

A stylized paper airplane icon is positioned on a dashed line that represents a flight path. The path starts from the left, curves upwards, then downwards, and then upwards again towards the right. The background features large, light grey abstract shapes that resemble the map of Malaysia.

CIVIL AVIATION DIRECTIVE – 1821

MAINTENANCE TRAINING ORGANISATION APPROVAL

CAAM PART 147

CIVIL AVIATION AUTHORITY OF MALAYSIA

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Civil Aviation Directive components and Editorial practices

This Civil Aviation Directive is made up of the following components and are defined as follows:

Standards: Usually preceded by words such as “*shall*” or “*must*”, are any specification for physical characteristics, configuration, performance, personnel or procedure, where uniform application is necessary for the safety or regularity of air navigation and to which Operators must conform. In the event of impossibility of compliance, notification to the CAAM is compulsory.

Recommended Practices: Usually preceded by the words such as “*should*” or “*may*”, are any specification for physical characteristics, configuration, performance, personnel or procedure, where the uniform application is desirable in the interest of safety, regularity or efficiency of air navigation, and to which Operators will endeavour to conform.

Appendices: Material grouped separately for convenience but forms part of the Standards and Recommended Practices stipulated by the CAAM.

Definitions: Terms used in the Standards and Recommended Practices which are not self-explanatory in that they do not have accepted dictionary meanings. A definition does not have an independent status but is an essential part of each Standard and Recommended Practice in which the term is used, since a change in the meaning of the term would affect the specification.

Tables and Figures: These add to or illustrate a Standard or Recommended Practice and which are referred to therein, form part of the associated Standard or Recommended Practice and have the same status.

Notes: Included in the text, where appropriate, Notes give factual information or references bearing on the Standards or Recommended Practices in question but not constituting part of the Standards or Recommended Practices;

Attachments: Material supplementary to the Standards and Recommended Practices or included as a guide to their application.

It is to be noted that some Standards in this Civil Aviation Directive incorporates, by reference, other specifications having the status of Recommended Practices. In such cases, the text of the Recommended Practice becomes part of the Standard.

The units of measurement used in this document are in accordance with the International System of Units (SI) as specified in CAD 5. Where CAD 5 permits the use of non-SI alternative units, these are shown in parentheses following the basic units. Where two sets of units are quoted it must not be assumed that the pairs of values are equal and interchangeable. It may, however, be inferred that an equivalent level of safety is achieved when either set of units is used exclusively.

Any reference to a portion of this document, which is identified by a number and/or title, includes all subdivisions of that portion.

Throughout this Civil Aviation Directive, the use of the male gender should be understood to include male and female persons.



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Table of Contents

1	GENERAL	1-1
1.1	CITATION.....	1-1
1.2	APPLICABILITY	1-1
1.3	REVOCATION.....	1-1
1.4	DEFINITIONS	1-1
2	APPLICATION OF MAINTENANCE TRAINING ORGANISATION APPROVAL	2-1
3	ISSUE OF MAINTENANCE TRAINING ORGANISATION PROVISIONAL APPROVAL AND MAINTENANCE TRAINING ORGANISATION APPROVAL.....	3-1
4	ORGANISATIONAL REQUIREMENTS (SUBPART B).....	4-1
4.1	FACILITY REQUIREMENTS (147.100)	4-1
4.2	PERSONNEL REQUIREMENTS (147.105).....	4-2
4.3	RECORD OF INSTRUCTORS, EXAMINERS AND PRACTICAL ASSESSORS (147.110)	4-3
4.4	INSTRUCTIONAL EQUIPMENT (147.115).....	4-4
4.5	MAINTENANCE TRAINING MATERIAL (147.120).....	4-4
4.6	RECORD-KEEPING (147.125).....	4-4
4.7	TRAINING PROCEDURE AND QUALITY SYSTEMS (147.130).....	4-5
4.8	EXAMINATIONS (147.135)	4-5
4.9	ASSESSMENT.....	4-7
4.10	MAINTENANCE TRAINING ORGANISATION EXPOSITION (147.140).....	4-7
4.11	MAINTENANCE TRAINING PROGRAMME.....	4-8
5	APPROVED BASIC TRAINING COURSE (SUBPART C).....	5-1
5.1	THE APPROVED BASIC TRAINING COURSE (147.200).....	5-1
5.2	BASIC KNOWLEDGE EXAMINATIONS (147.205).....	5-1
5.3	BASIC PRACTICAL ASSESSMENTS (147.210).....	5-2
6	AIRCRAFT TYPE/ TASK TRAINING COURSE (SUBPART D)	6-1
6.1	AIRCRAFT TYPE/ TASK TRAINING (147.300).....	6-1
7	PRIVILEGES OF THE ORGANISATION (147.145)	7-1
7.2	LIMITATIONS ON THE ORGANISATION	7-1
8	CONTINUATION OF AN APPROVAL.....	8-1
8.1	CHANGES TO THE ORGANISATION (147.150).....	8-1
8.2	CONTINUED VALIDITY (147.155).....	8-1
8.3	FINDINGS (147.160).....	8-2
9	APPENDICES	9-1
9.1	APPENDIX 1 – BASIC TRAINING COURSE DURATION.....	9-1
9.2	APPENDIX 2 – CERTIFICATE OF RECOGNITION	9-3
9.3	APPENDIX 3 – AIRCRAFT TYPE/ TASK TRAINING AND EXAMINATION	9-5
9.4	APPENDIX 4 – QUALIFICATION AND EXPERIENCE OF INSTRUCTOR, KNOWLEDGE EXAMINER AND PRACTICAL ASSESSOR.....	9-7



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1 General

1.1 Citation

1.1.1 These Directives are the Civil Aviation Directives 1821 – Maintenance Training Organisation Approval (CAAM Part 147), Issue 01/Revision 02, and comes into operation on 15th November 2022.

1.1.2 This CAD 1821 – Maintenance Training Organisation Approval, Issue 01/Revision 02 will remain current until withdrawn or superseded.

1.2 Applicability

1.2.1 The following persons shall be subject to this Directive—

- a) an applicant or holders of a certificate of approval under regulation 31(1)(c) of the MCAR; and
- b) an applicant or holders of a certificate of approval under regulation 32 of the MCAR;

1.3 Revocation

1.3.1 This CAD revokes Civil Aviation Circular 08/2021 – Revised CADs and CAGMs Requirements and Guidance, dated 31 December 2021 and Civil Aviation Directives 1821 – Maintenance Training Organisation Approval (CAAM Part 147) (CAD 1821) Issue 01/Revision 01, dated 15th November 2021.

1.3.2 This CAD also revokes Civil Aviation Guidance Material 1823 - Guidance for Qualification and Experience of Instructor, Knowledge Examiner and Practical Assessor, Issue 01/Revision 00, dated 15th September 2021.

1.4 Definitions

1.4.1 In this Directive, unless the context otherwise requires—

Aircraft Maintenance Licence or AML means a licence issued by CAAM in accordance with CAD 1801.

AMO means, an approved maintenance organisation which holds a valid certificate of approval granted under regulation 31(1)(b), or regulation 32 of the MCAR.

Invigilator means a person who is delegated by the MTO to invigilate the examination, other than those staff listed as examiner for the particular subject.

Knowledge Examiner means an appropriately qualified person authorised by the maintenance training organisation to develop theoretical examination question paper and conduct assessment on the performance of the examinations.

Large Aircraft means

- a) an aeroplane with a maximum certificated take-off mass exceeding 5,700 kg;
- b) an aeroplane equipped with turbojet engine(s) or more than one turboprop engine;
- c) a rotorcraft with a maximum certificated take-off mass exceeding 3,175 kg; or
- d) a rotorcraft with more than one engine.

Maintenance means, in relation an aircraft, the performance of tasks required to ensure the continuing airworthiness of the aircraft, including any one or combination of overhaul, inspection, replacement, defect rectification, and the embodiment of a modification or repair.

Maintenance Experience means experience of being involved in maintenance tasks on operating aircraft and cover a wide range of tasks in length, complexity and variety.

Maintenance Training Organisation Exposition or MTOE means an approved document that contains the material specifying the scope of work deemed to constitute approval and showing how the organisation intends to comply with this CAD.

MTO or The Organisation means an approved maintenance training organisation which holds a valid certificate of approval granted under regulation 31(1)(c), or regulation 32 of the MCAR.

Practical Assessor means an appropriately qualified person authorised by the maintenance training organisation to conduct the practical assessments in determining the level of practical knowledge or skill whether the trainee is competent.

Validator means licensed personnel or a person authorised by the maintenance training organisation who is responsible to supervise, train and validate the skill training and experience acquisition of aircraft maintenance trainee or personnel.



2 Application of Maintenance Training Organisation Approval

(Subpart A)

- 2.1 An application for maintenance training organisation approval shall be made to the CAAM.
- 2.2 In the case of a maintenance training organisation under regulation 31 of MCAR, an applicant shall submit —
- a) an application form CAAM/AW/1821-01;
 - b) a maintenance training organisation exposition;
 - c) a description of the proposed maintenance training course programme;
 - d) CAAM Form 4 forms for each of the persons specified in paragraph 4.2 of this CAD; and
 - e) the applicable fee.
- 2.3 In the case of a maintenance training organisation under regulation 32 of the MCAR, an applicant shall submit
- a) the documents specified in paragraph 2.2 above;
 - b) evidence that the organisation is approved as a maintenance training organisation by the local national aviation authority; and
 - c) evidence of need from local AMO.
- 2.4 The application form shall be signed by the nominated accountable manager.
- 2.5 The scope of application for maintenance training organisation may either be basic training or type training, or combination of both and is classified as following:
- a) Basic Training
 - 1) Category A (Aircraft Maintenance Technician)
 - A1 – Aeroplanes Turbine
 - A2 – Aeroplanes Piston
 - A3 – Helicopters Turbine
 - A4 – Helicopters Piston
 - 2) Category B (Aircraft Maintenance Engineer – Mechanical)
 - B1.1 – Aeroplanes Turbine
 - B1.2 – Aeroplanes Piston
 - B1.3 – Helicopters Turbine



B1.4 – Helicopters Piston

B2 – Avionics

3) Category B2 (Aircraft Maintenance Engineer – Avionics)

- b) Type Training– aircraft type training which correspond to the category/ subcategory specified in paragraph 2.5(a) above including Category C

2.6 In addition to paragraph 2.2 above, in the case of basic training the organisation shall furnish an evidence of an engagement with local AMO to support the performance of practical training and on the job training for the trainee's practical hands-on activity and maintenance experience gathering.

2.7 An applicant for basic training is only applicable for organisation regulated under regulation 31 of MCAR.



3 Issue of Maintenance Training Organisation Provisional Approval and Maintenance Training Organisation Approval

3.1 For issue of maintenance training organisation provisional approval and maintenance training organisation approval for organisation located in Malaysia:

- a) An organisation may be entitled to have a provisional certificate of approval for maintenance training organisation if CAAM is satisfied that it complies with the applicable requirements under this Directive.
- b) A provisional certificate of approval holder shall be entitled to perform maintenance training activity in accordance with the conditions specified in the certificate to demonstrate technical competency.
- c) A provisional certificate of approval holder shall not be entitled to issue a certificate of recognition as specified in paragraph 7.1(e) of this CAD.
- d) An organisation who holds a provisional certificate of approval may be entitled to have a certificate of approval, if the CAAM is satisfied that it has –
 - 1) demonstrated technical competency; and
 - 2) fulfilled the applicable requirements under this CAD.
- e) The provisional certificate of approval is terminated upon the issuance of the certificate of approval.

3.2 For issue of maintenance training organisation approval for organisation located outside Malaysia:

- a) An organisation may be entitled to have a maintenance training organisation approval if CAAM is satisfied that it complies with the applicable requirements under this CAD.



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4 Organisational Requirements (Subpart B)

4.1 Facility requirements (147.100)

- a) The size and structure of facilities shall ensure protection from the prevailing weather elements and proper operation of all planned training and examination on any particular day.
- b) Fully enclosed appropriate accommodation separate from other facilities shall be provided for the instruction of theory and the conduct of knowledge examinations.
 - 1) The maximum number of students undergoing knowledge training during any training course shall not exceed 28; and
 - 2) The size of accommodation for examination purposes shall be such that no student can read the paperwork or computer screen of any other student from his/her position during examinations.
- c) By derogation to paragraph 4.1(b) above, accommodation environment shall be maintained such that students are able to concentrate on their studies or examination as appropriate, without undue distraction or discomfort.
- d) In the case of a basic training course, basic training workshops and/or maintenance facilities separate from training classrooms shall be provided for practical instruction appropriate to the planned training course. If, however, the organisation is unable to provide such facilities, arrangements may be made with another organisation to provide such workshops and/or maintenance facilities, in which case a written agreement shall be made with such organisation specifying the conditions of access and use thereof. CAAM shall have access to any such contracted organisation and the written agreement shall specify this access.
- e) In the case of an aircraft type/ task training course, access shall be provided to appropriate facilities containing examples of aircraft type as specified in paragraph 4.4(d) of this CAD.
- f) The maximum number of students undergoing practical training during any training course shall not exceed 15 per practical instructor or validator.
- g) Office accommodation shall be provided for instructors, knowledge examiners and practical assessors of a standard to ensure that they can prepare for their duties without undue distraction or discomfort.
- h) Secured storage facilities shall be provided for examination papers and training records. The storage environment shall be such that documents remain in good condition for the retention period as specified in paragraph 4.6 of this CAD. The storage facilities and office accommodation may be combined, subject to adequate security.
- i) A library shall be provided containing all technical material appropriate to the scope and level of training undertaken.

4.2 Personnel requirements (147.105)

- a) The organisation shall appoint an accountable manager who has corporate authority for ensuring that all training commitments can be financed and carried out to the standard required by this CAD. The accountable manager shall:
 - 1) ensure that all necessary resources are available to accomplish training and examination commitments to support the organisation approval;
 - 2) establish and promote the safety and quality policy specified in paragraph 4.7 of this CAD; and
 - 3) demonstrate a basic understanding of this CAD.
- b) The organisation shall nominate a person or group of persons, whose responsibilities include ensuring that the organisation complies with this CAD. Such person(s) shall ultimately be responsible to the accountable manager.
 - 1) The person(s) nominated shall represent the training management structure of the organisation and be responsible for all functions specified in this CAD;
 - 2) The person or persons nominated shall be identified and their credentials submitted in a form and manner established by CAAM.
 - 3) The person(s) nominated shall be able to demonstrate relevant knowledge, background and satisfactory experience related to aircraft maintenance training and demonstrate a working knowledge of this CAD; and
 - 4) Procedures shall make clear who deputises for any particular person in the case of lengthy absence of the said person.
- c) The accountable manager under paragraph 4.2(a) of this CAD shall nominate a person with responsibility for monitoring the quality system, including the associated feedback system as required by paragraph 4.7 of this CAD. The appointed person shall have direct access to the accountable manager to ensure that the accountable manager is kept properly informed on quality and compliance matters.
- d) The organisation shall nominate a person, or group of persons who shall represent the examination structure of the organisation and be responsible for all functions specified in paragraph 4.8 of this CAD. Such person shall be able to demonstrate relevant knowledge, background and satisfactory experience related to the examination.

Note. — Persons nominated under paragraphs 4.2(a), 4.2 (b), 4.2(c), and 4.2(d) shall be subjected to acceptance by CAAM.
- e) The organisation shall contract sufficient staff to plan/perform knowledge and practical training, conduct knowledge examinations and practical assessments in accordance with the terms of approval.

- f) The organisation shall have a maintenance training man-hour plan showing that the organisation has sufficient staff to plan, perform, supervise, conduct training, knowledge examination, practical assessment and quality monitor the organisation in accordance with the approval. In addition, the organisation shall have a procedure to reassess training activity intended to be carried out when actual staff availability is less than the planned staffing level for any particular training.
- g) By derogation to paragraph 4.2(e) and 4.2(f) above, when another organisation is subcontracted to provide practical training and assessments, such other organisation's staff may be nominated to carry out practical training and assessments.
- h) Any person may carry out any combination of the roles of instructor, knowledge examiner and practical assessor are subject to compliance with paragraph 4.2(i) of this CAD.
- i) The qualification and experience of instructors, knowledge examiners and practical assessors shall be established in accordance with Appendix 4 of this CAD and shall be documented in the MTOE approved by CAAM.
- j) Knowledge examiners and practical assessors, including their capability shall be specified in the MTOE.
- k) Instructors, knowledge examiners and practical assessors shall undergo updating training at least every 24 months relevant to current technology, practical skills, human factors and the latest training techniques appropriate to the knowledge being trained, examined or assessed.
- l) The maintenance training organisation shall establish and control the competence of personnel involved in any training, examination, management and quality audits in accordance with a procedure, and to a standard, agreed by CAAM.

4.3 Record of Instructors, Examiners and Practical Assessors (147.110)

- a) The organisation shall maintain a record of all instructors, knowledge examiners and practical assessors. These records shall reflect the experience and qualification, training history and any subsequent training undertaken.
- b) Terms of reference shall be drawn up for all instructors, knowledge examiners and practical assessors.

4.4 Instructional Equipment (147.115)

- a) Each classroom shall have appropriate presentation equipment of a standard that ensures students can easily read presentation text/ drawings/ diagrams and figures from any position in the classroom. Presentation equipment shall include representative synthetic training devices to assist students in their understanding of the particular subject matter where such devices are considered beneficial for such purposes. Synthetic training devices are working models of a particular system or component and include computer simulations. A synthetic training device is considered beneficial for complex systems and fault diagnostic purposes.
- b) The basic training workshops and/ or maintenance facilities as specified in paragraph 4.1(d) of this CAD must have all tools and equipment necessary to perform the approved scope of training.
- c) The basic training workshops and/or maintenance facilities as specified in paragraph 4.1(d) of this CAD must have an appropriate selection of aircraft, engines, aircraft parts and avionics equipment.
- d) The aircraft type training maintenance training organisation as specified in paragraph 4.1(e) of this CAD must have access to the appropriate aircraft type. Synthetic training devices may be used when such synthetic training devices ensure adequate training standards.

4.5 Maintenance Training Material (147.120)

- a) Maintenance training course material shall be provided to the student and cover as applicable: -
 - 1) the basic knowledge syllabus specified in CAD 1801 Appendix 1 for the relevant aircraft maintenance licence category or subcategory;
 - 2) the type course content required by CAD 1801 Appendix 3 for the relevant aircraft type and aircraft maintenance licence category or subcategory;
- b) Students shall have access to examples of maintenance documentation and technical information in the library as specified in paragraph 4.1(i) of this CAD.

4.6 Record-keeping (147.125)

- a) The organisation shall establish a system of record-keeping that allows adequate traceability of the training and examination related process.
- b) The organisation shall keep all student training, examination and assessment records. Records shall not be destroyed without consent from CAAM.
- c) The records shall include as a minimum: -
 - 1) the student application documentation;
 - 2) the student previous and current certificate;

- 3) the student knowledge and practical training including examination and practical assessments;
 - 4) details of any student exemption record;
 - 5) any disciplinary and/ or termination records; and
 - 6) any report from other foreign authorities relating to the student exemption
- d) The records shall be stored in a manner that ensures protection from damage, alteration and theft.
- e) All computer hardware used to ensure backup shall be stored in a different location from that containing the working data in an environment that ensures they remain in good condition.

4.7 Training Procedure and Quality Systems (147.130)

- a) The organisation shall establish procedures acceptable to CAAM to ensure proper training standards and compliance with all relevant requirements in this CAD.
- b) The organisation shall establish a quality system including:
- 1) an independent audit function to monitor training standards, the integrity of knowledge examinations and practical assessments, compliance with and adequacy of the procedures, and
 - 2) a quality feedback reporting system of audit findings to the person or group of persons specified in paragraph 4.2(b) and 4.2(d) and ultimately to the accountable manager that ensures proper and timely corrective action is taken in response to reports resulting from the independent audits established to meet paragraph 4.7(b)(1) above.

4.8 Examinations (147.135)

- a) An approved maintenance training organisation shall only conduct the examination for which it is approved for its own student.
- b) The conduct of examination for other than its own student is not allowed unless approved by CAAM, subject to a controlled procedure established by the organisation.
- c) The organisation shall establish a procedure for the development and control of examination papers ensuring that—
- 1) Examination papers shall be developed by an authorised knowledge examiner within the organisation.
 - 2) Examination papers shall cover the complete syllabus concerned in accordance with CAD 1801 Appendix 1 and/ or Appendix 3.

- 3) Examination standards for basic training shall be in accordance with CAD 1801 Appendix 2 and type training examination standard in accordance with CAD 1801 Appendix 3.
 - 4) Each examination paper shall be identified with a reference number, issue or revision number and serial number. Records of papers shall be maintained.
 - 5) Examination papers shall be submitted to CAAM for approval. Only approved examination paper shall be used for the examination.
 - 6) Each examination paper shall be specified in the maintenance training programme.
 - 7) The examination papers to be used in the examination shall be decided by a person specified in paragraph 4.2(d) of this CAD.
 - 8) The organisation shall ensure the security of all questions. Examination paper shall be kept secured and protected from unauthorised access by adequate security means. Examination papers shall be kept in locked cabinets. Only authorised personnel by MTO shall have access to the examination papers.
 - 9) A system for the management of the development, review and amendment of questions shall be established and records are maintained. Quality review of examination questions shall be regularly conducted. Records of such reviews shall be properly kept.
 - 10) Existing examination papers shall be reviewed periodically for technical accuracy, completeness and currency of its content.
 - 11) Records of completed examination shall be retained and maintained in accordance with paragraph 4.6 of this CAD.
- d) Only qualified candidates shall be allowed to sit for the examination. The organisation shall ensure that all candidates are adequately screened to prevent unqualified candidate from sitting in this examination.
 - e) In the case of external candidate, the organisation shall control a list of qualified candidates with associated examination detail.
 - f) Any student found during a knowledge examination to be cheating or in possession of material pertaining to the examination subject other than the examination papers and associated authorised documentation shall be disqualified from taking the examination and may not take any examination for at least 12 months after the date of the incident. CAAM shall be informed of any such incident together with the details of any enquiry within one calendar month.
 - g) Any knowledge examiner or invigilator found prior or during examination to be providing question answers to any student shall be disqualified from acting as a

knowledge examiner or invigilator and the examination shall be declared void. CAAM must be informed of any such occurrence within one calendar month.

4.9 Assessment

- a) The practical assessment shall be carried out using an established assessment standard described in the maintenance training programme and assessed by the practical assessor.
- b) The assessment shall ensure evidence of knowledge, skill and experience acquisition and determine whether the student is competent at using tools and equipment and working in accordance with the applicable manuals. The assessment shall also emphasise on student's situation awareness ability and the application of safety principle.
- c) The organisation's practical assessor shall ensure the security and confidentiality of all assessment question.
- d) Assessment shall only be conducted at the approved location specified in paragraph 4.10 of this CAD, and be conducted:
 - 1) at appropriately enclosed and secured facility
 - 2) without the student carrying any instructional material pertaining to the assessment, other than assessment papers and associated authorised documents
 - 3) in a control environment where only the practical assessor and student scheduled is present for the assessment session.
- e) Any practical assessor found to be providing assessment answers to the student or otherwise assist a student to cheat, or not performing in accordance with paragraph 4.9 of this CAD, the organisation shall:
 - 1) disqualify the person from being an assessor;
 - 2) declare the assessment void in accordance with the organisation's control procedures; and
 - 3) inform CAAM of any such occurrence, within one calendar month.

4.10 Maintenance Training Organisation Exposition (147.140)

- a) The organisation shall provide an exposition for use by the organisation describing the maintenance training organisation and its procedures and containing the following information—
 - 1) a statement signed by the accountable manager confirming that the MTOE and any associated manuals define the maintenance training organisation's compliance with this CAD and shall be complied with at all times;
 - 2) the title(s) and name(s), if applicable of the person(s) nominated in accordance with paragraphs 4.2(b),4.2(c) and 4.2(d);

- 3) the duties and responsibilities of the person(s) specified in paragraph 4.10 (a)(2), including matters on which they may deal directly with CAAM on behalf of the maintenance training organisation;
 - 4) a maintenance training organisation chart showing associated chains of responsibility of the person(s) specified in paragraph 4.10(a)(2); a list of the training instructors, knowledge examiners and practical assessors with associated capabilities;
 - 5) a general description of the training and examination facilities located at each address, and if appropriate any other location, as required by paragraph 4.2.
 - 6) a list of the maintenance training courses, which includes each maintenance training programme reference which form the extent of the approval;
 - 7) the maintenance training organisation's exposition amendment procedure;
 - 8) the maintenance training organisation's procedures, including procedure for approval, amendments and quality review of each training programme as required by paragraph 4.7(a);
 - 9) the maintenance training organisation's control procedure, as required by paragraph 7.2(a), when authorised to conduct training, examination and assessments in locations different from those specified in paragraph 7.2(c) of this CAD;
 - 10) a list of the location specified in paragraph 7.2(a) of this CAD.
 - 11) a list of organisation, if appropriate specified in paragraph 7.2(c) of this CAD.
- b) The MTOE and any subsequent amendments shall be approved by CAAM.
 - c) Notwithstanding paragraph 4.10 (b) above, any minor amendments to the exposition may be accomplished through an exposition procedure as approved by CAAM. The type of amendments which is considered as minor amendments shall be specified in the amendment procedure in the MTOE.

4.11 Maintenance training programme

- a) The organisation shall established a document describing its maintenance training course programme for each category or type of course being offered.
- b) Training courses that may be offered at the organisation are state as below:
 - 1) Basic training as specified in paragraph 2.5 a) of this CAD;
 - 2) Aircraft type/ task training as specified in paragraph 2.5 b) of this CAD; or
 - 3) Both basic and type training specified in the aforesaid paragraph.
- c) The training programme shall contain both theoretical and practical elements specified in Chapter 5 or Chapter 6 of this CAD, and be established in



accordance with the syllabus and training standard specified in CAD 1801 Appendix 1 and/or Appendix 3.

- d) The training programme shall include training need analysis, which contain at minimum the content of syllabus, the level of depth and its duration, which correspond to the learning objective appropriate to the category or type of course being offered.
- e) The training programme shall obtain CAAM approval prior to implementation. The organisation shall not change its approved training programme unless the change is approved in advance.
- f) The organisation shall only conduct training, examination and assessment in accordance with the approved maintenance training programme.



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5 Approved Basic Training Course (SUBPART C)

5.1 The approved basic training course (147.200)

- a) The approved basic training course shall consist of knowledge training, knowledge examination, practical training and a practical assessment.
- b) The knowledge training element shall cover the subject matter for a category or subcategory aircraft maintenance licence as specified in Appendix 1 of CAD 1801.
- c) The knowledge examination element shall cover a representative cross section of knowledge training element's subject matter as specified in paragraph 5.1(b) above.
- d) The practical training element shall cover the practical use of common tooling/ equipment, the disassembly/ assembly of a representative selection of aircraft parts and the participation in representative maintenance activities such being carried out relevant to the particular CAAM Part-66 complete module.
- e) The practical assessment element shall cover the practical training and determine whether the student is able to demonstrate understanding of the particular subject, competent at using tools and equipment, able to work in accordance with maintenance manuals, and application of safety awareness.
- f) The conduct of knowledge training, knowledge examinations, practical training and practical assessments for basic training shall be in accordance with the standards defined, as agreed with CAAM in the approved documented training procedure.
- g) The duration of basic training courses shall be in accordance with Appendix 1 of this CAD.
- h) The duration of conversion courses between (sub)categories shall be determined through an assessment of the basic training syllabus and the related practical training needs.

5.2 Basic knowledge examinations (147.205)

5.2.1 Basic knowledge examinations shall:

- a) be in accordance with the standard defined in CAD 1801;
- b) be conducted without the use of training notes; and
- c) cover a representative cross section of subjects from the particular module of training completed in accordance with CAD 1801 Appendix 1;



5.3 Basic practical assessments

(147.210)

- a) Basic practical assessments shall be carried out during the basic maintenance training course by the appropriately qualified practical assessors at the completion of each visit period to the practical workshops/maintenance facility.
- b) The student shall be assessed with competent with respect to paragraph 5.3(a) of this CAD.
- c) The organisation shall not conduct examination and assessment, unless it is approved to conduct the corresponding training.



6 Aircraft Type/ Task Training Course (SUBPART D)

6.1 Aircraft type/ task training (147.300)

- a) The organisation shall be approved to carry out CAAM Part-66 aircraft type and/or task training subject to compliance with the requirement specified in this and CAD 1801 paragraph 3.3 of CAD 1801.
- b) The organisation shall not conduct examination and assessment, unless it is approved to conduct the corresponding training.



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7 Privileges of the organisation (147.145)

7.1 In accordance with the exposition, the organisation who holds certificate of approval shall be entitled to carry out the following tasks:

- a) basic training courses to the CAAM Part-66 syllabus specified in accordance with CAD 1801, or part thereof;
- b) aircraft type/task training courses in accordance with CAAM Part-66 syllabus as in CAD 1801;
- c) the examination for student who attended the basic training course and type training course at the organisation including detail of assessment;
- d) the examination for student who did not attend the basic training course at the organisation including details of assessment, provided that the examination is conducted at the location identified in the certificate of approval;
- e) the issue of certificates of recognition in accordance with Appendix 2, of this CAD following successful completion of the approved basic or aircraft type/ task training courses and/or examination specified in paragraph 7.1(a), 7.1(b), 7.1(c) and 7.1(d) as applicable.
- f) the organisation may only engage in the maintenance training activity specified in paragraph 7.1(a), (c), (d) and (e) or paragraph 7.1(b), (c) and (e) or paragraph 7.1(a), (b), (c), (d) and (e) when it holds a valid approval with appropriate rating.

7.2 Limitations on the organisation

- a) Training, knowledge examinations and practical assessments may only be carried out at locations specified in the MTOE.
- b) By derogation to paragraph 7.2(a) above, the organisation may only conduct training, knowledge examinations and practical assessments in a location different from the locations specified in paragraph 7.2(a) above, in accordance with a control procedure specified in the MTOE. Such locations may not be listed in the maintenance training organisation exposition.
- c) The organisation may subcontract the conduct of type training to a non-maintenance training organisation only when it is validated by CAAM as specified in paragraph 3.3.13 of CAD 1801 and when it is under the control of the organisation quality system.
- d) The subcontracting of type training and examination is limited to powerplant and avionics systems.



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8 Continuation of an approval

8.1 Changes to the organisation (147.150)

- a) The organisation shall notify CAAM of any proposed changes to the organisation that affect the approval before any such change takes place, in order to enable CAAM to determine continued compliance with this CAD and to amend if necessary, the certificate of approval, except that in the case of proposed changes in personnel not known to the management beforehand, these changes must be notified at the earliest opportunity:
 - 1) the name of the organisation;
 - 2) the main location of the organisation;
 - 3) additional locations of the organisation;
 - 4) the accountable manager;
 - 5) any of the persons nominated under paragraph 7.2(b), 7.2(c) and 7.2(d); and
 - 6) the facilities, procedures and scope of work
 - 7) changes to the maintenance training programme
- b) CAAM may prescribe the conditions under which the organisation may operate during such changes unless CAAM determines that the certificate of approval must be suspended.
- c) Failure to inform CAAM of such changes may result in suspension or revocation of the certificate of approval.

8.2 Continued validity (147.155)

- a) A provisional certificate of approval issued by CAAM shall be valid for a period not exceeding 1 year and may not be renewed. Upon expiry, the application for maintenance training organisation approval is terminated.
- b) A certificate of approval issued by CAAM shall be valid for a period not exceeding 1 year.
- c) Validity of provisional certificate of approval or certificate of approval is subject to the following conditions:
 - 1) The approval is limited to that specified in the provisional certificate of approval or certificate of approval;
 - 2) The provisional certificate of approval or certificate of approval requires compliance with the procedures specified in the MTOE
 - 3) The organisation remaining in compliance with this CAD; and
 - 4) The certificate not being surrendered, suspended or revoked

- d) The list of maintenance training courses and examination deemed to constitute the approval shall be specified in the certificate of approval.
- e) An application to renew or vary the certificate of approval shall be made to CAAM by submitting—
 - 1) an application form CAAM/AW/1821-01;
 - 2) proposed amendments of MTOE, if applicable;
 - 3) a description of the maintenance training course programme, if applicable; and
 - 4) the applicable fee.
- f) CAAM may renew or vary the certificate of approval if CAAM is satisfied that the applicant has fulfilled all applicable requirements under this CAD.

8.3 Findings

(147.160)

- a) A level 1 finding is any significant non-compliance with requirements which would invalidate the examination(s), and any significant non-compliance with the training process. The maintenance training organisation approval shall cease to be in force immediately until acceptable corrective action has been taken by the organisation.
- b) A level 2 finding is any non-compliance with the training process other than level 1 findings. If the organisation fails to accomplish the corrective action to the satisfaction of CAAM within 14 days after receipt of notification of findings, unless otherwise agreed, the maintenance training organisation approval shall cease to be in force until acceptable corrective action has been taken by the organisation.
- c) After receipt of notification of findings, the applicant or holder of the maintenance training organisation approval shall define a preventive action and demonstrate the preventive action and impact assessment to the satisfaction of CAAM within 90 days unless otherwise agreed. The maintenance training organisation approval shall be revoked, limited or suspended in whole or in part, depending upon the extent of the finding, until acceptable preventive action has been taken by the organisation.



9 Appendices

9.1 Appendix 1 – Basic Training Course Duration

BASIC COURSE	DURATION (in hour)	THEORETICAL TRAINING RATIO (in %)
A1	800	30 TO 35
A2	650	30 TO 35
A3	800	30 TO 35
A4	800	30 TO 35
B1.1	2400	50 TO 60
B1.2	2000	50 TO 60
B1.3	2400	50 TO 60
B1.4	2400	50 TO 60
B2	2400	50 TO 60



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9.2 Appendix 2 – Certificate of Recognition

- a) The CAAM Part-147 basic training certificate template detailed below is to be used for recognition of completion of either the basic training, the basic examination or both the basic training and basic training examinations.
- b) The training certificate shall clearly identify each individual module examination by date passed together with the corresponding version of Appendix 1 of CAD 1801.



Sample of Certificate of Recognition for Basic Training Course and/ or Examinations.

CERTIFICATE OF RECOGNITION

Approval Reference: [MTO Approval Number]

This Certificate of Recognition is issued to:

[NAME]

[DATE AND PLACE OF BIRTH]

BY:

[COMPANY NAME AND ADDRESS]

APPROVAL REFERENCE : [MTO APPROVAL NUMBER]

a maintenance training organisation approved to provide training and examinations, within its terms of approval in accordance with Civil Aviation Directive 1821

This certificate confirms that the above-named person has successfully completed the approved basic training programme stated below, passing the basic training course with the related examination and basic practical training with assessments in compliance with the Civil Aviation Regulation 2016 for the time being in force.

[BASIC TRAINING PROGRAMME (*)] or/ and [BASIC EXAMINATION (*)]

[LIST OF CAAM PART-66 MODULES/ DATE OF EXAMINATION PASSED]

Date: _____

Signature: _____

For: **[COMPANY NAME]**

9.3 Appendix 3 – Aircraft type/ task training and examination

- a) The CAAM Part 147 type training certificate template detailed below is to be used for recognition of completion of either the theoretical elements, the practical elements or both the theoretical and practical elements of the type/ task rating training course.
- b) The certificate shall indicate the airframe and engine combination/ engine or avionics only for which the training was imparted.
- c) The appropriate references shall be deleted as applicable and the course type box shall detail whether only the theoretical elements or the practical elements were covered or whether theoretical and practical elements were covered.
- d) The training certificate shall clearly identify if the course is a complete course or a partial course (such as an airframe or powerplant or avionic/electrical course) or a difference course based upon the applicant previous experience, for instance Airbus A340 (CFM56) for A320 technicians. If the course is not a complete one, the certificate shall identify whether the interface areas have been covered or not.



Sample of Certificate of Recognition for Type/ Task Training Course.

CERTIFICATE OF RECOGNITION

Reference: [MTO Approval Number]

This Certificate of Recognition is issued to:

[NAME]

[DATE AND PLACE OF BIRTH]

BY:

[COMPANY NAME AND ADDRESS]

REFERENCE : [MTO APPROVAL NUMBER]

a maintenance training organisation approved to provide training and conduct examinations, within its terms of approval in accordance with Civil Aviation Directive 1821

This certificate confirms that the above-named person either successfully passed the theoretical (*) and/or practical elements (*) of the approved type training course stated below and the related examinations in compliance with Civil Aviation Regulation 2016 for the time being in force.

[AIRCRAFT TYPE/ TASK TRAINING COURSE (*)]

[START and END DATES]

[SPECIFY THEORETICAL ELEMENTS OR PRACTICAL ELEMENTS]

and/or

[AIRCRAFT TYPE EXAMINATION (*)]

[END DATE]

Date: _____

Signature: _____

For: **[COMPANY NAME]**

9.4 Appendix 4 – Qualification and Experience of Instructor, Knowledge Examiner and Practical Assessor

1. Introduction

- 1.1 The competency of the instructors, knowledge examiners and practical assessors is an essential factor in contributing to the quality of a training course and its recognition by CAAM.
- 1.2 It is therefore important for the organisations to assess the qualifications, experience and skill of their instructional staff against relevant and verifiable criteria to be documented in the Maintenance Training Organisation Exposition (MTOE).
- 1.3 The initial assessment process and the continuation / revalidation process shall be developed by the MTO and referenced in the relevant MTOE.
- 1.4 To be deemed as competent, a potential or existing candidate for a position of instructor, knowledge examiner and practical assessor shall demonstrate that:
 - a) He/she has a good command of the subjects included into his/her assigned scope of instruction, examination or practical assessment. This includes having an adequate theoretical knowledge and, where appropriate, hands-on skills gained through practical training and/ or sufficient relevant working experience;
 - b) He/she is familiar with instruction, examination and assessment techniques, as appropriate, and has pedagogical skills & good communication abilities;
 - c) He/she is knowledgeable of the organisation's approved procedures in relation with his/her scope of activity and he understands the importance of instructional & examination staff ethics & integrity;
 - d) He/she is proficient with the specific training methods and equipment used by the particular training organisation; and
 - e) He/she is proficient in English language.
- 1.5 MTO shall establish a programme for the initial and continuation training for the instructor, knowledge examiners and practical assessor including a procedure to ensure compliance with the relevant paragraph of 4.2 of this Directive as the basis for issuing personal authorisation documents or certificates.
- 1.6 A record shall be established and retained for the instructor, knowledge examiner, and practical assessor containing information relevant to his/ her qualifications, experience and skills, including training history for an indefinite period as well as ensuring that ALL instructional staff are issued with copies of their personal authorisation documents or certificates. Periodicity of these checks shall be recorded and retained in the individual's personal training record file.

- 1.7 In ensuring that the organisation continuously remains in compliance with the standards of this Directives, the organisation shall be subjected to surveillance and compliance audit by CAAM.

2. Assessing the Competency

- 2.1 The assessment of the competency for initial and subsequent nomination of instructional staff are key-steps and must be conducted in accordance with a procedure described in the MTOE.
- 2.2 The assessment shall emphasis on the key elements such as the instructional staff qualification, training, skill and experience.
- 2.3 The procedure shall indicate the persons responsible for such assessment as well as the criteria used by the organisation to determine the eligibility of a candidate to a specific position of instructor, knowledge examiner or practical assessor.
- 2.4 MTO shall demonstrate whether the candidates fulfil the condition specified in paragraph 1.4 of this Appendix, together with the experience and qualification criteria as specified in paragraph 5.0 of this Appendix.
- 2.5 In some cases, an alternative means of compliance may be proposed by the organisation, however the same level of confidence in the competency of the proposed instructor, knowledge examiner or practical assessor shall be assured. The acceptance of such alternate means is at the discretion of CAAM.
- 2.6 The procedure shall include a face-to-face interview and assessment with the candidate including review of their credentials such as training certificates, experience records or others as applicable. Where necessary, it shall be completed by an in-situ evaluation of the candidate ability such as simulated training session or real class-teaching under supervision.
- 2.7 Where appropriate, the procedure shall also consider a period of “OJT” (instruction under supervision) allowing a fine-tuned assessment before confirming the nomination of a candidate as an instructor, knowledge examiner or practical assessor. This is for instance in order to verify specific abilities or to verify the adherence to the organisation’s training / examination procedures
- 2.8 The assessment shall be verifiable by CAAM and therefore be documented. Supporting documents such as training certificates, working experience records, assessment records etc. shall be kept in the individual file.
- 2.9 The training organisation shall conduct regular assessments of their instructional staff to ensure the competency remains and is able to openly discuss and converse with his trainee on technical matters.
- 2.10 The preceding principles shall be equally applied for the extension of an existing scope of instruction, examination or assessment held by a staff already exercising

such activities within the organisation. A lighter assessment process essentially centred on the specialty knowledge would however be appropriate.

3. Acceptance of Instructional Staff

- 3.1 The proposed candidate is formally accepted through the approval of MTOE containing the organisation's list of instructors, knowledge examiners and practical assessors. The list shall include contractors and part-timers as applicable.

Note. —CAAM Form 4 is not required for the acceptance of instructional and examination staff. However, instructors, knowledge examiners, practical assessors and invigilators within the MTO must be listed in Part 1.5 of the MTOE

- 3.2 The acceptance of proposed candidate through the approval of MTOE shall also be supported with relevant documents and evidence such as assessment record, licence and/or degree, training certificates, and etc.
- 3.3 Application for additional instructional staff or an extension to existing scope of authorisation such as basic/ type rating category, additional aircraft type, modules/ submodule or to remove a limitation to certain basic (sub-) modules shall be submitted to CAAM together with proposed revision of MTOE together with applicable supporting documents
- 3.4 The list shall contain a comprehensive information, as a minimum the staff authorised scope of activity for example type training, theoretical knowledge, A320 (CFM56) ATA 34, Category B2, where applicable as well as any limitations (i.e., Module 1 except sub-module 1.3), and the expiry of the organisation's authorisation when applicable.
- 3.5 The list shall be developed in a manner that CAAM can easily verify that there is at least 1 qualified instructor, examiner or assessor nominated for each part or sub-part of the approved training.

Note: The list may be controlled in separate document(s) and cross-referenced from the applicable section of the MTOE. The list shall be controlled in accordance with an established procedure, and/ or separately approved unless otherwise agreed, by CAAM.

- 3.6 Prior approval of the MTOE, the proposed candidate may be subjected to assessment, interview and inspection depending on the complexity and extent of the application being made. The acceptance of such candidate is at the discretion of CAAM.
- 3.7 Once formally accepted, the candidate shall be provided with a personal authorisation document/ certificate issued by the MTO detailing the granted privileges and any applicable limitations.
- 3.8 The personal authorisation document as well as other records as specified in paragraph 1.5 and 1.6 of this Appendix shall be kept in a manner established in the documented procedure.

4. Continuation/ Revalidation of Authorisation

- 4.1 The MTO shall develop and document a program to maintain the qualifications of instructors, examiners and assessors. The updating training program shall as a minimum comply with CAD 1821 para 4.2(k) requirements.
- 4.2 This training shall consist of a minimum of 35 hours within the 24-month period; in addition, MTO personnel are to remain conversant with the latest revision of the CAAM Part 147 requirements, standards and guidance material. They shall also be conversant with the respective organisations MTOE and associated training procedures.
- 4.3 The MTO shall ensure that personnel training records, including records of qualifications, update training and experience and competency is retained for each instructor, knowledge examiner and practical assessor. It is also expected that the MTO and its instructional staff shall be able to evidence recency as part of the continuation of an approval. The organisations may wish to adopt the standard industry default of 6 months experience in a 24-month period, alternatively they may wish to define their own within their approved MTOE, subject to the approval of CAAM.
- 4.4 The MTO shall deliver continuation training to all its staff in some form or another depending upon their scope and authorisation. As example, invigilators and examiners need to be familiar with exam process, instructors and assessors the training and assessment process.
- 4.5 In order for an instructor, knowledge examiner or practical assessor’s authorisation to be revalidated following renewal / expiry / withdrawal, the MTO shall implement a reinstating procedure within their approved MTOE that will cover the relevant training disciplines associated with the authorisation concerned and evidence of recency, where applicable.
- 4.6 The criteria for reinstating shall take into consideration the length of time the individual has been away from that specific training environment or discipline.
- 4.7 Any instructor, knowledge examiner or practical assessor who has passed 24-month period without exercising the privileges of his authorisation, as a minimum, shall comply with the Table 1 below:

Inactive Period	Recovery action
24 to 30 months	35 hours update training + Continuation training + Training organisation procedures and processes + 2 monitored training sessions with another instructor covering both theoretical and practical aspects.
30 months 60 months	As above plus two sit-ins on the type course for the authorisation being sought.

60 months and longer	Re-training in the core subject with successful examination.
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Table 1: Recovery action for inactive period

4.8 CAAM has the authority to question and where necessary refuse any applicant's authorisation to be named as an instructor, assessor or examiner. This is regardless of whether the applicant has held an instructional position previously.

5. Instructor, Knowledge Examiner and Practical Assessor's qualification, training and experience requirement

5.1 All aircraft basic and type training instructors whether permanently or temporally employed, must have undergone an instructional techniques training course to a nationally recognised standard or equivalent and be able to demonstrate a comprehensive understanding of the CAAM Part 66 and 147 regulatory requirements. Additionally, they shall have a practical working knowledge of the maintenance training organisations exposition (MTOE) and associated training procedures and be familiar in their application.

5.2 CAAM Form 4 is only required for Training Manager, Quality Manager and Examinations Manager. (In smaller organisations, a combination of these positions may be held by the same person).

5.3 Instructors may with the consent of CAAM also combine roles/ positions within the training organisations, i.e. knowledge examiner, practical assessor; these other roles must be clearly identified against the individual within the relevant MTOE and annotated on their personal authorisation document/certificates.

**5.4 BASIC TRAINING**

5.4.1 Theoretical Element Instructor

MODULE 1, 2, 3, 4		
Qualification/ Experience	Criteria	Remarks
Specialty knowledge	<p>Hold an aeronautical / electrical/ mechanical engineering degree recognised by local education authorities, or an acceptable equivalent; or</p> <p>Hold CAAM Part 66 aircraft maintenance engineer licence relevant to the category/ subcategory for the modules to be taught, or an acceptable equivalent; or</p> <p>Attained Part 147 Certificates of recognition with successful completion of training and examination for the modules to be taught, at the appropriate level (example of Module 1 for B1/B2 instructor in Module 1 class). The scope of instruction will be limited to the passed modules.</p>	<p>The degree specialty must be consistent with the modules to be taught (the curriculum must include appendix 1 sub-modules), and the level of the studies must be adapted to the level (1, 2 or 3) of the modules to be taught. The knowledge level attested shall contain the elements of relevant sub-module to be taught</p> <p>A foreign aircraft maintenance engineer licence, issued by any ICAO contracting state may be acceptable by CAAM, provided with justification made by training organisation to utilise the expertise.</p> <p>The Part 147 examination shall not be attended in the MTO where the instructor is to exercise its privileges. To avoid conflict of interest, it is strongly recommended that the examination is taken at CAAM examination centre.</p>
Pedagogical Skills	Completion of instructor techniques training delivered by a legal entity to a nationally recognised standard; or	Example of training acceptable are HRDF, NIOSH, CIAST, teaching permit which are approved/ accredited/ recognised by relevant Ministry body.



	Completion of a “Train the trainer course”, with evaluation of the training course syllabus documented by Quality Manager.	The evaluation of the training course syllabus shall be at least equivalent to the nationally recognised standard and documented in the MTOE. The quality manager, or training manager who assisted with the evaluation/ review shall first be appropriately trained to the nationally recognised standard.
Other knowledge	A documented familiarisation with the specific training procedures and requirements as described in MTOE	
Specialty Experience	NIL	The practical experience in aircraft maintenance, design or production activities is advantageous; the advantage for the instructor is to understand the practical applications of a scientific knowledge and therefore to better appreciate the knowledge that the trainee must receive (as example, for a mathematics instructor, the practical applications may be the reading of inflation charts, the conversation of units or determination of a centre of gravity)

MODULE 5, 6, 8		
Qualification/ Experience	Criteria	Remarks
Specialty knowledge	Hold an aeronautical / electrical/ mechanical engineering degree recognized by local education authorities, or an acceptable equivalent; <u>and</u>	The degree specialty must be consistent with the modules to be taught (the curriculum must include appendix 1 sub-modules), and the level of the studies must be adapted to the level (1, 2 or 3) of the modules to be taught.



	<p>A training received to gain knowledge about the design, the function and the operation of relevant typical aircraft systems and components; or Hold CAAM Part 66 aircraft maintenance engineer licence relevant to the category/ subcategory for the modules to be taught, or an acceptable equivalent; or</p> <p>Attained CAAM Part 147 certificates of recognition with successful completion of training and examination for the modules to be taught, at the appropriate level. The scope of instruction will be limited to the passed modules.</p>	<p>The knowledge level attested shall contain the elements of relevant sub-module to be taught</p> <p>A foreign aircraft maintenance engineer licence issued by any ICAO contracting state may be acceptable by CAAM provided with justification made by training organisation to utilize the expertise.</p> <p>The Part 147 examination shall not be attended in the MTO where the instructor is to exercise its privileges. To avoid conflict of interest, it is strongly recommended that the examination is taken at CAAM examination centre.</p>
<p>Pedagogical Skills</p>	<p>Completion of instructor techniques training delivered by a legal entity to a nationally recognised standard; or</p> <p>Completion of a “Train the trainer course”, with evaluation of the training course syllabus documented by Quality Manager.</p>	<p>Example of training acceptable are HRDF, NIOSH, CIAST, teaching permit which are approved/ accredited/ recognised by relevant Ministry body.</p> <p>The evaluation of the training course syllabus shall be at least equivalent to the nationally recognised standard and documented in the MTOE. The quality manager, or training manager who assisted with the evaluation/ review shall first be appropriately trained to the nationally recognised standard.</p>
<p>Other knowledge</p>	<p>A documented familiarisation with the specific training procedures and requirements as described in MTOE</p>	
<p>Specialty Experience</p>	<p>NIL</p>	<p>The practical experience in aircraft maintenance, design or production activities is advantageous; the advantage for the instructor is to understand the practical applications of a scientific knowledge and</p>



		therefore to better appreciate the knowledge that the trainee must receive (as example, for a mathematics instructor, the practical applications may be the reading of inflation charts, the conversation of units or determination of a centre of gravity)
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MODULE 7		
Qualification/ Experience	Criteria	Remarks
Specialty knowledge	<p>Hold CAAM Part 66 aircraft maintenance engineer licence with type rating endorsed relevant to category/ subcategory to be taught or an acceptable equivalent; or</p> <p>Attained CAAM Part 147 certificates of recognition with successful completion of training and examination for Modules 7 in accordance with CAD1801 Appendix 1, at the appropriate level and passed aircraft type training in accordance with CAD 1801 Appendix 3 standard relevant to the category/ subcategory; or</p> <p>Specialised training received from nationally recognise training organisation / institution for specialized services.</p>	<p>A foreign aircraft maintenance engineer licence issued by any ICAO contracting state may be acceptable by CAAM provided with justification made by training organisation to utilize the expertise.</p> <p>The Part 147 examination shall not be attended in the MTO where the instructor is to exercise its privileges. To avoid conflict of interest, it is strongly recommended that the examination is taken at CAAM examination centre.</p> <p>Example of specialized services such as NDT, Welding etc. The purpose is to facilitate the use of instructors –non maintenance specialized- providing a specialized training (i.e., on welding) as part of the module 7 training and under the oversight of the module 7 maintenance instructor(s). The instruction will be limited to the concerned submodules.</p>



<p>Pedagogical Skills</p>	<p>Completion of instructor techniques training delivered by a legal entity to a nationally recognised standard; or</p> <p>Completion of a “Train the trainer course”, with evaluation of the training course syllabus documented by Quality Manager.</p>	<p>Example of training acceptable are HRDF, NIOSH, CIAST, teaching permit which are approved/ accredited/ recognised by relevant Ministry body.</p> <p>The evaluation of the training course syllabus shall be at least equivalent to the nationally recognised standard and documented in the MTOE.</p> <p>The quality manager, or training manager who assisted with the evaluation/ review shall first be appropriately trained to the nationally recognised standard.</p>
<p>Other knowledge</p>	<p>Completion of organisation approved MTOE training;</p> <p>Completion of detailed Part 145 training course;</p> <p>Completion of basic Part 66 and Part 147 training course; and</p> <p>A documented familiarisation with the specific training procedures and requirements as described in MTOE; and</p>	
<p>Specialty Experience</p>	<p>3 years of relevant maintenance experience, or acceptable equivalent.</p>	<p>The experience must be representative of the subject to be taught and gained in civil aviation environment or acceptable equivalent such as maintenance, engineering, design organisation, or equivalent in civil aviation environment (aeronautical maintenance).</p>



MODULE 9		
Qualification/ Experience	Criteria	Remarks
Specialty knowledge	<p>Evidence of training on Human Factors in Aviation, of a minimum of 2 days. The syllabus of the training must meet the intent of Module 9 as specified in Appendix 1 of CAD1801; or</p> <p>Attained Part 147 certificates of recognition with successful completion of training and examination for Module 9.</p>	<p>The Part 147 examination shall not be attended in the MTO where the instructor is to exercise its privileges. To avoid conflict of interest, it is strongly recommended that the examination is taken at CAAM examination centre.</p>
Pedagogical Skills	<p>Completion of instructor techniques training delivered by a legal entity to a nationally recognised standard; or</p> <p>Completion of a “Train the trainer course”, with evaluation of the training course syllabus documented by Quality Manager.</p>	<p>The evaluation of the training course syllabus shall be at least equivalent to the nationally recognised standard and documented in the MTOE.</p> <p>The quality manager, or training manager who assisted with the evaluation/ review shall first be appropriately trained to the nationally recognised standard.</p>
Other knowledge	<p>Completion of organisation approved MTOE training;</p> <p>Completion of detailed Part 145 training course;</p> <p>Completion of basic Part 66 training course; and</p>	



	A documented familiarisation with the specific training procedures and requirements as described in MTOE;	
Specialty Experience	NIL	Experience in an environment that is representative of human factors on aviation maintenance (i.e., Line & Base maintenance experience) is advantageous;

MODULE 10		
Qualification/ Experience	Criteria	Remarks
Specialty knowledge	<p>Hold an aeronautical / electrical/ mechanical engineering degree recognized by the local education authorities, or</p> <p>An acceptable equivalent with evidence of successful completion of Part 66 Module 10 training and examination as specified in Appendix 1 of CAD 1801; or</p> <p>Hold CAAM Part 66 aircraft maintenance engineer licence applicable to relevant category/ subcategory;</p>	
Pedagogical Skills	<p>Completion of instructor techniques training delivered by a legal entity to a nationally recognised standard; or</p> <p>Completion of a “Train the trainer course”, with evaluation of the training course syllabus documented by Quality Manager.</p>	<p>Example of training acceptable are HRDF, NIOSH, CIAST, teaching permit which are approved/ accredited/ recognised by relevant Ministry body.</p> <p>The evaluation of the training course syllabus shall be at least equivalent to the nationally recognised standard and documented in the MTOE.</p> <p>The quality manager, or training manager who assisted with the evaluation/ review shall first be</p>



		appropriately trained to the nationally recognised standard.
Other knowledge	Completion of organisation approved MTOE training; Completion of detailed Part 66, Part 145 and Part M training course; Completion of basic Part 21 training course; A documented familiarisation with the specific training procedures and requirements as described in MTOE; and Evidence of knowledge and familiarisation in regulatory aspect for civil aviation framework, safety management system, operational and airworthiness including specific approval	
Specialty Experience	3 years of relevant maintenance experience.	The experience must be representative of the subject to be taught and gained in civil aviation environment or acceptable equivalent such as maintenance, engineering, design organisation, or equivalent in civil aviation environment (aeronautical maintenance)

MODULE 11, 12, 13, 14, 15, 16 & 17		
Qualification/ Experience	Criteria	Remarks
Specialty knowledge	<p>Hold an aeronautical / electrical/ mechanical engineering degree recognized by the local education authorities, or an acceptable equivalent with evidence of successful completion of Part 66 module training and examination as specified in Appendix 1 of CAD 1801 relevant to the modules to be taught, at the appropriate level. The scope of instruction shall be limited to the passed modules; or</p> <p>Hold CAAM Part 66 aircraft maintenance engineer licence applicable to relevant category/ subcategory, or acceptable equivalent; or</p> <p>Specialized training received from an acceptable training organizations or institutions.</p>	<p>The Part 147 examination shall not be attended in the MTO where the instructor is to exercise its privileges. To avoid conflict of interest, it is strongly recommended that the examination is taken at CAAM examination centre</p> <p>A foreign aircraft maintenance engineer licence issued by any ICAO contracting state may be acceptable by CAAM provided with justification made by training organisation to utilize the expertise.</p> <p>The purpose is to facilitate the use of specialized instructors providing a specialized training (i.e., on hydraulic power) as part of a complete module and under the oversight of the training manager. The instruction will be limited to the concerned sub-modules. Acceptable specialized training may for instance include specialized training offered by aircraft manufacturers and etc.</p>
Pedagogical Skills	<p>Completion of instructor techniques training delivered by a legal entity to a nationally recognised standard; or</p>	<p>Example of training acceptable are HRDF, NIOSH, CIAST, teaching permit which are approved/ accredited/ recognised by relevant Ministry body.</p>



	Completion of a “Train the trainer course”, with evaluation of the training course syllabus documented by Quality Manager.	The evaluation of the training course syllabus shall be at least equivalent to the nationally recognised standard and documented in the MTOE. The quality manager, or training manager who assisted with the evaluation/ review shall first be appropriately trained to the nationally recognised standard.
Other knowledge	Completion of organisation approved MTOE training; A documented familiarisation with the specific training procedures and requirements as described in MTOE; and	
Specialty Experience	3 year of relevant maintenance experience, or acceptable equivalent.	The experience must be representative of the subject to be taught and gained in a civil aviation environment such as aviation engineering department or base maintenance AMO

5.4.2 Practical Element Instructor

Qualification/ Experience	Criteria	Remarks
Specialty knowledge	Hold CAAM Part 66 aircraft maintenance engineer licence relevant to category/ subcategory with appropriately aircraft type endorsed, or similar technology for each aircraft type used for the training, or acceptable equivalent; or	A foreign aircraft maintenance engineer licence issued by any ICAO contracting state may be acceptable by CAAM provided with justification made by training organisation to utilize the expertise. Example of B1.1 AML for B1.1 Instructor with 737-400 aircraft type endorsed for practical training on 737-400 aircraft type.



	<p>Attained Part 147 certificates of recognition with successful completion of training and examination for module 7, Module 9 & 10, and Module 11 to 17 at appropriate level specified in accordance with CAD 1801 Appendix 1 relevant to the modules to be taught; and</p> <p>Evidence of successful completion (theoretical and practical) of aircraft type training, or type training with similar technology in the appropriate category for each aircraft type used for the training; or</p> <p>Specialised training received from nationally recognise training organisations/ institutions to cover specialised services. The instruction will be limited to the subjects/ methods covered by the specialised training(s). NDT instructors shall be holder of a valid license or certificate in accordance with NDT standard (NAS410 or EN4179) acceptable to CAAM (level 2 minimum) or acceptable equivalent.</p>	<p>The Part 147 examination shall not be attended in the MTO where the instructor is to exercise its privileges.</p> <p>The required level depends on the instructor's specialty either airframe or avionics.</p> <p>Example of specialized services such as NDT, Welding etc. The purpose is to facilitate the use of instructors –non maintenance specialized- providing a very specialized training (i.e., on welding) as part of the module 7 training and under the oversight of the module 7 maintenance instructor(s). The instruction will be limited to the concerned submodules.</p>
<p>Pedagogical Skills</p>	<p>Completion of instructor techniques training delivered by a legal entity to a nationally recognised standard; or</p> <p>Completion of a “Train the trainer course”, with evaluation of the training course syllabus documented by Quality Manager; or</p> <p>A practical instructor privilege (documented) granted by AMO when this part is contracted out (<i>note: an administrative assessment of the competency is still required to be completed and documented by the MTO to determine how the AMO qualifies internal instructors</i>).</p>	<p>Example of training acceptable are HRDF, NIOSH, CIAST, teaching permit which are approved/ accredited/ recognised by relevant Ministry body.</p> <p>The evaluation of the training course syllabus shall be at least equivalent to the nationally recognised standard and documented in the MTOE.</p> <p>The quality manager, or training manager who assisted with the evaluation/ review shall first be appropriately trained to the nationally recognised standard.</p>



Other knowledge	<p>Completion of organisation approved MTOE training;</p> <p>A documented familiarisation with the specific training procedures and requirements as described in MTOE;</p> <p>Completion of basic Part 66 & Part 147 training and detailed Part 145 training course; and</p> <p>Proficient in English language</p>	
Specialty Experience	<p>3 years of relevant maintenance experience. The experience shall be representative of the subject to be taught and gained as per following:</p> <ul style="list-style-type: none">i) aircraft maintenance instructor: experience to be gained in a regulated civil aviation environment or acceptable equivalent,ii) shop maintenance instructors (engine/ aircraft parts and component/ structural elements etc.): experience to be gained in approved civil aviation workshops and adequate to the component maintenance to be taughtiii) For specialized services (welding, NDT etc.): relevant experience to be gained in industry	<p>Care shall be exercised that the experience gained in a nonaeronautical industry is relevant and transferable to aviation maintenance practices.</p>



5.4.3 Knowledge Examiner

Qualification/ Experience	Criteria	Remarks
Specialty knowledge	Shall meet the same criteria as the theoretical instructor of the concerned modules, as example examiner for module 11 shall meet the criteria of instructor module 11	
Pedagogical Skills	<p>Completion of a “Train the examiner course”; and</p> <p>Assessment performed and documented by the MTO’s Examination Manager if himself is appropriately qualified as knowledge examiner and in accordance with MTOE procedure.</p>	<p>The training course syllabus shall at minimum include the following elements: -</p> <p>a) Roles and responsibility of examiner;</p> <p>b) Understanding of basic knowledge requirement and examination standard in accordance with CAD 1801 Appendix 1 and 2;</p> <p>c) Preparing, administer and evaluate written theoretical examination; and</p> <p>be evaluated in accordance with process and procedure documented in MTOE approved by CAAM</p>
Other knowledge	<p>Shall meet the same criteria as the theoretical instructor of the concern modules.</p> <p>Specific training to the organisation’s procedures addressing examinations and to the Part 66 examination standard; and</p> <p>Familiarisation with the TNA for theoretical aspect</p>	
Specialty Experience	Shall meet the same criteria as the theoretical instructor of the concerned modules. However practical experience in aircraft maintenance, design or production activities is an advantageous.	



5.4.4 Practical Assessor

Qualification/ Experience	Criteria	Remarks
Specialty knowledge	Shall meet the same criteria as the theoretical instructor of the concerned modules, as example examiner for module 11 shall meet the criteria of instructor module 11	
Pedagogical Skills	<p>Completion of a “Train the assessor course”; and</p> <p>Assessment performed and documented by the MTO’s Examination Manager if himself is appropriately qualified as practical assessor and in accordance with MTOE procedure.</p>	<p>The training course syllabus shall at minimum include the following elements: -</p> <p>a) Roles and responsibility of assessor; b) Understanding of basic practical training needs & assessment standard c) Conduct of practical skill test/ assessment; and be evaluated in accordance with process and procedure documented in MTOE approved by CAAM</p>
Other knowledge	<p>Shall meet the same criteria as the theoretical instructor of the concern modules.</p> <p>Specific training to the organisation’s procedures addressing practical assessment and to the Part 66 assessment standard; and</p> <p>Familiarisation with the TNA for practical aspect</p>	
Specialty Experience	<p>5 years of relevant maintenance experience. The experience shall be representative of the subject to be taught and gained as per following:</p> <p>i) aircraft maintenance instructor: experience to be gained in a regulated civil aviation environment or acceptable equivalent,</p>	<p>For Module 7 and Module 11 to 17, at least 2 years of experience exercising certification privileges in line and/ or base (hangar) maintenance.</p>



	<ul style="list-style-type: none">ii) shop maintenance instructors (engine/ aircraft parts and component/ structural elements etc.): experience to be gained in approved civil aviation workshops and adequate to the component maintenance to be taughtiii) For specialized services (welding, NDT etc.): relevant experience to be gained in industry	Care shall be exercised that the experience gained in a nonaeronautical industry is relevant and transferable to aviation maintenance practices
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5.5 TYPE TRAINING

5.5.1 Theoretical Element Instructor

Qualification/ Experience	Criteria	Remarks
Specialty knowledge	<p>Attained Part 147 certificate of recognition with successful completion of training and examination including practical element of relevant aircraft type training at level 3. The Certificate of Recognition shall address the category of license corresponding to the specialty of the instructor; and</p> <p>A of refresher/update course on the concerned aircraft type if the instructor has not instructed the concerned aircraft type(s) in a Part 147 environment during the two years preceding its employment in the current MTO; or</p> <p>Successful completion of type training with theoretical and practical elements received in other than CAAM Part 147 MTO.</p> <p>The curriculum/ level of the course must be at least equivalent to CAD 1801 Appendix 3 type training standard. The equivalency of the course shall be demonstrated and documented by the MTO; and</p> <p>A refresher/update course on the concerned aircraft type if the instructor has not instructed the concerned aircraft type(s) or has not been actively involved in the relevant maintenance of the aircraft type (in the case of contracted MRO staff) during the two years preceding its employment by the current MTO</p>	<p>The Part 147 examination shall not be attended in the MTO where the instructor is to exercise its privileges unless specific measures are taken and accepted by CAAM to demonstrate that the integrity of examination is ensured</p> <p>For new type certified aircraft, type training to be completed at OEM, unless otherwise agreed by CAAM.</p> <p>Further guidance is provided in paragraph 6.0 of this Appendix.</p>



<p>Pedagogical Skills</p>	<p>Completion of instructor techniques training delivered by a legal entity to a nationally recognised standard; or</p> <p>Completion of a “Train the trainer course”, with evaluation of the training course syllabus documented by Quality Manager.</p>	<p>The evaluation of the training course syllabus shall be at least equivalent to the nationally recognised standard and documented in the MTOE.</p> <p>The quality manager, or training manager who assisted with the evaluation/ review shall first be appropriately trained to the nationally recognised standard.</p>
<p>Other knowledge</p>	<p>A documented familiarisation with the specific training procedures and requirements as described in MTOE;</p> <p>A training on specific instructional methods or training devices used by the MTO such as simulators, synthetic trainers etc.; and</p> <p>Proficient in English language</p>	
<p>Specialty Experience</p>	<p>3 years of relevant maintenance experience including 1 years of experience exercising certification privileges in line and/ or base (hangar) maintenance on the relevant aircraft type; or</p> <p>Sufficient experience in performing technical training functions in OEM training organisation which is acceptable to CAAM</p>	<p>The experience must be representative of the elements(s) to be taught and gained in civil aviation environment or acceptable equivalent such as maintenance, engineering, design organisation etc.</p> <p>Does not apply for new type certified aircraft. The experience required will be determined by CAAM on case-to-case basis.</p>



5.5.2 Practical Element Instructor

Qualification/ Experience	Criteria	Remarks
Specialty knowledge	Shall meet the same criteria as the theoretical instructor of the concerned aircraft type training	
Pedagogical Skills	<p>Completion of instructor techniques training delivered by a legal entity to a nationally recognised standard; or</p> <p>Completion of a “Train the trainer course”, with evaluation of the training course syllabus documented by Quality Manager; or</p> <p>A practical instructor privilege (documented) granted by AMO when this part is contracted out (note: an administrative assessment of the competency is still required to be completed and documented by the MTO to determine how the AMO qualifies internal instructors).</p>	<p>The evaluation of the training course syllabus shall be at least equivalent to the nationally recognised standard and documented in the MTOE.</p> <p>The quality manager, or training manager who assisted with the evaluation/ review shall first be appropriately trained to the nationally recognised standard.</p>
Other knowledge	<p>A documented familiarisation with the specific training procedures and requirements as described in MTOE;</p> <p>A training on specific instructional methods or training devices used by the MTO such as simulators, synthetic trainers etc.</p> <p>A training on CAAM regulation; Completion of basic Part 66 & Part 147 and detailed Part 145 training course; and</p> <p>Proficient in English language</p>	



<p>Specialty Experience</p>	<p>For other than large aircraft, 3 years of relevant maintenance experience including 1 years of experience exercising certification privileges in line and/ or base (hangar) maintenance on the relevant aircraft type</p> <p>For large aircraft, 5 years of relevant maintenance experience including 2 years of experience exercising certification privileges in line and/ or base (hangar) maintenance on the relevant aircraft type; or</p> <p>Sufficient experience in performing technical training functions in OEM training organisation which is acceptable to CAAM</p>	<p>The experience shall be representative of the subject to be taught and gained in approved civil aviation environment or acceptable equivalent</p> <p>Does not apply for new type certified aircraft. The experience required will be determined by CAAM on case-to-case basis.</p>
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5.5.3 Knowledge Examiner

Qualification/ Experience	Criteria	Remarks
Specialty knowledge	Shall meet the same criteria as the theoretical instructor of the concerned aircraft type training	
Pedagogical Skills	<p>Completion of a “Train the examiner course”; and</p> <p>Assessment performed and documented by the MTO’s Examination Manager if himself is appropriately qualified as knowledge examiner and in accordance with MTOE procedure.</p>	<p>The training course syllabus shall at minimum include the following elements: -</p> <p>a) Roles and responsibility of examiner;</p> <p>b) Understanding of basic knowledge requirement and examination standard in accordance with CAD 1801 Appendix 3;</p> <p>c) Preparing, administer and evaluate written theoretical examination; and</p> <p>be evaluated in accordance with process and procedure documented in MTOE approved by CAAM</p>



Other knowledge	<p>Shall meet the same criteria as the theoretical instructor for type;</p> <p>Specific training to the organisation’s procedures addressing examinations and to the Part 66 examination standard; and</p> <p>Familiarisation with the TNA for theoretical aspect.</p>	
Specialty Experience	Shall meet the same criteria as theoretical instructor for type	However practical experience in aircraft maintenance, design or production activities is advantageous

5.5.4 Practical Assessor

Qualification/ Experience	Criteria	Remarks
Specialty knowledge	Shall meet the same criteria as the practical instructor of the concerned elements, for example assessor for landing gear shall meet the criteria of landing gear elements practical instructor); and	
Pedagogical Skills	<p>Completion of a “Train the assessor course”; and</p> <p>Assessment performed and documented by the MTO’s Examination Manager if himself is appropriately qualified as practical assessor and in accordance with MTOE procedure.</p>	<p>The training course syllabus shall at minimum include the following elements: -</p> <p>a) Roles and responsibility of assessor;</p> <p>b) Understanding of type practical training needs & assessment standard</p> <p>c) Conduct of practical skill test/ assessment; and be evaluated in accordance with process and procedure documented in MTOE approved by CAAM</p>



Other knowledge	Shall meet the same criteria as the practical instructor for type training; Specific training to the organisation's procedures addressing practical assessment and to the Part 66 assessment standard; Training on specific assessment methods or devices used by MTO, such as simulators, synthetic task trainers etc; and Familiarisation with the TNA for practical aspect	
Specialty Experience	Shall meet the same criteria as practical instructor for type training	

6. Assessment of the Type Training received at non-Part CAAM 147 Maintenance Training Organisation

- 6.1 Type training received at a non CAAM Part 147 MTO shall only be acceptable to CAAM, if it is: -
- (a) conducted by the manufacturer of the applicable aircraft or component; or
 - (b) conducted by the maintenance training organisation approved by the competent authority of a foreign contracting state which is acceptable to CAAM.
- 6.2 The following elements, at a minimum shall be evaluated and documented by the MTO to evidence that the type training standard is in compliance with CAD 1801 Appendix 3.
- (a) Type training syllabus:
Syllabus levels for the type training shall be assessed for equivalency to CAD 1801 Appendix 3 on the relevant licence category/ subcategories.
 - (b) Type training course length:
Verification that the course length shall be equivalent to CAAM Part 147 course for the same or similar aircraft type as specified in CAD 1801 Appendix 3.
 - (c) Type training course provider:
Record related to the course provider. Assess if possible if the training documentation/ material came from a reputable source and the training provided by an established organisation.
 - (d) Theoretical and practical training:
Verification that the course covers the theoretical and practical aspects. If the training covers only the theoretical aspect then the practical training shall be assessed separately. It shall be noted that the practical training might have been carried out as structured OJT.
 - (e) Examination:
 - i) Verify that individual training course certificates and the associated examination results are available;
 - ii) Verification that the exam result is at least equivalent to CAD 1801 requirements; and
 - iii) Review, when available, the examination paper and assess the multi choice questions (number of multi choice question per hour of training, pertinence of the questions).

Notes: For staff holding a valid certificate of authorization for the aircraft type that was issued by an organisation approved under CAAM Part 145, the assessment of specialty knowledge is considered having been performed by this organisation. The training organisation can therefore replace the assessment by a verification of the authorization and be documented with a copy in the staff individual's file.



For instructors who were trained to the type in a non-Part 147 environment, the assessment of the training's equivalency to Part 66 may be replaced by a Part 147 examination, conducted by the Part 147 training organisation, provided measures are in place to ensure the integrity of the examination. If the integrity cannot be sufficiently demonstrated then an independent examination performed in another Part 147 organisation would be necessary. In both cases, examination's rules described in Part 66 appendix 3 must be applied.