

**Aircraft Type Practical Experience and On-the-Job Training requirements for:
Group 1 Aircraft Part-66 Type rating endorsement.**

<p>EC 2042/2003 amended up to EU 1149/2011 SECTION A TECHNICAL REQUIREMENTS SUBPART A</p>	<p>AML 66.A.5 Aircraft groups For the purpose of ratings on aircraft maintenance licences, aircraft shall be classified in the following groups: 1. Group 1: complex motor-powered aircraft as well as multiple engine helicopters, aeroplanes with maximum certified operating altitude exceeding FL290, aircraft equipped with fly-by-wire systems and other aircraft requiring an aircraft type rating when defined so by the Agency.</p>											
<p>EC 2042/2003 amended up to EU 1149/2011 SECTION A TECHNICAL REQUIREMENTS SUBPART A</p>	<p>AML 66.A.45 Endorsement with aircraft ratings (a) In order to be entitled to exercise certification privileges on a specific aircraft type, the holder of an aircraft maintenance licence need to have his/her licence endorsed with the relevant aircraft ratings. — For category B1, B2 or C the relevant aircraft ratings are the following: 1. For group 1 aircraft, the appropriate aircraft type rating. (b) The endorsement of aircraft type ratings requires the satisfactory completion of the relevant category B1, B2 or C aircraft type training. (c) In addition to the requirement of point (b), the endorsement of the first aircraft type rating within a given category/sub-category requires satisfactory completion of the corresponding On the Job Training, as described in Appendix III to Annex III (Part-66).</p>											
<p>ED 2003/19/RM amended up to ED 2012/004/R</p>	<p>GM 66.A.45(b) Endorsement with aircraft ratings An aircraft type rating includes all the aircraft models/variants listed in column 2 of Appendix I to AMC to Part-66. When a person already holds a type rating on the licence and such type rating is amended in the Appendix I to AMC to Part-66 in order to include additional models/variants, there is no need for additional type training for the purpose of amending the type rating in the licence. The rating should be amended to include the new variants, upon request by the applicant, without additional requirements. However, it is the responsibility of the licence holder and, if applicable, the maintenance organisation where he/she is employed to comply with 66.A.20(b)3, 145.A.35(a) and M.A.607(a), as applicable, before he/she exercises certification privileges. Similarly, type training courses covering certain, but not all the models/variants included in a type rating, are valid for the purpose of endorsing the full type rating.</p>											
<p>ED 2003/19/RM amended up to ED 2012/004/R</p>	<p>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.</p> <table border="1" data-bbox="379 1182 1445 1509"> <thead> <tr> <th data-bbox="379 1182 647 1211">Aircraft Groups</th> <th data-bbox="647 1182 912 1211">B1</th> <th data-bbox="912 1182 1177 1211">B2 licence</th> <th data-bbox="1177 1182 1445 1211">C licence</th> </tr> </thead> <tbody> <tr> <td data-bbox="379 1211 647 1509"> Group 1 Complex motorpowered aircraft. Multiple engine helicopters. Aeroplanes certified above FL290. Aircraft equipped with fly-by-wire. Other aircraft when defined by the Agency. </td> <td data-bbox="647 1211 912 1509"> Individual TYPE RATING Type training: - Theory + examination - Practical + assessment PLUS OJT (for first aircraft in licence subcategory) </td> <td data-bbox="912 1211 1177 1509"> Individual TYPE RATING Type training: - Theory + examination - Practical + assessment PLUS OJT (for first aircraft in licence category) </td> <td data-bbox="1177 1211 1445 1509"> Individual TYPE RATING Type training: - Theory + examination </td> </tr> </tbody> </table>				Aircraft Groups	B1	B2 licence	C licence	Group 1 Complex motorpowered aircraft. Multiple engine helicopters. Aeroplanes certified above FL290. Aircraft equipped with fly-by-wire. Other aircraft when defined by the Agency.	Individual TYPE RATING Type training: - Theory + examination - Practical + assessment PLUS OJT (for first aircraft in licence subcategory)	Individual TYPE RATING Type training: - Theory + examination - Practical + assessment PLUS OJT (for first aircraft in licence category)	Individual TYPE RATING Type training: - Theory + examination
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<p>EC 2042/2003 amended up to EU 1149/2011 SECTION B PROCEDURES FOR COMPETENT AUTHORITIES SUBPART B</p>	<p>ISSUE OF AN AML 66.B.115 Procedure for the change of an aircraft maintenance licence to include an aircraft rating or to remove limitations (b) In the case where the complete type training is not conducted by maintenance training organisation appropriately approved in accordance with Annex IV (Part-147), the competent authority shall be satisfied that all type training requirements are complied with before the type rating is issued. (f) Compliance with the practical elements shall be demonstrated (i) by the provision of detailed practical training records or a logbook provided by a maintenance organisation appropriately approved in accordance with Annex II (Part-145) or, where available, (ii) by a training certificate covering the practical training element issued by a maintenance training organisation appropriately approved in accordance with Annex IV (part-147). (g) Aircraft type endorsement shall use the aircraft type ratings specified by the Agency.</p>											

<p>ED 2003/19/RM amended up to ED 2012/004/R</p>	<p>AMC 66.B.115 Procedure for the change of an aircraft maintenance licence to include an aircraft rating or to remove limitations (a) Where the type training has not been conducted by a Part-147 organisation, there should be supporting documents confirming to the competent authority that:</p> <ul style="list-style-type: none"> • the type training has been approved by the competent authority in accordance with 66.B.130; • the applicant has completed the elements of the approved type training; and • the trainee has been successfully examined/assessed.
<p>EC 2042/2003 amended up to EU 1149/2011 SECTION B PROCEDURES FOR COMPETENT AUTHORITIES SUBPART B</p>	<p>ISSUE OF AN AML 66.B.130 Procedure for the direct approval of aircraft type training The competent authority may approve aircraft type training not conducted by a maintenance training organisation approved in accordance with Annex IV (Part-147), pursuant to point 1 of Appendix III to this Annex (part-66). In such case the competent authority shall have a procedure to ensure the aircraft type training complies with Appendix III of this Annex (Part-66).</p>
<p>ED 2003/19/RM amended up to ED 2012/004/R</p>	<p>AMC 66.B.130 Procedure for the direct approval of aircraft type training</p> <ol style="list-style-type: none"> 1. The procedure for the direct approval of type training courses by the competent authority should require that the following aspects are described by the organisation providing the training: <ul style="list-style-type: none"> • The content and the duration of the theoretical and/or practical elements, as applicable, in accordance with Appendix III to Part-66, including the Training Need Analysis (TNA); • The teaching methods and instructional equipment; • The material and documentation provided to the student; • The qualification of instructors, examiners and/or assessors, as applicable; • The examination and/or assessment procedure, as applicable. Further guidance about the assessment and the designated assessors is given in Appendix III to AMC to Part-66; • The documentation and records to be provided to the student to justify the satisfactory completion of the training course and related examination/assessment. This should include not only a certificate of completion but enough documentation and records to justify that the content and duration approved has been met and that the examination/assessment has been successfully passed. 2. The above criteria apply to a full course as well as to a partial course such as the practical element of a type training course and its assessment. 3. The procedure should also indicate how the competent authority is going to audit the proper performance of the approved course. 4. The direct approval of aircraft type training should be done on a case-by-case basis and should not be granted for long-term periods, since it is not a privilege of the organisation providing the training.
<p>EC 2042/2003 amended up to EU1149/2011</p>	<p>Part 66 Appendix III Aircraft type training and examination standard. On the job training 1. General Aircraft type training shall consist of theoretical training and examination, and, except for the category C ratings, practical training and assessment.</p> <p>(b) Practical training and assessment shall comply with the following requirements:</p> <ol style="list-style-type: none"> i. Shall be conducted by a maintenance training organisation appropriately approved in accordance with Annex IV (Part-147) or, when conducted by other organisations, as directly approved by the competent authority. ii. Shall comply with the standard described in paragraph 3.2 and 4 of this Appendix III, except as permitted by the differences training described below. iii. Shall include a representative cross section of maintenance activities relevant to the aircraft type. iv. Shall include demonstrations using equipment, components, simulators, other training devices or aircraft. v. Shall have been started and completed within the 3 years preceding the application for a type rating endorsement.
<p>EC 2042/2003 amended up to EU1149/2011</p>	<p>Part 66 Appendix III Aircraft type training and examination standard. On the job training 3.2. Practical element (a) Objective: The objective of practical training is to gain the required competence in performing safe maintenance, inspections and routine work according to the maintenance manual and other relevant instructions and tasks as appropriate for the type of aircraft, for example troubleshooting, repairs, adjustments, replacements, rigging and functional checks. It includes the awareness of the use of all technical literature and documentation for the aircraft, the use of specialist/special tooling and test equipment for performing removal</p>

	<p>and replacement of components and modules unique to type, including any on-wing maintenance activity.</p> <p>(b) Content:</p> <p>At least 50 % of the crossed items (<i>DTA OJT compliance list: blue, red & green items</i>) in the table below, which are relevant to the particular aircraft type, shall be completed as part of the practical training (<i>See DTA OJT compliance report</i>).</p> <p>Tasks crossed represent subjects that are important for practical training purposes to ensure that the operation, function, installation and safety significance of key maintenance tasks is adequately addressed; particularly where these cannot be fully explained by theoretical training alone. Although the list details the minimum practical training subjects, other items may be added where applicable to the particular aircraft type.</p> <p>Tasks to be completed shall be representative of the aircraft and systems both in complexity and in the technical input required to complete that task. While relatively simple tasks may be included, other more complex tasks shall also be incorporated and undertaken as appropriate to the aircraft type.</p> <p>Glossary of the table: LOC: Location; FOT: Functional/Operational Test; SGH: Service and Ground Handling; R/I: Removal/Installation; MEL: Minimum Equipment List; TS: TroubleShooting.</p> <p>(Note: Table not included in this extract of the legislation text – see ED 1149/2011 or DTA OJT)</p>
<p>EC 2042/2003 amended up to EU1149/2011</p>	<p>Part 66 Appendix III Aircraft type training and examination standard. On the job training</p> <p>4. Type training examination and assessment standard</p> <p>4.2. Practical element assessment standard After the practical element of the aircraft type training has been completed, an assessment must be performed, which must comply with the following:</p> <p>(a) The assessment shall be performed by designated assessors appropriately qualified.</p> <p>(b) The assessment shall evaluate the knowledge and skills of the trainee.</p>
<p>EC 2042/2003 amended up to EU1149/2011</p> <p>Part 66 Appendix III Aircraft type training and examination standard. On the job training</p>	<p>6. On the Job Training</p> <p>On the Job Training (OJT) shall be approved by the competent authority who has issued the licence.</p> <p>It shall be conducted at and under the control of a maintenance organisation appropriately approved for the maintenance of the particular aircraft type and shall be assessed by designated assessors appropriately qualified.</p> <p>It shall have been started and completed within the 3 years preceding the application for a type rating endorsement.</p> <p>(a) Objective: The objective of OJT is to gain the required competence and experience in performing safe maintenance.</p> <p>(b) Content: OJT shall cover a cross section of tasks acceptable to the competent authority. The OJT tasks to be completed shall be representative of the aircraft and systems both in complexity and in the technical input required to complete that task. While relatively simple tasks may be included, other more complex maintenance tasks shall also be incorporated and undertaken as appropriate to the aircraft type.</p> <p>Each task shall be signed off by the student and countersigned by a designated supervisor. The tasks listed shall refer to an actual job card/work sheet, etc.</p> <p>The final assessment of the completed OJT is mandatory and shall be performed by a designated assessor appropriately qualified.</p> <p>The following data shall be addressed on the OJT worksheets/logbook:</p> <ol style="list-style-type: none"> 1. Name of Trainee; 2. Date of Birth; 3. Approved Maintenance Organisation; 4. Location; 5. Name of supervisor(s) and assessor, (including licence number if applicable); 6. Date of task completion; 7. Description of task and job card/work order/tech log, etc.; 8. Aircraft type and aircraft registration; 9. Aircraft rating applied for. <p>In order to facilitate the verification by the competent authority, demonstration of the OJT shall consist of (i) detailed worksheets/logbook and (ii) a compliance report demonstrating how the OJT meets the requirement of this Part.</p>
<p>ED 2003/19/RM amended up to ED 2012/004/R</p>	<p>AMC to Section 1 of Appendix III to Part-66 “Aircraft Type Training and Examination Standard. On-the-Job Training”</p> <p>Aircraft type training</p> <ol style="list-style-type: none"> 1. Aircraft type training may be subdivided in airframe and/or powerplant and/or avionics/electrical systems <ul style="list-style-type: none"> • Airframe type training course means a type training course including all relevant aircraft structure and electrical and mechanical systems excluding the powerplant. • Powerplant type training course means a type training course on the bare engine, including the build-up to a quick engine change unit. • The interface of the engine/airframe systems should be addressed by either airframe or powerplant type training course. In some cases, such as for general aviation, it may be more appropriate to

	<p>cover the interface during the airframe course due to the large variety of aircraft that can have the same engine type installed.</p> <ul style="list-style-type: none">• Avionics/electrical systems type training course means type training on avionics and electrical systems covered by but not necessarily limited to ATA (Air Transport Association) Chapters 22, 23, 24, 25, 27, 31, 33, 34, 42, 44, 45, 46, 73 and 77 or equivalent. <p>2. Practical training may be performed either following or integrated with the theoretical elements. However, it should not be performed before theoretical training.</p> <p>3. The content of the theoretical and practical training should:</p> <ul style="list-style-type: none">• address the different parts of the aircraft which are representative of the structure, the systems/components installed and the cabin; and• include training on the use of technical manuals, maintenance procedures and the interface with the operation of the aircraft. <p>Therefore, it should be based on the following elements:</p> <ul style="list-style-type: none">• Type design including relevant type design variants, new technology and techniques;• Feedback from in-service difficulties, occurrence reporting, etc.;• Significant applicable airworthiness directives and service bulletins;• Known human factor issues associated with the particular aircraft type;• Use of common and specific documentation, (when applicable, such as MMEL, AMM, MPD, TSM, SRM, WD, AFM, tool handbook), philosophy of the troubleshooting, etc.;• Knowledge of the maintenance on-board reporting systems and ETOPS maintenance conditions, when applicable;• Use of special tooling and test equipment and specific maintenance practises including critical safety items and safety precautions;• Significant and critical tasks/aspects from the MMEL, CDL, Fuel Tank Safety (FTS), airworthiness limitation items (ALI) including Critical Design Configuration Control Limitations (CDCCL), CMR and all ICA documentation such as MRB, MPD, SRM, AMM, etc., when applicable.• Maintenance actions and procedures to be followed as a consequence of specific certification requirements, such as, but not limited to, RVSM (Reduced Vertical Separation Minimum) and NVIS (Night Vision Imaging Systems);• Knowledge of relevant inspections and limitations as applicable to the effects of environmental factors or operational procedures such as cold and hot climates, wind, moisture, sand, de-icing/anti-icing, etc. <p>The type training does not necessarily need to include all possible customer options corresponding to the type rating described in the Appendix I to AMC to Part-66.</p> <p>4. Limited avionic system training should be included in the category B1 type training as the B1 privileges include work on avionics systems requiring simple tests to prove their serviceability.</p> <p>5. Electrical systems should be included in both categories of B1 and B2 type training.</p> <p>6. The theoretical and practical training should be complementary and may be:</p> <ul style="list-style-type: none">• Integrated or split;• Supported by the use of training aids, such as, trainers, virtual aircraft, aircraft components, synthetic training devices (STD), computer-based training devices (CBT), etc.
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<p>ED 2003/19/RM amended up to ED 2012/004/R</p>	<p>AMC to Paragraphs 1(b), 3.2 and 4.2 of Appendix III to Part-66 “Aircraft Type Training and Examination Standard. On-the-Job Training” Practical element of the aircraft type training</p> <ol style="list-style-type: none"> 1. The practical training may include instruction in a classroom or in simulators but part of the practical training should be conducted in a real maintenance or manufacturer environment. 2. The tasks should be selected because of their frequency, complexity, variety, safety, criticality, novelty, etc. The selected tasks should cover all the chapters described in the table contained in paragraph 3.2 of Appendix III to Part-66. 3. The duration of the practical training should ensure that the content of training required by paragraph 3.2 of Appendix III to Part-66 is completed. Nevertheless, for aeroplanes with a MTOM equal or above 30 000 kg, the duration for the practical element of a type rating training course should not be less than two weeks unless a shorter duration meeting the objectives of the training and taking into account pedagogical aspects (maximum duration per day) is justified to the competent authority. 4. The organisation providing the practical element of the type training should provide trainees with a schedule or plan indicating the list of tasks to be performed under instruction or supervision. A record of the tasks completed should be entered into a logbook which should be designed such that each task or group of tasks may be countersigned by the designated assessor. The logbook format and its use should be clearly defined. 5. In paragraph 4.2 of Appendix III to Part-66, the term “designated assessors appropriately qualified” means that the assessors should demonstrate training and experience on the assessment process being undertaken and be authorised to do so by the organisation. Further guidance about the assessment and the designated assessors is provided in Appendix III to AMC to Part-66. 6. 6. The practical element (for powerplant and avionic systems) of the Type Rating Training may be subcontracted by the approved Part-147 organisation under its quality system according to the provisions of 147.A.145(d)3 and the corresponding Guidance Material.
<p>ED 2003/19/RM amended up to ED 2012/004/R</p>	<p>AMC to Section 6 of Appendix III to Part-66 “Aircraft Type Training and Examination Standard. On-the-Job Training” On-the-Job Training (OJT)</p> <ol style="list-style-type: none"> 1. “A maintenance organisation appropriately approved for the maintenance of the particular aircraft type” means a Part-145 or M.A. Subpart F approved maintenance organisation holding an A rating for such aircraft. 2. The OJT should include one-to-one supervision and should involve actual work task performance on aircraft/components, covering line and/or base maintenance tasks. 3. The use of simulators for OJT should not be allowed. 4. The OJT should cover at least 50 % of the tasks contained in Appendix II to AMC to Part-66. Some tasks should be selected from each paragraph of the Appendix II list. Tasks should be selected among those applicable to the type of aircraft and licence (sub)category applied for. Other tasks than those in the Appendix II may be considered as a replacement when they are relevant. Typically, in addition to the variety and the complexity, the OJT tasks should be selected because of their frequency, safety, novelty, etc. 5. Up to 50 % of the required OJT may be undertaken before the aircraft theoretical type training starts. 6. The organisation providing the on-the-job training should provide trainees with a schedule or plan indicating the list of tasks to be performed under supervision. A record of the tasks completed should be entered into a logbook which should be designed such that each task or group of tasks is countersigned by the corresponding supervisor. The logbook format and its use should be clearly defined. 7. Regarding the day-to-day supervision of the OJT programme in the approved maintenance organisation and the role of the supervisor(s), the following should be considered: <ul style="list-style-type: none"> • It is sufficient that the completion of individual OJT tasks is confirmed by the direct supervisor(s), without being necessary the direct evaluation of the assessor. • During the day-to-day OJT performance, the supervision aims at overseeing the complete process, including task completion, use of manuals and procedures, observance of safety measures, warnings and recommendations and adequate behavior in the maintenance environment. • The supervisor(s) should personally observe the work being performed to ensure the safe completeness and should be readily available for consultation, if needed during the OJT performance. • The supervisor(s) should countersign the tasks and release the maintenance tasks as the trainee is still not qualified to do so. • The supervisor(s) should therefore: <ul style="list-style-type: none"> • have certifying staff or support staff privileges relevant to the OJT tasks; • be competent for the selected tasks;

	<ul style="list-style-type: none">• be safety-orientated;• be capable to coach (setting objectives, giving training, performing supervision, evaluating, handling trainee's reactions and cultural issues, managing objectively and positively debriefing sessions, determining the need for extra training or reorientate the training, reporting, etc.);• be designated by the approved maintenance organisation to carry out the supervision. <p>8. Regarding the assessor, the following should be considered:</p> <ul style="list-style-type: none">• The function of the assessor, as described in Section 6 of Appendix III to Part-66, is to conduct the final assessment of the completed OJT. This assessment should include confirmation of the completion of the required diversity and quantity of OJT and should be based on the supervisor(s) reports and feedback.• In Section 6 of Appendix III to Part-66, the term "designated assessor appropriately qualified" means that the assessor should demonstrate training and experience on the assessment process being undertaken and should be authorised to do so by the organisation. <p>Further guidance about the assessment and the designated assessors is provided in Appendix III to AMC to Part-66.</p> <p>9. The procedures for OJT should be included into the Exposition Manual of the approved maintenance organisation (Chapter 3.15, as indicated in AMC 145.A.70(a)).</p> <p>However, since these procedures in the Exposition Manual are approved by the competent authority of the maintenance organisation, and providing training is not one of the privileges of a maintenance organisation, they can only be used when the licencing authority is the same as the competent authority of the maintenance organisation. In other cases, it is up to the licencing authority to decide whether it accepts such procedures for the purpose of approving the OJT (refer to AMC 66.B.115).</p>
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