



## Regulation EU1149/2011 and Decision 2012/004/R)

*Juan Anton  
Continuing Airworthiness Manager  
Rulemaking Directorate  
EASA*



## Scope of changes

- **Opinion 05/2008 “Time limit for demonstrating compliance with knowledge and experience requirements”.**
- **Opinion 04/2009 “Aircraft maintenance license for non-complex aircraft”.**
- **Opinion 05/2009 “Privileges of B1 and B2 aircraft maintenance license, type and group ratings and type rating training”.**



## Entry into Force and Applicability

### ✈ **New Regulation (EU)1149/2011:**

- Published on the Official Journal on 16 November 2011.
- Entry into Force on 17 November 2011.
- Applies as of 01 August 2012, except the opt-out to continue using national licences for piston-engine non-pressurised airplanes of 2000 Kg MTOM and below not used in CAT, which applies as of 17 November 2011.
- One additional year (until 01 August 2013) for training organisations and competent authorities to adapt existing courses and examinations to the new rule and to provide the corresponding TNA.



## Opt-outs

### → Piston-engine non pressurised aeroplanes of 2000 Kg MTOM and below, when not used in CAT (Article 7.3(h)):

- **After 28 Sept. 2012**, mandatory to comply with Part-66 for new and converted licences.
- **After 28 Sept. 2014**, mandatory for certifying staff to have a Part-66 licence (new or converted).

**NOTE:** Only national qualifications obtained prior to 28 Sept. 2012 can be converted to a B3 licence. For these conversions, the new regulation of converting privileges applies.

### → For ELA1 aeroplanes, when not used in CAT (Article 7.3(i)):

- **After 28 Sept. 2015**, mandatory to comply with Part-66 for new and converted licences and mandatory for certifying staff to have a Part-66 licence (new or converted).

**NOTE:** This date has been set having in mind that the Agency will issue a new Opinion for a simplified licence for ELA1 aeroplanes and for aircraft other than aeroplanes and helicopters.



## Transition provisions

- Existing licences with aircraft group ratings do not need to be converted to the new group/sub-group ratings until the first renewal or change (Article 5.4).
- Basic Training courses complying with current requirements may be started until 31 July 2013 (1 year after the applicability date of the new Regulation). Basic Knowledge examinations which are part of these courses may comply with the current requirements (Article 6.3).
- Basic Knowledge examinations (not being part of a course), conducted by the NAA or by a Part-147 organisation, and complying with the current requirements, may be conducted until 31 July 2013 (1 year after the applicability date of the new Regulation) (Article 6.4).
- Type Training courses and type examinations complying with the current requirements, shall be started and finished not later than 31 July 2013 (1 year after the applicability date of the new Regulation) (Article 6.5).



## Grandfather provisions

→ **Certifying staff holding a Part-66 licence in a given category/sub-category will obtain automatically the new privileges described in 66.A.20(a) for that category/sub-category (even if they do not meet anymore with the Basic Knowledge requirements) (Article 5.3):**

- **Example:** B2 licence holders will obtain the privileges to release avionics and electrical tasks within mechanical and powerplant systems.
- No need for recalling licences.
- No need for re-examination.
- It is the responsibility of the maintenance organisation (or independent certifying staff), per new 66.A.20(b)3, to ensure that the person is competent before exercising certification privileges.

**NOTE:** In addition, the new Basic Knowledge requirements are considered met, for the purpose of defining the knowledge required for extending the licence to a new category/sub-category.



## Grandfather provisions

- **Conversion reports and examination credit reports complying with the current requirements shall be deemed to be in compliance with this Regulation (Article 5.5).**
- **The new time limits for application for a Part-66 licence shall have the following grandfather provisions (Article 7.8):**
  - For basic knowledge examinations and basic experience completed before the applicability date of the new Regulation, 10 years from this date (31 July 2022).
  - For theoretical type training and examinations, practical training and assessment, type examinations and on the job training completed before the applicability date of the new Regulation, 3 years from this date (31 July 2015).



## Time limits for Part-66 licence application

→ **“Time limit for demonstrating compliance with knowledge and experience requirements”.**





# Time limits for Part-66 licence application

## → Issues being addressed:

### ▪ **Before Regulation 1149/2011:**

- All basic knowledge examinations had to be passed within a 5 year period. However, there were no limits regarding:
  - The number of attempts and waiting periods for each module.
  - The time available after passing the exams in order to apply for a licence.
  
- There was no limit on how old the basic experience could be (except for the recent experience) when applying for a licence.
  
- For type training, there were no limits regarding:
  - The time available to complete the type training.
  - The time available after completing the type training in order to apply for a licence.



## Time limits for Part-66 licence application

### → **Basic knowledge examinations and basic experience:**

- All basic knowledge examinations and experience must be passed/gained within the 10 years prior to the application for a licence (66.A.25(b) and 66.A.30(f)).
  - Certificate of recognition modified: date of passed module is recorded.
  - Recent experience still required.
  
- This limit does not apply, in the case of a licence extension, for the common modules/sub-modules which are part of an already endorsed licence category/sub-category.
  
- Extension of the validity of the basic examinations may be performed for another 10 years by granting examination credits (comparison between initial Part-66 Appendix I syllabus when exams were passed and new syllabus at the time of granting credits) (66.A.25(c)1 and (d)).



## Time limits for Part-66 licence application

### → Recent experience:

- **66.A.30(d):**
  - At least 1 year of the required experience shall be recent (except for additional categories/subcategories where it shall be at least 3 months).
  
- **AMC 66.A.30(d):**
  - 50% (6 months) of the required 1 year **recent** experience should be within the last year before licence application.
  - The remaining **recent** experience (6 months), should be within the last 7 years before licence application.
  - The remaining experience (as required by 66.A.30(a)) must be within the 10 year limit.



## Time limits for Part-66 licence application

### → **Basic examination after a failed module (Appendix II, points 1.11 and 1.13):**

- Waiting periods for each set of 3 consecutive attempts:
  - 90 days after 1st attempt.
  - 90 days after 2nd attempt.
  - 1 year after 3rd attempt.

NOTE: The 90 day waiting periods may be reduced to 30 days when additional training is provided by a Part-147 organisation in the area where the candidate failed.



## Time limits for Part-66 licence application

→ **Type rating training and On the Job Training (Appendix III, points 1(a)(iv), 1(b)(v) and 6):**

- Theoretical training (+ examination), practical training (+ assessment) and On the Job Training (when required) must have been started and finished within 3 years prior to application for licence endorsement.

→ **Type examination and experience (Appendix III, point 5(h)):**

- Examination + practical experience must be completed within 3 years prior to application for licence endorsement.
- Waiting periods for each set of 3 consecutive attempts:
  - 30 days after 1st attempt.
  - 60 days after 2nd attempt.
  - 1 year after 3rd attempt.



## Time limits for Part-66 licence application

### → Examination credits (66.A.25(c) and (d), 66.B.400, 66.B.405 and 66.B.410):

- Extension of the 10-year validity of the Part-66 basic examinations may be performed for another 10 years by granting examination credits (upon applicant request). This requires the preparation of a credit report comparing the initial Part-66 Appendix I syllabus applicable when the exams were passed with the new syllabus at the time of requesting credits.

NOTE: In addition, the current possibility for granting examination credits for other technical qualifications still remains.

- 66.B.405 has been amended as follows (66.B.405(b)):
  - **Credit for examinations, other than basic knowledge examinations carried out in Part-147 organisations, can only be granted by the competent authority of the Member State in which the qualification has been obtained, without prejudice to bilateral agreements.**



# B1 and B2 privileges

✈ **“B1 and B2 privileges”**



## B1 and B2 privileges

### → Issues being addressed:

- ✦ Feedback suggested that the B2 privileges were too restrictive and also suggested that the B2 basic training course duration (2400 h) should be shorter than the B1 duration (based on a syllabus comparison).
- ✦ Revise Appendix I, II and III to include new technologies.
- ✦ Further clarification regarding the avionic tasks that could be performed with a B1 licence.
- ✦ Provide a clear definition of “electrical system”, “avionic system” and “simple test”.
- ✦ Further clarification of the category A privileges and updating the list of typical tasks.
- ✦ Include the possibility of having organisations approved with only B1 or B2 certifying staff.





## B1 and B2 privileges

### → New privileges of B2 licence holders:

- **Certification of electrical and avionic tasks within powerplant and mechanical systems, requiring only simple tests to prove their serviceability (66.A.20(a)3(i)).**
  - Appendices I, II and III have been revised to increase the level of training and examination in the affected modules.
  - Existing B2 licence holders will get the privilege automatically (Article 5.3).
    - No need for recalling licences.
    - No need for re-examination.
    - It is the responsibility of the maintenance organisation (or independent certifying staff), per new 66.A.20(b)3, to ensure that the person is competent before exercising certification privileges.



## B1 and B2 privileges

### → New privileges of B2 licence holders:

- **Certification of minor scheduled line maintenance and simple defect rectification (similar to category A) (66.A.20(a)3(ii) and 145.A.35(o)). However:**
  - It does not mean that the category B2 licence includes the corresponding sub-category A (like is the case of the B1). In fact, there are no sub-categories in B2.
  - This is a privilege of the B2 licence, subject to certain conditions (because the B2 syllabus does not fully cover the category A syllabus):
    - 66.A.20(a)3(ii): Limited to ratings already endorsed on the B2 licence.
    - 145.A.35(o): Performance of task training and examination/assessment plus six months of documented practical experience on the tasks that will be authorised. All must be performed (training, examination/assessment and experience) at the Part-145 organisation that will issue the authorisation.



## B1 and B2 privileges

### → New privileges of B2 licence holders:

- **Certification of minor scheduled line maintenance and simple defect rectification (continuation)**

#### **AMC 145.A.35(o):**

- This privilege cannot be transferred to another Part-145 (task training and experience must be obtained again).
- If a B2 licence holder has a certifying staff authorisation for category A tasks on a particular aircraft type, new tasks can be added for this type with only task training (no 6 months of experience required).
- If a new type is added, the 6 months of experience are required unless the aircraft is similar per AMC 66.A.20(b)2 to one already held.
- If the authorisation is going to cover several aircraft types, the experience may be combined in a 6-month period.



## B1 and B2 privileges

### → Revision of Appendix I, II and III:

- New technologies included for cat A, B1 and B2:
  - Integrated Modular Avionics (ATA42)
  - Cabin Systems (ATA44)
  - Information Systems (ATA46)
  
- New subjects for cat B2 to cover the new privileges linked to mechanical and powerplant systems.
  
- Revised Appendix II to adapt the number of questions to the new syllabus and to make them multiple of 4 (75% pass mark).



## B1 and B2 privileges

### ✈ Length of the B2 basic training course:

- The evaluation of the previous B1 and B2 syllabus justified a reduction of the duration of the B2 basic course to 2000 hours.
- However, due to the increase of the B2 syllabus to cover the new privileges and the new technologies, the duration has been maintained at 2400 hours.



## B1 and B2 privileges

### → Clarification of category B1 privileges:

#### **66.A.20(a):**

- For B1 and B2 it has been indicated that the privileges also include acting as “support staff”.
- For B1, “replacement of LRUs” has been changed to a more general “work on avionic systems” (always within the “simple test” provisions).
- Category B1 privileges do not include “troubleshooting”.



## B1 and B2 privileges

### ✈ Definition of “Electrical System” (GM 66.A.20(a)):

The aircraft electrical power supply source, plus the distribution system to the different components and relevant connectors.

Lighting systems are included, as well as the following typical practices on electrical system cables and connectors:

- Continuity, insulation and bonding techniques and testing.
- Crimping and testing of crimped joints.
- Connector pin removal and insertion.
- Wiring protection techniques.



## B1 and B2 privileges

### ✈ Definition of "Avionic System" (GM 66.A.20(a)):

Any aircraft system that transfers, processes, displays or stores analogue or digital data using data lines, data buses, coaxial cables, wireless or other data transmission medium, and includes the system's components and connectors. Examples include the following:

- Autoflight
- Communication, Radar and Navigation
- Instruments (**NOTE: maintenance on electro-mechanical and pitot-static components may also be released by B1 licence holders**)
- In-flight Entertainment Systems
- Integrated Modular Avionics
- On-Board Maintenance Systems
- Information Systems
- Fly-by-Wire Systems (related to ATA 27)
- Fibre Optic Control Systems





## B1 and B2 privileges

### → **Definition of "Simple Test" (GM 66.A.20(a)):**

A test described in approved maintenance data and meeting all the following criteria:

- Serviceability can be verified using aircraft controls, switches, BITE, Central Maintenance Computer or external test equipment not involving special training.
- The outcome of the test is a unique go-no go indication or parameter (single value or a value within a tolerance), without any interpretation of the result or interdependence of different values.
- No more than 10 steps as described in the approved maintenance data (excluding those needed to configure the aircraft for the test or to return it to the initial configuration). Pushing a control, switch or button, and reading the corresponding outcome may be considered as a single step.



## B1 and B2 privileges

### → Clarification and update of category A privileges (AMC 145.A.30(g)):

Revised the typical tasks in AMC 145.A.30(g) as follows:

Item r) revised:

- **PREVIOUS:** Replacement of any other component as agreed by the Agency for a particular aircraft type only where it is agreed that the task is simple.
- **NEW:** Any other task agreed by the competent authority as a simple task for a particular aircraft type. This may include defect deferment when all the following conditions are met:
  - No need for troubleshooting, and
  - The task is in the MEL, and
  - The maintenance action required by the MEL is agreed by the competent authority to be simple.



## B1 and B2 privileges

### → **Clarification and update of category A privileges (continuation):**

New tasks for helicopters: Removal and installation of

- Helicopter Emergency Medical Service (HEMS) simple internal medical equipment.
- External cargo provisions (external hook, mirrors...) other than the hoist.
- Quick release external cameras and search lights.
- Emergency float bags, not including the bottles.
- External doors with quick release attachments.
- Snow pads / skid wear shoes / slump protection pads.

No task which requires troubleshooting should be part of the authorised maintenance actions. CRS after rectification of deferred defects possible if the task is listed in this AMC.



## B1 and B2 privileges

### → Requirement for having B1 and B2 personnel in Part-145 organisations:

#### **145.A.30(g) revised to read:**

- "...in the case of line maintenance, have appropriate aircraft rated certifying staff qualified as category B1, B2, B3, **as appropriate**, ..."

#### **This means the following (see AMC 145.A.30(g), par. 4):**

- The competent authority may accept that for line maintenance an organisation has only B1, B2 or B3 personnel as long as the scope of work (in the MOE) clearly justifies it. Special attention should be paid to appropriately limit the scope of work not only for scheduled maintenance but also for non-scheduled maintenance (defect rectification).



## B1 and B2 privileges

### ✈ Responsibilities of the licence holder and the maintenance organisation in relation to the certification privileges:

#### **New provision in 66.A.20(b)3:**

- The holder of an aircraft maintenance licence may not exercise its privileges unless he/she has the adequate competence to certify maintenance on the corresponding aircraft.

#### **This means the following (see AMC 66.A.20(b)3):**

- The licence holder and the maintenance organisation where he/she is contracted/employed are responsible for ensuring appropriate knowledge, skills, attitude and experience to release the aircraft being maintained. **This is essential because holding an appropriately rated licence does not necessarily mean that the person is competent to release a particular aircraft.** (See additional information in AMC 145.A.35(a) )



## B1 and B2 privileges

Typical examples of areas which may not have been covered by the licensing requirements (AMC 66.A.20(b)3):

- Ratings endorsed on the licence after attending type training covering only certain variants (Airbus A318/A319/320/321 rating endorsed after attending A320 course).
- Maintenance performed on a model/variant for which the technology has significantly evolved since the type training course was imparted.
- Specific technology/customer options.
- Changes in the Basic Knowledge syllabus (Appendix I) not requiring re-examination of existing licence holders.
- Endorsement of group ratings based on experience, type training or type examination on a representative number of tasks/aircraft.
- Persons having 6 months of experience within the last 2 years only for certain similar aircraft (AMC 66.A.20(b)2).
- Removal of limitations from a converted licence only after examination on the applicable modules, without appropriate experience and, possibly, additional type training.



# Type and Group ratings

→ **“Type and Group ratings”**



# Type and Group ratings

## → **Issues being addressed:**

- ✦ Provide a clear policy of when an aircraft is considered complex in terms of maintenance, requiring an individual type rating and type training.
- ✦ Provide a clear classification of aircraft in groups related to their maintenance complexity.
- ✦ For the endorsement of group ratings, consider the possibility to replace the need for type examination on a representative number of aircraft by demonstration of appropriate experience, since in many cases it is very difficult to find a provider for those examinations.
- ✦ Clarify what is an aircraft type rating (different variants).





# Type and Group ratings

## → New aircraft groups (66.A.5):

### ▪ **GROUP 1:**

- Complex motor-powered aircraft
- Multiple-engine helicopters
- Aeroplanes with maximum certified operating altitude exceeding FL290
- Aircraft equipped with fly-by-wire systems
- Other aircraft requiring an aircraft type rating when defined by the Agency

### ▪ **GROUP 2:** Aircraft other than Group 1, in following sub-groups:

- Subgroup 2a: single turbo-propeller aeroplanes.
- Sub-group 2b: single turbine helicopters.
- Sub-group 2c: single piston helicopters.

### ▪ **GROUP 3:** Piston engine aeroplanes (other than Group 1)



## Type and Group ratings

- **For details on the requirements for endorsement of aircraft ratings (66.A.45), refer to the table contained in GM66.A.45**



## Type and Group ratings

→ **Experience required for the endorsement of group/sub-group ratings and for the endorsement of individual type ratings after type examination (AMC 66.A.45(d), (e)3, (f)1 and (g)1):**

A representative cross-section including 50% of the tasks of Appendix II to AMC, relevant to the licence category and to the aircraft ratings applied for:

- It should cover tasks from each paragraph of Appendix II to AMC.
- Other relevant tasks may be considered as an alternative.
- Should be obtained under supervision of certifying staff.
- Should be demonstrated by records or logbook.



## Type and Group ratings

In the case of (sub)group ratings, this experience may cover one or several aircraft types of the applicable (sub)group and may include experience on aircraft in group 1, 2 or 3 as long as it is relevant.

In the case of individual type ratings after type examination, this experience may be reduced to (instead of 50%):

- 30% of the relevant tasks, for the second endorsed aircraft type from the same manufacturer (sub)group.
- 20% of the relevant tasks for subsequent aircraft types from the same manufacturer (sub)group.



## Type and Group ratings

### → Limitations:

- **For B1.2 licence, on Group 3 aircraft (if no appropriate experience can be shown) (66.A.45(f)2):**
  - Pressurised aeroplanes,
  - Wooden structure aeroplanes,
  - Aeroplanes with metal tubing structure covered with fabric,
  - Metal structure aeroplanes,
  - Composite structure aeroplanes.
- **For B3 licence (if no appropriate experience can be shown) (66.A.45(g)2):**
  - Wooden structure aeroplanes,
  - Aeroplanes with metal tubing structure covered with fabric,
  - Metal structure aeroplanes,
  - Composite structure aeroplanes.



## Type and Group ratings

### → Limitations:

- **New point 66.A.50 “Limitations”:**
  - They are exclusions from certification privileges.
  - Limitations referred in 66.A.45 shall be removed based on experience or after practical assessment by the NAA.
  - Limitations referred in 66.A.70 shall be removed after examination on the modules/subjects defined in the conversion report.



## Type and Group ratings

### → Limitations:

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  - They are exclusions from certification privileges.
  - Limitations referred in 66.A.45 shall be removed based on experience or after practical assessment by the NAA.
  - Limitations referred in 66.A.70 shall be removed after examination on the modules/subjects defined in the conversion report.



## Type and Group ratings

### → **Experience required to remove limitations referred to in 66.A.45 (AMC 66.A.50(b)):**

Performance of a variety of tasks appropriate to the limitation:

- Should be obtained under supervision of certifying staff.
- Should include the tasks required by a scheduled annual inspection.

Alternatively, may be replaced (if agreed by the NAA) by:

- Theoretical and practical training provided by the manufacturer, as long as an assessment is carried out and recorded by the manufacturer.





## Type and Group ratings

### → **Conversion of existing Part-66 licences to the new Group Ratings (66.B.125):**

- Existing licences with aircraft group ratings do not need to be converted to the new group/sub-group ratings until the first renewal or change (Article 5.4).
- This conversion will be performed in accordance with new article *66.B.125 "Procedure for the conversion of licences including group ratings"*.
- This guarantees that privileges are not reduced.
- Those persons holding individual type ratings will maintain those ratings (no conversion applies to them).



## Type and Group ratings

### → **What is an aircraft type rating (different variants) (AMC 66.A.45(b)):**

- An aircraft type rating includes all the models/variants listed in column 2 of the Appendix I to AMC.
- When the rating is amended in Appendix I, the holder of a licence with the previous type rating is entitled, upon request, to get the new full type rating without further requirements.
- Similarly, type training courses covering certain but not all the models/variants of the type rating, are valid for endorsement of the full type rating.

It is the responsibility of the licence holder and, if applicable, the maintenance organisation, to comply with 66.A.20(b)3, 145.A.35(a) and M.A.607(a) before exercising certification privileges.



# Type training

✈ **“Type training”**



# Type training

## → **Issues being addressed:**

- ✦ Separate type training (theoretical + practical) from “On the Job Training) in order to reduce the current significant variation in length of the approved type training courses.
- ✦ Provide clear requirements for the duration/content of theoretical and practical elements of type training and “On the Job Training”.
- ✦ Introduce clear requirements and guidance material related to the TNA (Training Needs Analysis).



# Type training

## → Appendix III describes now all the requirements for:

### ▪ **Aircraft type training:**

- Theoretical training and examination:
  - General (point 1(a)).
  - Theoretical element standard (point 3.1), including objective, level, duration and content.
  - Examination standard (point 4.1).
- Practical training and assessment:
  - General (point 1(b)).
  - Practical element standard (point 3.2), including objective and content.
  - Assessment standard (point 4.2).
- Differences training (point 1(c)).

### ▪ **Type examination standard (point 5).**

### ▪ **On the Job Training (point 6).**



# Type training

## → **Fundamental aspects of type training:**

- Type training is composed of theoretical and practical element.
- The theoretical element:
  - has a minimum duration (depending on the licence and the aircraft category), with some flexibility. The final duration must be justified by a training needs analysis (TNA). See points 3.1(c) and (d) of Appendix III.
  - Must have a content following the Table contained in point 3.1(e) of Appendix III.
- The practical element has a fixed content (50% of the tasks listed in the Table in point 3.2(b) of Appendix III, relevant to the aircraft type). There is no duration defined.
- Each element can be performed by a Part-147 organisation or as directly approved by the NAA.
- The theoretical and practical elements should address the different parts of the aircraft representative of the structure and the systems/components (AMC to Section 1 of Appendix III).



# Type training

## → Fundamental aspects of type training (continuation):

- Aircraft type training may be subdivided in airframe and/or powerplant and/or avionics/electrical systems type training courses (AMC to Section 1 of Appendix III).
- Practical training:
  - may be performed after or integrated with the theoretical element. However, it should not be performed before (AMC to Section 1 of Appendix III).
  - may include instruction in a classroom or in simulators, but part of it should be conducted in a real maintenance or manufacturer environment (AMC to Paragraphs 1(b), 3.2 and 4.2 of Appendix III).
  - the duration has to ensure meeting the content required by paragraph 3.2 of Appendix III. Nevertheless, for aircraft equal or above 30000 Kg MTOM it should not be less than 2 weeks (unless properly justified) (AMC to Paragraphs 1(b), 3.2 and 4.2 of Appendix III).
  - for powerplant and avionic systems, it may be sub-contracted by the Part-147 organisation (AMC to Paragraphs 1(b), 3.2 and 4.2 of Appendix III).



# Type training

## → Fundamental aspects of “On the Job Training”:

- On the Job Training is not part of the Type Training
- On the Job Training is required for the first aircraft rating in a licence category/sub-category.
- However, it is not part of the Type Training and cannot be provided by a Part-147 organisation. It must be performed at and under the control of a Part-145 or Subpart F maintenance organisation.
- It is approved by the NAA issuing the licence.
- Should include one-to-one supervision and involve actual work task performance on aircraft/components. Simulators should not be allowed (AMC to Section 6 of Appendix III).
- Should cover 50% of the tasks of Appendix II to AMC applicable to the aircraft type and licence category. Some tasks should be selected from each paragraph. Other relevant tasks not in the list may be performed as an alternative (AMC to Section 6 of Appendix III).
- Up to 50% of OJT may be performed before the theoretical element (AMC to Section 6 of Appendix III).





## Type training

### → **Fundamental aspects of “On the Job Training” (continuation):**

- The procedures for OJT should be included in the Exposition Manual of the approved maintenance organisation (chapter 3.15, see AMC 145.A.70(a)). They can only be used when the licensing authority is the same as the competent authority of the maintenance organisation. In other cases, it is up to the licensing authority to decide whether it accepts such procedures for the purpose of approving the OJT.



## Type training

### → Training Needs Analysis (TNA):

- Introduced in point 3.1(d) of Appendix III and corresponding AMC.
- Applicable to the theoretical element of courses either carried out by Part-147 organisations or directly approved by the competent authority.
- Required in order to justify the duration of the theoretical element of the type training.
- **In Opinion 05/2009 the Agency proposed not to require a TNA for courses already approved which had a duration equal or above the minimum duration established in the new Appendix III.** However, the final Regulation EU1149/2011 required the TNA for all courses, including those courses approved before 01 August 2012, for which the content had to be adapted to the new rule and the TNA had to be produced by 01 August 2013.



## Type training

**In order to reduce the impact of the TNA on Part-147 organisations and on the authorities responsible for approving courses, AMC to Paragraph 3.1(d) of Appendix III to Part-66 allows the following:**

- ✦ For courses approved prior to 01 August 2012, with a duration of the theoretical element equal or above the minimum duration contained in the new paragraph 3.1(c) of Appendix III, the TNA only needs to cover:
  - the differences of “content” introduced by the new Regulation (paragraph 3.1(e) of Appendix III).
  - the minimum attendance and the maximum number of training hours per day (paragraph 3.1(d) of Appendix III).
- This reduced TNA may result in a change to the duration of the theoretical element.



## Type training

### **For new courses a full TNA is always required:**

- It is the main driver to determine the duration of the theoretical element of the type training, regardless of whether it is above or below the minimum duration contained in Appendix III.
- The purpose of the table of minimum duration is to provide a reference both to the organisation and the competent authority of what to expect as an average for the corresponding category of aircraft. Indicates also to the authority the level of detail of the scrutiny to be performed. For example:
  - The average duration for a course of an aircraft above 30000Kg MTOM is 150 hours.
  - A proposal for a course on an Airbus 380 or a Boeing 747 of 150 hours may require a close look to the TNA, because most likely the course may need a longer duration.
  - A proposal for a course on a Learjet 45 of 120 hours, even when it is below the minimum duration (average for the category) may be easily justified by the TNA and may not need such an in-depth investigation.
- The content and duration deriving from the TNA may be supported by an analysis from the TC holder.



# Type training

## Key aspects of the TNA:

- It takes into account (among other aspects):
  - The particular aircraft type, applicable systems, maintenance needs and operational experience.
  - The corresponding Instructions for Continued Airworthiness and other maintenance documentation available.
  - The learning objectives (what is expected to be achieved by the student taking into account the content and level of training defined for each licence category in Appendix III).
  - Appropriate coverage of typical tasks (removal/installation, testing, servicing, inspection, troubleshooting, etc).
  - Sequence of learning.
  - Instructional methods.
  - Documentation and resources available to the student.
  - The maximum number of training hours per day (recommended 6 full hours excluding breaks, examinations, aircraft visits, etc).
  - Minimum participation time from the student (not less than 90%)



## Type training

### → Changes to Part-147 requirements:

#### ▪ **147.A.125**

- The organisation shall keep all student training, examination and assessment records for an **unlimited** period.

**NOTE:** In 66.B.20, the NAA has to keep now for an unlimited period the records of examinations conducted by the NAA.

#### ▪ **147.A.145**

- An organisation may not be approved to conduct examinations unless approved to conduct the corresponding training.
- By derogation from the above, an organisation approved to provide basic knowledge training or type training may also be approved to provide type examination in the cases where type training is not required.



## Type training

### → Changes to Part-147 requirements:

- **Appendix III (Certificates of Recognition Forms 148 and 149)**
  - They include now the dates when each module was passed (for basic knowledge) and the start and end dates (for type training and type examination).
  - It is stated that the certificate must clearly identify if the type training course is complete or partial. If it is partial, it must indicate whether the interface areas are covered or not.



## B3 licence

✈ **“B3 licence”**





## B3 licence

- Applicable to “Piston-engine non-pressurized aeroplanes of 2000 Kg MTOM and below”.
- The B3 licence does not cover sailplanes, balloons and airships. Sailplanes /balloons/airships (and ELA1 aeroplanes) will be covered by a future more simplified licence.
- **Basic Knowledge (66.A.25):**
  - Appendix I to part-66 has been extended to include a column “B3” showing the required levels of basic knowledge.
  - Examination as per revised Appendix II to Part-66.
  - Duration for approved Part-147 basic courses (Appendix I to Part-147): 1000h
- **Basic Experience (66.A.30):**
  - The same as for B1.2 licence (between 1 and 3 years)



## B3 licence

### Ratings (66.A.45(a) and (g)):

- In order to exercise certification privileges the B3 licence must be endorsed with the rating:

**« Piston-engine non-pressurized aeroplanes of 2000 Kg MTOM and below »**

- This rating is endorsed based on demonstration of appropriate practical experience:

AMC 66.A.45(d), (e)3, (f)1 and (g)1: A representative cross-section including 50% of the tasks of Appendix II to AMC, relevant to the licence category and to the aircraft ratings applied for:

- It should cover tasks from each paragraph of Appendix II to AMC.
- Other relevant tasks may be considered as an alternative.
- Should be obtained under supervision of certifying staff.
- Should be demonstrated by records or logbook.



## B3 licence

### ✈ Limitations (66.A.45(g)2):

- **If no appropriate experience can be shown, the following limitations apply:**
  - Wooden structure aeroplanes,
  - Aeroplanes with metal tubing structure covered with fabric,
  - Metal structure aeroplanes,
  - Composite structure aeroplanes.

### ✈ Experience required to remove these limitations (AMC 66.A.50(b)):

Performance of a variety of tasks appropriate to the limitation:

- Should be obtained under supervision of certifying staff.
- Should include the tasks required by a scheduled annual inspection.

Alternatively, may be replaced (if agreed by the NAA) by:

- Theoretical and practical training provided by the manufacturer, as long as an assessment is carried out and recorded by the manufacturer.



## B3 licence

### **Conversion of national qualifications:**

- For aircraft not involved in CAT other than large, the aircraft maintenance licence shall contain limitations in accordance with point 66.A.50 to ensure that the certifying staff privileges valid in the Member State prior to the entry into force of this Regulation and the privileges of the converted Part-66 aircraft maintenance licence remain the same (66.A.70(d)).
- For a complete description of the Conversion Process refer to 66.A.70 and corresponding GM.