



Comment-Response Document 2012-15

B2L and L Part-66 aircraft maintenance licences

CRD to NPA 2012-15 — RMT.0135 (66.027(A))

22.6.2015

EXECUTIVE SUMMARY

Article 7(8) of Regulation (EU) No 1321/2014 reads: 'The Agency shall submit an opinion to the Commission including proposals for a simple and proportionate system for the licensing of certifying staff involved in the maintenance of ELA1 aeroplanes as well as aircraft other than aeroplanes and helicopters'.

In addition, it was requested by industry to simplify the Part-66 avionics licence by adapting it to the lower complexity of light aircraft.

A proposal for two new types of licences (L and B2L) covering the aspects described above was issued by the Agency in October 2012 through NPA 2012-15.

This document includes the comments received from stakeholders and competent authorities and the responses thereto provided by the Agency further to the publication of the NPA together with the proposed amendments to the AMC/GM. The proposed amendments to the rules are contained in the related Opinion No 05/2015 issued by the Agency.

	Applicability	Process map
Affected regulations and decisions:	Commission Regulation (EU) No 1321/2014; Annex I (Part-M); Annex II (Part-145), Annex III (Part-66); Annex IV (Part-147); and related AMC/GM.	Concept Paper: No Terms of Reference: 15.4.2011 Rulemaking group: Yes RIA type: Full Technical consultation during NPA drafting: No
Affected stakeholders:	Certifying and support staff of maintenance organisations, competent authorities, Part-147 training organisations.	Publication date of the NPA: 4.10.2012 Duration of NPA consultation: 3 months Review group: Yes
Driver/origin:	Article 7(9) of Regulation (EC) No 2042/2003 (new point 7(8) of Regulation (EU) No 1321/2014); efficiency/proportionality (B2L licence); and level playing field (L licence).	Focused consultation: Yes Publication date of the Opinion: 2015/Q2 Publication date of the Decision: 2016/Q4
Reference:	N/A.	



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1. Procedural information

1.1. The rule development procedure

The European Aviation Safety Agency (hereinafter referred to as the 'Agency') developed this Comment-Response Document (CRD) in line with Regulation (EC) No 216/2008¹ (hereinafter referred to as the 'Basic Regulation') and the Rulemaking Procedure².

This rulemaking activity is included in the Agency's [2014-2017 Rulemaking Programme](#), under RMT.0135 (66.027 (a)). The scope and timescale of the task were defined in the related Terms of Reference (see process map on the title page).

The draft Regulation and the related AMC/GM have been developed by the Agency based on the input of the Rulemaking Groups RMT.0135 (66.027(a)). All interested parties were consulted through NPA 2012-15³, which was published on 4 October 2012. 124 comments were received from individuals, flying sports clubs/associations, an association of avionics components maintainers, training organisations, an association of sailplane manufacturers, National Aviation Authorities (NAAs) and an airship manufacturer.

The text of this CRD has been developed by the Agency based on the input of the Review Group RMT.0135 (66.027(a)).

The process map on the title page contains the major milestones of this rulemaking activity.

1.2. The structure of this CRD and related documents

This CRD provides a summary of comments and responses as well as the full set of individual comments received on NPA 2012-15 and responses thereto. The resulting AMC/GM text is provided in Chapter 3 of this CRD.

1.3. The next steps in the procedure

The Agency has published this CRD in parallel with Opinion No 05/2015, which contains proposed changes to the European Union regulation. It is addressed to the European Commission, to be used as technical basis in order to prepare a legislative proposal.

The Decision containing amendments to AMC/GM will be published by the Agency when the related regulation is adopted by the Commission.

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, 19.3.2008, p. 1).

² The Agency is bound to follow a structured rulemaking process as required by Article 52(1) of the Basic Regulation. Such process has been adopted by the Agency's Management Board and is referred to as the 'Rulemaking Procedure'. See Management Board Decision concerning the procedure to be applied by the Agency for the issuing of Opinions, Certification Specifications and Guidance Material (Rulemaking Procedure), EASA MB Decision No 01-2012 of 13 March 2012.

³ <http://easa.europa.eu/system/files/dfu/NPA%202012-15.pdf>.



2. Summary of comments and responses

There was a general support (with some limited exceptions) to the proposals, both from industry and competent authorities (CAs).

- On the industry's side, there was a wide support from associations like Europe Air Sports, European Gliding Union, Royal Danish Aeroclub and Luftsport Verband Bayern. They stated that the proposal was a step forward in the right direction, although they also commented that they were afraid that the introduction of Part-66 licences for sectors which were previously under national rules might increase the costs. The Agency believes that the costs associated with the new licences should be kept to a minimum (although this will depend on each competent authority) due to the following reasons:
 - all existing certifying staff could get the L-licence by conversion of privileges, without comparing with the Part-66 syllabus; and
 - for new applicants, no training is required, and any organisation (like a manufacturer, aeroclub or association) may perform the exams if agreed by the competent authority.

In addition, the British Gliding Association (BGA), which holds Subpart F and Subpart G approvals, expressed concerns that they would lose certain control on their certifying staff once they get a Part-66 L-licence. Currently, the BGA issues certifying staff privileges to their members, which are valid only for as long as their members remain in the association.

- On the competent authorities' side, only the Irish CAA expressed significant concerns, fearing that the proposed licences might introduce complexity into the licensing system. The Agency believes that the proposed system, as simple and proportionate, is fully in line with the expectations of the General Aviation (GA) industry, and is also in line with the objectives of the GA Road Map.

UK-CAA also mentioned that they would prefer to have a separate L-licence (separate from the other categories) in order to facilitate its understanding. However, the Agency prefers that each licence holder holds only one licence, even if it includes more than one category.

Some comments requested to identify the link between the L licence and the B1 or B3 licences, or the possibility for the holder of a B1 or B2 licence to also obtain an L or a B2L licence. This was addressed by:

- clarifying that, due to the simplicity of the L licence, it was not the intention to include provisions to extend the L licence to the B1, B2 or B3 licences;
- clarifying that the holder of a B1 or B3 licence will be entitled to obtain certain L licence subcategories; and
- clarifying that the privileges of the B2 licence already include those of the B2L licence.

A significant number of comments requested to remove the obligation to have the L-licence examinations at Part-147 organisations or the competent authority. The proposal has been changed to allow examinations at any organisation if agreed by the competent authority. This would allow to have the examinations at, for example, sailplane/balloon manufacturers, associations, aeroclubs, etc.

Significant concerns were expressed over the possibility to obtain an L licence through grandfather rights of the people currently qualified as certifying staff in the national system. The Agency has made absolutely clear that this will be the case. Any person holding a national certifying staff qualification will be



entitled (per 66.A.70) to obtain an L licence with the same privileges, without the need to compare the syllabus.

Some requests were made to align the B2 licence with the 'very innovative approach' used for the B2L licence which is based on 'system ratings'. Unfortunately, the ToR did not provide for amending the text of the B2 licence and, in addition, creating systems ratings for complex aircraft may prove difficult since this would also require the adoption of type training courses covering separate system ratings. The advisory bodies (RAG/TAGs and SSCC) may, if needed, submit a proposal for a separate rulemaking task.



3. Draft AMC/GM

This chapter contains the draft AMC/GM prepared to complement Opinion 05/2015. This material is included for information only, as the Decision containing AMC and GM will be published by the Agency when the related Implementing Rules are adopted by the Commission.

The text of the amendment is arranged to show deleted text, new text or new paragraph as shown below:

- (a) deleted text is shown with a strike through: ~~deleted~~
- (b) changed or new text is highlighted with grey shading: **new**
- (c) (...) indicates that remaining text is unchanged in front of or following the reflected amendment.

3.1. Draft amendment to AMC to Part-M

AMC M.A.707(a) is amended as follows:

AMC M.A.707(a) Airworthiness review staff

(...)

- 4. An appropriate licence in compliance with Annex III (Part-66) is any one of the following:
 - a category B1 licence in the subcategory of the aircraft reviewed, or
 - a category B2 or C licence, or
 - in the case of piston-engine non-pressurised aeroplanes of 2 000 kg **Maximum Take-off Mass (MTOM)** and below, a category B3 licence,
 - **in the case of sailplanes, powered sailplanes, ELA1 aeroplanes, balloons and airships, a category L licence in the appropriate subcategory.**

It is not necessary to satisfy the experience requirements of Part-66 at the time of the review.

(...)

3.2. Draft amendment to AMC to Part-145

AMC 145.A.30(g) is amended as follows:

AMC 145.A.30(g) Personnel requirements

(...)

- 3. The requirement of having appropriate aircraft rated certifying staff qualified as category B1, B2, **B2L**, B3, **L**, as appropriate, in the case of aircraft line maintenance does not imply that the organisation must have B1, B2, **B2L**, ~~and~~ B3 **and L** personnel at every line station. The MOE should have a procedure on how to deal with defects requiring B1, B2, **B2L**, ~~or~~ B3 **or L** certifying staff.
- 4. The competent authority may accept that in the case of aircraft line maintenance an organisation has only B1, B2, **B2L**, B3, or **L** certifying staff, as appropriate, provided the competent authority is satisfied that the scope of work, as defined in the Maintenance Organisation Exposition, does not need the availability of all B1, B2, **B2L**, ~~and~~ B3 **and L** 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.

3.3. Draft amendment to AMC/GM to Part-66

GM 66.A.3 is replaced by the following:

GM 66.A.3 Licence categories and subcategories

‘ELA1 aeroplanes’ means those aeroplanes which meet the definition of ‘ELA1 aircraft’ contained in Article 2, paragraph (k) of Regulation (EU) No 1321/2014.

‘ELA2 gas airships’ means those gas airships which meet the definition of ‘ELA2 aircraft’ contained in Article 2, paragraph (ka) of Regulation (EU) No 1321/2014.

‘Gas airships other than ELA2’ means those gas airships which do not meet at least one condition of the definition of ‘ELA2 aircraft’ contained in Article 2, paragraph (k), point (v) of Regulation (EU) No 1321/2014.

NOTE: The ‘ELA2 aircraft’ category includes all ‘ELA1 aircraft’.

The term ‘powered sailplane’ includes:

- those powered sailplanes which may take off solely by means of their own power (self-launching sailplanes);
- the self-sustaining powered sailplanes, and
- the Touring Motor Gliders (TMGs).

While the L1C subcategory only includes composite sailplanes, the L1 subcategory includes all sailplanes (composite, metal and wood).

While the L2C subcategory only includes composite powered sailplanes and composite ELA1 aeroplanes, the L2 subcategory includes all powered sailplanes and ELA1 aeroplanes (composite, metal and wood).

In the case of maintenance of mixed balloons (combination of gas and hot air), it is required to hold a licence for both L3G and L3H subcategories.

For the B2L licence, a ‘system rating’ is a rating which gives the privilege to release maintenance work on the aircraft systems covered by the ‘system rating’.

The sentence ‘shall contain, as a minimum, one system rating’ means that the application for a B2L licence should be made for any of the system ratings or any combination of the system ratings specified in 66.A.3.

There is no specific order in which the system ratings should be applied for. Any combination of system ratings is possible.

The description of systems covered by the different system ratings is provided in Appendix I ‘Basic Knowledge Requirements’ under paragraph 2. ‘Modularisation’, in the table related to ‘Categories B2 and B2L’.

A new GM 66.A.5 is added as follows:

GM 66.A.5 Aircraft groups



The following table summarises the applicability of categories/subcategories of Part-66 licences against the groups/subgroups of aircraft:

Category/subcategory	A, B1 and C	B2	B2L	B3	L				
					L1C and L1	L2C and L2	L3H and L3G	L4H and L4G	L5
Aircraft groups									
1 — complex motor-powered aircraft; — helicopters with multiple engine; — aeroplanes above FL290; — aircraft with fly-by-wire systems; — any other defined by the Agency	X	X							
1 Gas airships other than ELA2		X							X
2 — 2a: single turboprop aeroplanes; — 2b: single turbine engine helicopters; — 2c: single piston engine helicopters.	X	X	X						
3 Piston engine aeroplanes	X	X	X						
3 Piston engine aeroplanes (non-pressurised of 2 000 kg MTOM and below)	X	X	X	X					
3 ELA1 piston engine aeroplanes	X	X	X	X		X			



4									
— sailplanes;		X	X		X				
— powered sailplanes;		X	X			X			
— balloons;		X	X				X		
— airships not included in Group 1		X	X					X	

A new GM 66.A.10(a) is added as follows:

GM 66.A.10(a) Application

When an application is made for a licence in the B2L category, the applicant should specify on EASA Form 19:

- the system rating or the combination of system ratings applied for, and
- the aircraft rating,

considering that according to 66.A.45(e), a B2L licence endorsed with a full subgroup 2b rating is entitled to be endorsed also with a full subgroup 2c rating.

When applying for the addition of a system rating to a B2L licence, the applicant should provide, together with the application, the demonstration of experience related to the system applied for.

When a B2L licence holder applies for the extension of a B2L licence to include a new system rating, they need to demonstrate the practical experience required by 66.A.30(a)3 for the system rating but also the practical experience required by 66.A.45(e) and (f) in case the aircraft group is different.

When a B2L licence holder applies for the change of their B2L licence to a category B2 one, they only need to:

- demonstrate by examination the differences between the basic knowledge corresponding to the B2L licence held and the basic knowledge of the B2 licence, as described in Appendix I; and
- demonstrate the additional experience described in Appendix IV.

These requirements also apply to the competent authority under 66.B.110.

When an applicant applies for an extension of a B2L licence to a B2 one, and they meet the requirements, the B2L is replaced by the B2 licence.

GM 66.A.20(a) is amended as follows:

GM 66.A.20(a) Privileges

(...)

2. The category B3 licence does not include any A subcategory. Nevertheless, this does not prevent the B3 licence holder from releasing maintenance tasks typical of the A1.2 subcategory for piston-engine non-pressurised aeroplanes of 2 000 kg MTOM and below, within the limitations contained in the B3 licence.



3. The B1.2 and B3 licences do not include any L subcategory. Nevertheless, the holder of a B1.2 or B3 licence with the appropriate ratings is entitled to receive, upon application, licences in subcategories L1 and L2 under the conditions described in 66.B.110(d).
4. The privileges of the B2 licence with given aircraft ratings include the privileges of the B2L licence for all systems ratings for the same aircraft ratings. Nevertheless, the holder of a B2 licence with given aircraft ratings may apply for a B2L licence in order to include a different aircraft rating if the applicant only wants to demonstrate the experience requirements for certain system ratings.
5. The category C licence permits certification of scheduled base maintenance by the issue of a single certificate of release to service for the complete aircraft after the completion of all such maintenance. The basis for this certification is that the maintenance has been carried out by competent mechanics and category B1, B2, B2L and B3 and L support staff, as appropriate, have signed for the maintenance tasks under their respective specialisation. The principal function of the category C certifying staff is to ensure that all required maintenance has been called up and signed off by the category B1, B2 and B3 support staff, as appropriate, before issue of the certificate of release to service. Only category C personnel who also hold category B1, B2, B2L or B3 and L qualifications may perform both roles in base maintenance.

A new AMC 66.A.20(a)4 is added as follows:

AMC 66.A.20(a)4 Privileges

'within the limits of the system ratings specifically endorsed on the licence' means that the privileges of the licence holder are limited:

- to the group/sub-group of aircraft endorsed on the licence, but also
- to the system rating(s) endorsed.

When an applicant wishes to be granted the privilege to issue certificates of release to service and to act as support staff for electrical and avionics tasks within power plant and mechanical systems, they should apply for the 'airframe systems' rating on the B2L licence. The reason is that the 'airframe systems' rating is the only rating which covers completely the electrical and avionics tasks of the power plant and mechanical systems of the aircraft.

AMC 66.A.20(b)2 is amended as follows:

AMC 66.A.20(b)2 Privileges

(...)

2. Nature of the experience:

(...)

For category, B1, B2, B2L and B3 and L, for every aircraft included in the authorization, the experience should be on that particular aircraft or on a similar aircraft within the same licence subcategory. Two aircraft can be considered as similar when (...)

For licences endorsed with (sub)group ratings:



- In the case of a B1 licence endorsed with (sub)group ratings (either manufacturer subgroup or full (sub)group) as defined in 66.A.45 the holder should show experience on at least one aircraft type per (sub)group and per aircraft structure (metal, composite, wood).
- In the case of a B2 licence endorsed with (sub)group ratings (either manufacturer subgroup or full (sub)group) as defined in 66.A.45 the holder should show experience on at least one aircraft type per (sub)group.
- In the case of a B2L licence endorsed with systems and full groups or subgroup ratings as defined in 66.A.45, the holder should show experience on at least one aircraft type per group/subgroup. It is not required that experience is also shown on all systems.
- In the case of a B3 licence endorsed with the rating 'piston-engine non-pressurised aeroplanes of 2 000 Kg MTOM and below' as defined in 66.A.45, the holder should show experience on at least one aircraft type per aircraft structure (metal, composite, wood),
- In the case of an L licence endorsed with a rating (or a combination of ratings) as defined in 66.A.45, the holder should show experience on at least one aircraft type per rating endorsed on the licence, and for the rating 'sailplanes' and the rating 'powered sailplanes and ELA1 aeroplanes', at least one aircraft type per aircraft structure (metal, composite, wood).

(...)

The experience should be documented in an individual log book or in any other recording system (which may be an automated one) containing the following data:

- Date;
- Aircraft type;
- Aircraft identification i.e. registration;
- ATA chapter (optional);
- Operation performed i.e. 100 FH check, MLG wheel change, engine oil check and complement, SB embodiment, trouble shooting, structural repair, STC embodiment...;
- In the particular case of Part-145 organisations, the type of maintenance: i.e. base, line;
- Type of activity i.e. perform, supervise, release;
- Category used: A, B1, B2, B2L, B3, L or C.
- Duration in days or partial-days.

A new AMC 66.A.25(b) is added as follows:

AMC 66.A.25(b) Basic knowledge requirements

'Or as agreed by the competent authority' means that the examination is conducted by an organisation under a formal agreement with (and the oversight of) the competent authority.

AMC 66.A.30(a) is amended as follows:

AMC 66.A.30(a) Basic experience requirements

(...)



4. Maintenance experience on operating aircraft:
- means the experience of being involved in maintenance tasks on aircraft which are being operated by airlines, air taxi organisations, aeroclubs, owners, etc., as relevant to the licence category/subcategory;
 - should cover a wide range of tasks in length, complexity and variety;
 - aims at gaining sufficient experience in the real environment of maintenance as opposed to only the training school environment;
 - may be gained within different types of maintenance organisations (Part-145, M.A. Subpart F, FAR-145, etc.) or under the supervision of independent certifying staff;
 - may be combined with Part-147 approved training (or other training approved by the competent authority) so that periods of training can be intermixed with periods of experience, similar to an apprenticeship.
 - in the case of licences in the category L, B3 and B2L, may be full-time or part-time, either as professional or on a voluntary basis.
 - in the case of the L licence, it is acceptable that the one/two year experience required by 66.A.30(a)4 covers maintenance performed only during the weekends (or equivalent periods) as long as the applicant has achieved a sufficient level of competency related to the applicable licence subcategory as attested by the corresponding statement(s) issued by the maintenance organisation(s) or independent certifying staff who supervised the applicant.
5. In the case of an applicant for a licence including several categories/subcategories, it is acceptable to combine the periods of experience as long as there is a sufficient continuous experience for each category/subcategory during the required period. Examples:
- Application for a B1.1 (turbine aeroplanes) + B1.3 (turbine helicopters) licence: The regulation requires a five-year experience for B1.1 and a five-year experience for B1.3 for an applicant with no relevant previous technical training:
 - It is not acceptable to combine the experience in a single five-year period where the applicant has been working for three years on turbine aeroplanes and two years on turbine helicopters.
 - However, it is acceptable to combine the experience in a single five-year period if the applicant has been working for five years continuously on turbine aeroplanes and turbine helicopters (for example, aeroplanes in the morning, helicopters in the afternoon, or a few days every week on aeroplanes and a few days every week on helicopters).
 - Application for a B1.1 (turbine aeroplanes) + B2 (avionics) licence: The regulation requires a five-year experience for B1.1 and a five-year experience for B2 for an applicant with no relevant previous technical training;



- It is not acceptable to combine the experience in a single five-year period where the applicant has been working for three years on turbine aeroplanes (with no avionics work) and two years on avionics systems.
 - However, it is acceptable to combine the experience in a single five-year period if the applicant has been working for five years continuously on structures, power plant, mechanical and electrical systems and avionics.
- Application for a B1.1, B1.2, B1.3, B1.4 and B2: The regulation requires a five-year experience for B1.1, B1.3 and B2, and a three-year experience for B1.2 and B1.4 for an applicant with no relevant previous technical training:
- In this case it is not acceptable to combine all the required experience in a single five-year period even if the experience has been continuous in all the categories/subcategories. The reason is that the experience for each category/subcategory would not be sufficient.

A new AMC 66.A.30(c) is added as follows:

AMC 66.A.30(c) Basic experience requirements

In the case of category B2L licence, the phrase ‘a representative cross section of maintenance tasks on aircraft’ means that the person has carried out some maintenance tasks representative of the systems corresponding to the system ratings for which they apply (see 66.A.3). These tasks may include troubleshooting, modifications or repairs.

AMC 66.A.30(e) is amended as follows:

AMC 66.A.30(e) Basic experience requirements

1. For category A the additional experience of civil aircraft maintenance should be a minimum of 6 months. For category B1, B2, B2L or B3 the additional experience of civil aircraft maintenance should be a minimum of 12 months.

(...)

AMC 66.A.45(d), (e)3, (f)1 and (g)1 is amended as follows:

AMC 66.A.45(d), (e)3, (f)1, and (g)1 and (h) Endorsement with aircraft ratings

1. The ‘practical experience’ should cover a representative cross section including at least:
 - for categories B1, B2, B2L and B3, 50 % of tasks contained in Appendix II to AMC relevant to the licence category and to the applicable aircraft type ratings or aircraft (sub)group ratings being endorsed;
 - for category L:
 - in the subcategories L1 and L2, 50 % as in the paragraph related to B1, B2, B2L and B3;
 - in the subcategories L3 ‘Balloons’ and L4 and L5 for ‘Airships’, 80 % of the tasks should be demonstrated, and should include the tasks identified with an (*) in the Appendix;



- and can be full-time or part-time either as professional or on a voluntary basis.

This experience should cover tasks from each paragraph of the Appendix II list. Other tasks than those in the Appendix II may be considered as a replacement when they are relevant. In the case of (sub)group ratings, this experience may be shown by covering one or several aircraft types of the applicable (sub)group and may include experience on aircraft classified in group 1, 2 and/or 3 as long as the experience is relevant. The practical experience should be obtained under the supervision of authorised certifying staff.

(...)

GM 66.A.45 is amended as follows:

GM 66.A.45 Endorsement with aircraft ratings

The following table shows a summary of the aircraft rating requirements contained in 66.A.45, 66.A.50 and Appendix III to Part-66.

The table contains the following:

- The different aircraft groups.
- For each licence (sub)category, which ratings are possible (at the choice of the applicant):
 - Individual type ratings.
 - Full and/or Manufacturer (sub)group ratings
- For each rating option, which are the qualification options.
- For the B1.2 licence (Group 3 aircraft) and for the B3 licence (piston-engine non-pressurised aeroplanes of 2000 kg MTOM and below), which are the possible limitations to be included in the licence if not sufficient experience can be demonstrated in those areas.

Note: OJT means 'On the Job Training' (Appendix III to Part-66, Section 6) and is only required for the first aircraft rating in the licence (sub)category.



Aircraft rating requirements			
Aircraft Groups	B1/B3/L licence	B2/B2L licence	C licence
<p>Group 1 aircraft, except airships</p> <ul style="list-style-type: none"> • Complex motor-powered aircraft. • Helicopters with multiple engines. • Aeroplanes certified above FL290. • Aircraft equipped with fly-by-wire. • Other aircraft when defined by the Agency. 	<p>(For B1)</p> <p>Individual TYPE RATING</p> <p>Type training:</p> <ul style="list-style-type: none"> — Theory + examination — Practical + assessment <p>PLUS</p> <p>OJT (for first aircraft in licence subcategory)</p>	<p>(For B2)</p> <p>Individual TYPE RATING</p> <p>Type training:</p> <ul style="list-style-type: none"> — Theory + examination — Practical + assessment <p>PLUS</p> <p>OJT (for first aircraft in licence category)</p>	<p>Individual TYPE RATING</p> <p>Type training:</p> <ul style="list-style-type: none"> — Theory + examination
<p>Group 1 airships</p>	<p>(For L5 licence)</p> <p>Individual TYPE RATING</p> <p>Type training:</p> <ul style="list-style-type: none"> — Theory + examination — Practical + assessment <p>PLUS</p> <p>OJT (for first aircraft in licence subcategory)</p>	<p>(For B2 licence)</p> <p>Individual TYPE RATING</p> <p>Type training:</p> <ul style="list-style-type: none"> — Theory + examination — Practical + assessment <p>PLUS</p> <p>OJT (for first aircraft in licence category)</p>	<p>Not Applicable</p>
<p>Group 2 aircraft:</p> <p>Subgroups:</p> <p>2a: single turboprop aeroplanes (*)</p> <p>2b: single turbine engine helicopters (*)</p> <p>2c: single piston engine helicopters (*)</p> <p>(*) Except those classified in Group 1.</p>	<p>(For B1.1, B1.3, B1.4)</p> <p>Individual TYPE RATING (type training + OJT) or (type examination + practical experience)</p> <p>Full SUB-GROUP RATING (type training + OJT) or (type examination + practical experience) on at least 3 aircraft representative of that subgroup</p> <p>Manufacturer SUB-GROUP RATING (type training + OJT) or (type examination + practical experience) on at least 2 aircraft representative of that</p>	<p>(For B2)</p> <p>Individual TYPE RATING (type training + OJT) or (type examination + practical experience)</p> <p>(For B2 and B2L)</p> <p>Full SUB-GROUP RATING based on demonstration of practical experience</p> <p>Manufacturer SUB-GROUP RATING based on demonstration of practical experience</p>	<p>Individual TYPE RATING type training or type examination</p> <p>Full SUB-GROUP RATING type training or type examination on at least 3 aircraft representative of that subgroup</p> <p>Manufacturer SUB-GROUP RATING type training or type examination on at least 2 aircraft representative of that manufacturer subgroup</p>



<p>Group 3 aircraft</p> <p>Piston engine aeroplanes (except those classified in Group 1)</p>	<p>manufacturer subgroup (For B1.2)</p> <p>Individual TYPE RATING (type training + OJT) or (type examination + practical experience)</p> <p>Full GROUP 3 RATING based on demonstration of practical experience Limitations:</p> <ul style="list-style-type: none"> — Pressurised aeroplanes — Metal aeroplanes — Composite aeroplanes — Wooden aeroplanes — Metal tubing & fabric aeroplanes 	<p>(For B2)</p> <p>Individual TYPE RATING (type training + OJT) or (type examination + practical experience)</p> <p>(For B2 and B2L)</p> <p>Full GROUP 3 RATING based on demonstration of practical experience</p>	<p>Individual TYPE RATING type training or type examination</p> <p>Full GROUP 3 RATING based on demonstration of practical experience</p>
<p>Piston engine non-pressurised aeroplanes of 2 000 kg MTOM and below</p>	<p>(For B3)</p> <p>FULL RATING ‘Piston engine non-pressurised aeroplanes of 2 000 Kg MTOM and below’ based on demonstration of practical experience Limitations:</p> <ul style="list-style-type: none"> — Metal aeroplanes — Composite aeroplanes — Wooden aeroplanes — Metal tubing & fabric aeroplanes 	<p>This rating cannot be endorsed on a B2/B2L licence. These aircraft are already covered by the endorsement of ratings for Group 3 aircraft (see box above)</p> <p>Not Applicable</p>	<p>This rating cannot be endorsed on a B2/B2L licence. These aircraft are already covered by the endorsement of ratings for Group 3 aircraft (see box above)</p> <p>Not Applicable</p>
<p>Group 4 aircraft:</p> <p>Sailplanes, powered sailplanes, balloons and airships other than those in Group 1</p>	<p>(For all L subcategories, except L5):</p> <ul style="list-style-type: none"> — for L1C, rating ‘composite sailplanes’; — for L1, rating ‘sailplanes’; — for L2C, rating ‘composite powered sailplanes and composite ELA1 aeroplanes’; — for L2, rating 	<p>(For B2 and B2L)</p> <p>Full GROUP 4 RATING based on demonstration of practical experience</p>	<p>Not Applicable</p>



	<p>'powered sailplanes and ELA1 aeroplanes';</p> <p>— For L3H, rating 'hot-air balloons';</p> <p>— For L3G, rating 'gas balloons';</p> <p>— For L4H, rating 'hot air airships'; and</p> <p>— For L4G, rating 'ELA2 gas airships'.</p> <p>All ratings are based on demonstration of practical experience</p> <p>Limitations: See 66.A.45(h)</p>		
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A new GM 66.A.45(h)2 is added as follows

GM 66.A.45(h)2 Endorsement with aircraft ratings

For subcategories L1 and L2, it is possible to endorse the corresponding ratings with limitations depending on the type of structures covered by the gained experience.

For subcategory L3G, it is possible to endorse the rating 'gas balloons' with a limitation on 'other than ELA1 gas balloons' if the experience only covered ELA1 gas balloons.

However, no limitations are possible for subcategories L1C, L2C, L3H, L4H and L4G. The ratings on these licences can only be obtained after demonstration of appropriate experience representative of the full scope of the licence subcategory.

AMC 66.A.50(b) is amended as follows:

AMC 66.A.50(b) Limitations

1. The appropriate experience required to remove the limitations referred in 66.A.45(f), and (g) and (h) should consist of the performance of a variety of tasks appropriate to the limitations under the supervision of authorised certifying staff. This should include the tasks required by a scheduled annual inspection. Alternatively, this experience may also be gained, if agreed by the competent authority, by theoretical and practical training provided by the manufacturer, as long as an assessment is further carried out and recorded by this manufacturer.
2. It may be acceptable to have this experience on just one aircraft type, provided this type is representative of the (sub)group in relation to the limitation being removed.
3. It is acceptable that this experience is gained on aircraft not covered by Regulation (EC) No 216/2008, provided that this experience is relevant and representative of the corresponding (sub)group. An example would be the experience required to remove a limitation such as 'aircraft with metal-tubing structure covered with fabric', which may be gained on ultralight aircraft (see aircraft classified in Annex II of said Regulation).



- 3-4. The application for the limitation removal should be supported by a record of experience signed by the authorised certifying staff or by an assessment signed by the manufacturer after completion of the applicable theoretical and practical training.

AMC 66.A.70 is amended as follows:

GM 66.A.70 Conversion provisions

(...)

2. The conversion applies to “certifying staff qualifications” such as, for example:
- Holding a national licence (or completed the process to obtain such a national licence);
 - Having completed a qualification process defined by the competent authority, or an equivalent body under the national system, to become certifying staff;
 - Having completed the qualification requirements for certifying staff within a maintenance organisation, as defined in their procedures.

(...)

3. As described in point 66.A.70, certifying staff qualifications eligible for conversion are those valid “prior to the date of entry into force of Annex III (Part-66)”, which means those qualifications valid before the following dates:
- 28 September 2005 for aircraft above 5 700 Kg MTOM (ref. EC2042/2003, Article 7, point 3(e));
 - 28 September 2006 for aircraft of 5 700 Kg MTOM and below (ref. EC2042/2003, Article 7, point 3(f)).

Nevertheless, since the B3, B2L and L licences did not exist at those dates, certifying staff qualifications eligible for conversion to a B3, B2L and L licence are those valid before the competent authority had the obligation to start issuing such licences, that is:

- for the B3 licence, those qualifications valid before 28 September 2012; and
- for the B2L and L licences, those qualifications valid before the date when those licence became applicable.

~~those valid before 28 September 2012, which is the date where the authority has the obligation to start issuing such licences in accordance with (EC) 2042/2003, Article 7, point 3(h), item (i).~~

(...)

5. A certifying staff qualification can be subject to more than one conversion process and can also be converted to more than one licence (sub)category (with any applicable limitations). This could be the case, for example, of a person who already had the certifying staff qualification converted in the past to a B1.2 licence with limitations linked to some missing elements of the Part-66 Appendix I and II standard (following 66.A.70(c)). This person would be entitled to apply and have his/her certifying staff qualification converted to a B1.2 or a B3 or L licence on the basis of 66.A.70(d), which would mean no need to compare with the Part-66 Appendix I, and II or VII standard, introducing only those limitations required in order to maintain the existing privileges.



GM 66.A.70(d) is amended as follows:

GM 66.A.70(d) Conversion provisions

(...)

One more example would be the case where a person holds a pre Part-66 qualification which covered privileges to release work on composite and metal sailplanes and powered sailplanes, covering aircraft structures, power plant, mechanical and electrical systems. This person would be issued a Part-66 aircraft maintenance licence in the L2 subcategory, with the following limitations (exclusions):

- aircraft involved in commercial air transport (this limitation always exists);
- ELA1 aeroplanes;
- wooden-structure aircraft covered with fabric; and
- aircraft with metal-tubing structure covered with fabric.

A further example would be the case where a person holds a pre Part-66 qualification which covered privileges to release work on composite sailplanes up to the annual inspection but not including complex maintenance tasks, repairs and changes. This person would be issued a Part-66 aircraft maintenance licence in the L1C subcategory, with the following limitations (exclusions):

- aircraft involved in commercial air transport (this limitation always exists); and
- complex maintenance tasks described in Appendix VII to Annex I (Part-M), standard changes described in Part-21, point 21.A.90B, and standard repairs described in Part-21, point 21.A.431B.

The essential aspect is that the limitations are established in order to maintain the privileges of the pre Part-66 qualification, without comparing the previous qualification with the standard of Part-66 Appendix I and II.

For removal of limitations, refer to 66.A.50(c).

A new GM 66.B.100 is added as follows:

GM 66.B.100 Procedure for the issue of an aircraft maintenance licence by the competent authority

At the issue or renewal of a B2L licence:

- one or several system ratings; and
- one or several group/subgroup ratings

should be endorsed in Form 26.

AMC 66.B.110 is amended as follows:

AMC 66.B.110 Procedure for the change of an aircraft maintenance licence to include an additional basic category or subcategory

In the case of computer generated licences, the licence should be reissued.

When the conditions set in the rule for extending a B2L licence to include the B2 category are met, the B2L licence should be replaced by a B2 licence.



The B2L licence replaced by a B2 licence should be retained by the competent authority.

AMC 66.B.130 is amended as follows:

AMC 66.B.130 Procedure for the direct approval of aircraft type training

In the case of type training for aircraft other than airships:

1. (...)
2. (...)
3. (...)
4. (...)



Appendix II to AMC to Part-66 is amended as follows:

Appendix II
Aircraft Type Practical Experience and On-the-Job Training
List of Tasks

Tasks are divided in categories of aircraft:

- (1) aeroplanes;
- (2) sailplanes and powered sailplanes; and
- (3) balloons and airships.

(1) SPECIFIC TASKS FOR AEROPLANES

(...)

Communications

- Replace VHF com unit.
- Replace HF com unit.
- Replace existing antenna.
- Replace static discharge wicks.
- Check operation of radios.
- Perform antenna VSWR check.
- Perform Selcal operational check.
- Perform operational check of passenger address system.
- Functionally check audio integrating system.
- Repair co-axial cable.
- Troubleshoot faulty system.
- Check SATCOM.

(...)

Navigation

- ~~Calibrate magnetic direction indicator.~~
- ~~Replace airspeed indicator.~~
- ~~Replace altimeter.~~
- ~~Replace air data computer.~~
- ~~Replace VOR unit.~~
- ~~Replace ADI.~~
- ~~Replace HSI.~~
- ~~Check pitot static system for leaks.~~
- ~~Check operation of directional gyro.~~
- ~~Functional check weather radar.~~
- ~~Functional check doppler.~~
- ~~Functional check TCAS.~~
- ~~Functional check DME.~~



Functional check ATC Transponder.
Functional check flight director system.
Functional check inertial nav system.
Complete quadrantal error correction of ADF system.
Update flight management system database.
Check calibration of pitot static instruments.
Check calibration of pressure altitude reporting system.
Troubleshoot faulty system.
Check marker systems.
Compass replacement direct/indirect.
Check Satecom.
Check GPS.
Test AVM.

Instruments

Troubleshoot faulty system.
Calibrate magnetic direction indicator.
Replace airspeed indicator.
Replace altimeter.
Replace air data computer.
Replace ADI.
Replace HSI.
Check pitot static system for leaks.
Check operation of directional gyro.
Check calibration of pitot static instruments.
Compass replacement direct/indirect.
Functional check flight director system.

Surveillance

Troubleshoot faulty system.
Functional check weather radar.
Functional check doppler.
Functional check TCAS.
Functional check ATC Transponder.
Check calibration of pressure altitude reporting system.

Navigation

Functional check inertial nav system.
Complete quadrantal error correction of ADF system.
Check GPS.
Test AVM.
Check marker systems.
Functional check DME.

Oxygen

(...)



APU

Removal/installation of the APU.

Removal/installation of the inlet guide-vane actuator.

Operational test of the APU emergency shut-down test.

Operational test of the APU.

(2) SPECIFIC TASKS FOR SAILPLANES AND POWERED SAILPLANES

	Wooden/metal tube and fabric/composite/metallic
General Activities	
Check and/or replace placards	x
Weighing, Weight & Balance Sheet	x
Documentation of annual inspection and repairs	x
Review records for compliance with airworthiness directives	x
Five annual inspections	x
Inspection after an occurrence	x
Dismantling/reinstallation of wings and empennages	x
Leveling and Weighing	
Level the sailplane	x
Weighing, Weight & Balance Sheet	x
Prepare a weight and balance amendment	x
Check the list of equipment	x
Flight Controls and Flight Control Systems	
Aileron and flaps — removal, balancing and reinstallation	x
Elevator — removal, balancing and reinstallation	x
Rudder — removal, balancing and reinstallation	x
Rudder Cable — fabrication and installation	x
Elevator pushrod — installation	x
Safeguarding of pins, screws and castellated nuts	x
Sealing of gaps	x
Electrical Systems	
Electrical components, wiring — removal and installation	x
Batteries — servicing	x
Avionics Systems	
COM — removal and installation	x
NAV — removal and installation	x



	Wooden/metal tube and fabric/composite/metallic
TRANSPONDER — removal and installation	x
Antenna/Antenna cable — removal and installation	x
Cabin Equipment/Systems	
Belts — safety harness removal and installation	x
Oxygen system — removal, installation and test	x
Canopy replacement or repair	x
Pitot/Static system — removal, installation and test	x
Flight instruments — removal and installation	x
Installation of approved equipment	x
Compass — installation and compensation	x
Tow release — removal and installation	x
Water ballast system — removal, installation and test	x
Undercarriage — removal and installation	x
Brake system — replacement of components.	x
Fuel Engine, Propeller and Engine Instruments	
Refer to the tasks related to propeller, piston engine, fuel and control, ignition, and engine indications and exhaust, contained in point 1 'Specific tasks for aeroplanes' of this Appendix.	x
Verification and adjustment of folding system of powered sailplanes	x
Wooden Structures/Metal Tubes and Fabric	
Inspection/testing for damages	x
Rib structure repair	x
Plywood skin repair	x
Recover or repair structure with fabric	x
Inspect protective coating and finishing	x
Install patch on fabric material	x
Repair of fairings	x
Composite Structures	
Laminate repair	x
Sandwich structure repair	x
Partial gel coat repair	x
Complete gel coating	x
Repair of fairings	x



	Wooden/metal tube and fabric/composite/metallic
Metal Structures	
Crack testing	x
Repair of covering	x
Drilling cracks	x
Riveting jobs	x
Bonding of structures	x
Anti-corrosion treatment	x
Repair of fairings	x

(3) SPECIFIC TASKS FOR BALLOONS AND AIRSHIPS

Note: Refer to AMC 66.A.45(d), (e)3, (f)1, and (g)1 and (h) for an explanation of the meaning of symbol (*) in the table below.

Tasks	Balloon			Airship	
	Hot Air	Gas	Tethered Gas	Hot Air	Gas
General activities					
Functionality test of aircraft (*)	x	x	x	x	x
Check and/or replace placards	x	x	x	x	x
Documentation of annual inspection, repairs, Airworthiness Directives, and equipment. (*)	x	x	x	x	x
Classification repair (*)	x	x	x	x	x
Weighing					
Weighing and weighing report (*)	x	x	x	x	x
Servicing					
Lubrication of controls when applicable			x	x	x
Cleaning of envelope, basket and burner	x	x	x	x	x
Inspections					
Eight annual inspections (covering at least 3 different types) (*)	x				
Five annual inspections (covering at least 2 different types) (*)		x			
Three annual inspections (covering at least 2 different types) (*)			x	x	
Two annual inspections (*)					x
Strength test of envelope fabric (*)	x	x	x	x	x



Tasks	Balloon			Airship	
	Hot Air	Gas	Tethered Gas	Hot Air	Gas
Removal, inspection and reinstallation of flight control systems:					
Control surface cable					x
Trim system					x
Safeguarding of pins, screws, castellated nuts (*)			x	x	x
Stick and pedals					x
Hydraulic/mechanical control systems			x		x
Ballonet control systems (*)			x	x	x
Electrical control systems			x		x
Valves (gas valve, turning vent, parachute or rip panel) (*)	x	x	x	x	x
Control and shroud lines and pulleys	x	x	x	x	x
Elevator stabiliser (incl. balancing if applicable)					x
Rudder (incl. balancing if applicable)					x
Drag rope		x			
Electrical System					
Removal/installation of electrical wires			x	x	x
Removal/installation of electrical components			x	x	x
Servicing of batteries	x	x	x	x	x
Communication System — Transponder					
Removal/installation of COM	x	x	x	x	x
Removal/installation of NAV					x
Removal/installation of TRANSPONDER	x	x	x	x	x
Installation of antenna	x	x	x	x	x
Replacement of antenna cable	x	x	x	x	x
Cabin and Equipment					
Pitot/static systems/tubes — removal, installation and replacement					x
Flight instruments — removal, installation and replacement	x	x	x	x	x



Tasks	Balloon			Airship	
	Hot Air	Gas	Tethered Gas	Hot Air	Gas
Installation of an approved system	x	x	x	x	x
Magnetic compass installation/compensation					x
Check fire extinguisher	x			x	x
Replacement of Ballast					
Water ballast (when applicable)					x
Sand/shot ballast (when applicable)		x	x		x
Inspection and rigging of valves					x
Envelope					
Inspection and repair of envelope panels/gores/seams	x	x	x	x	x
Inspection and repair of load tapes and attachment points	x	x	x	x	x
Inspection and repair of deflation system	x	x		x	
Inspection and repair of net		x	x		
Inspection and repair of mooring system			x		
Electrostatic conductivity test (if type is approved for hydrogen) (*)		x			x
Ballonet inspection and repair			x		x
Fabrication and inspection of a suspension cable or rope	x	x	x	x	x
Fabrication and inspection of a catena				x	x
Load ring/frame					
Crack detection (welded and machined parts) (*)	x	x	x	x	
Heater System					
Removal, inspection and reinstallation thereof	x			x	
Inspection and cleaning of vaporiser and filter (*)	x			x	
Inspection and replacement of hoses (*)	x			x	
Inspection and replacement of pilot flame ignition unit (*)	x			x	
Sealing of fittings (*)	x			x	
Pressure and leak test (*)	x			x	
Disassembly and assembly of fuel	x			x	



Tasks	Balloon			Airship	
	Hot Air	Gas	Tethered Gas	Hot Air	Gas
cell (*)					
10-year inspection of fuel cell	x			x	
Basket/Gondola					
Removal, inspection and reinstallation thereof (as applicable)	x	x	x	x	x
Fabrication and inspection of a suspension cable or rope (*)	x	x			
Removal/installation of padding	x	x			
Removal/installation of belts/safety harness				x	x
Removal/installation of essential elements of the cabin	x	x	x	x	x
Fabrication and inspection of a basket wire	x	x	x		
Inspection of operational equipment and its fixation points	x	x	x	x	x
Crack detection and repair (welded parts and frames)	x	x	x	x	x
Landing Gear					
Removal, inspection and reinstallation of wheels			x	x	x
Removal, inspection and reinstallation of brakes					x
Removal, inspection and reinstallation of shock absorber					x
Wood Structure					
Structure repair	x	x	x		
Inspect protective coating	x	x	x		
Composite structure					
Laminate repair			x		x
Sandwich structure repair			x		x
Metal Structures					
Crack detection (welded and machined parts)	x	x	x	x	x
Riveting jobs				x	x
Bonding of structures		x	x	x	x
Anti-corrosion treatment			x	x	x
Repair of fairings			x		x
Engine					
Tasks for aeroplanes of comparable				x	x



Tasks	Balloon			Airship	
	Hot Air	Gas	Tethered Gas	Hot Air	Gas
certification level					
Exhaust System					
Tasks for aeroplanes of comparable certification level				x	x
Propeller					
Tasks for aeroplanes of comparable certification level				x	x
Fuel system					
Tasks for aeroplanes of comparable certification level				x	x
Hydraulic system					
Tasks for aeroplanes of comparable certification level				x	x
Pneumatic system					
Tasks for aeroplanes of comparable certification level				x	x
Winch system					
Witness winch inspection			x		

3.4. Draft amendment to AMC to Part-147

AMC 147.A.200(g) is amended as follows:

AMC 147.A.200(g) The approved basic training course

Typical conversion durations are given below:

(...)

(d) (...)

(e) The approved basic training course to qualify for conversion from holding a Part-66 aircraft maintenance licence in any subcategory A to category B2L (with any system rating) should not be less than 800 hours, and should include between 60 % and 70 % knowledge training.



4. Individual comments (and responses)

In responding to comments, a standard terminology has been applied to attest the Agency's position. This terminology is as follows:

- (a) **Accepted** — The Agency agrees with the comment and any proposed amendment is wholly transferred to the revised text.
- (b) **Partially accepted** — The Agency either agrees partially with the comment, or agrees with it but the proposed amendment is only partially transferred to the revised text.
- (c) **Noted** — The Agency acknowledges the comment but no change to the existing text is considered necessary.
- (d) **Not accepted** — The comment or proposed amendment is not shared by the Agency.

(General Comments)	-
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comment	<div style="float: right; text-align: right;">comment by: <i>Trafi</i></div> <p>3</p> <p>If B1.1 mechanic with several B1/B2 type ratings (from ATR42 to EMB-190) wants to have B2L, can he use his work experience for B2L?</p>
response	<p><i>Noted</i></p> <p>The wording for 'experience required to get a B2L licence' is 'maintenance experience on electrical systems and maintenance performed on avionics systems' which are related to the 'System' applied for and to the aircraft group/subgroup.</p> <p>A B1.1 licence only attests that the holder has experience in line with the privileges granted by such licence. This means, as indicated in 66.A.20, experience on airframe, power plant, mechanical and electrical systems and some limited avionics. Only the experience related to electrical systems and avionics could be taken into account, if properly recorded and if applicable to the system ratings applied for.</p>
comment	<div style="float: right; text-align: right;">comment by: <i>Trafi</i></div> <p>4</p> <p>Does the existing B1.1 license cover L1-L5 categories and must they show in B1.1 license form?</p>
response	<p><i>Noted</i></p> <p>GM 66.A.20(a) details which licences cover other categories/subcategories. The B1.1 licence</p>



does not include any L subcategory.

comment

20

comment by: *Luftfahrt-Bundesamt*

The LBA has no comments on NPA 2012-15.

response

Noted

comment

40

comment by: *British Gliding Association*

Comments from British Gliding Association

General Comment on NPA 2012-15

From the point of view of the BGA (as a Subpart F organisation), this proposal can be seen as double regulation, i.e. at the organisation and individual level. This is more so in the UK than some other nations, although there are now a number of Member States with Subpart F Sporting Bodies. The UK has a record of locally managing hundreds of inspectors over several decades, to the satisfaction of our NAA, and with a more than acceptable level of safety. That success has continued under the BGA Subpart F approval under local exemption. The BGA neither sought or need this level of regulation. The cost of maintenance of individual licences, in addition to company approval, will at least double the overhead cost to the customer in UK. There will be no improvement in safety - indeed it will be more difficult for the Subpart F to supervise individual licensees, simply because they feel they will have more autonomy. This is actually a threat to safety in our environment.

The BGA believes that there is still a case for a simpler accreditation given that individuals operate under the umbrella of a Subpart F regime as in UK. The BGA understands that this is not the case in wider aviation circles, but the BGA see no reason why it should not apply in a Sport Aviation context.

response

Noted

Currently, in the absence of a corresponding Part-66 licence, the qualification of personnel involved in the maintenance of sailplanes, powered sailplanes, balloons and airships is performed in accordance with national rules. This has resulted in the coexistence within the EU of very different qualification standards (varying from robust to extremely weak, depending on the country) and in a limitation where certifying staff not working for an Approved Maintenance Organisation (AMO) can only certify aircraft registered in the Member State responsible for their qualification.

In addition, in the case of ELA1 aeroplanes, where Part-66 licences already exist (B3, B1.2 and B2), the qualification is still following national rules due to an opt-out which will eventually finish on 28 September 2016, and which was introduced in Regulation (EU)



No 1321/2014 in order to provide time for the development of a more simplified licence.

In order to address those issues, Article 7(8) of said Regulation requires the Agency to propose a simple and proportionate system for the licencing of certifying staff involved in the maintenance of the aircraft described above.

This resulted in proposing in this Opinion an L licence with the following advantages:

- It provides a common qualification standard for all EU Member States for sailplanes, powered sailplanes, balloons and airships, allowing the licence holders to freely circulate in the EU and perform maintenance on any EU-registered aircraft, applicable to their licence category.
- It provides a simplified licensing system for ELA1 aeroplanes.
- All existing maintenance personnel already qualified in accordance with national rules are entitled to obtain an equivalent L licence (with the same privileges) without further showing.
- For new staff, obtaining the L licence, this should be quite simple since:
 - there is no training required (just examination); and
 - examinations can be conducted not only by Part-147 Approved Training Organisations (ATOs) and CAs, but also by any organisation if agreed by the CA (such as an aeroclub, an association or a manufacturer). **This could be the case of the BGA if agreed by the UK CAA.**
- L licence holders will be eligible for two additional privileges which are linked to two ongoing rulemaking activities:
 - the possibility to perform standard changes and repairs in accordance with the new CS-STAN (RMT.0245 (MDM.048)) on aircraft registered in any EU Member State; and
 - the possibility to perform airworthiness reviews and issue the Aircraft airworthiness Review Certificate (ARC) for any EU-registered aircraft within the scope of their licence category.

Taking into account the above, the fact that all existing certifying staff could obtain the L licence by conversion of privileges without comparing with the Part-66 syllabus, and the fact that the BGA may continue performing the exams (if agreed by the UK CAA), the costs associated to the new licences should be kept to a minimum (although this will depend on each competent authority).

Finally, the Agency has also considered the priorities introduced in the GA Road Map, in particular the one related to granting more privileges to individuals. These additional privileges for independent certifying staff can only be granted if a common qualification level exists throughout Europe.

In summary, the Agency is convinced that the proposed system ensures an adequate level of safety and is simple and proportionate, which is the mandate awarded by Article 7(8) of



Regulation (EU) No 1321/2014.

comment	<p>46 comment by: <i>Luftsport Verband Bayern / Germany</i></p> <p>In General we appreciate the changes proposed by the working group. We ask EASA to proceed as quick as possible to introduce these changes together with the proposals we have made. This will give us to opportunity to train our personnel and close the personnel gaps we are facing now.</p>
response	<p><i>Accepted</i></p> <p>The Agency continues with the rulemaking process and endeavours to issue an Opinion in 2015.</p>
comment	<p>98 comment by: <i>Irish Aviation Authority</i></p> <p>General</p> <p>The Irish Aviation Authority (IAA) has oversight responsibility for a relatively small number of aircraft and maintenance personnel affected by this proposed amendment. In summary we consider that this proposed amendment is overly complex and disproportionate to this sector of aviation.</p> <p>This NPA introduces significant complexity to the existing Part-66 AML, this complexity results primarily from the number of categories, sub-categories to category A and B and sub-categories to category L. In addition rating may include; aircraft type ratings, aircraft sub-group ratings, aircraft manufacturer group ratings, aircraft full group ratings, avionics system ratings. Limitations may include; limitations resulting from national conversion, limitations associated with category B3 and limitations associated with the various category L sub-categories. This level of complexity will cause the Part-66 AML (EASA Form 26) to become extremely cluttered and difficult for licence holders, maintenance organisations and aircraft owners to comprehend. This difficulty in understanding the licence and the associated privileges may introduce a potential safety risk. See comment to Appendix VI.</p> <p>The IAA further considers that the added complexity introduced by this NPA is disproportionate to this sector of aviation and will introduce a corresponding disproportionate increase in workload and cost for NAA's with no apparent increase in safety standards.</p>



response

We have made some suggestions below which we believe would simplify the licensing of the concerned persons and activities whilst maintaining an equivalent level of safety.

Noted

There are two aspects addressed in this proposal:

- a proportionate licence for maintenance personnel involved in avionics on light aircraft (B2L licence); and
- a simple and proportionate licensing system for sailplanes, powered sailplanes, balloons, airships and ELA1 aeroplanes (L licence).

In particular:

B2L licence

The current Part-66 licensing system for maintenance of avionics and electrical systems is not adapted to the lower complexity of light aircraft. Specifically:

- (1) A significant amount of the material applicable to the current Part-66 B2 licence is not relevant to GA aircraft.
- (2) New engineers performing self-study have been reported to have serious difficulties in passing the exams for Module 13, since they do not have any experience in the complex systems applicable to larger aircraft.
- (3) It is too expensive for GA organisations to send their maintenance personnel to a Part-147 ATO in order to attend the 2 400 hours B2 Basic Course, taking moreover into account that, once this personnel obtain the B2 licence, they are likely to leave the GA sector in favour of airlines and large maintenance organisations.
- (4) This problem may not have been very serious over the past years as most of the avionics engineers have been working with licences converted from their previous national qualifications. However, as these engineers are steadily reaching the retirement age, the number of engineers is decreasing in the GA sector.

The proposed B2L licence, in addition to eliminating from the knowledge requirements those aspects linked to complex aircraft, incorporates system ratings to allow the licence holders to start working as certifying staff as soon as possible, even if it is only on certain aircraft systems. **This has been a wide request from the GA industry and is fully in line with the objectives of the GA Road Map.**

L licence

Currently, in the absence of a corresponding Part-66 licence, the qualification of personnel involved in the maintenance of sailplanes, powered sailplanes, balloons and airships is performed in accordance with national rules. This has resulted in the coexistence within the EU of very different qualification standards (varying from robust to extremely weak, depending on the country) and in a limitation where certifying staff not working for an AMO



can only certify aircraft registered in the Member State responsible for their qualification.

In addition, in the case of ELA1 aeroplanes, where Part-66 licences already exist (B3, B1.2 and B2), the qualification is still following national rules due to an opt-out which will eventually expire on 28 September 2016, and which was introduced in the Regulation in order to provide time for the development of a more simplified licence.

In order to address those issues, Article 7(8) of Regulation (EU) No 1321/2014 requires the Agency to propose a simple and proportionate system for the licencing of certifying staff involved in the maintenance of the aircraft described above.

This has resulted in the proposal of an L licence with the following advantages:

- It provides a common qualification standard for all EU Member States for sailplanes, powered sailplanes, balloons and airships, allowing the licence holders to freely circulate in the EU and perform maintenance on any EU-registered aircraft applicable to their licence category.
- It provides a simplified licensing system for ELA1 aeroplanes.
- All existing maintenance personnel already qualified in accordance with national rules are entitled to obtain an equivalent L-licence (with the same privileges) without further showing.
- For new staff, obtaining the L-licence should be quite simple since:
 - there is no training required (just examination); and
 - examinations can be conducted not only by Part-147 ATOs and competent authorities (CAs), but also by any organisation if agreed by the CA (such as an aeroclub, an association or a manufacturer).
- L licence holders will be eligible for two additional privileges which are linked to two ongoing rulemaking activities:
 - the possibility to perform standard changes and repairs in accordance with the new CS-STAN (RMT.0245 (MDM.048)) on aircraft registered in any EU Member State; and
 - the possibility to perform airworthiness reviews and issue the Aircraft airworthiness Review Certificate (ARC) for any EU-registered aircraft within the scope of their licence category.

Regarding the number of subcategories L1 to L5, this was needed in order to reflect the reality, where maintenance personnel only work and have experience on a particular field (for example sailplanes or balloons, but not both of them at the same time).

Finally, the Agency has taken into account the priorities introduced in the General Aviation Road Map, in particular the one related to granting more privileges to individuals. These additional privileges for independent certifying staff can only be granted if a common qualification level exists in Europe.

As a summary, the Agency is convinced that the proposed system ensures an adequate



level of safety and is simple and proportionate, which is the mandate given in Article 7(8) of the above-mentioned Regulation.

comment 102 comment by: *Aircraft Electronics Association - Europe*

Attachment [#1](#)

response *Noted*

The Agency thanks AEA for the support provided in the attached letter.

comment 105 comment by: *Ralf Keil*

Es ist grundsätzlich begrüßenswert, dass sich die EASA dem Thema der Lizenzen für freigabeberechtigtes Personal für die Erhaltung der Lufttüchtigkeit von einfachen Luftfahrzeugen widmet. Das Erreichen einer möglichst kurzfristigen Regulierung ist besonders wichtig, weil offenbar verschiedene nationale Behörden die Übergangsregulierungen, welche Part 66 bietet sehr unterschiedlich und mehr oder weniger restriktiv auslegen.

Unglücklich ist die Veröffentlichung zweier komplett unterschiedlicher Lizenzen (B2L und L) in einer NPA, da beide Lizenzkategorien sehr unterschiedliche Anforderungen haben und damit sehr wahrscheinlich differenziert kommentiert werden.

response *Noted*

It is true that the subjects covered by both B2L and L licences are different, but the Agency thinks that there is no objection to submitting a project for both licences in a single proposal.

comment 106 comment by: *Danish Powered Flying Union*

Danish Powered Flying Union (DMU) is a non-profit organization representing 43 national aeroclubs.

We fully support Europe Air Sports comments.

response *Noted*

comment 110 comment by: *European Sailplane Manufacturers*

The European sailplane manufacturers have a general comment regarding NPA 2012-15



about the proposed B2L and L licences.

The aircraft covered by these new licences are at the lowest end of the full spectrum of aviation – we are dealing here with aircraft belonging to the ELA 1 and ELA 2 “categories”.

This of course includes sailplanes, which are in Europe mostly sailplanes, which have been produced by our manufacturers here in Europe.

These manufacturers see with great scepticism the proposed regulation, because they fear that the proposed rules and processes will be in some member states make matters much worse, as they are already.

To understand our concern, first a description of the status quo:

Sailplanes have been produced in considerable numbers – in Europe we have several 10.000 sailplanes in operation.

Sailplanes often need to be operated on minimum financial impact – especially within gliding clubs the cost of maintenance must not become too high, otherwise these clubs will rapidly loose members.

Until now, an affordable operation of this vast number of sailplanes has been possible due to several different systems of educating and training the needed maintenance staff including the (now in EASA terms so called) certifying staff.

In some member states the certifying staff is in majority consisting of people working on a voluntary basis without or only with minimum salary.

This high number of voluntary certifying staff members often belongs to two groups of licence holders:

First there are licences offering the full range of privileges (as offered now within the proposed B2L and L licences).

Second there are less extensive licences which include typically the privilege for certain inspections on aircraft (i.e. the regarding release to service), but not all for all maintenance jobs (e.g. releasing a complicated repair was not included).

The reason for this layered approach to licensing of certifying staff was, that a as large as possible number of persons coming from those gliding clubs should get the opportunity to get involved with sailplane maintenance technical training.

With this system it has been successfully shown, that operating many thousands of aircraft can be done at very affordable costs in an airport environment, where the majority of members belong to gliding clubs.

As additional benefit a very large number of these members have attained not only the qualification to become a pilot, but additionally learned more about their aircraft during the associated training courses to become such voluntary certifying staff members with reduced privileges.

The manufacturers are very happy that these training and licensing systems exist and feel that loss of such a layered approach is extreme important also for the good technical health



of our European glider fleet.

With the proposed rules and licenses of NPA 2012-15 unfortunately these systems would be destroyed!

Even more alarming we already see the destructive effects right now, as the Part-M rules in combination with non-permissive interpretation by national aviation authorities has already started to make work of these voluntary certifying staff members impossible.

As a result, the demand for the maintenance training courses on a beginners level has already diminished considerably.

If this trend continues and with rules as proposed in NPA 2012-15 in place we see the following bleak future:

Certifying staff for ELA 1 & 2 aircraft will only be according to the B2L and L licenses (or to the even much more demanding B2).

This will be limited to a small number of individuals, who either have a lot of time and money available to invest into a hobby or who will later want to get regarding remuneration for their services.

This will make maintenance for small aircraft like sailplanes considerably more expensive.

Additionally the now quite large number of voluntary persons interested in the technical side of sailplane operations will become much smaller.

Therefore anytime a technical issue surfaces during sailplane operations, then the owner/operator has only two options remaining:

Either he has a B2L / L / B2 licence holder available to look after the problem and release the aircraft to service.

Or he quits the operation until he has such an option.

(In reality we fear that the second option will often not be taken, but that the aircraft would be operated without the proper maintenance.)

The best option – namely to have a large number of persons available, who could take a first look based on proper technical training and then to decide what to do – will not be longer existing, because of the results of NPA 2012-15.

Therefore the sailplane manufacturers will only accept NPA 2012-15 if immediately an option to offer certain privileges to less trained (than described under the B2L and L licenses) technical staff members will be made possible.

We know that the first rulemaking effort by EASA and cooperating stakeholders included such an option and that the now actual effort has been started, because during comitology it was said, that the proposal was considered too complicated.

But for the sake of the reasons stated above, we sincerely hope that existing proven systems



	will not be destroyed and flight safety lowered.
response	<p><i>Noted</i></p> <p>The Agency wishes to point out that your comment is one of the rare sceptical comments about the future of licences in light aviation. A rather large number of comments, as the ones made by Europe Air Sports (EAS), Royal Danish Aeroclub and Luftsport Verband Bayern, encourage the Agency to continue with the next steps of this NPA process.</p> <p>To better control a large number of ELA1 aeroplanes, sailplanes, powered sailplanes, balloons and airships, it has been necessary to set a unique and safe standard of licensing, which should be at an affordable cost as the training requirement has been deleted.</p> <p>Regarding also the comment on economic impact, the personnel holding an L licence may continue to act on a voluntary basis, which does not mean that the costs of light aircraft operation would automatically increase.</p> <p>B2L personnel might be professional, but the cost of employing B2L staff should be lower than employing B2 personnel.</p>
comment	<p><i>112</i> <i>comment by: Royal Danish Aeroclub</i></p> <p><i>Royal Danish Aeroclub is representing the light sport aviation and air sports community in Denmark. The appr. 10.000 members operate in total 1.100 aircrafts.</i></p> <p><i>General:</i></p> <p><i>We thanks the agency for this job with simplifying the regulation regarding the certifying staff especially in the environment in GA.</i></p> <p><i>We do fully support the comments supplied by our European organization, Europe Air Sports, and have only one comment in addition to this. We therefore do not repeat what already has been remarked.</i></p>
response	<p><i>Noted</i></p>
comment	<p><i>116</i> <i>comment by: DGAC FRANCE</i></p> <p><i>General comment: Correspondence between L and B3 modules</i></p> <p><i>Numbering and scope of L and B3 modules are totally different, therefore it is not practical to determine the necessary additional training/exam to obtain a B3 licence for a L licence holder, or to obtain a L licence for a student in the process of B3 training.</i></p>



response *Noted*

It was initially not our intent to have a bridge between L and B3 licence, the reason being that only the ELA1 aeroplanes are common to both licences. L subcategories include also sailplanes, balloons and airships which have very few areas of similitude with aircraft covered by the B3 licence.

In addition, if some knowledge modules are common for ELA1 aeroplanes covered by the L licence and for aircraft up to 2 000 kg covered by the B3 licence, a majority of these modules is defined at a higher level for B3.

As a result, the application for a B3 licence shall require demonstration of all modules with the exception of the common parts.

This is compensated by the statement made in 66.A.25 that 'The holder of an aircraft maintenance licence in the category/subcategory B1.2 or B3 is deemed to meet the basic knowledge training and examination requirements for a licence in the subcategories L1 and L2'.

EXECUTIVE SUMMARY

p. 2

comment 14

comment by: CAA-NL

The Netherlands supports this proposals to further complete the system of Part 66 certifying staff with more proportional licenses for the General Aviation sector. We do have some detailed questions and comments we will give at the various paragraphs of the proposals.

response *Noted*

comment 53

comment by: René Meier, Europe Air Sports

Europe Air Sports, representing National Aero-Clubs and European Air Sports Federations in regulatory matters with European institutions and authorities thanks the Agency for the preparation of NPA 2012-15.

As our organisation covers a very wide range of air sports activities, some of our members will submit their comments directly. We kindly invite the Agency to consider these comments submitted by individuals, clubs or groups active at the forefront of general aviation, working in a not-for-profit-environment, most activities being un-paid, nevertheless accepting the highest possible standards in training of the personnel and in maintaining privately or club-owned aircraft not used for commercial air transport operations.

We carefully read the document proposed. Our comments will essentially cover the more



general topics, we leave the initiative to deal with the more specific topics to our specialised federations like e.g. the European Gliding Union (EGU), and the European Powered Flight Union (EPFU), and to the National Aero-Clubs.

Particularly important to our entire community is the existence of unrestricted grandfather rights: No-one up to now active in the maintenance field of light aircraft becomes less capable just because of the fact that new regulations are created, safety does not increase just by implementing new provisions. What counts are human factors like capability, capacity, integrity, sound judgment, good airmanship.

As a general remark we like to state that in our view the approach to such new licences is a positive step. We believe to see, however, that a real danger of escalating costs exist, and that a level playing field will, for many years to come, not be reached.

Another aspect rendering difficult to submit appropriate comments is the fact that we are not informed precisely enough at this very moment of the probable outcome of the activities of "Part-M for General Aviation Task Force".

A general feeling among our members is that the Agency believes very much in organisations, not so much in individuals. We see it a bit differently: We firmly believe in competent, well trained individuals, forming organisations. It is in our view not only the form of an organisation that contributes to safety, it is first of all the selection of the best-qualified individual to perform a task, particularly in the sports and recreational sector of aviation where one-man/one-woman organisations perform excellently.

response

Accepted

The Agency thanks the Europe Air Sports association for the support to the proposal made in this NPA.

Regarding the comment on the existence of unrestricted grandfather rights, the Agency points out that the conversion process listed in 66.A.70 applies similarly as for the conversion of previous national qualifications in the field of GA, where no comparison of basic knowledge is required but a comparison of privileges only.

We agree with your comment that 'it is first of all the selection of the best-qualified individual to perform a task', and this is the reason why this NPA aims at qualifying correctly and in a harmonised way the personnel to ensure the best level of knowledge and experience.

comment

74

comment by: SVFB/SAMA

NPA 2012-15121231-0318 by **ECOGAS****ECOGAS** is the European federation of national General & Business Aviation representative

bodies cooperating across the continent and representing General Aviation with the European Aviation with the European Authorities.

1/139 Propose a simple and proportionate system for the licensing of certifying staff involved in the maintenance of aircraft.....and....ELA1 aeroplanes.

Such a system is not possible with the current basic regulation, because it monopolizes the theoretical training to PART 147 approved organisations.

The prerequisites to get a 147 approval, the necessary hardware, the organisation structure have all originally been designed with CAT in mind: the same inadequate approach as with Part M was followed. The consequences: organisations providing generations of staff equivalent to a L Licence and equivalent up to today's ELA1, ELA2 and group 3 level (licences) are cut off from training, because they can not organize themselves according to the prescriptive Part 147. If they do, the training is prohibitive expensive. This leads to loss of business and loss of jobs.

Students are forced into Part 147 organisations.

Part 147 organisations are well suited and competent for A320, A330, A340 and typical airline type aircraft training. They may even be competent for the lower end of aircraft. However training for the lower end of aircraft up to Group 3 aircraft cannot be provided economically by large CAT training organisations. It can not be provided either by SME-organisations forced into complex part 147 structures.

EASA respectively the EU must reconsider if what they say: "propose a simple and proportionate system" is true and why, what worked before EASA is not allowed to work now. This would mean that for training up to and including B3, associations, clubs, small non profit organisations must be encouraged by and supported through adapted regulation to provide such training and not **discouraged as by present regulation**. Unfortunately the discouragement remains after the proposed regulation in this NPA 2012-15 as well.

The costs to set up and maintain today's Part 147 organisation are prohibitive to any non profit or low profit or SME profit organisation. Therefore the opportunity to provide a good and cost efficient starting point for future aviators has become a matter of the past. Once more EU (& EASA), by way of making simple things complex, are erasing jobs and opportunities instead of promoting them.

Regardless of all the numerous calls for job creation, promoting initiatives, support of SME's: EU (& EASA) are talking about it but they do not deliver.

A new, and we mean a **completely new way** of thinking and acting is required if the lower end aviation, the starting point for many future jobs and careers, shall be promoted.

response *Partially accepted*

The Agency does not agree that 'proposing a simple and proportionate system for licensing'



is not possible and is of the opinion that actually the opposite is the case.

The Agency agrees with your comment that the training for small aircraft may not create financial interest to Part-147 ATOs.

However, the Agency does not agree with the following statement: 'by way of making simple things complex, are erasing jobs and opportunities instead of promoting them'.

In fact, the Agency has considered that training for an L licence is not required, therefore, there is no obligation for new applicants to attend a training in a Part-147 ATO, only to sit an exam. The exam may even be conducted in organisations 'as agreed by the authority', which means that the decision lies with the authority to agree that any sort of organisation, as for example an association, aeroclub or manufacturer, may evaluate the applicant's basic knowledge.

Training in a Part-147 ATO on basic knowledge for a B2L licence remains as for a B2 licence, but only on the aircraft avionics systems applied for.

comment 90

comment by: René Meier, Europe Air Sports

Final combined comment

The main points in a condensed form:

Statements received:

- a) The Agency's proposals show in the right direction and are welcome.
- b) We urgently ask for a EASA-wide uniform set of training and examination material, this to be accepted by all NAA with no opt-outs allowed. Many of our members do not think that the NAA will be in a position to handle these new B2L and L Licences adequately and without delay.
- c) There are doubts as regards the sustainability of the measures by attracting young people choosing a career in aviation (maintenance).
- d) We have to insist on comprehensive grandfather-rights.

These statements prove

for a) above: Basically, the proposals of the Agency are welcome.

for b) above: Never a level playing field will be reached when opt-outs are granted and when the creation of the materials required as well as the introduction of these new licenses is delegated to the NAA. Negative situations experienced with the original Part-M introduction still are present, no-one wishes a repetiton.

for c) above: Also aviation maintenance lost much of the glamour of the earlier years.

for d) above: If grandfather rights are not granted to the maximum extent costs for re-checks, re-examinations will arise. This is not acceptable to us. Many fear massive cost



	<p>increase, more bureaucracy, no safety gain.</p> <p>Conclusion</p> <p>The Agency should in our view invite industry to study and submit proposals for all training and all examination material to be used by all member states, as it was done .e.g. when FDTL was discussed or with the "Hawk" study.</p> <p>Advantages for all stakeholders:</p> <ol style="list-style-type: none"> 1) No additional tasks for the NAA. 2) Uniform set of documents EASA-wide. 3) Creates a level playing field and promotes free circulation of persons. 4) No additional costs. <p>Disadvantages for all stakeholders:</p> <p>None</p>
response	<p><i>Noted</i></p> <p>Your comments:</p> <p>Comment a): The agency welcomes this comment.</p> <p>Comment b): The details added in Appendix VII with regard to basic knowledge examinations for each subcategory of L licence serve the purpose of setting a minimum level of knowledge and should help to standardise the content of training in every country.</p> <p>The opt-out on the dates for implementing the rule is not under Agency control, but the responsibility rests with each Member State.</p> <p>Comment c): The interest of young people to choose a career in light aviation may rather largely depend on the personal interest of each person in the aviation sector. Simple licences (as the one proposed) and the possibility to move within Europe and certify any EU-registered aircraft may help in that respect.</p> <p>Comment d): Grandfather rights are granted by the provision in 66.A.70 to convert national privileges without a need to compare the previous syllabus.</p>

comment	<p><i>107</i></p> <p style="text-align: right;">comment by: <i>Danish Soaring Association</i></p> <p>The Agency deserves credit for this job which in many ways are simplifying the regulation regarding the certifying staff for sailplanes and powered sailplanes.</p> <p>We support the comments supplied by our European organization, Europe Air Sports and European Gliding Union as well. We do not want to repeat what already has been remarked by them. We only have a couple of amendments to the above mentioned remarks.</p>
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response *Noted*

comment 131

comment by: *T.Grether*

Attachment [#2](#)

"This has created a decrease of the number of certifying staff available to maintain this category of aircraft, with the risk that in the future less staff will be available to maintain light aircraft;"

In Germany a high number of aviation professionals started their career in non-profit clubs operating ELA 1 aeroplanes by learning skills and techniques which are required for maintenance doing on those aeroplanes.

These people are certified by the Deutsche Aeroclub (DAEC) and his suborganisations to do maintenance like small inspections and repairs in accordance with their national licence. See additional file: [TEKO_Richtlinie_2000_R6.pdf](#)

The training for the national licences to do simple maintenance for example on gliders and motorgliders is about 5 days.

In accordance with Part M, Appendix VIII Pilot Owner Maintenance it's not allowed to issue a certificate release to service for a complete visual inspection in accordance with manufacturers maintenance manual. Only single ATA chapters are covered. ATA Chapter 5 (Inspections) is not included in Pilot Owner Maintenance.

In the future a L-licence holder must issue the CRS for a complete inspection. The duration of training for L1 (sailplane) is in accordance with this NPA (Page 95/96) 205 hr. For a motorglider(L2) 250 hr. In conjunction with part 147 regulations the tuition hours per day is limited to 6hr. This means to get a L1 licence nearly 35 days or 7 weeks (5-day week) is necessary, for L2 about 8,5 weeks.

People do the training in accordance with DAEC regulations during their leisure time. But nobody doing volunteer work is able to fulfill all requirements for a L-licence.

Therefore in the future is nobody willing working for a non-profit club. These means that less staff will start an aviation career in a club too.

The enormous gap between the national regulation and the planned new easa regulation should be discussed additionally.

response *Noted*

To compare the proposal in this NPA with the TEKO licensing system (+ Prüfer Klasse 3), an average of 5 weeks is needed in the TEKO system, whereas no training is required with the proposal in this NPA, only knowledge demonstration by exam.

In addition, applicants having 'simple maintenance experience' may be issued an L licence



with the same privilege than before the conversion. For new applicants, the privilege for applicants with no sufficient experience will be restricted by a limitation to exclude certain complex maintenance.

The Agency endeavours to simplify the content of basic knowledge requirements but the proposal must also ensure a minimum level of safety.

A. Explanatory Note — I. General

p. 4-5

comment

27

comment by: *Ian HEY*

Overall the intention to introduce the L licence is welcomed. It is however to be expected that the L licence will cost money to obtain and to keep, which will deter its use in sporting organisations.

Therefore, the existing ability for individuals to operate as authorised maintenance persons under the umbrella of a Part M, subpart F organisation, as currently occurs in the British Gliding Association (BGA), must not be lost. This latter arrangement allows the sporting organisation to maintain control of glider maintenance in the UK, ensuring that essential safety information is disseminated and consistent standards are applied.

If this existing modus operandi was lost, it would damage gliding in the UK by reducing the number of inspectors and making it much more difficult for the BGA to control and monitor glider maintenance in the UK.

response

Partially accepted

The requirement in this NPA is appropriate for defining a simple and proportionate system for the licensing of the personnel involved in the maintenance of lower complexity aircraft.

The purpose is to create a licence, simpler than that required for the B1.2 and B3 licences.

The knowledge required to obtain an L1 or L2 licence shall be demonstrated by exam only. The Agency feels that this is a reasonable knowledge requirement for individuals to operate as authorised maintenance persons under the umbrella of a Part-M, Subpart F ATO or as simple individuals.

comment

73

comment by: *René Meier, Europe Air Sports*

Page 4/139

A. Explanatory Note

İ. General

Thanky for this text, we have one question: When will a clear process for national licence



conversion be installed? And: How such a process can be kept at a strict minimum?

response *Noted*

The process of converting national qualifications to L licences is already in place in Part-66. Points 66.A.70 and 66.B.305 and the related AMCs provide for such conversion, and contain some alleviated conversion conditions for non-large aircraft not involved in CAT (our domain of light aircraft, sailplanes, balloons and airships).

The alleviation is such that the conversion is made in a way that national privileges before and after entry into force of the regulation remain the same.

comment

75

comment by: *SVFB/SAMA*

4/139

Para 2. Quote : “In the meanwhile, in 2010, the Rulemaking Directorate had launched another rulemaking activity by Term of Reference (ToR) 66.0274, whose objective was to introduce in Part-66 an avionics licence adapted to the lower complexity of General Aviation aircraft. “

As much as we are **welcoming** this initiatives, the succession of such initiatives shows that regulation had been set up indifferent to needs, circumstances and risks of GA & BA and this trend is still imminent or even dominant the EASA/ICAO system.

Para 3.

PART 145 needs to be changed because the boundaries between CAT, commercial and non commercial are not set in an appropriate and an supportive way.

response

Noted

Part-145 is modified in this Opinion by the introduction of L and B2L licences, because some organisations may require a Part-145 approval for maintenance on large aircraft or non-large aircraft, sailplanes and light aircraft.

In Part-145, no link to CAT and non-CAT is made, those are included in Part-M.

An organisation wishing to have lighter rules may apply for a Part-M Subpart F maintenance organisation approval.

A. Explanatory Note — IV. Content of the draft Opinion/Decision

p. 6-7

comment

47

comment by: *Luftsport Verband Bayern / Germany*



A.IV. 19: The text inside the brackets does not match the appendix IV header which makes the paragraph difficult to understand.

A.IV. 16ff : In Germany it will still be impossible to convert existing national DAeC-privileges into an L-license because the German LBA insists that this technical staff did not have a certifying privilege before. With the proposal by this NPA a certifying license will only be granted if full examination has been passed. Not all our staff does have full privileges comparable to the new training modules so substantial training will be required to close the gaps, even if credits will be granted for the experience.

We ask the EASA to change the requirements in such a way that an L-license can be granted if the applicant successfully passed examination of all modules 1, 2, 3, 7, 9, 13 and one of the modules 4, 5, 6, 8, 10, 11 or 12. This will allow conversion of existing experience and training into the new system without the need for substantial additional training of modules which existing staff does not have and does not need.

response *Partially accepted*

The Agency already made very clear in 2011, in the current GM 66.A.70(1), that certifying staff privileges should not be confused with the privileges associated with airworthiness reviews. The conversion provisions contained in 66.A.70 are applicable to personnel performing the functions equivalent to certifying staff, which in the EU system means those persons who could sign maintenance actions and, as a consequence, make the aircraft ready for flight. Airworthiness review staff only perform the airworthiness review at given intervals (typically from six months to three years) and this cannot be seen as declaring the aircraft ready for flight after maintenance.

The requirement in 66.A.70 for conversion of privileges in GA considers the privileges in the national system, and does not require a comparison of training syllabi against Part-66.

As a result, the applicants having limited privileges in the national system may be issued an L licence with the same privileges as in the national system. Appropriate limitations may be added in the licence to reflect these privileges. Please refer to GM 66.A.70(d) and the response to Comment No 73 from EAS.

Please also note that the subcategories for the L licence have been changed to allow, for example, to obtain a licence for composite sailplanes. As a consequence, it is not necessary to pass all the modules to obtain a licence. Another example is that there is no need to pass module 8 in those cases where there is no engine.

comment 76

comment by: SVFB/SAMA

6/139

Para 14&15.

The system rating proposal is fully supported. This approach should be extended to the B



	<p>Licence as well.</p> <p>6/139</p> <p>Para 18</p> <p>The scope of 145 should be restricted to CAT and aircraft >5.7 T. We cannot see commercial air transport which by definition is “carriers according community” law dealing with L, LSA, ELA 1, ELA2 and group 3 aircraft. The basic regulation must be revised to reflect this appropriately, otherwise all revisions of the regulation remain patchwork and will not promote innovation and competitiveness of the GA</p>
response	<p><i>Not accepted</i></p> <p>Although the Agency thanks SVFB/SAMA for supporting the NPA, we kindly remind that the TOR did not provide for modifying the B2 licence. This may be effected by another rulemaking task further to a proposal by RAG/TAG and SSCC.</p> <p>Your comment on Part-145 is not correct because some organisations are already approved for light aircraft in accordance with Part-145, at line or at base stations or both, depending on how they carry out maintenance at field locations. With this NPA, this may even include ELA1 aeroplanes, sailplanes or balloons at Part-145 ATOs in addition to the M/F organisations or independent certifying staff, and no change to the Basic Regulation is necessary.</p>
comment	<p>77 comment by: SVFB/SAMA</p> <p>7/139</p> <p>Para 22 The law (either basic and or implementing) should be rewritten in a form an manner which allows to establish the necessary theoretical training (and examination) for L, LSA, ELA1 &2 in a simple and efficient manner outside of 147 institutions, to promote GA.</p>
response	<p><i>Accepted</i></p> <p>Please refer to the response already provided to your Comment No 74.</p>

A. Explanatory Note — V. Regulatory Impact Assessment

p. 8-13

comment 55 comment by: René Meier, Europe Air Sports



Page 11 and 12/139

Option 2

Economic impacts

The Agency writes "it might lead NAAs to modify licensing and examination management system and impose additional cost...". This means: Additional costs will appear, nothing will become cheaper, no cost reduction will be possible.

Rationale

A negative cost-benefit ratio will be the result, therefore no more young people will be willing to enter aviation, the GA maintenance organisations will not employ a really significant number of B2L holders as there will be no lower costs. As long as the NAA play a dominant role in the field of licensing a level playing field will not be reached.

7. Conclusion and preferred option

Number 2 also is our preferred option. What the Agency writes with regards to attracting young people and thereby eliminating the potential understaffing of certifying staff and that rulemaking in this area is probably the option as it will be beneficial does not sound very convincing nor promising: As we learned from the past more rules never increased attractiveness, on the contrary, the fewer the rules the higher the appeal to do something special.

response

Noted

The sentence in the CRD that reads: 'it might lead NAAs to modify licensing and examination management system and impose additional costs' was related to NAAs as they need to adapt their computerised programmes for issuing licences to new licence categories — we had some information that this was the case in certain countries.

This sentence was not aimed at individuals. The requirement to obtain an L licence entails some training and experience, but there is an investment to be made for being licensed, as for any licence.

The Agency makes every effort to set a basic knowledge requirement where the required amount of knowledge is the minimum in order to reduce costs without affecting safety.

The level of safety will be increased in the countries where the national system did not require any knowledge or a low level of knowledge for carrying out maintenance and certifying aircraft.

comment

78

comment by: SVFB/SAMA

10/139

Second alinea



“...the alternative to self-study...”

“...the majority are small organisations that can barely support the training cost”: this is wrong, they cannot bear the training costs barely they can't bear it **anymore at all**. This is reflected in the number of licenses issued which steadily is decreasing to a level of around 50 % compared to Pre EASA training levels for light aircraft. This decrease in the delivery of light aircraft licenses is an major safety concern for GA.

response *Accepted*

The Agency agrees on the principle of your comment, and this strengthens the need to set lighter standards for licences in light aviation as proposed in this NPA.

comment 79

comment by: SVFB/SAMA

11/139 the problem with the “do nothing” option is that it refers to a wrong baseline, to the B2 and not to the state of training before EASA. The “do nothing” option would have been a suitable option before EASA but as the system is set up, we are dealing unfortunately with a wrong baseline. This leads to the quoted “none” impact because the wrong development and change of baseline with introduction of EASA is ignored. The damage has already been done and is ignored here in this NPA as well.

response *Noted*

It is right that the ‘do nothing’ option refers to the existing B2 licence, where maintenance organisations and owners of aircraft would continuously need to hire the services of B2 avionics engineers. Please note that the state of play before EASA did not allow mutual recognition, and this recognition was one of the main objectives of the Part-66 licensing system.

Please note that the number of B2 personnel might seriously decrease in the future, thus creating more difficulties in hiring personnel qualified for avionics and increasing the costs. This is the reason why personnel qualified in a more appropriate way, as proposed by the B2L licence (i.e. for some systems only), would better meet the needs.

comment 80

comment by: SVFB/SAMA

12/139

Para 7.

Under this circumstances option 2 is the only option. However reducing the theoretical syllabus only by 25%, given the much higher training cost of the training mainly due to modular examination, greatly reduces the benefit of the B2L. It will not produce enough



incentive to improve the marginal number of new trainees and/or will not attract the required number of today's youth for an aviation career.

13/139 Subject to L: the same arguments as above in ref to page 12/139 apply but even much more so in case of the L license.

response *Noted*

The arguments developed here have been considered in the RIA:

- reduction of basic knowledge requirements at such point that training for an L licence is no more required, only sitting for the exam; and
- regarding the B2L licence, the great interest is to offer a modular and proportionate system by reducing the large Chapter 13 which is excessive for GA and splitting it into different 'aircraft avionics systems' that the applicant may select at the time of application.

Please note that the main problems exposed by the industry in order to initiate the task were not linked to the duration of the training but to the following:

- the difficulty to pass the exams of the full module 13 when performing self-study because it included systems typical of large aircraft where the applicant (working in the GA field) did not have experience;
- the impossibility to start working at least on certain systems until the full B2 licence was obtained; and
- a situation where the B2 licence holders would decide to leave the GA field and move to the commercial one.

B. Draft Opinion — I. Regulation EC (No) 2042/2003 (Cover Regulation)

p. 14-15

comment 48

comment by: *Luftsport Verband Bayern / Germany*

Article 2 I) ii): "of 2000kg MTOW or less" can be deleted. There are no sailplanes above 850kg

response *Not accepted*

The Agency is aware that the MTOM of sailplanes is currently 850 kg, but the wording 'of 2 000 kg MTOW or less' is a repetition in Regulation (EU) No 1321/2014 of the definition of



ELA2 aircraft in Regulation (EU) No 748/2012 (Part-21).
The introduction of a different definition is not possible.

comment	<p>59 comment by: <i>René Meier, Europe Air Sports</i></p> <p>Page 14/139</p> <p>Article 2 Definitions</p> <p>"troubleshooting" is used in the text, it should be defined.</p> <p>Rationale</p> <p>In doing so misunderstandings and misinterpretations will be avoided. Please add a definition to the list proposed, tailored to the needs of our community.</p>
response	<p><i>Partially accepted</i></p> <p>'Troubleshooting' is already defined in GM 66.A.20(a), together with other words as 'electrical system', 'avionics system', 'simple test' etc.</p>

comment	<p>100 comment by: <i>Aircraft Electronics Association - Europe</i></p> <p>The definition of maintenance should be clarified to not only address pre-flight but also servicing. Servicing of fuel and oil is not considered maintenance while servicing of oxygen and hydraulic fluids would be.</p>
response	<p><i>Partially accepted</i></p> <p>The wording 'maintenance' is already defined in Article 2 ('Definitions') of Regulation (EC) No 1321/2014 as follows:</p> <p>'(h) 'maintenance' means any one or combination of the following activities: overhaul, repair, inspection, replacement, modification or defect rectification of an aircraft or component, with the exception of pre-flight inspection;'</p> <p>which means that any sort of servicing is considered as 'maintenance'.</p> <p>Only the pre-flight inspection is not considered as 'maintenance' because this is the only task which does not require a Certificate of Release to Service (CRS) by licensed personnel.</p>

comment	<p>114 comment by: <i>DGAC FRANCE</i></p>
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	<p>Cover regulation :</p> <p>This NPA does not address Article 5 item 6 and article 7 of Commission Regulation EC n° 2042/2003 which should be revised to introduce application dates for sailplanes and balloons as well as a transition phase which is needed to consider national licences. DGAC suggest such items to be introduced.</p>
response	<p><i>Accepted</i></p> <p>The CRD has been amended to include:</p> <ul style="list-style-type: none"> — the date by which the NAAs will have to start issuing L licences; and — the date by which the certifying staff will be obliged to use the L licence.

B. Draft Opinion — II. Annex II (Part-145) to Regulation (EC) No 2042/2003 — 145.A.30

p. 15-16

comment	<p>81</p> <p>16/139</p> <p>(g) we do not know any aircraft up to including group 3 and ELA 2 aircraft whom are undergoing “line maintenance”. We emphasize this because this highlights the discrepancy within the regulation. All lower end maintenance activities would be better compromised in one single chapter in the respective part or a separate dedicated part.</p> <p>Para h 2.</p> <p>We are not aware that there is a differentiation in aircraft up to ELA2 and higher including most of the A/C <5.7 T as to “base and line maintenance”. This terms are associated to “Airline Transport” environment.</p> <p>145.A.35 same remark: what is line maintenance & base maintenance in glider maintenance (LSA ELA1 ELA2 GROUP 3 and even some GROUP 2 A/C) ?</p>	comment by: SVFB/SAMA
response	<p><i>Partially accepted</i></p> <p>There are some organisations within the EU which are already approved for aeroplanes of Group 3 at line and others at base stations. It is wrong to think that the concept of line maintenance is associated with only large commercial aircraft.</p> <p>Your last comment: Similarly, a maintenance organisation may request to be Part-145 approved to carry out maintenance on gliders. The rule must include such provision.</p>	



B. Draft Opinion — III. Annex III (Part-66) to Regulation (EC) No 2042/2003 — 66.A.3

p. 19-20

comment

1

comment by: *Zeppelin Luftschifftechnik*

Zeppelin does not agree to Point 66.A.3 and proposes to amend it in the following:

- Category C

The licences is applicable to aeroplanes, ~~and~~ helicopters **and airships > ELA 2**

Reason:

The NPA states:

- Airships > ELA 2 integrated into Group 1 aircraft,

but Category L5 mechanical licence release to service **after base maintenance** not included.

- Category C mechanical licence regulated for **aircraft and helicopters only**,

So in future airships >ELA 2 can not be released to service in their entirety after base maintenance.

As the worldwide population of airships >ELA 2 is very small, the personnel with the respective airship licences is very limited.

So the inclusion of airships >ELA 2 into the Category C mechanical licence is vital for the maintenance of airships in air carrier service.

response

Noted

According to 145.A.30(h)1, the category C licence is only needed for base maintenance of large aircraft. An airship is not a large aircraft (even if it is classified as a Group 1) and, as a consequence, the base maintenance can be released according to 145.A.30(h)2 by L5 and B2 licence holders.

In addition, persons holding appropriate national privileges can be issued an equivalent L5 or B2 licence by conversion.

comment

82

comment by: *SVFB/SAMA*

19/139 we support that B2 is applicable to all aircraft. A system rating approach for all aircraft except group 1 similar as for B2L would be a real innovative approach.

B2L System ratings: a progressive system and would be very beneficial for B2 as well.

response

Not accepted

Although your statement about the B2 licence makes sense, it was not planned in the TOR to



include any modification to the B2 licence. In addition, please note that for Group 1 aircraft full type training is required. Defining type training based on system ratings will be not easy to achieve. Please refer to the answer provided to Comment No 76.

comment 99

comment by: *Aircraft Electronics Association - Europe*

The introduction of 'system ratings' for general aviation aircraft is a proven process that was used throughout Europe prior to EASA by many of the European NAAs. The adoption of this rating approach by EASA is an exceptional addition to the licencing structure.

This approach should be evaluated for expansion into Group 1 aircraft.

response *Partially accepted*

Your support is appreciated. However, the working group on the B2L licence did not envisage to include complex motor-powered aircraft. In addition, it is not sure that the process of system ratings could be simply transposed to Group 1 aircraft.

A possible extension to complex aircraft should be addressed by another rulemaking task.

comment 120

comment by: *Irish Aviation Authority*

The deviation from the current numbering system (B1, B2, B3) introduces an additional level of confusion and complexity to the licence.

Commission Regulation (EU) No 1149/2011 introduced the category B3 licence with associated group rating and limitations for; "piston-engine non-pressurised aeroplanes of 2000 kg MTOM and below", the B3 is effectively a lighter version of the B1 (B1.2). We would suggest the following changes in an effort to reduce the complexity of what is proposed in this NPA;

- Continue with the current, licence category numbering system.
- Amend the current B3 category to include the proposed L category and sub-categories.
- Introduce a category B4 instead of the B2L, this would follow the current convention where B4 would be a light version of B2, this would reduce the complexity of the overall licence (EASA Form 26)
- The B4 category (B2L) should not have system ratings as these are unnecessary and only contribute to the complexity and confusion.



response

Not accepted

Continuing with the current numbering B1, B2, B3 and then B4 was an option, but creating a licence for light aircraft was proposed by the group as a B2 licence for light aircraft, thus resulting in B2L. This was justified by the fact that the B2L licence was a stepped approach which eventually could result in the issuance of a B2 licence. We do not really see how the use of a letter/number (B2L or B4) can change the complexity of the licensing system.

Your comment: 'Amend the current B3 category to include the proposed L category and sub-categories'. Point 66.A.25(b) already includes a statement that the holders of a B1.2 or a B3 licence are deemed to meet the basic knowledge and examination requirements for a licence in subcategories L1 and L2, but certainly not for the other aircraft categories (balloons and airships).

Not having a system rating for the B2L licence contradicts the essential proposal made by the stakeholders who specifically asked for this particular concept of system ratings, in order to allow maintenance personnel to start obtaining certifying staff privileges as soon as possible, without the need to cover all aircraft systems.

B. Draft Opinion — III. Annex III (Part-66) to Regulation (EC) No 2042/2003 — 66.A.5

p. 20

comment

56

comment by: *René Meier, Europe Air Sports*

Page 20/139

66.A.20 Privileges

To us it is not clear how the licence categories interface with the proposed "group" structures, particularly not in the field of "powered sailplanes" and "touring motor gliders", where in our view the list of this paragraph and Part-FCL are not identical, but should be.

Rationale:

In our view "aircraft groups" and "licence categories" should cover exactly the same topics to simplify training and licence validity maintenance.

Question:

Is there another regulatory agenda we do not know behind this inconsistency?

response

Partially accepted

The Agency agrees on the fact that there is an apparent mismatch between the groups and the subcategories of L licence, but the aims are different.



Groups cover all aircraft:

- Group 1: complex aircraft (including large airships);
- Group 2a: single turboprop aeroplanes and 2b/2c for helicopters;
- Group 3: piston engine aeroplanes; and
- Group 4: sailplanes, motor-powered sailplanes, balloons and airships,

while the Part-66 licence subcategories of L are ordered differently:

- L1 and L1C for sailplanes;
- L2 and L2C for powered sailplanes and ELA1 aeroplanes;
- L3H and L3G for balloons;
- L4H and L4G for airships; and
- L5 for large gas airships.

Touring Motor Gliders (TMG) belong to the category of powered sailplanes.

It is, therefore, impossible to align the Groups with the L subcategories.

In addition, the groups and subgroups are for use by the authorities only for the management of type ratings, but the licence applicants for an L licence will deal only with subcategories L1 to L5. This should ease the understanding of the L licence and there would be no mix between groups and subcategories.

In answer to the last comment, the FCL licences are created following the logic of the aircraft operation, aeroplanes requiring LAPL(A) or PPL(A) and sailplanes requiring LAPL(s) or PPL(s). TMG are in the middle requiring supplements from each licence category. In Part-66, ELA1 aeroplanes are associated with motor-powered sailplanes which include TMG and require L2 licence because their design is similar. L2 includes L1 because the requirement for L2 is larger than for L1. Part-66 and FCL do not share the same logic.

comment

119

comment by: DGAC FRANCE

66.A.5 :

Inconsistency related to group 4 definition

As presented, the table of GM 66.A.5 describing aircraft groups indicates that group 4 includes ELA1 aeroplanes. This is not in line with the definition of group 4 within §66.A.5. As currently defined in that paragraph, the ELA1 aeroplanes fall under group 3 category.

Considering the aim to require a L license and not a “higher” license to address ELA1 aeroplanes , DGAC recommends to modify §66.A.5 as follows:

- - *group 3 : piston engine aeroplanes other than those in group 1 and other than ELA1*



aeroplanes

- - group 4 : sailplanes, powered sailplanes, balloons and airships, other than those in group 1, and ELA1 aeroplanes.

(assuming an ELA1 aeroplane less than 1200 kg, but powered by a single turbo prop (which would be then be a sub-group 2a) does not exist.)

response *Partially accepted*

You are right that there is a mistake in GM 66.A.5, which has been corrected.

However, it is clearly the intent that all piston engine aeroplanes (other than the complex ones) are in Group 3, and this includes the ELA1 aeroplanes, and that Group 4 includes only sailplanes, motor-powered sailplanes, balloons and airships (other than the complex ones).

You are right, this assumes that no ELA1 aeroplanes would be fitted with a turboprop — in such case they would belong to subgroup 2a.

These groups and subgroups are not reflected on the L licences, where only the subcategories and ratings are shown.

B. Draft Opinion — III. Annex III (Part-66) to Regulation (EC) No 2042/2003 — 66.A.20

p. 20-21

comment 12

comment by: *Ian HEY*

Section 6

The wording of the last paragraph of Section 6 is not acceptable unless experience on sailplanes, enabling for instance no restrictions on an L1 rating are applicable to the L2 rating. Unless this is the case, gaining L2 approval, but with experience of a limited selection of powered aircraft constructions, would remove previously gained L1 privileges.

response *Partially accepted*

The limitations on L licences are described in 66.A.45(h) (and are related to the structures of airframes or to the size of gas balloons).

The text of 66.A.20(a)6 is modified to include the reference of 'limitations in accordance with 66.A.45(h)'.

The intent of this paragraph is to explain that any limitation to maintenance on powered sailplanes (category L2) (i.e. wooden structures) applies automatically to maintenance on sailplanes (L1) because the absence of competence on wooden structures applies to both subcategories similarly.

Your last sentence is not correct because you cannot gain a L2 subcategory with a limitation



(experience of a limited section of powered sailplanes or aeroplanes) and get an L1 on sailplanes with no limitation (as the limited experience applies automatically, please refer to the example of 'wooden sailplanes').

comment 21 comment by: *British Gliding Association*

Comments from British Gliding Association

66.A.20 Privileges

(a) 6

Basic or simple troubleshooting on avionic systems should be allowed.

Develop AMC material specifying that simple troubleshooting not requiring the use of complex test equipment requiring a high level of interpretation is allowed for L licence holders.

The majority of sailplane and light aircraft maintenance companies will not have access to a B2 or B2L and for simple troubleshooting this would be inappropriate.

response *Accepted*

The privileges of B2L and L licences have been modified to delete the wording 'except troubleshooting'.

The privilege of a B2L licence is similar to that of a B2 licence but is limited to its system rating. The privilege of an L licence on avionics maintenance, according to 66.A.20(a)6, is to 'work on radio and transponder systems and work on other avionics systems requiring simple tests to prove their serviceability'.

comment 35 comment by: *KNVvL (Royal Netherlands Aviation Association) Technical Committee*

Point 6 second bullet now reads:

work on avionic systems requiring only simple tests to prove their serviceability and not requiring troubleshooting

Electric/avionic systems in (powered)sailplanes are extremely simple compared to avionic systems of large aircraft.

According this definition we still need personell with B2L license for activities which are outside the above definition.

We appreciate the fact that a L licensee is not allowed to work on the internals of



response

COM/NAV/XPDR etc components.

Our suggestion is to drop this restriction completely.

An alternative would be to reformulate the restriction to include regular maintenance work on the avionic systems, but exclude maintenance on avionic components (such as a COM/NAV or XPDR unit).

Noted

The proposed text states in 66.A.30(a)6 that maintenance work on avionics systems allows the holder of an L licence in any subcategory to 'work on radio and transponder systems' but also 'to work on other avionics systems requiring simple test to prove their serviceability'.

The statement 'work on radio and transponder systems' is not limited to 'simple tasks', therefore, it is open to more than simple tasks.

As suggested, this does not include work on avionics boxes which have to be maintained in shops.

comment

44

comment by: *Howard Torode*

66.A.20 Privileges

The European Gliding Union finds the basic privileges of the 'L' licence as proposed in NPA2012-15 to be broadly in line with expectation. However, the burden of regulation, applied both at the organisation level (through Part M) and at the individual level (through Part 66) appears to be a case of over-regulation for non-CAT Sport/General aviation. Since 2008, several Subpart F approved organisations, born out of National Sporting Bodies have been successfully and safely operating under temporary exemption) using certifying staff approved locally (ie. through existing national) qualifications. Given that Part 66 qualified individuals can operate equally on their own authority outside a SubPart F organisation, there seems little need for maintaining the SubPart F umbrella, which comes at a significant overhead cost. Alternatively, and preferably, we see no reason why the SubPart F organisation should not undertake and supervise the education of its own staff, within the limits of its extant approval. This aspect of regulation will not affect operations until the current 'L' licence becomes operational (understood to be in late 2015). We have serious reservations that, after that date, the workforce of licensed engineers will be difficult to sustain – as described in our general comment.

While the cost of approvals will undoubtedly rise, due to the double requirement for approval of both organisation and individual, there will be no corresponding contribution to



safety. In the sport aviation environment it will become increasingly difficult for SubPart F organisations to exercise appropriate standards and control on their certifying 'staff' who, as unpaid contributors to the sport, will possess the autonomy of individual personal qualifications. Only by binding these individuals to the organisation through the personal convenience of common professional indemnity insurance will Sub Part F organisation be able to exercise control of its own population of engineers.

response *Noted*

Please refer to the response to your Comment No 40.

comment 49

comment by: *Luftsport Verband Bayern / Germany*

66.A.20 (a) 4.: What is the difference between "maintenance performed on electrical systems" and "when holding the airframe system rating , performance of electrical tasks"?

66.A.20 (a) 6. headline: "..... and to act as L support staff for the following:"

66.A.20 (a) 6. second indent: There should be a possibility to include "troubleshooting and rectification inclusive installation" into a Module 13 of sailplanes and powered sailplanes. Reason is that these aircraft do have very simple radio wiring and installation and troubleshooting is not a problem for experienced electronic staff. B2L-licence holders will be very rare. With the introduction of 8,33kHz channel spacing a lot of old radios will have to be exchanged to new ones and to fetch a B2-licence holder will put further costs on general aviation. Proven education as an electronic engineer or technician at the discretion of the national authority should give reason to include an appropriate rating into the license.

response *Partially accepted*

66.A.20 (a) 4: There is a difference between the two wordings:

- the first one reads: 'maintenance performed on electrical system include the generation, control and distribution of electrical power (ATA 24); and
- the second one 'performance of avionics and electrical tasks within power plant and mechanical systems', including the installation, repair and removal of electronic components and of electrical lines used on power plant and mechanical systems (i.e. the landing gear).

Holding the 'system' rating is necessary to acquire knowledge on the aircraft mechanical systems.

66.A.20 (a) 6 — Heading: Agreed.

66.A.20 (a) 6 — Second indent: Please refer to the response provided to Comment No 21 from BGA.



comment	<p data-bbox="359 293 395 331">91</p> <p data-bbox="957 293 1498 331" style="text-align: right;">comment by: <i>René Meier, Europe Air Sports</i></p> <p data-bbox="359 376 603 409">Page 20 and 21/139</p> <p data-bbox="359 432 576 465">66.A.20 Privileges</p> <p data-bbox="359 488 1498 566">Basically, we agree with these provisions, we think, however, they will lead to higher costs, with no associated increase in safety.</p> <p data-bbox="359 589 480 622">Rationale</p> <p data-bbox="359 645 1498 880">As the organisation involved (Part-M) and the future licence holder (Part-66) will have to pay separately for their licences, costs will undoubtedly increase with no safety gain. We are not talking about profitability of a business here, we are talking about club members spending their time (and money) on sports activities, encouraging young citizens to think of aviation as a career. For this reason we want the regulator to make the formation of Subpart-F organisations as attractive as possible.</p>
response	<p data-bbox="359 925 443 958"><i>Noted</i></p> <p data-bbox="359 1003 1498 1171">In order to obtain L licences at a lower cost than other licences, the text allows applicants for an L licence to pass the examination in organisations other than Part-147 ATOs as agreed by the authority. This may include small-size organisations and also associations, aeroclubs and manufacturers, as long as they are under an agreement with the authority.</p> <p data-bbox="359 1193 1498 1272">The safety gain is for countries which did not previously have safety regulations or only had some of low level.</p>
comment	<p data-bbox="359 1373 395 1411">94</p> <p data-bbox="1141 1373 1498 1411" style="text-align: right;">comment by: <i>AOPA-Sweden</i></p> <p data-bbox="359 1451 1498 1686">66A20 (a) 6 should be clarified so that installation of a replacement or upgrade VHF or transponder (or any other equipment) where the new unit is designed to fit in the existing rack and can use existing wiring with or without ready-made adaptation harnesses or similar items, should be allowed for a L license engineer. There may in some cases be requirements for functional tests which go beyond the L scope, however the physical installation should be within the scope of an L license.</p>
response	<p data-bbox="359 1731 475 1765"><i>Accepted</i></p> <p data-bbox="359 1809 1498 1888">66.A.20(6) already allows replacement of an avionics component with an upgraded one as long as:</p> <ul data-bbox="359 1910 1498 2022" style="list-style-type: none"> — such replacement is an approved solution (by SB for example) — this corresponds to the wording ‘work on avionics systems’; and — the test is simple.



An L licence holder with appropriate rating may also carry out repairs and changes as long as his scope of work permitted by his licence is not limited. Please refer to GM 66.A.70(d) on limitations endorsed at the conversion of a national qualification limited to non-complex maintenance tasks, as well as to the response to Comment No 21 from BGA.

comment 130

comment by: T.Grether

66.A.20 (a) 6. "-work on avionic systems requiring only simple test to prove their serviceability and not requiring troubleshooting":

In the future holders of category L licence will be mostly employed by organisations/companies holding just a Part M, Subpart F certification.

If the L-licence holder is not allowed to issue a CRS after troubleshooting and defect rectification on avionic systems the Part M, Subpart F organisation is forced to have as a minimum a B2L licence holder. This will produce more costs for maintenance organisations and owner of the ELA1/ELA2/LSA aircrafts.

The minimum required avionic systems in ELA1/ELA2/LSA aircrafts certified for VFR contain mostly only a VHF comm and ELT system. In some cases a transponder is installed.

The most common problems in conjunction with com systems occur with faulty microphone/headset/loudspeaker connections and antennas. Connection problems can be found out easily by using a simple multimeter. Faulty antenna connections and antennas can be found out by using also a simple Signal-Wave-Ratio equipment.

The widely installed 406MHz ELTs and Mode S Transponder includes BITE (BUILT IN TEST EQUIPMENT) and will inform the operator about internal failures. In this case the unit itself has to be replaced.

The required training for a L-licence include Module 13 "Radio-Comm/Transponder" with a duration of 15 hrs. Concerning an AMC is the maximum tuition hours per day 6 hours. This means that module 13 has to be taught 2,5 days. This is a lot of time and give the ability to teach additionally to system knowledge how to perform troubleshooting and defect rectification at these systems.

It should be noted too that the applicant has to prove practical experience in accordance with 66.A.30.

Therefore the L-Licence holder should have the permission to issue a CRS after doing troubleshooting and defect rectification on these limited number of avionic systems.

response *Accepted*

The text has been amended to allow troubleshooting. Work on communication, ELT and transponder systems is possible. Please refer to the response provided to Comment No 49 from Luftsport Verband Bayern, Germany, No 91 from René Meyer and No 21 from BGA. In



addition, further to the NPA, the training requirement for an L licence has been deleted and only demonstration of knowledge by exam and suitable experience are required.

B. Draft Opinion — III. Annex III (Part-66) to Regulation (EC) No 2042/2003 — 66.A.25

p. 21-22

comment	<p>22 comment by: <i>British Gliding Association</i></p> <p>Comments from British Gliding Association</p> <p>66.A.25 Basic knowledge requirements</p> <p>To encourage new engineers allow some credits for L licence holders against some elementary or academic B1 and B3 licence modules. By adopting this principal the L licence can be seen as a stepping stone towards the higher licence and help address the up and coming problem of attracting younger licensed engineers into the industry.</p> <p>Allow some credit for national education qualifications against the L licence academic subjects and for those with higher education qualifications some credits for the basic modules such as a Degree, City & Guilds, EITB and other vocational qualifications.</p> <p>This will help applicants without having to re-sit basic subjects where they have already proven knowledge.</p>
response	<p><i>Noted</i></p> <p>Any applicant for a Part-66 licence may already claim for a reduction of the basic knowledge examination based on the demonstration of knowledge acquired in any elementary or academic training.</p> <p>This is also valid for B2L or L categories and it is provided in 66.A.25(e) in this NPA for claiming a full or a partial examination credit.</p> <p>This requires the authority to accept to compare the syllabus of Part-66 licences against the training programme of the academy.</p>
comment	<p>23 comment by: <i>British Gliding Association</i></p> <p>Comments from British Gliding Association</p> <p>AMC 66.A.25 Basic knowledge requirements</p> <p>(b)</p> <p>Clarification required please;</p>



	<p>Does the AMC mean,</p> <p>1/ That an M/F or M/G organisation does not need to seek competent authority approval to carry out optional training within its own expertise?</p> <p>2/ If an M/F or M/G organisation wishes to carry out examinations specific approval is required from the competent authority but does not require a Part 147?</p>
response	<p><i>Noted</i></p> <p>On (1): AMC 66.A.25(b) has been deleted. Point 66.A.25(b) has been amended during the works of the Review Group on deleting the training requirement for an L licence. The remaining text has to clarify the meaning of ‘as agreed by the authority’.</p> <p>On (2): ‘Examinations may be conducted by Part-147 ATOs or by the authority or as approved by the authority’ (as stated in 66.A.25(b)) means that examinations may be conducted by an organisation which acts under a formal agreement with and oversight of the authority. In case where an association or a Part-M Subpart G organisation or a Part-M Subpart F organisation has been agreed by the authority to conduct an examination, this organisation is not required to be a Part-147 ATO. However, successfully passing such examination will only be valid for licence applications to such authority.</p>
comment	<p>29 comment by: <i>KNVvL (Royal Netherlands Aviation Association) Technical Committee</i></p> <p>Concerning point (a) text:</p> <p>The examination shall be conducted either by a training organisation appropriately approved in accordance with Annex IV(Part -147) or by the competent authority.</p> <p>we would like to propose the following line of text:</p> <p>The examination shall be conducted either by a training organisation appropriately approved in accordance with Annex IV (Part 147) or by an organisation approved by the authority or by the competent authority.</p>
response	<p><i>Not accepted</i></p> <p>(a) Point (a) refers to the requirement for basic knowledge for B1, B2 and B3 licences. The Agency believes that you refer to point (b) for L licences. In addition to the possibility that the examination is conducted by the competent authority, the examination may also be conducted by another organisation as long as there is an agreement with the competent authority and it is conducted on their behalf. Please refer to the details in the response to Comment No 23 from BGA.</p> <p>(b) To keep the requirement as simple, it is only required that the organisation working on behalf of the competent authority is nominated by this authority but not approved. Requiring an approval would necessitate a reference of approval for conducting</p>



examinations, and only a Part-147 ATO is suitable in that respect. The intention was to avoid complicated solutions.

comment 43

comment by: *Howard Torode*

66.A.25 Basic Knowledge requirements- 'L' licence - examination implementation

The European Gliding Union recognises that in the modern safety environment it is unrealistic to establish a qualification based on experience alone. Nevertheless we feel that a lengthy exposure to simple multiple choice questioning in accordance with an sketchily described syllabus is not an ideal approach. We feel EASA might consider some of the approaches given below to mitigate the barrier presented by these examinations:

- Recognise national scholastic qualifications in mathematics physics and other related basic school subjects as equivalent to the corresponding licence examinations this obviating the need to 'resit' these modules. Further, the recognition of higher academic qualifications such as baccalaureates and degrees in relevant subjects to represent a wider exemption from licence examination.
- Correspondence with elementary B1 licence modules should be established to ensure that the 'L' licence is recognised as a stepping stone to B3 and higher licences, and maximises the availability of extant training programmes (for example via Part 147).
- The careful review of the syllabus material to ensure that there is minimal duplication of examination material thereby ensuring the most efficient examination schedule possible.
- Enable sport aviation bodies to set and disseminate examination proformas, and enable them to supervise the sitting of such examinations with minimum over-head costs.
- Enable appropriately qualified SubPart F organisations to manage their own examination processes internally with appropriate oversight from the NAA.
- Provide clear guidance on the actions to be taken in the event of marginal performance and failure in an examination. There needs to be sufficient richness of examination material to enable realistic 're-sits' (or enable these by interview or oral explanation).
- Ensure that there is a generous margin provided between completion of the theoretical and practical modules of the qualification, enabling the candidate to choose, at his own convenience his/her schedule to licence qualification. In particular, to ensure that there is no delay once a candidate has completed the



examinations having previously completed the experience requirements.

Above all, the standard of theoretical examinations must be recognised as acceptable across the EASA community. It would be unacceptable for a an engineer, a national of one nation, should be precluded from certifying a sailplane in another nation, because this second nation's NAA does not accept the standards of engineer's qualification.

response *Noted*

Point 1: we invite you to read the response to Comment No 40 from BGA about the first point of your comment on the recognition of scholastic qualifications.

Point 2: the L licence includes subcategories of aircraft related to ELA 1 aeroplanes, but also to sailplanes, balloons and airships, therefore, with the exception of Sections 2 and 3, the holder of an L licence can hardly claim for a reduction of the basic knowledge required for a B3 licence.

Point 3: a review has been conducted to ensure the duplication of some modules between the L and the B3 licences as in example modules 2 and 3, 'Aviation regulation' and 'Human factors', to allow some credit for the B3 licence examination when these modules have already been demonstrated for the lower L licence.

Point 4 and 5: 66.A.25 has been modified to delete the requirement for training for an L licence. The examinations may be conducted by sport aviation bodies as long as there is a formal agreement with the authority.

Point 6: the L licence examination standard in Appendix VII does not include any instruction with regard to the case of failure in an exam and on how to repeat the exam.

Point 7: in the rule, there is no requirement for a delay between the completion of the examination and meeting the experience requirements.

The standardisation of the Member States authorities' surveys is ensured by the Agency, the survey of the training organisations is conducted by each competent authority, and each training organisation is responsible for developing its own questionnaire for examinations in accordance with Appendix VII.

comment 57

comment by: *René Meier, Europe Air Sports*

Page 21
66.A.25(e)

The Agency proposes 10 years as timeframe from the start of the training courses till having successfully passed the examination. We think this is too long.

Rationale



	<p>Much progress is possible on the one hand, but much may be forgotten on the other. Hands-on capabilities as well as theoretical knowledge may fade, so we propose 7 years, a figure we know from the pilot-licencing world.</p>
response	<p><i>Not accepted</i></p> <p>The part of the text where you made a comment on the ‘period of 10 years as time frame from the start of the training courses till having successfully passed the examination’ was proposed through NPA 2007-02 for all licences and has been adopted by Regulation (EU) No 1149/2011. This applies to B2L licences because the system is similar to that of B2 licences, but does not apply to L licences because there is no training requirement for L licences.</p> <p>As the Terms of Reference of this task did not include any work on the duration of training for other licences, it is not possible in this NPA to include a change to the related point.</p>
comment	<p>83 comment by: SVFB/SAMA</p> <p>21/139</p> <p>66.a.25 (a) ff B2L and L shall remain outside the 147 system. (see earlier remarks above)</p> <p>(b) or as approved by the competent authority: if this means what we propose, we would highly support this. However, any competent authority should be forced to approve it or the applicant should get approved by EASA in a manner adapted to the scope of “systems”.</p> <p>(d) we have the same reservation: by forcing the B2L for system ratings into the 147 system, the costs will be prohibitive. (see above)</p>
response	<p><i>Partially accepted</i></p> <p>(a) Regarding the L licence, there is no requirement for training. The examination may however be conducted by the authority or anywhere else under an agreement with the authority, which means for example a manufacturer, a Subpart F or Subpart G organisation or any other organisation or association. This aims at simplifying the requirement by proposing another solution for training than the Part-147 ATOs.</p> <p>(b) Regarding the B2L licence, training remains within the competence of the Part-147 ATOs because the content and level of basic knowledge for each system module are similar to the basic knowledge of the B2 licence. Examinations, however, can also be performed by the competent authority.</p>



B. Draft Opinion — III. Annex III (Part-66) to Regulation (EC) No 2042/2003 — 66.A.30

p. 22-23

comment	<p data-bbox="359 385 395 414">24</p> <p data-bbox="1002 385 1484 414">comment by: <i>British Gliding Association</i></p> <p data-bbox="359 465 874 495">Comments from British Gliding Association</p> <p data-bbox="359 521 831 551">66.A.30 Basic experience requirements</p> <p data-bbox="359 577 512 607">(a) 4 (i) & (ii)</p> <p data-bbox="359 633 1484 745">Allow experience (1yr + 6 mts or 2yr + 12 mts) to be accumulated prior to taking the examination. Thus when the examination is passed and the experience requirements having already been met, the engineer can apply for and use the licence without delay.</p> <p data-bbox="359 772 751 801">AMC guidance would be helpful.</p>
response	<p data-bbox="359 857 576 887"><i>Partially accepted</i></p> <p data-bbox="359 936 1484 1081">(a) There is no requirement in the original text, neither in the text of the NPA, whether the basic experience may be accumulated before, during or after sitting the basic knowledge examination. As a result, the scenario described in your comment may take place.</p> <p data-bbox="359 1099 1102 1128">(b) The Agency does not think that an AMC is needed here.</p>
comment	<p data-bbox="359 1234 395 1263">30</p> <p data-bbox="874 1234 1484 1263">comment by: <i>The Norwegian Air Sports Federation</i></p> <p data-bbox="359 1312 762 1341">Norwegian Air Sports Federation:</p> <p data-bbox="359 1429 456 1458">66.A.30</p> <p data-bbox="359 1485 544 1514">Paragraph 4, i)</p> <p data-bbox="359 1541 1484 1776">The basic requirement of one-year experience is too high to be practically applied in the field for part-time maintenance personnel typically working on gliders, balloons, etc. If the requirement is kept, it will basically eradicate the base of maintenance personell for these categories of aircraft in Norway. Instead, we would like to suggest that the paragraph should specify that a one-year involvement on a part-time basis is sufficient, alternatively that the Agency suggests a minimum hours limit rather than a calendar based limit.</p>
response	<p data-bbox="359 1888 576 1917"><i>Partially accepted</i></p> <p data-bbox="359 1966 1484 2033">The Agency does not think that the one- or two-year experience required by 66.A.30(a)4 is too long, because the applicant shall demonstrate during this period that he carried out a</p>



representative number of maintenance tasks and that this duration of time was necessary for that. In addition, the AMC reads that such a period may include part-time work or weekends. Moreover, as the counting of time becomes impossible when working on weekends, the AMC states that it is permitted to only ask the organisation or another licence holder who supervised the applicant to provide a statement of his competency.

comment 33 comment by: *KNVvL (Royal Netherlands Aviation Association) Technical Committee*

Concerning point 4 Experience for category L:

Most of the experience for L licences will be gained during off-season maintenance activities on club (powered)sailplains.

This means that experience is not gained in a full-time work environment. To appreciate this fact, it should be considered to rephrase the experience period where the effort (days of full-time experience) is separated from the duration (period of time in which the maintenance work shall be performed).

response *Not accepted*

The fact that experience may be gained during off-season or weekends only is not the leading factor of the subject here, this is why the text does not include any detail on this. Please refer to the response provided to Comment No 30. The content and number of the maintenance tasks required is the main point in terms of maintenance experience.

comment 36 comment by: *UK CAA*

Page No: 22

Paragraph No: 66.A.30 Basic Experience Requirements

Comment: Where the experience requirement is referred to as 'one year', clarification is needed as to whether this is 12 total months experience, or experience gained within a year. Many applicants will be working on a volunteer basis and only work weekends and evenings on an occasional basis.

Justification: Standardisation. All NAAs should require the same experience requirement.

response *Partially accepted*

The Agency did not convert the one- or two-year experience into days because, as stated in the related AMC, it is permitted that the experience is gained during part-time employment



or weekends. In such case, as the counting of time becomes impossible, AMC 66.A.30(a) states that in order for the authority to be satisfied that the person is competent, it is permitted to only ask the organisation or another licence holder who supervised the applicant to provide a statement of his competency.

comment 42

comment by: *Howard Torode*

66.A.30 Basic experience requirements - Implementation of practical experience qualification:

The options regarding the acceptable combinations of practical experience and formal training courses is welcomed (Ref: 66.A.25(c) and 66.A.30(a)4). In doing this, it is clear that EASA recognises that formal Part 147 training for the 'L' licence is unlikely to be economically available, except in very particular cases. However there is a more fundamental issue regarding the interpretation of experience duration. This has remained a point of conjecture throughout attempts to scope qualification of any kind to Sport Aviation. The EGU remains concerned that this subjective assessment of 'calendar experience' is unlikely to receive consistent assessment across the EASA community, given that it is carried out by 26 separate NAAs. Regrettably we have seen many confusions created (notably in Part M) by the practice of passing the responsibility for the interpretation of such criteria on to NAAs.

In addition to the basic rules, clear guidance material must be provided to NAA's recognising that credit must be given to continuous, if intermittent, exposure to engineering issues in a sport aviation and club environment by individuals for whom this may not be their primary profession. We would suggest that the requirement of two years of maintenance experience should be characterised in AMC such as: "*cumulative maintenance experience within 4 years*" as glider maintenance is mainly achieved during winter period, i.e. during 3 months per year. Proper credit should also be given for experience gathered in a SubPart F approved organisation or under the direct supervision and tutoring of an already qualified licensed engineer.

response *Accepted*

The Agency clarified the way the experience may be gained considering the real cases of applicants who will be working on a voluntary basis and only on weekends and evenings on an occasional basis. Please refer to the response provided above to Comment No 36 from the UK CAA.

comment 60

comment by: *René Meier, Europe Air Sports*

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66.A.30 Basic experience requirements



Several "years of duration" are proposed in this provision. Could we not changed to a competence-based proposal?

Rationale

This is a completely different approach, but when nowhere is specified what must be done within a "year" the variety of results obtained will be so important that any comparison will be impossible, any judging the capacities and the capabilities of the young people we wish to attract for aviation careers will not be really fair.

response *Accepted*

Please refer to the response provided above to Comment No 36 from the UK CAA. The statement of competency that an organisation may provide in case where experience was gained during temporary periods of employment as weekends is a sort of a competency-based training. See also AMC 66.A.30(a)4.

comment *84*

comment by: *SVFB/SAMA*

22/139

3.ii second alinea, we rate this requirement as appropriate, however the theoretical training should not be required in the 147, as stated above (d)

response *Accepted*

The same response as to Comment No 83 applies:

- (a) For the L licence, there is no requirement for training. The examination may, however, be conducted by the authority or under an agreement with the authority, which means by a manufacturer, a Subpart F or Subpart G organisation or any other organisation or association. This aims at simplifying the requirement by proposing another solution for training than the Part-147 ATOs.
- (b) For the B2L licence, training remains within the competence of the Part-147 ATOs because the content and level of basic knowledge for each system module are similar to the basic knowledge for B2 licence, and there is a possible bridge to extend the B2L to a B2 licence.

comment *115*

comment by: *DGAC FRANCE*

§66.A.30 4 (ii)



Replacement of basic knowledge training requirement by experience requirement for L licence

§ 66.A.25(c) and § 66.A.30 4(ii) allow for replacement of basic knowledge training/exam requirement for L category by one additional practical experience year.

DGAC France proposes:

- - either to increase this additional one year experience in order to make sure the L licence candidate would have certainly the opportunity to cover a representative part of maintenance activities during a longer period of time,
- or to provide with an AMC to better evaluate what should be covered during that additional one year in order to meet the “representative cross section of maintenance activities”.

response *Partially accepted*

The one- or two-year maintenance experience required by 66.A.30(a)4 for L licence is one element of requirement, but:

- the related AMC provides details of what a representative cross section of maintenance activities means, and a period more than one year may be needed to cover these tasks, which means that the duration is not the leading factor; and
- this AMC provides also the possibility that, in case where such activity is carried out on weekends, a statement by the organisation that the applicant is competent in terms of maintenance experience can be enough for the authority to be assured that the level of competency is reached.

B. Draft Opinion — III. Annex III (Part-66) to Regulation (EC) No 2042/2003 — 66.A.45

p. 23-25

comment 15

comment by: CAA-NL

66.A.45 Endorsement with aircraft ratings

In the case of gas airship type ratings on a B2 or L5 licence, the type training must be approved by the competent authority. As there are no type certificated gas airships yet, will the GM on gas airship type training be developed during the type certification process or as part of the OSD process?

response *Noted*

The list of balloons and airships certificated by the Agency is visible on the website under EASA Balloons/Airships Type Certificates and it also includes a gas airship.



66.A.45(b) states now that for holders of a B2 or L5 category licence, the rating for gas airships above ELA2 may be endorsed on the basis of a direct approved training, which means that:

- an organisation other than Part-147 ATOs may provide such type course; and
- in the case of gas airships, the requirement for approval should correspond to the manufacturer's specifications as Appendix III to Part-66 does not apply.

When Operational Suitability Data (OSD) are available, the Type Certificate (TC) holder will be able to provide a training syllabus on the particular type (as well as the definition of Type Rating (TR) and Master Minimum Equipment List (MMEL) elements etc.).

comment 19

comment by: *John DAVIES*

In section (ii) for the rating balloons there is no indication of where mixed balloons (also known as Rozière balloons). There does not seem to be any reference to mixed balloons throughout the whole NPA. EASA must make it clear what licencing requirements are required for mixed balloons.

response *Accepted*

GM 66.A.3 Licences, categories and subcategories clarifies that for mixed balloons, it is required to hold licences of both subcategories, L3G (gas) and L3H (hot air). The only possible limitation is linked to the size of gas balloons: 'other than ELA1 gas balloons'.

comment 25

comment by: *British Gliding Association*

Comments from British Gliding Association

66.A.45 Endorsement with aircraft type ratings

(h) 2 (i)

Consider adding the following additional sailplane categories/limitations;

- Metal tube fuselage and wooden wing structure covered in fabric.

This group includes the Alexander Schleicher ASK 13 series and the Scheibe SF25 series both types produced in huge numbers with metal tubular fuselage and wooden structure wings.

- Electric Propulsion Aeroplanes
- Electric Propulsion Powered Sailplanes
- Jet Propulsion Aeroplanes



- Jet Propulsion Powered Sailplanes

Both these types are new technology gradually emerging on to the market. Both require an element of specialist skills for example; to inspect turbine power plants or for battery care and maintenance. It is noted that they are included in the training/examination syllabus (8.23 & 8.24).

Both these propulsion systems should be limited to powered sailplanes with suitable experience and to exclude any ELA aircraft that may be developed with these systems that due to their very nature and size will have much more complicated systems and without the benefit or superior gliding capabilities of a sailplane.

- ELA 1 Powered Aeroplanes

Without these limitations and engineer with only experience of self sustaining powered sailplanes would be able to certify a powered aeroplane.

response *Partially accepted*

In the case of sailplanes and powered sailplanes, as ASK13 and SF25, which are a combination of:

- wooden structures, and
- metal tubes covered with fabric,

experience on both structures is required. Therefore, both limitations would need to be removed to work on such sailplanes.

The addition of a combined limitation, as proposed, would increase the complexity of the text and would result in the same limitations.

Regarding the proposal to include categories for:

- electric-propulsion aeroplanes,
- electric-propulsion-powered sailplanes,
- jet propulsion aeroplanes, and
- jet-propulsion-powered sailplanes,

the Agency does not think this is useful as the group of aeroplanes and powered sailplanes listed here already includes these sorts of propulsion. As both require the same subcategory L2 licence, they are similarly linked to the same basic knowledge. Please refer to the list of modules for subcategory L2 in Appendix VII.

As a result, the holder of a subcategory L2 licence with the rating 'powered sailplanes and ELA1 aeroplanes' would have the privilege to release all these aircraft. The differences of systems between ELA1 aeroplanes and powered sailplanes are not very important here and their gliding capability is not a decisive factor.

Your proposal to enlarge these modules, 8.23 and 8.24 (now 8L.19 and 8L.20) for electric and



jet propulsion with additional technical data is welcome and has been adopted.

comment 31 comment by: *KNVvL (Royal Netherlands Aviation Association) Technical Committee*

Concerning point (h) 2 (i) Limitations on L licenses:

- The list of structure types is very explicit and therefore does not appreciate hybrid structures (e.g. a combination of wood and metal tubing). It is not clear which limitation applies to hybrid structures.
- New combination of structure types are likely to emerge. What limitation will apply in these cases?
- Our current (national) technical licence does not have limitation on structure types.
- Any (powered) sailplane structure can be considered as a simple structure.

Considering all these points we believe that a system with limitations on structure type is too complex for the maintenance on (powered) sailplanes. We therefore suggest to drop the limitations on structure type on L licences altogether.

response *Not accepted*

The response to Comment No 25 from BGA already covers a part of your comment about the combination of structures. We would recommend you to refer to said response.

A lack of experience in a combination of both wood and metal tubing would be subject to double limitations.

The Agency does not agree on dropping the limitations on structures, as proposed, as this would contradict the principle of appropriate qualification of maintenance personnel since we would have personnel working on structures in which they have no experience.

comment 41 comment by: *Howard Torode*

66.A.45 Endorsement with aircraft ratings.

(This is a curious title as the 'L' licence at least does not use the Aircraft Group structure given in 66.A.5).

The subdivisions of the 'L' licence (L1 and L2) are not consistent with the Aircraft Group



definitions given in 66.A.5. Given the licensing structure the EGU assumes that in this particular case the licence subdivision will be used NOT the Aircraft Group structure, although it is hard to understand why there should be a difference. Specifically the L2 licence for 'powered sailplanes' [to CS-22] and ELA aircraft [to CS-23]', whereas in 66.A.5 these types are split between Groups 3 and 4. Surely it would be more consistent to standardise the maintenance licence and group ratings in line with the corresponding CS codes. This would also eliminate the situation of a powered sailplane licensee also being rated to certify large powerful ELA aircraft of much greater sophistication. Properly resolved this should also enable a simplification of the theory qualifications for powered sailplane engineers which, for examples includes a large section on superchargers – unknown of powered sailplanes.

response

Noted

The Agency notes that the objective of creating aircraft Groups (1, 2, 3 and 4) was to classify aircraft in groups based on their complexity and, consequently, on the method used for endorsing aircraft ratings. For example, Group 1 requires individual type training, Group 2 requires type examination (for the B1 licence) or experience (for the B2 and B2L), Group 3 and Group 4 require experience for all the licences.

On the other hand, the licence subcategories were created for the purpose of allowing maintenance personnel to obtain a licence which covered only those aircraft where they have knowledge and experience. For example, there are licences for sailplanes, licences for balloons, licences for airships, etc. It would be unlikely to find somebody who would need or even qualify to obtain a licence covering the full Group 4 (sailplanes, powered sailplanes, balloons and ELA2 airships).

comment

50

comment by: *Luftsport Verband Bayern / Germany*

66.A.45 (a): For the transfer of grandfathers rights it may be necessary to put further limitations into the licenses as listed in this paragraph. This possibility should be foreseen here. (e.g. limitation of a B3 license to an aircraft type, group or structure).

response

Noted

Please note that the limitations contained in 66.A.45 only affect full Part-66 licences (not the ones obtained by conversion). Licences obtained through conversion can contain any limitations deemed necessary by the competent authority to maintain the previous privileges.

Point 66.A.70 and all related GM have been modified to adapt to the conversion of national qualifications for sailplanes/powered sailplanes and balloons. In addition, two conversion examples for sailplanes have been added in GM 66.A.70(d).

However, it was not the purpose of this task to modify the method of endorsing limitations



on the B3 licence.

For your information, the conversion rights to a B3 licence already include possible limitations on a type of aircraft or a single aircraft. This is visible in GM 66.A.70(d).

comment

61

comment by: René Meier, Europe Air Sports

Page 24 and 25/139 66.A.45 Endorsement with aircraft ratings (h) For the L licence, subcategories L1, L2, L3, and L4:

2.(i) This provisions should be reconsidered for clarification.

Rationale

Just inspect a wooden structure aircraft, a metal tubing structure covered with fabric, a metal structure aircraft we think there is no need for the ratings the Agency mentions. It is different when it comes to repair work on such structures.

response

Not accepted

On your comment that ‘there is no need for the ratings the Agency mentions’, the Agency thinks that it is necessary to keep the ratings as proposed in the NPA in order to make clear on what category of aircraft the licence holder may exercise his privilege.

Depending, however, on the experience the applicant can demonstrate in the conversion of national privileges, the appropriate rating may be endorsed together with the relevant limitation in order to reflect exactly the same privilege as in their national system.

comment

85

comment by: SVFB/SAMA

23/139

66.A.45 a we recommend for B2 to change relevant aircraft rating into system rating

4. for B2L replace aircraft rating by system rating as proposed in the NPA

last aline of 4

... for category A: we don't see a need for line and base maintenance in the L category, this is appropriate for CAT

response

Not accepted

Regarding your comment ‘in a B2 licence to replace the aircraft rating by system rating’, it was not planned in the related TOR to change any requirement for B2 licences, but only to



create a B2L and an L licence.

Any work on the B2 licence would require another rulemaking task, and none is planned at this stage for this purpose.

The NPA proposes a double rating system for B2L licences: system rating + aircraft rating. The purpose is to give the privilege to work on CERTAIN systems only on CERTAIN categories of aircraft. Please refer to the details in Chapter 3 'Objectives' of the NPA.

With respect to your second comment about 'last line (...) for category A licence', the text on category A is not part of this NPA, but it is included in the existing Part-66; as a result it shall not be subject to any response in this CRD.

However, you are kindly advised to bear in mind that some M/F maintenance organisations are already approved either at line or at base stations depending on their structure.

comment

86

comment by: SVFB/SAMA

24/139 a B2 adequate type rating does most of the time not exist for AC/ C < 5.7T and therefore this should be replaced by "system rating"

response

Not accepted

This comment calls for the same response as Comment No 85: 'a B2 licence to replace the aircraft rating by system rating'. It was not planned in this TOR to change any requirements on B2 licences, but only to create a B2L and an L licence.

comment

95

comment by: AOPA-Sweden

Expand the L license scope to include ELA 2 aircraft. No existing or future aircraft were or will be designed to be ELA 1 or ELA 2, they are all certified iaw CS23 or FAR23.

There is no difference in technology between ELA 1 and ELA 2 and since the L license privileges are in fact technology limited the weight limit makes little sense.

response

Not accepted

The intent of this task is defined in Article 8(5) of Regulation (EU) No 1321/2014, which stresses:

'5. The Agency shall submit an opinion to the Commission including proposals for a simple and proportionate system for the licensing of certifying staff involved in the maintenance of ELA1 aeroplanes as well as aircraft other than aeroplanes and helicopters.'

As a result, the proposal was limited to ELA1 aeroplanes and aircraft other than aeroplanes and helicopters; therefore, an L licence for aircraft up to 2 000 kg MTOM cannot be



proposed.

A B3 licence already exists for aeroplanes up to 2 000 kg MTOM.

The B2L licence was associated with the task thereafter, which allows the B2L licence to be valid for aircraft in Groups 2, 3 and 4 (these groups include aircraft other than those in Group 1 'Complex motor-powered aircraft').

comment

101

comment by: *Aircraft Electronics Association - Europe*

The proposal reads:

For category B2L the relevant aircraft ratings are the following:

1. For group 2 aircraft, manufacturer sub-group rating or full sub-group rating.
2. For group 3 aircraft, full group rating.
3. For group 4 aircraft, the full group rating.

In paragraph 2 and 3: the sentences should read the same, either: "..., full group rating" or "..., the full group rating". Either way is acceptable, however they should be consistent.

response

Accepted

Corrected as proposed.

comment

118

comment by: *DGAC FRANCE*

66.A.45 a

Inconsistency related to applicability of category C licence:

In §66.A.3, it is said "The C licence is applicable to aeroplanes and helicopters" which is contrary to §66.A.45(a)4 allowing the full group 4 rating for category C, while group 4 covers sailplanes and balloons.

A modification of either § 66.A.3 or § 66.A.45a4 seems necessary

response

Partially accepted

Point 66.A.3 remains unchanged as it reads: 'The C licence is applicable to aeroplanes and



helicopters', and there is no intention to enlarge the scope of category C personnel to other aircraft. Point 66.A.45(a)4 has been corrected to affect ratings for only B2 licences. There is not a mismatch anymore between the two.

comment 121

comment by: Irish Aviation Authority

This NPA introduces significant complexity to the existing Part-66 AML, this complexity results primarily from the number of categories, sub-categories to category A and B and sub-categories to category L. In addition rating may include; aircraft type ratings, aircraft sub-group ratings, aircraft manufacturer group ratings, aircraft full group ratings, avionic system ratings. Limitations may include; limitations resulting from national conversion, limitations associated with category B3 and limitations associated with the various category L sub-categories.

The number of licence options available under this NPA appears excessive for this sector of aviation

response *Noted*

Please refer to the response to Comment No 98, which is similar to this comment.

comment 134

comment by: John DAVIES

In practical terms the inspection of a Rozière (mixed balloon) is not very different from a hot air balloon but, as the NPA establishes the principle of creating ratings for both gas and hot air balloons, logic dictates that an inspector of Rozière balloons should have to show competence in both disciplines. In this respect the text is OK.

This also highlights the problem of having a common Module 1 for the L licence. The proposed syllabus covers Aerodynamics whereas the theory of how a Rozière and other balloons react with the atmosphere is Aerostatics. Maybe you can use this comment as an excuse to correct the module 1 text to (for example) Aerodynamics / Aerostatics or split the module to recognise the differences between the two disciplines.

response *Accepted*

Your statement on the combination of knowledge of mixed balloons is accepted. GM 66.A.3 states that the application for a licence for mixed balloons will require an application for both balloon subcategories, L3G (gas) and L3H (hot air).

Module 1 (renamed 1L) has been completely reworded for clarity. The text now includes the



concept of aerodynamics and aerostatics in 1L.4.

B. Draft Opinion — III. Annex III (Part-66) to Regulation (EC) No 2042/2003 — 66.B.115

p. 26

comment 87

comment by: *SVFB/SAMA*

26/139 we understood above that there are system ratings instead of type ratings for B2L, why is the TR B2L here reintroduced again ?

response *Noted*

The particularity of a B2L licence is that this licence is endorsed with a double rating system:

(a) One system rating as shown in 66.A.3: Category B2L. The B2L licence is applicable to all aircraft other than those in Group 1 and is divided in the following system ratings:

- (1) communication/navigation (com/nav),
- (2) instruments,
- (3) autoflight,
- (4) surveillance, and
- (5) airframe systems.

A B2L licence shall contain, as a minimum, one system rating.

(b) One aircraft rating as shown in 66.A.45(a). For category B2L, the relevant aircraft ratings are the following:

- (1) for Group 2 aircraft, manufacturer subgroup rating or full subgroup rating;
- (2) for Group 3 aircraft, full group rating; and
- (3) for Group 4 aircraft, full group rating.

As a result, the holder of a B2L licence has the privilege to certify a group of aircraft in 'aircraft rating' for the maintenance carried out on the systems shown in 'system rating'.

B. Draft Opinion — III. Annex III (Part-66) to Regulation (EC) No 2042/2003 — 66.B.200

p. 26

comment 45

comment by: *Howard Torode*

General – Implementation of 'L' licence (relevant to 66.B.200 plus Appendix I and VII)



In addition to the detailed comments filed, it is unclear to the European Gliding Union who will provide the infrastructure to support the theoretical examination required for the inception of new 'L' engineers? A minimum of 9 examinations are currently required to qualify, even as a pure sailplane engineer. How, and who will generate the volume of material? EASA has made it clear that it is not their role, and it seems clear to the user community in gliding that there would be little economic interest from the Part 147 training organisations in providing such support, as there would be little money to be made in this local, specialist sector. The only guidance offered to date is that this examination material must be supplied to the satisfaction of the National Aviation Authority. How can this possibly lead to goal of standardised interpretation across Europe.? The sport gliding community would, and we believe could, mount an initiative to furnish this material but the task of approving it across all NAA's in Europe would be uneconomic. We believe that, in this respect, EASA is creating an unsustainable regulation. After 2015, new entries into maintenance engineering for sport aviation will dwindle to those who only see this as a stepping stone to higher qualifications in commercial aerospace. This could easily lead to a situation which is less safe than at present.

response *Noted*

The Agency has provided in the NPA and in the subsequent Opinion the necessary material to define the level and syllabus of the examination in each subcategory of L licence. Unless the examination is conducted by the authority, it is on the training organisation (whether it is approved by the authority or in accordance with a process as agreed by the authority) to set an examination on the basis of the syllabus and the conditions described in Appendix VIII.

This minimum syllabus of examination for the L licence subcategories should be sufficient to ensure the harmonisation of the relevant courses. This should ensure safety in the Member States where only a low level of training was previously ensured or no regulation existed.

B. Draft Opinion — III. Annex III (Part-66) to Regulation (EC) No 2042/2003 — Appendix I

p. 28-82

comment 67

comment by: *René Meier, Europe Air Sports*

Page 28ff/139

Appendix I

Basic Knowledge Requirements

Knowledge levels, Modularisation

Europe Air Sports and its members thank the Agency for the comprehensive tables. As it will be a huge task to prepare all the training and the examination materials we offer our



	<p>assistance.</p> <p>We see one risk: As technology moves on, such lists easily become obsolete. A clear but generic topics list is probably more helpful.</p> <p>Rationale</p> <p>The required level playing field for training and examination purposes could best be attained when national specifications or requirements are avoided. Commonly created syllabi and tests would enhance free circulation of persons to a much greater extent than many other measures. Needless to say that we insist on unrestricted mutual acceptance of all training and all examinations by any authority of Europe of the 27 + 4 when performed according to these provisions.</p>
response	<p><i>Noted</i></p> <p>The Agency proposes in Appendix VII a simple syllabus for conducting exams on the different L licence subcategories. It already includes modern technologies as composite structures, or motor-powered sailplanes with electric and jet engines. New technologies will be considered in the future and Appendix VII will be updated accordingly.</p> <p>Please note that there is no requirement for basic training (just for an examination).</p>

comment	<p>68</p> <p style="text-align: right;">comment by: <i>René Meier, Europe Air Sports</i></p> <p>Page 48ff/139</p> <p>Module 9A Human factors, also valid for Module 9B 9.1 General</p> <p>Please add "good airmanship" to this list, e.g. decision making based on available facts. The term could be modified to "good aircraftmanship".</p> <p>Rationale</p> <p>Some "positive education" could do no harm.</p> <p>9.3 Social psychology</p> <p>Please delete "culture issues".</p> <p>Rationale</p> <p>Discussing "culture phenomenons" will inevitable create tension within any group, especially when the group is composed by members of various nations, cultures, religions.</p> <p>9.4 Factors affecting performance</p> <p>We hope all in charge of training and examining will insist on an absolute zero-tolerance as regards alcohol, medication, drug abuse.</p> <p>Rationale</p>
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	<p>That is where safety in aviation begins.</p> <p>9.8 Human error "just culture" could be added, as well as the need for a working environment free of unjustified pressure.</p> <p>Rationale Incidents and accidents do not just happen, they normally have a root cause in human behaviour.</p>
response	<p><i>Partially accepted</i></p> <p>The subjects proposed in your comment have been considered by a working group under MDM.055 with the assistance of the European Human Factors Advisory Group (EHFAG) to cover the Safety Management System (SMS) in Regulation (EU) No 1321/2014. An amendment to this part is proposed which modifies the submodules of Module 9. As a result, we suggest that Europe Air Sports checks the proposals made in NPA 2013-19 on Part-66 and Part-147, and in NPA 2013-01 on Part-M and Part-145. In the meanwhile, Europe Air Sports may communicate with EHFAG for proposing the changes described in their comment.</p>
comment	<p>69 comment by: René Meier, Europe Air Sports</p> <p>Page 51/139 Module 10 10.1 Regulatory Framework</p> <p>Question: Is the acronym "EU-OPS" still appropriate?</p> <p>10.4 Air operations</p> <p>General understanding of EU-OPS: Same question as above.</p> <p>MEL//CDL: Question: Is there not one backslash too many?</p>
response	<p><i>Accepted</i></p> <p>This has been corrected in Regulation (EU) No 1321/2014.</p>
comment	<p>70 comment by: René Meier, Europe Air Sports</p> <p>Page 56/139</p> <p>11.10 Fuel systems</p> <p>Remark: We would add some information about fuel grades, also in the relevant parts of Modules 11B, 11C, and 12.</p>



response *Not accepted*

This is already addressed in Modules 15.9 and 16.8.

comment **71** comment by: *René Meier, Europe Air Sports*

Page 71/139

13.4 Communication

Remark: What about data-link, ADS-B?

response *Accepted*

Text revised.

comment **127** comment by: *Ralf Keil*

Die B2L ist auf Grund ihres Umfanges und der Zugangsvoraussetzungen für ehrenamtliches freigabeberechtigtes Personal in Luftsportvereinen unattraktiv.

Gemessen am Umfang der Avionikusrüstung in ELA-Luftfahrzeugen steht der Erwerb einer B2L in keinem wirtschaftlichen Verhältnis.

response *Noted*

The Agency understands your concerns about costs, however, in principle, the B2L licence is applicable to all aircraft other than those in Group 1. In addition, the need to employ a B2L or a B2 licence holder will depend on their scope of work in the domain of avionics and on the particular system rating(s) of the B2L holder.

Please refer to the explanations in the Executive Summary of the NPA as well as in pages 9 and 10 thereof, where the intent of the working group is described.

comment **132** comment by: *John DAVIES*

I also think Module 9 needs to be modified so balloon inspectors do not learn about tasks that are quite specifically fixed wing but do learn about the fabric grab test or pull test which is arguable the most important inspection for a balloon envelope.

	Level
Cleaning, use of lighting and mirrors	3



Measurement tools,	
Measure of controls deflection (except balloons)	
Screw torque	
Wear of slide bearings etc. (except balloons)	
Procedures for testing of flight instruments	
Test flight: programme and evaluation	
Types of NDT inspections and tests	
Fabric Grab Test (balloons only)	

response

Accepted

Fabric grab test has been added to Module 9L.8.

comment

133

comment by: *John DAVIES*

Subject	Knowledge Level
10.1 Basic principles and assembly of hot-air balloons/airships	3
Assembly and individual parts	
Envelopes	
- Envelope Materials:	
- Envelope Systems:	
- Conventional and special shapes	
Fuel System	
- Burner, burner frame and burner support rods	
- Compressed-gas cylinders and compressed-gas hoses	
- Basket and alternative devices (seats)	
- Rigging accessories	
- Maintenance and servicing tasks	



<ul style="list-style-type: none"> - Annual/100 hr inspection - Log Books - Flight and Maintenance Manuals - Rigging and launch preparation (launch restraint) - Launch 	
<p>10.2 Practical training</p> <ul style="list-style-type: none"> - Operating controls, maintenance and servicing tasks (according to flight/maintenance manual) 	3
<p>10.3 Envelope</p> <ul style="list-style-type: none"> - Fabrics - Seams - Load tapes, rip stoppers - Crown Rings - Parachute valve and fast deflation systems - Ripping panel - Turning vent - Diaphragms / Catenaries (Special Shapes and Airships) - Rollers, pulleys - Control and shroud lines - Knots - Temperature indication label, temperature flag, envelope thermometer - Flying wires - fittings, Karabiners 	3
<p>10.4 Burner and fuel system</p> <ul style="list-style-type: none"> - Burner coils - Blast-, liquid- and pilot-valves - Burners/Jets - Pilot lights/vaporisers/jets - Burner frame - Fuel lines/hoses - Fuel cylinders, valves and fittings 	3



<p>10.5 Basket and basket suspension (incl. alternative devices)</p> <ul style="list-style-type: none"> - Types of baskets (incl. alternative devices) <p>Basket Materials: Cane and willow, hide, wood, trim materials, suspension cables</p> <ul style="list-style-type: none"> - Seats, roller bearings - Karabiner, shackle and pins - Burner support rods - Fuel cylinder straps - Accessories 	3
<p>10.6 Equipment</p> <p>Fire extinguisher, fire blanket</p> <p>Instruments (single or combined)</p>	3
<p>10.7 Minor repairs</p> <p>Stitching</p> <p>Bonding</p> <p>Basket Hide/Trim Repairs</p>	3
<p>response <i>Accepted</i></p> <p>The content proposed has been introduced in Module 9L on 'Hot-air balloons/airships' (previously Module 10).</p>	

comment

89

comment by: SVFB/SAMA

29/139-120/139

No detailed comments to page 29/139 to 120/139.

Except that the content/concept must be tested/verified. After a 12 to maximal 24 month



trial period it shall be evaluated:

- if there are safety problems or gaps
- if application makes the system less economical, equal or better then before

If found less economical the necessary changes must be made to improve it to at least an equal economical level as before the adaption to the new system.

The justification for this request is rooted in the statistical insignificance of maintenance generated fatalities in the concerned categories of aircraft up to and including group 2. The EASA proposed risk based and performance based approach for surveillance in the near future supports such an approach.

This concludes the comments of ECOGAS to NPA 2012-15

response *Noted*

Regular updates to Part-66 are planned to be performed by the Agency in the light of experience and information reported to the Agency.

B. Draft Opinion — III. Annex III (Part-66) to Regulation (EC) No 2042/2003 — Appendix V

p. 88-91

comment 37

comment by: UK CAA

Page No: 88

Paragraph No: Appendix V

Comment: Form 19 section 1 applicants details does not have a requirement for the applicants contact telephone number or email details.

Justification: NAAs need to be able to contact the applicants in case of any problems with the application process.

Proposed Text: A section should be added requiring the contact details mentioned above.

response *Accepted*

The text has been amended.

B. Draft Opinion — III. Annex III (Part-66) to Regulation (EC) No 2042/2003 — Appendix VI

p. 92-94



comment	<p>2</p> <p>Dear EASA,</p> <p>However Aeroplex has only large A/C in the scope of work, I had to comment this proposal. Please look at that Maintenance license. In the lower left page the category table is problematic for us. 76% of that table is blank (n/a). For us it makes it more and more hard to overlook a license. And further it is a waist of paper and ink. We would highly welcome if you could totally reorganise the maintenance license. For example do it in a single column instead of a table.</p>	comment by: <i>ACE</i>
response	<p><i>Not accepted</i></p> <p>This NPA relates only to licences for light aircraft, whereas this comment relates to Part-66 in general and cannot be taken on board.</p>	
comment	<p>38</p> <p>Page No: 93</p> <p>Paragraph No: n/a</p> <p>Comment: With the new licence categories being added to the existing Part 66 licence for a licence holder with multi categories, the format of the licence will become complex. Added to this, with the mix of National limitations and the EASA limitations against the categories and ratings the licence becomes confusing to read.</p> <p>Justification: To ensure Part 66 licences are easy to read and to avoid confusion.</p> <p>Proposed Text: A separate Category L Part 66 licence would allow the contents of the licence to be less complex and confusing.</p>	comment by: <i>UK CAA</i>
response	<p><i>Not accepted</i></p> <p>The Agency favours the option of having each licence holder holding only one licence. In addition, those fields not applicable can always be deleted.</p>	
comment	<p>122</p> <p>The level of complexity introduced by this NPA will cause the Part-66 AML (EASA Form 26) to become extremely cluttered and difficult for licence holders, maintenance organisations and aircraft owners to comprehend. The potential difficulty in understanding the licence and the associated privileges may introduce a safety risk.</p>	comment by: <i>Irish Aviation Authority</i>
response	<p><i>Noted</i></p>	



Please refer to Comment No 98.

In addition, the Agency favours the option of having each licence holder holding only one licence. Those fields not applicable to a particular licence holder can always be deleted to make the licence easier to understand.

B. Draft Opinion — III. Annex III (Part-66) to Regulation (EC) No 2042/2003 — Appendix VII

p. 95-118

comment 5 comment by: *Gerhart Berwanger*

Module 1, 1.4. I Propose to amend: for balloons: Aerostatic

response *Accepted*

This has been added to 'Aerodynamics'.

comment 6 comment by: *Gerhart Berwanger*

10.4 - I propose to amend: Igniters, Manometers

10.5 - I propose to amend Basket structure an materials

response *Noted*

The whole Module 9L (previously Module 10) on hot air balloons/airships has been amended in accordance with Comment No 134 from John Davies.

comment 8 comment by: *Ian HEY*

Module 4.

Section 4.6 is largely a repeat of Section 4.5. The only new items in 4.6 are Weight and balance and Aircraft rigging.

This may be due to the words used in the two sections providing an inadequate indication of what is intended. If so, then re word both sections to make clear what is intended.

If the two sections are repeats of each other, delete everything from 4.6 except Weight and balance and Rigging

response *Accepted*



The whole Module 4 has been reworked to simplify its wording and content.

comment 9 comment by: Ian HEY

Module 5

Transparency repair is included in both 5.7 and 5.8. Delete from one of them.

response *Accepted*

In the following modules 4L, 5L and 6L the item 'Repair of transparency' has been harmonised as it is common to all airframes.

comment 10 comment by: Ian HEY

Module 6

Use of Nicopress and Talurit ferrules, and Transparency repairs is included in both 6.7 and 6.8. Delete from one section

response *Accepted*

'Nicopress and Talurit clamping joints' in Module 6.7 (now Module 6L.6) covers 'Clamp repairs (Nicopress Talurit)' which has been deleted.

comment 13 comment by: John DAVIES

Attachment [#3](#)

Module 13

Module 13 is wholly inappropriate to balloon inspection and will result in the decimation of approved inspectors and no new balloon inspectors being approved.

At the present time there is no general requirement for balloons to carry transponders so they are very rare. Balloons have no power supply so transponders and radios are carry-on equipment. As the transponders and radios are fully portable they can be easily taken to approved avionics workshops that have the necessary equipment and expertise.

There is no economic argument to persuade any organisation/inspector to set up their own avionics workshop (cost €20,000?) as there are very few units that require maintenance. No balloon inspector will be prepared to undertake a training course, estimated cost €3500 per applicant (plus the cost of course development), with no chance of recouping the cost.



	<p>Existing inspectors will, presumably, not be able to transition to an EASA licence without completing this course so will cease to become inspectors. Although existing inspectors will have “grandfather rights” it is hard to imagine that any (many of whom will have never maintained or operated a transponder) will be accepted without some sort of conversion report.</p> <p>A revised module 13 is attached or alternatively the licence could be endorsed with a limitation “excluding radio and transponder (Module 13)”</p>
response	<p><i>Accepted</i></p> <p>Module 13 (now module 12L) has been adjusted according to your proposal (tasks to be related to simple checks and reduced knowledge), thus reducing the content.</p>

comment	<p>26 comment by: <i>British Gliding Association</i></p> <p>Comments from British Gliding Association</p> <p>Appendix VII Basic Knowledge and Training Requirements for Category L aircraft maintenance licence.</p> <p>Module 1 Basic Knowledge</p> <p>Only Mathematics and Physics (1.1 & 1.2) are included. If this is to be a basic knowledge module it should include other basic skills such as language (in an official EASA language as applicable locally) as the need to read and write is very important. Consider allowing NAA's to grant national academic qualifications gained as exemptions to these subjects.</p> <p>Module 2 and 3 Human Factors & Aviation Legislation</p> <p>There is duplication of module syllabi. 2.9 and 3.8 both cover Safety in the Workplace. Module 3.8 having a much wider list of subjects to be covered. 2.9 is just a title.</p> <p>Module 8 Power plant</p> <p>8.23 Electrical propulsion</p> <p>The scope of knowledge requirement is limited.</p> <p>Consider including;</p> <p>Electrical wiring and control systems</p> <p>Pylon, extension and retraction systems</p> <p>Motor/propeller brake systems</p> <p>Motor ventilation systems</p> <p>Practical experience of 100 hour / annual inspections</p> <p>8.24 Jet propulsion</p>
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The scope of knowledge requirement is very limited

Consider including:

- Engine installation
- Pylon, extension and retraction systems
- Fire protection
- Fuel systems including lubrication
- Engine starting systems, gas assist.
- Engine damage assessment
- Engine servicing
- Engine removal / refit and test
- Practical experience of conditional / run time / annual inspections
- Conditional inspections
- Module 9 Procedures for physical inspection

The scope of knowledge requirement is limited.

Consider including:

- Inspection equipment (Boreoscope, special tools)
- Calibration of measuring tools
- Practical experience of instrument testing at annual inspection
- Practical experience of internal structural inspection

response *Partially accepted*

We do not agree on the remark that Module 1 includes only Maths and Physics; it also includes Electrics, Aerodynamics and Aerostatics.

Requirements for B3 or B1 licences do not include any knowledge of languages, therefore, this cannot be required for an L licence. This is covered by the certifying staff requirements contained in 66.A.20.

Regarding your comment on exceptions for national academic qualifications, please refer to the response to Comment No 22 where this subject has already been commented on.

The next items of the comment have been taken into consideration, as the numbering of the elements in the module has been modified to read 1L, 2L etc. (...) up to 12L only (Ex-module 9 has been deleted).

We agree on your comment about Modules 2.0 and 3.8. This has been corrected.

We agree on your comment about Modules 8.23, 8.24 and 9. This has been corrected.

We agree on completing the scope of knowledge of Module 8.23 'Electrical propulsion' (now



Module 8L.19).

We agree on completing the scope of knowledge of Module 8.24 'Jet propulsion' (now Module 8L.20).

The old Module 9 'Procedures of physical inspection' has been deleted, and the elements of exam have been distributed in the modules related to the different airframes, Modules 4L, 5L and 6L.

As a consequence, all subsequent modules have been renumbered.

comment 32 comment by: *KNVvL (Royal Netherlands Aviation Association) Technical Committee*

The duration of basic training could be less explicit and made more flexible. As long as all subjects according to the basic knowledge are covered, the duration of the training is, in our opinion, less relevant.

response *Noted*

The requirement for training has been deleted, as a result, Appendix VII has been modified accordingly (it is only there for the purpose of defining the content of the examinations).

comment 52 comment by: *Luftsport Verband Bayern / Germany*

Appendix VII:

To grant a maintenance license for an L-subcategory it is required to pass the complete examination of all relevant modules. The people in our clubs are working on a voluntary basis. The requirement for complete exam of all modules forces them to learn and/or gain experience on tasks they will probably not use, e.g. metal structure, (there are nearly no metal structure sailplanes and powered sailplanes). So they may have to spend up to 25% of the training (and their holiday period) to learn for something which is of no use for them. In Germany a 6 weeks holiday period (per year) will last for a complete training but in other countries people will have to spend more than one complete holiday period of a year to get the training finished. We have to convince our club members to spend this time away from families and friends.

This is not reasonable. At the workshop in Cologne on November 6, 2012 Juan Anton mentioned that the aviation industry claimed that the training for a B2-licence was too difficult for people from the general aviation due to the incorporation of content into the syllabus which they would never use. Because of this B2L was introduced.

With the L-license EASA is doing something similar by putting training stuff into the syllabus



which people never use.

We ask the EASA to change the requirements in such a way that an L-license can be granted if the applicant successfully passed examination of all modules 1, 2, 3, 7, 9, 13 and one of the modules 4, 5, 6, 8, 10, 11 or 12. This will lead to a minimum training duration of 145 hours for a basic AML instead of 205 hours for full training. This would be a way where we think we can still motivate our young members to spend the time.

response

Accepted

The text has been amended, and now the subcategories for 'Sailplanes' and 'Powered sailplanes/ELA1 aeroplanes' are the following:

- those made out of composite structures, represented by the 'Composite sailplanes' (subcategory L1C) and 'Composite powered sailplanes/composite ELA1 aeroplanes' (subcategory L2C), which represent the majority of them; and
- those made out of wood or composite or metal structure, represented by the 'Sailplanes' (subcategory L1) and 'Powered sailplanes/ELA1 aeroplanes' (subcategory L2), which require basic knowledge of all structures.

This allows the applicant to demonstrate knowledge only on composite structures in order to have the subcategory L1C or L2C endorsed on the licence.

comment

96

comment by: *Gerhard HOOGESLAG*

The maintenance of hot air balloons and gas balloons is realized in general by two separate groups of maintenance personnel. In most countries the gas balloon is a rare aircraft. To get and maintain sufficient experience in balloon-maintenance it should be considered to put hot air balloons (L3) and gas balloons (L...) in two separate subcategories. It doesn't make sense for hot air balloon maintenance personnel to have to go through module 11 (or visa versa) as such aircraft (gas balloons) are a rarity in most 'EASA-countries'. Two subcategories avoids problems with the conversion of national licenses. Is this solved with adding the subcategory L3 to specific aircraft ratings gas balloon or hot air balloon?

response

Accepted

The text has been amended, and now the subcategories for 'Balloons' and 'Airships' are the following:

- those sustained by hot air, represented by the 'Hot-air balloons' (subcategory L3H) and 'Hot-air airships' (subcategory L4H); and
- those sustained by gas, represented by the 'Gas balloons' (subcategory L3G) and 'ELA2 Gas airships' (subcategory L4G).



The particularity of airships is the existence of the group of large gas airships represented by category L5: 'Gas airships other than ELA2'.

comment 97 comment by: Gerhard HOOGESLAG

Module 1 ad 1.4 Physics of the Atmosphere (Aerodynamics in this context) isn't really relevant to balloon maintenance personnel. Probably it's better to move these requirements to the 'aircraft modules' and add a 'Physics of ballooning or Aerostatics' to the 'balloon/airship modules'.

response *Accepted*

'Aerostatic' is added to 'Aerodynamics'.

comment 103 comment by: IAAG - Amaury de la Grange Aviation Training Center

As per 66.A.25, the holder of a B1.2 or B3 licence is considered to meet the basic knowledge requirement for a licence L1 or L2. In this case why several items in the L syllabus are at higher levels than in the B1.2 or B3 syllabus?

Module 3 in L licence (legislation) is, for some items, requesting a level 3 while there is no level 3 in Module 10 of the B licence. The same can be found in the other L-modules. The L syllabus must be checked against the B syllabus to ensure compliance with 66.A.25b statement.

response *Accepted*

Levels of knowledge for category L have been adjusted to align with the level required for category B3.

comment 108 comment by: Danish Soaring Association

The duration of theoretical training for a L1 License seems to be unnecessary long. The former table with specific ratings for different types of airframes, such as - tube and fabric/ wooden airframes/ metallic airframes/composite - is still wanted.

Justification:

Experience during many years shows, that most certifying staff works with only one or two types of airframe, and the single person will not have opportunity to maintain his skills in e.g. metallic airframes, as pure metallic sailplanes are quite rare, and others do not work with



	<p>other than composite airframes and so on. If rating on different types of airframes is wanted, it should be possible to obtain it by participation in relevant courses.</p>
response	<p><i>Accepted</i></p> <p>Please refer to the response to Comment No 52 on sailplanes/powered sailplanes and ELA1 aeroplanes. In addition, the training requirement has been deleted.</p> <p>The requirements to obtain aircraft ratings have been modified for the L licence: for sailplanes, motor-powered sailplanes and ELA1 aeroplanes, they have been split into composite structures and all structures. This allows an applicant to demonstrate knowledge of part of the structures only.</p>
comment	<p>109 comment by: <i>Danish Soaring Association</i></p> <p>The need of “module 13” for L1 – Sailplanes is from our point of view not necessary, and should be deleted from the requirements for L1, but remain for L2.</p> <p>Justification:</p> <p>In most sailplane workshops there will be certifying staff with a L2 license, and the need for L1 certifying staff to maintain COM/NAV equipment will not be relevant. It will further shorten the time consumption to obtain a L1 license, and urge more young people to start in business.</p>
response	<p><i>Partially accepted</i></p> <p>Module 13 ‘Radio-com/Transponder’ (now Module 12L ‘Radio-com/Transponder/instruments’) is not a module on laboratory and repair of the components. Its content only refers to the minimum knowledge of maintaining these components on board of the sailplanes and aeroplanes.</p> <p>As these components are fitted on board of all these aircraft (sailplanes, powered sailplanes, ELA1 aeroplanes, balloons and airships), this module is part of all subcategories.</p>
comment	<p>111 comment by: <i>European Sailplane Manufacturers</i></p> <p>The sailplane manufacturers understand that the proposed syllabi for the L licenses will amount to a number of training hours in the region of 200 to 250.</p> <p>For a certifying staff having the privilege to release to service an aircraft even after extensive maintenance jobs including large repairs this might be OK.</p> <p>Nevertheless often technical problems with sailplanes would require a much less extensive training.</p>



	<p>Additionally 200 hours of training and more mean a training course of several weeks duration.</p> <p>Both facts together mean that limitation to the L licence as described would result into a workforce of certifying staff of a limited number, which would mostly be reduced to persons working on a professional basis.</p> <p>For the reasons described in our general comment we are not accepting this proposal.</p> <p>Only by addition of options to have a license with less privileges and accordingly less training we see a workable way forward for sailplane maintenance.</p>
response	<p><i>Accepted</i></p> <p>For new L licences, the training requirement has been deleted, and only demonstration of knowledge and experience are required. This should substantially ease the access to such an L licence.</p> <p>Licences with less privileges mentioned in your comment may be issued by the authority through conversion of national qualifications in accordance with 66.A.70 due to the possibility for the authority to add an appropriate limitation on the licence so that privileges of the L licence are similar to the privileges previously valid in the national system.</p> <p>For more details, please refer to the last example in GM 66.A.70(d).</p>
comment	<p><i>113</i> comment by: <i>Royal Danish Aeroclub</i></p> <p>Appendix VII – L3: Balloons</p> <p>The need of “module 13” for L3 – Balloons is unnecessary, and should be deleted from the requirements.</p> <p>Justification:</p> <p>Only few balloons are equipped with COM and NAV devices, and if so, they are more or less portable and probably dismantled after each flight and are easily brought to an authorized workshop for repair.</p>
response	<p><i>Partially accepted</i></p> <p>Please refer to the response to Comment No 108 from the Danish Soaring Association.</p>
comment	<p><i>117</i> comment by: <i>DGAC FRANCE</i></p> <p>Appendix VII :</p> <p>Consistency between L and B3 modules :</p>



In appendix VII, the level required for some modules of the category L licence is more important than the level of the corresponding module of the category B3 licence, whereas B3 category is supposed to include L category.

Example: for L2 licence there is a level 3 required for the module 13 (radio-com/transponder) whereas there is only a level 1 required for the corresponding module of the B3 licence (module 11C (11.5)).

response

Accepted

The Agency has corrected the level of required knowledge for L licence to ensure that it does not exceed what is required for B3 licence.

comment

123

comment by: *Irish Aviation Authority*

Some modules are entitled MODULE X while others are MODULES X, example; MODULE 7 – MODULES 8.

response

Accepted

The designation and numbering of the modules in Appendix VII have been changed.

comment

128

comment by: *Ralf Keil*

Angesichts der Tatsache, dass es sich bei freigabeberechtigtem Personal in Luftsportvereinen um ehrenamtliche Personen handelt und die Vereine meist über eine überschaubare Anzahl von Luftfahrzeugen verfügen, ist die Notwendigkeit des Nachweises des Basiswissens aller Module nicht verhältnismäßig.

Der Nachweis sollte außer in den allgemeinen Modulen bei einer limitierten L-Lizenz ausschließlich im Umfang der angestrebten Lizenz gefordert werden.

response

Noted

Your comment that ‘the need to demonstrate the basic knowledge of all modules is not proportionate’ is no more applicable because the basic knowledge has been divided according to the type of structures. Please refer to the response to Comments No 52 from LVB and No 96 from Gerhard Hoogeslag.

Your second comment related to the ‘Limited L licence’ is also no more applicable because the Agency reminds here that this NPA does no more include the concept of ‘Limited L licence’ but proposes a single ‘L licence’ with different subcategories.



B. Draft Opinion — III. Annex III (Part-66) to Regulation (EC) No 2042/2003 — Appendix VIII

p. 119

comment

39

comment by: UK CAA

Page No: 119**Paragraph No:** Appendix VIII

Comment: There are large variations between syllabus subject items regarding question numbers against areas of syllabus. Clarification required as to how the number of questions per syllabus area have been determined.

Justification: Clarification needed of how question numbers are determined against the syllabus.

response

Noted

In Appendix VIII, the number of questions (and time allowed) per module is proportionate to the content and level of each module/submodule.

A general proportionality rule has been applied.

comment

129

comment by: Ralf Keil

Siehe Kommentar 128

response

Noted

Comment No 128 has been considered and responded to.

B. Draft Opinion — III. Annex IV (Part-147) to Regulation (EC) No 2042/2003 — Appendix II

p. 122-123

comment

16

comment by: CAA-NL

BL2 not included on Form 11 issue 4.

1. We are aware that the basic knowledge requirements for B2 includes all the B2L requirements. But does this mean that a B2 automatically includes the B2Lprivelidge, when so, maybe some clarification in GM could be provided. Further does that also mean that a maintenance training organization cannot to be approved a limited number of system ratings under B2L only?



	2. Form 11 page 1 of ... still states issue 3 instead of issue 4.
response	<p><i>Accepted</i></p> <p>A new GM has been added in 66.A.20(a) 'Privileges' to clarify that the privileges of a B2 licence holder include those of a B2L licence holder for the same aircraft ratings. Maintenance organisations dealing with light aircraft may not need B2 staff if their scope of work is covered by the B2L licence holders.</p> <p>EASA Form 11 has been modified to also include the B2L licence because some Part-147 ATOs may be approved only to conduct the examination for B2L. The affected system ratings shall be indicated on this form.</p> <p>In case the ATO is approved for courses and exams for B2, this includes the B2L as indicated in the marking: ****.</p> <p>Form 11 has been corrected to indicate that the revision level is 'Issue 4'.</p>

C. Draft Decision

p. 124

comment	<p>72 comment by: <i>René Meier, Europe Air Sports</i></p> <p>Page 124/139</p> <p>GM 66.A.3 Licence categories and subcategories</p> <p>Question: Does "ELA1 aeroplanes means those aeroplanes which meet the definition of ELA1 aircraft" mean that work may be done on so-called Annex II aircraft and that this must be accepted by all NAA of EASA member states?</p>
response	<p><i>Partially accepted</i></p> <p>The answer to your question is 'not exactly', because:</p> <p>(a) On one hand, the definition of ELA1 aeroplanes is already part of Regulation (EU) No 1321/2014. ELA1 aeroplanes are aeroplanes meeting the definition of Article 2(k)(i) 'Definitions': 'an aeroplane with a MTOM of 1 200 kg or less that is not classified as complex motor-powered aircraft' (this does not include any Annex II aircraft).</p> <p>(b) On the other hand, to facilitate gaining experience, it has been decided by the Agency that experience for removing a limitation may be gained on an Annex II aircraft, provided the experience is relevant and representative of the corresponding (sub)group. This is stated in AMC 66.A.50(b)3. Please refer also to the example provided.</p>



C. Draft Decision — AMC M.A.707(a)

p. 124

comment	124	comment by: <i>Irish Aviation Authority</i>
	'in the case of sailplanes, powered sailplanes, ELA1 aeroplanes, balloons and airships, a category L licence' – Is it the intention that a person holding a Category L licence in one Subcategory may become Airworthiness Review Staff for another Subcategory?	
response	<i>Noted</i>	
	To become an airworthiness review staff holding an appropriate licence means that: <ul style="list-style-type: none"> — for sailplanes, the licence is in subcategory L1 or L2; — for powered sailplanes and ELA1 aeroplanes, the licence is in subcategory L2; — for balloons, the licence is in subcategory L3; and — for airships, the licence is in subcategory L4 or L5, as appropriate. 	

C. Draft Decision — AMC 66.A.20(b)2

p. 127-128

comment	17	comment by: <i>CAA-NL</i>
	AMC 66.A.20(b)2 Privileges	
	With the addition “in Part-145 organisations” in the text, it can give the impression that experience must be gained in a Part 145 organisation. It’s our opinion this limitation is not intended, to prevent this suggested limitation we suggest to remove the words ‘in Part 145 organisation’.	
	Ref. AMC 66.A.30(a) Basic experience requirements	
response	<i>Accepted</i>	
	The text has been amended to show that the Part-145 organisation is just one option out of many.	

C. Draft Decision — new AMC 66.A.25(b)

p. 128



comment	11	comment by: <i>Ian HEY</i>
	AMC 66.A.25(b) refers to a M/F or a M/G approved organisation. This presumably means Part M, subpart F, and Part M, subpart G, respectively. This should be made clear by describing the organisations in full, as in this comment.	
response	<i>Noted</i>	
	The wording in this AMC has been modified to refer to the meaning of 'or as agreed by the competent authority', but it does not refer to M/F or M/G organisations anymore.	
comment	28	comment by: <i>KNVvL (Royal Netherlands Aviation Association) Technical Committee</i>
	Proposed text for the last bullet concerning the examination: Examination is conducted by an approved in accordance with Part 147 or by a Part 21 or a M/F or M/G approved organisation or directly approved the authority, or by an organisation with works on behalf of the competent authority and under its quality control.	
response	<i>Noted</i>	
	AMC 66.A.25(b) has been reworded. Please refer to Comment No 11 above.	

C. Draft Decision — GM 66.A.45

p. 129-131

comment	104	comment by: <i>Bristow (European Operations)</i>
	to modify the rule FROM Point 66.A.45 Endorsement with aircraft ratings (aa) In order to be entitled – For category B2L the relevant aircraft ratings are the following : 1 For Group 2 aircraft, manufacturer sub-group rating or full sub-group rating 2	
	TO Point 66.A.45 Endorsement with aircraft ratings (bb) In order to be entitled	



	<p>.....</p> <p>..... – For category B2L the relevant aircraft ratings are the following :</p> <p>1 For Group 2 aircraft, [<i>the appropriate aircraft type rating,</i>] manufacturer sub-group rating or full sub-group rating</p> <p>2</p> <p>The reason for the modification is that in order to receive the manufacturer sub-group rating the technician has to be qualified on at least TWO (2) helicopters type representative of the manufacturer, which could not be possible if he/she works for a company which operates only ONE (1) type of helicopter, like for example a fleet of only Bell 206 or Ecureuil AS 350.</p> <p>Adding the phrase [<i>the appropriate aircraft type rating,</i>] the technician can be qualified only on ONE (1) type rating or , if he she luckily works for a company with different types of helicopter, can still qualify for manufacturer sub-group rating.</p> <p>Entered on behalf of the EHA.</p>
response	<p><i>Not accepted</i></p> <p>It is not possible to add the ‘Individual type rating’ in Group 2 for a B2L licence because of the difficulties to define the type training or the type examinations for only certain system ratings.</p> <p>Moreover, when experience is gained on a single type of aircraft (case of Bristow) and is representative of the ‘system’ and ‘aircraft rating’, then the conditions for obtaining a manufacturer or full-group rating are met. (Please refer to current AMC 66.A.45(d), (e)3, (f)1 and (g)1).</p> <p>As a result, no text change is needed because obtaining a ‘manufacturer’ or a ‘full-subgroup’ rating in Group 2 for a B2L licence does not require to be qualified for 2 aircraft types but, more simply, it only requires that experience is gained on an aircraft and that this experience is representative of both the ‘system rating’ and the ‘aircraft rating’ of:</p> <ul style="list-style-type: none"> — either the manufacturer group; or — the full subgroup of aircraft. <p>If the experience on a single aircraft is not representative, this may require experience on a second aircraft, but only experience and not type training because then it falls under Group 2 aircraft.</p>



	<p>Hot Air:</p> <p>Eight annual inspections of different types I suppose that doesn't mean "of 8 different types"</p> <p>How much? At least 2?</p> <p>I Propose to fix: 8 annual inspections of at least 3 different types.</p> <p>May be the same or less for gasballoons and Airships.</p>
response	<p><i>Accepted</i></p> <p>Appendix II to AMC to Part-66 has been modified accordingly.</p>
comment	<p>18 comment by: CAA-NL</p>
	<p>AMC to Part-66: Appendix II Aircraft Type Practical Experience and On-the-Job Training - List of Tasks</p> <p>With the introduction of B2L the following system rating(s) are possible with the related knowledge sub-modules: communication/navigation (com/nav);</p> <ul style="list-style-type: none"> • submodule13.4 • instruments; sub-module 13.8 <p>However in the current part of Appendix II Aircraft Type Practical Experience and On-the-Job Training - List of Tasks the task for the B2L will be the same as the related task for the B2, however the tasks for the instruments system rating are included in the tasks under the heading 'Navigation'. We suggest to split this into 'Navigation' and 'Instruments'.</p>
response	<p><i>Accepted</i></p> <p>The list of tasks under 'Navigation' is split into the different 'system ratings' as follows:</p> <p>Com/Nav (associated to Communications)</p> <p>Troubleshoot faulty system.</p> <p>Check SATCOM.</p> <p>Instruments</p> <p>Troubleshoot faulty system.</p> <p>Calibrate magnetic direction indicator.</p> <p>Replace airspeed indicator.</p> <p>Replace altimeter.</p> <p>Replace air data computer.</p>



Replace ADI.
 Replace HSI.
 Check pitot static system for leaks.
 Check operation of directional gyro.
 Check calibration of pitot static instruments.
 Compass replacement direct/indirect.
 Functional check flight director system.

Surveillance

Troubleshoot faulty system.
 Functional check weather radar.
 Functional check doppler.
 Functional check TCAS.
 Functional check ATC Transponder.
 Check calibration of pressure altitude reporting system.

Navigation

Functional check inertial nav system.
 Complete quadrantal error correction of ADF system.
 Check GPS.
 Test AVM.
 Check marker systems.
 Functional check DME.

comment

34

comment by: *KNVvL (Royal Netherlands Aviation Association) Technical Committee*

Concerning the Specific tasks on Avionics systems:

According to 66.A.20 Privileges point 6: A holder of a L licence is only allowed to release to service:

work on avionic systems requiring only simple tests to prove their serviceability and not requiring troubleshooting

Apparently the removal and installation of COM/NAV/XPDR and antenna installations according to this list of specific tasks, fall in the above definition of privileges of an L licence holder. However, the removal/installation of these components is more extensive than executing *only simple tests*.



	<p>We suggestion:</p> <p>The restriction on the avionics work of L licensee in section 66.A.20 point 6 (second bullet) should be removed completely or at least corrected to allow for the avionics tasks mentioned in the list of specific tasks.</p>
response	<p><i>Noted</i></p> <p>The privileges of an L licence holder in 66.A.20(a)6 have been reworded and enlarged to better adapt the work to what can be carried out on ELA1 aircraft. With respect to avionics, this includes:</p> <ul style="list-style-type: none"> — work on radio, ELT and transponder systems; and — work on other avionics systems requiring simple tests to prove their serviceability.
comment	<p>51 comment by: <i>Luftsport Verband Bayern / Germany</i></p> <p>Appendix II, B, Wooden structures / Metal tubes and fabric: Practical experience should not be demonstrated for "Welding of tubes". This is a specific task for approved welders acc. EN 29591.</p>
response	<p><i>Accepted</i></p> <p>This part has been amended to delete experience on 'welding of tubes'. Part-M already states in M.A.402 that personnel who carries out specialised tasks such as welding are qualified in accordance with an officially recognised standard.</p>
comment	<p>92 comment by: <i>René Meier, Europe Air Sports</i></p> <p>Page 132...135/139 Appendix II to AMC to Part-66 Aircraft Type Practical Experience and On the Job Training, List of Tasks</p> <p>B. Specific Tasks for Sailplanes and Powered Sailplanes</p> <p>Many thanks for this extensive task list. At a first glance it will be difficult to find such training organisations today, or to create such in the near future, some of our members from the smaller EASA member states fear, again citing high associated costs.</p> <p>Rationale</p> <p>The topics will remain, demand will be low, so prices will be high. Due to this simple market mechanism instead of encouraging young people they will be discouraged, this in fact being the opposite of the statement written on page 11/139, Option 2, Social impacts.</p>



response *Noted*

It cannot be envisaged that no relevant or little practical maintenance experience is demonstrated to issue a European Part-66 licence, even for small aircraft. The proposal made through the list of tasks in Appendix II to AMC seems a reasonable content, as 50 % of the tasks which are representative of the categories (aeroplanes, sailplanes and powered sailplanes, balloons and airships) should be selected.

These tasks should be performed in the organisations at the opportunity of maintenance, but it is right that it may be difficult to find the appropriate organisation to carry out the required tasks on a specific type of aircraft. Assistance from larger organisations may be needed. Furthermore, to facilitate the removal of limitations from the licence, it has been added in AMC 66.A.50(b) that experience may be gained on aircraft not covered by the Basic Regulation, provided the experience is relevant and representative of the corresponding (sub)group. Please refer to the example provided.

comment 93

comment by: *René Meier, Europe Air Sports*

Page 135...139/139 Appendix II to AMC to Part-66 Aircraft Type Practical Experience and On the Job Training, List of Tasks

C. Specific Tasks for Balloons and Airships

The same comment as for B before:

Many thanks for this extensive task list. It will be even more difficult to find such training organisations today for the ballooning world, or to create such in the near future, some of our members from the smaller EASA member states fear, again citing high associated costs.

Rationale

The topics will remain, the task list is very long, demand will be and remain low, so prices will be high. Due to this simple market mechanism instead of encouraging young people they will be discouraged, this in fact being the opposite of the statement written on page 11/139, Option 2, Social impacts.

response *Noted*

No comment was made by Cameron Balloons Limited as a large user of balloons. Apparently, this experience seems reasonable to them.



Attachments to comments

 [B2L NPA \(01032013\).pdf](#)

Attachment No 1 to Comment [No 102](#)

 [TEKO Richtlinie 2000 R6.pdf](#)

Attachment No 2 to Comment [No 131](#)

 [Module 13 revised.pdf](#)

Attachment No 3 to comment [No 13](#)

