

CAR-147

Civil Aviation Regulation

Maintenance Training

Organisation Requirement

Effective 01 May 2023

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President of CAA

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FOREWORD

- (a) The Civil Aviation Regulation Maintenance Training Organisation Requirement (CAR-147) has been issued by the Civil Aviation Authority of Oman (CAA) under the provisions of the Civil Aviation Law of the Sultanate of Oman.
- (b) The CAR-147 contains requirements for “Maintenance Training Organisation” in accordance with relevant standards and recommended practices (SARPs) of ICAO Annex 1 and its amendments. This Regulation has been modelled upon similar regulations implemented by other member states to ensure latest industry practices are considered.
- (c) CAA has established a designated Safety Regulations Department (SRD) to control the rulemaking process. Civil Aviation Industry of the Sultanate may contact this department in case of having any query on the CAA regulations or to submit their feedbacks, with the objective of improving CAA Regulations.

Note: Please find more information on rulemaking process as described within CAR-11.

- (d) The editing practices used in this document are as follows:
 - (1) **‘Shall’** is used to indicate a mandatory requirement within the contents of a Regulation.
 - (2) **‘Should’** is used to indicate a recommendation and normally is used in the contents of an AMC.
 - (3) **‘May’** is used to indicate discretion by the Authority, or the industry as appropriate.
 - (4) **‘Will’** indicates a mandatory requirement and is used to advise of action incumbent on the Authority.
 - (5) **‘Revision’** is an amendment to the text of Regulation, issued as a complete set of amended pages formed in a revised document and numbered starting from 01. The revised Regulation replaces previous one.

Note: The use of the male gender implies the female gender and vice versa.

Cover Regulation (Articles)

Article 1 – Definition

Approved training. Training conducted under special curricula and supervision approved by CAA.

Approved training organization. An organization approved by and operating under the supervision of CAA in accordance with these requirements to Perform approved training.

Article 2 – Repeals

The below list of regulation(s) shall be repealed from the time this regulation enters into force:

- CAN 4-09
- Any other requirements in the current Regulations that are contrary to this regulation.

Article 3 – Entry into Force

- (a) This Regulation shall enter into force on 01 May 2023.
- (b) This Regulation shall be binding in its entirety and directly applicable in all related parties.

Section A

Maintenance Training Organisation Requirement

SUBPART A

GENERAL

147.A.05 Scope

This section establishes the requirements to be met by organisations seeking approval to conduct training and examination as specified in CAR-66.

147.A.10 General

A training organisation shall be an organisation or part of an organisation registered as a legal entity.

GM 147.A.10 General

Such an organisation may conduct business from more than one address and may hold more than one approval.

147.A.15 Application

- (a) An application for an approval or for the change of an existing approval shall be made on a CAA Form AWR 017 and submit it to the CAA.
- (b) An application for an approval or change to an approval shall include the following information:
 - (1) the registered name and address of the applicant;
 - (2) the address of the organisation requiring the approval or change to the approval;
 - (3) the intended scope of approval or change to the scope of approval;
 - (4) the name and signature of the accountable manager;
 - (5) the date of application.

SUBPART B

ORGANISATIONAL REQUIREMENTS

147.A.100 Facility requirements

- (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.
 - (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) The paragraph (b) 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. The CAA shall require 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 147.A.115(d).
- (f) The maximum number of students undergoing practical training during any training course shall not exceed 15 per supervisor or assessor.
- (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) Secure 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 147.A.125. 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.

AMC 147.A.100(i) Facility requirements

- (a) For approved basic maintenance training courses this means holding and ensuring reasonable access to copies of Civil aviation law and relevant Civil aviation regulation, examples of typical aircraft maintenance manuals and service bulletins, Airworthiness Directives, aircraft and component records, release documentation, procedures manuals and aircraft maintenance programmes.
- (b) Except for the Civil Aviation Regulation and Law, the remainder of the documentation should represent typical examples for both large and small aircraft and cover both aeroplanes and helicopters as appropriate. Avionic documentation should cover a representative range of available equipment. All documentation should be reviewed and updated on a regular basis.

GM 147.A.100(i) Facility requirements

Where the organisation has an existing library of regulations, manuals and documentation required by another CAR, it is not necessary to duplicate such a facility subject to student access being under controlled supervision.

147.A.105 Personnel requirements

- (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 CAR.
- (b) A person or group of persons, whose responsibilities include ensuring that the maintenance training organisation is in compliance with the requirements of this CAR, shall be nominated. Such person(s) shall be responsible to the accountable manager. The senior person or one person from the group of persons may also be the accountable manager subject to meeting the requirements for the accountable manager as defined in paragraph (a).
- (c) The maintenance training organisation shall contract sufficient staff to plan/performance knowledge and practical training, conduct knowledge examinations and practical assessments in accordance with the approval.
- (d) By derogation to paragraph (c), when another organisation is used to provide practical training and assessments, such other organisation's staff may be nominated to carry out practical training and assessments.
- (e) Any person may carry out any combination of the roles of instructor, examiner, and assessor, subject to compliance with paragraph (f).
- (f) The experience and qualifications of instructors, knowledge examiners and practical assessors shall be established in accordance with criteria published and standard agreed by the CAA.
- (g) The knowledge examiners and practical assessors shall be specified in the organisation exposition for the acceptance of such staff.
- (h) Instructors and knowledge examiners 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 or examined.

AMC 147.A.105 Personnel requirements

- (a) The larger maintenance training organisation (an organisation with the capacity to provide training for 50 students or more) should nominate a training manager with the responsibility of managing the training organisation on a day-to-day basis. Such person could also be the accountable manager. In addition, the organisation should nominate an examination manager with the responsibility of managing the relevant CAR-147 Subpart C or Subpart D examination system. Such person(s) may also be an instructor and/or examiner. Furthermore, the organisation should appoint a quality manager with the responsibility of managing the quality system as specified in paragraph 147.A.130(b).
- (b) The smaller maintenance training organisation (an organisation with the capacity to provide training for less than 50 students) may combine training and examination manager positions subject to CAA verifying and being satisfied that all functions can be properly carried out in combination.
- (c) When the organisation is also approved against other CARs which contain some similar functions then such functions may be combined.

AMC 147.A.105(b) Personnel requirements

- (a) With the exception of the accountable manager, a Form AWR 032 should be completed for each person nominated to hold a position required by 147.A.105(b). The Form AWR 032 is included in the CAA public website.
- (b) Nominated person or group of persons should have:
 - (1) Practical experience and expertise in the application of aviation safety standards and safe operating practices.
 - (2) A comprehensive knowledge of applicable regulation.
 - (3) Knowledge of quality systems.
 - (4) Thorough knowledge with the organisation's exposition.
- (c) Knowledge should be gained through a formalised training course or assessment by the CAA.

GM 147.A.105(c) Personnel requirements

The maintenance training organisation should have a nucleus of permanently employed staff to undertake the minimum amount of maintenance training proposed but may contract, on a part-time basis, instructors for subjects which are only taught on an occasional basis.

AMC 147.A.105(f) Personnel requirements

- (a) Any person accepted by CAA prior to this issue of CAR-147 coming into force may continue to be accepted in accordance with 147.A.105(f).
- (b) Paragraph (c) of Appendix C to AMC to CAR-66 provides criteria to establish the qualification of assessors.

- (c) Instructors should have:
 - (1) Practical background in aviation in the areas relevant for the training provided and have undergone a course of training in instructional techniques; or
 - (2) Previous experience in giving theoretical knowledge instruction and an appropriate theoretical background in the subject on which they will provide theoretical knowledge instruction.
- (d) The theoretical knowledge instruction for type rating should be conducted by instructors holding the appropriate type rating or having appropriate experience in aviation and knowledge of the aircraft concerned.
- (e) Instructors should, before appointment, prove their competency by giving a test lecture based on material they have developed for the subjects they are to teach.
- (f) Knowledge examiners should meet the same criteria as the instructor, as well as Training to the Organization's procedures (MTOE) addressing examinations and to the CAR-66 examination standard.
- (g) Instructor, Knowledge examiner and practical assessor should have comprehensive knowledge of relevant regulation.

GM 147.A.105(g) Personnel requirements

Examiners should demonstrate a clear understanding of the examination standard required by CAR-66 and have a responsible attitude to the conduct of examinations such that the highest integrity is ensured.

AMC 147.A.105(h) Personnel requirements

Updating training should normally be of 35 hours duration but may be adjusted to the scope of training of the organisation and particular instructor/examiner.

GM 147.A.105(h) Personnel requirements

- (a) Records should show for each instructor/examiner when the updating training was scheduled and when it took place.
- (b) The updating training may be subdivided during the 24 months into more than one element and may include such activities as attendance at relevant lectures and symposiums.

147.A.110 Records of instructors, examiners, and assessors

- (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.

AMC 147.A.110 Records of instructors, examiners, and assessors

- (a) The following minimum information relevant to the scope of activity should be kept on record in respect of each instructor, knowledge examiner and practical assessor:
 - (1) Name
 - (2) Date of Birth
 - (3) Personnel Number
 - (4) Experience
 - (5) Qualifications
 - (6) Training history (before entry)
 - (7) Subsequent Training
 - (8) Scope of activity
 - (9) Starting date of employment/contract
 - (10) If appropriate – ending date of employment/contract
- (b) The record may be kept in any format but should be under the control of the organisations quality system.
- (c) Persons authorised to access the system should be maintained at a minimum to ensure that records cannot be altered in an unauthorised manner or that such confidential records become accessible to unauthorised persons.
- (d) The CAA is an authorised person when investigating the records system for initial and continued approval or when CAA has cause to doubt the competence of a particular person.

GM 147.A.110 Records of instructors, examiners, and assessors

Instructors, knowledge examiners and practical assessors should be provided with a copy of their terms of reference.

147.A.115 Instructional equipment

- (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.
- (b) The basic training workshops and/or maintenance facilities as specified in 147.A.100(d) 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 147.A.100(d) must have an appropriate selection of aircraft, engines, aircraft parts and avionics equipment.
- (d) The aircraft type training organisation as specified in 147.A.100(e) must have access to the

appropriate aircraft type. Synthetic training devices may be used when such synthetic training devices ensure adequate training standards.

GM 147.A.115(a) Instructional equipment

- (a) Synthetic training devices are working models of a particular system or component and include computer simulations.
- (b) A synthetic training device is considered beneficial for complex systems and fault diagnostic purposes.

AMC 147.A.115(c) Instructional equipment

- (a) An appropriate selection of aircraft parts means appropriate in relation to the particular subject module or sub-module of CAR-66 being instructed. For example, the turbine engine module should require the provision of sufficient parts from different types of turbine engine to show what such parts look like, what the critical areas are from a maintenance viewpoint and to enable disassembly/assembly exercises to be completed.
- (b) Appropriate aircraft, engines, aircraft parts and avionics equipment means appropriate in relation to the particular subject module or sub-module of CAR-66 being instructed. For example, category B2 avionic training should require amongst other equipment, access to at least one type of installed autopilot and flight director system such that maintenance and system functioning can be observed and therefore more fully understood by the student in the working environment.
- (c) 'Access' may be interpreted to mean, in conjunction with the facilities requirement of 147.A.100(d), that there may be an agreement with a maintenance organisation approved under CAR-145 to access such parts, etc.

147.A.120 Maintenance training material

- (a) Maintenance training course material shall be provided to the student and cover as applicable:
 - (1) The basic knowledge syllabus specified in CAR-66 for the relevant aircraft maintenance license category or subcategory and,
 - (2) The type course content required by CAR-66 for the relevant aircraft type and aircraft maintenance license category or subcategory.
- (b) Students shall have access to examples of maintenance documentation and technical information of the library as specified in 147.A.100(i).

AMC 147.A.120(a) Maintenance training material

Training course notes, diagrams and any other instructional material should be accurate. Where an amendment service is not provided, a written warning to this effect should be given.

147.A.125 Records

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

147.A.130 Training procedures and quality system

- (a) The organisation shall establish procedures acceptable to CAA to ensure proper training standards and compliance with all relevant requirements in this Regulation.
- (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 feedback system of audit findings to the person(s) and ultimately to the accountable manager referred to in 147.A.105(a) to ensure, as necessary, corrective action.
- (c) A training programme shall be developed for each type of course offered.
- (d) The training programme shall comply with the requirements of CAR-66, as applicable.
- (e) The content and sequence of the training programme shall be specified in the organisation's manual.

AMC 147.A.130(a) Training procedures and quality system

This acceptable means of compliance provides some clarifications for the incorporation of new training methods and training technologies in the procedures for aircraft maintenance training.

The classic training method is a teacher lecturing the pupils in a classroom. Commonly the training tools are a blackboard and training manuals. New technologies make it possible to develop new training methods and use other training tools, e.g., multimedia-based training and virtual reality. A combination of several training methods/tools is recommended in order to increase the overall effectiveness of the training.

Simulation cannot be eligible as a sole training or assessment tool for basic hand skills such as wiring, welding, drilling, filing, wire locking, riveting, bonding, or any other skill where competence may only be achievable by performing a hands-on activity.

Three tables are provided to illustrate the possibilities for the use of different training methods and tools:

Table 1: Training tools

Table 2: Training methods

Table 3: Combination of training methods and tools and their use

Table 1 lists existing training tools that may be selected for basic training

Table 1: Training tools

| Training Tools | | Description |
|----------------|-------------------------------------|--|
| 1 | Slideshow presentation | A structured presentation of slides |
| 2 | Manuals | Comprehensive and controlled publication of a particular topic. |
| 3 | Computer (desktop PC, laptop, etc.) | An electronic processing device that can hold and display information in various media |

| | | |
|----|---|--|
| 4 | Mobile devices (such as, but not limited to, tablets, smart phones, etc.) | A mobile electronic processing device that can hold and display information in various media |
| 5 | Videos | Electronic media for broadcasting moving visual images. |
| 6 | MSTD — Maintenance Simulation Training Device | A training device that is intended to be used in maintenance training, examination, and/or assessment for a component, system, or entire aircraft. The MSTD may consist of hardware and software elements. |
| 7 | Mock-up | A scaled or full-size replica of a component, system or entire aircraft that preserves (i.e., is an exact replica of) the geometrical, operational, or functional characteristics of the real component, system or entire aircraft for which maintenance training is delivered with the use of such a replica. |
| 8 | Virtual reality | A computer-generated three-dimensional (3D) environment which can be explored and possibly interacted with. |
| 9 | MTD — Maintenance Training Device | Maintenance training device is any training device other than an MSTD used for maintenance training and/or examination and/or assessment. It may include mock-ups. |
| 10 | Real aircraft | A suitable aircraft whose condition allows teaching a selection of maintenance tasks that are representative of the particular aircraft or of the aircraft category. ‘Suitable’ means an aircraft of the type or licence (sub)category (if the licence (sub)category aircraft is outfitted with the same equipment subject to the particular lesson module(s) and is sufficiently similar so that the lesson objective(s) can be satisfactorily accomplished) for type training, or an aircraft representative of the licence (sub)category for basic training and excludes ‘virtual aircraft’. ‘Condition’ means that the aircraft is equipped with its main components and that the systems can be activated/operated when this is required by the learning objectives |
| 11 | Aircraft component | A suitable aircraft component used to teach specific maintenance tasks off-the-wing. This may include but is not limited to tasks such as borescope inspections, minor repairs, testing, or the assembly/disassembly of sub-components. ‘Suitable’ means that the condition of the component should fit the learning objectives of the tasks and, when appropriate, may feature existing defects or damages. |
| 12 | Augmented reality | An enhancement (modification, enrichment, alteration, or manipulation) of one’s current perception of reality elements of a physical, real-world environment following user’s inputs picked up by sensors transferred to rapid streaming computer images. By contrast, virtual reality replaces the real world with a simulated one. |
| 13 | Embedded training | A maintenance training function that is originally integrated into the aircraft component’s design (i.e., a centralised fault display system). |
| 14 | Classroom | A physical, appropriate location where learning takes place. |
| 15 | Virtual classroom | A simulated, not physical, location where synchronous learning takes place |
| 16 | Virtual aircraft | A simulated, not physical, aircraft that may be used in theoretical training, practical training, examination, or assessment. |

Note: Synthetic training devices (STDs) is a generic term used for systems using hardware and/or software, simulating the behaviour of one or more aircraft systems or a complete aircraft, such as maintenance simulation training devices (MSTDs), maintenance training devices (MTDs) and flight simulation training devices (FSTDs).

Table 2 lists existing training methods that may be selected for basic training.

Table 2: Training methods

| Training Method | Description | Instructor-Centred⁽¹⁾ | Student-centred⁽²⁾ | Blended Training⁽³⁾ |
|--|--|---|--------------------------------------|---------------------------------------|
| Assisted learning (mentoring) | Assisted learning or mentorship represents an ongoing, close relationship of dialogue and learning between an experienced /knowledgeable instructor and a less experienced/knowledgeable student in order to develop experience/knowledge of students. | x | x | x |
| Computer-based training (CBT) | CBT is any interactive means of structured training using a computer to deliver a content. (Note: Not to be confused with competency-based training that also uses the acronym 'CBT') | x | x | x |
| Demonstration | A method of teaching by example rather than explanation | x | | x |
| Distance learning asynchronous | Distance learning reflects training situations in which instructors and students are physically separated. It is asynchronous if the teacher and the students do not interact at the same time. | | x | x |
| Distance learning synchronous | Distance learning reflects training situations in which instructors and students are physically separated. It is synchronous if the teacher and the students interact at the same time (real time). | x | | x |
| e-learning | Training via a network or electronic means, with or without the support of instructors (e-tutors). | x | x | x |
| Lecturing (instructor-led/face to face) | Practice of face-to-face delivery of training and learning material between an instructor and students, either individuals or groups. | x | | x |
| Mobile learning (M-learning) | Any sort of learning that happens when the student is not at a fixed, predetermined location, using mobile technologies. | x | x | x |
| Multimedia-based training ⁽⁴⁾ | Any combined use of different training media. | x | x | x |

| | | | | |
|--------------------------|--|---|---|---|
| Simulation | Any type of training that uses a simulator imitating a real-world process or system. | x | x | x |
| Web-based training (WBT) | Generic term for training or instruction delivered over the internet or an intranet using a web browser. | x | x | x |

Note: The purpose of this table is to provide a short definition for each associated training method and to relate each method to the focus of the learning. It is not meant to comprehensively explore and identify the capabilities of each training method herein included.

- (1) 'Instructor-centred' means that the instructor is responsible for teaching the student.
- (2) 'Student-centred' means that the student is responsible for the learning progress.
- (3) 'Blended training' includes different instructional methods and tools, different delivery methods, different scheduling (synchronous/asynchronous) or different levels of guidance. Blended training allows the integration of a range of learning opportunities.
- (4) 'Multimedia-based training' by definition uses various media to achieve its objective, thus, none of the single media listed is per se a complete solution for training.

Table 3 presents the combination of training methods and tools that may be taken into account for theoretical and practical training.

The table is intended to support potential delivery methods. Additional training methods and further use of those methods could be acceptable to the CAA when demonstrated as supporting learning objectives.

Table 3 Combination of training methods and tools and their use

| Training method | Training Tools | Theoretical elements | | | Practical elements | OJT | Learning objectives | | |
|--|---|----------------------|---------|------------------|--------------------|----------------|------------------------------------|-------------------------------|-------------------------------|
| | | Level 1 | Level 2 | Level 3 | | | Knowledge | Skills | Attitude |
| See Table 2 | See Table 1 | | | | | | | | |
| Lecturing (instructor-led /face to face) | 1,2,3,5,6,7,8,9,10 11,12,13,14,16 | x | x | x | x | x Only type | x | x | x Only type |
| Assisted learning (mentoring) | 1,2,3,5,6,7,8,9, 10,11,12,13,14, 15,16 | x | x | x | x | x Only type | x | x | x Only type |
| e-learning | 1,2,3,4,5,8,12, 14,15,16 | x | x | x ⁽¹⁾ | x ⁽¹⁾ | | x | x ⁽¹⁾ | x ⁽¹⁾ |
| Computer-based training | 1,2,3,4,5,8,12, 14,15,16 | x | x | x | x ⁽¹⁾ | | x Only type | x ⁽¹⁾ | |
| Multimedia-based training | 1,2,3,4,5,8,12, 13,14,15,16 | x | x | x | x ⁽¹⁾ | | x Only type | x ⁽¹⁾ | x ⁽¹⁾ |
| Web-based training (WBT) | 1,2,3,4,5,8,12, 14,15,16 | x | x | x ⁽¹⁾ | x ⁽¹⁾ | | x Only type | x ⁽¹⁾ Only type | x ⁽¹⁾ |
| M-learning | 1,2,3,4,5,12,15,16 | x | x | x ⁽¹⁾ | x ⁽¹⁾ | | x ⁽¹⁾ type unlimited | x ⁽¹⁾ | |
| Distance learning synchronous | 1,2,3,4,5,8,15,16 | x | x | x ⁽¹⁾ | x ⁽¹⁾ | | x ⁽¹⁾ type unlimited | x ⁽¹⁾ | x ⁽¹⁾ Only type |
| Distance learning asynchronous | 1,2,3,4,5,8,16 | x | x | x ⁽¹⁾ | | | x ⁽¹⁾ type unlimited | x ⁽¹⁾ | x ⁽¹⁾ Only type |

| | | | | | | | | | |
|---------------|--|---|---|------------------|---|-------------------------------|---|---|-------------------------------|
| Demonstration | 1,2,3,5,6,7,8,9, 10,11,12,13,14, 15,16 | x | x | x ⁽¹⁾ | x | x ⁽¹⁾ Only type | x | x | x ⁽¹⁾ Only type |
| Simulation | 1,3,4,6,7,8,9,10,12,14,15 ⁽¹⁾ ,16 | x | x | x ⁽¹⁾ | x | | x | x | x Only type |

This table relates a given training method to a list of acceptable training tools (code), oriented to deliver the theoretical elements, practical elements or on-the-job training associated with their specific learning objectives.

(1) Limited suitability. It means that the respective training method may be used but with limited results, thus requiring the support of a complementary training method to fulfil the learning objectives.

NOTE: Instructor (human) involvement should be considered in Basic Knowledge Modules 9A/9B.

AMC 147.A.130(b) Training procedures and quality system

- (a) The independent audit procedure should ensure that all aspects of CAR-147 compliance should be checked at least once in every 12 months and may be carried out as one complete single exercise or subdivided over a 12 month period in accordance with a scheduled plan.
- (b) In a small maintenance training organisation the independent audit function may be contracted to another maintenance training organisation approved under CAR-147 or a competent person acceptable to CAA. Where the small training organisation chooses to contract the audit function it is conditional on the audit being carried out twice in every 12-month period with one such audit being unannounced.
- (c) Where the maintenance training organisation is also approved to another CAR requiring a quality system, then such quality systems may be combined.
- (d) When training or examination is carried out under the sub-contract control system:
 - (1) a pre-audit procedure should be established whereby the CAR-147 approved maintenance training organisation should audit a prospective subcontractor to determine whether the services of the sub-contractor meet the intent of CAR-147.
 - (2) a renewal audit of the subcontractor should be performed at least once every 12 months to ensure continuous compliance with the CAR-147 standard.
 - (3) the subcontract control procedure should record audits of the subcontractor and to have a corrective action follow up plan.
- (e) The independence of the audit system should be established by always ensuring that audits are carried out by personnel not responsible for the function or procedure being checked.

GM 147.A.130(b) Training procedures and quality system

- (a) The primary objective of the quality system is to enable the training organisation to satisfy itself that it can deliver properly trained students and that the organisation remains in compliance with CAR-147.
- (b) The independent audit is a process of routine sample checks of all aspects of the training organisation's ability to carry out all training and examinations to the required standards. It represents an overview of the complete training system and does not replace the need for instructors to ensure that they carry out training to the required standard.
- (c) A report should be raised each time an audit is carried out describing what was checked and any resulting findings. The report should be sent to the affected department(s) for rectification action giving target rectification dates. Possible rectification dates may be discussed with the affected department(s) before the quality department confirms such dates on the report. The affected department(s) should rectify any findings and inform the quality department of such rectification.
- (d) A large training organisation (an organisation with the capacity to provide training for 50 students or more) should have a dedicated quality audit group whose sole function is to conduct audits, raise finding reports and follow up to ensure that findings are being rectified. For the small training organisation (an organisation with the capacity to provide training for less than 50

students) it is acceptable to use competent personnel from one section/department not responsible for the function or procedure to check the section/department that is responsible subject to the overall planning and implementation being under the control of the quality manager.

- (e) The management control and follow up system should not be contracted to outside persons. The principal function is to ensure that all findings resulting from the independent audit are corrected in a timely manner and to enable the accountable manager to remain properly informed of the state of compliance. Apart from rectification of findings, the accountable manager should hold routine meetings to check progress on rectification except that in the large training organisation such meetings may be delegated on a day-to-day basis to the quality manager as long as the accountable manager meets at least once per year with the senior staff involved to review the overall performance.

147.A.135 Examinations

- (a) The examination staff shall ensure the security of all questions.
- (b) 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 authorized 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. CAA shall be informed of any such incident together with the details of any enquiry within one calendar month.
- (c) Any examiner found during a knowledge examination to be providing question answers to any student being examined shall be disqualified from acting as an examiner and the examination declared void. CAA shall be informed of any such occurrence within one calendar month.

AMC 147.A.135 Examinations

- (a) Examinations may be computer or hard copy based or a combination of both.
- (b) The actual questions to be used in a particular examination should be determined by the examiners.

GM 147.A.135 Examinations

CAA will determine when or if the disqualified examiner may be reinstated.

147.A.140 Maintenance training organisation exposition

- (a) The organisation shall provide an exposition for use by the organisation describing the organisation and its procedures and containing the following information:
 - (1) A statement signed by the accountable manager confirming that the maintenance training organisation exposition and any associated manuals define the maintenance training organisation's compliance with this CAR and shall be complied with at all times.
 - (2) The title(s) and name(s) of the person(s) nominated in accordance with 147.A.105(b).
 - (3) The Qualification, duties and responsibilities of management personnel, instructors,

knowledge examiners and practical assessor.

- (4) A maintenance training organisation chart showing associated chains of responsibility of management personnel.
- (5) A list of the training instructors, knowledge examiners and practical assessors.
- (6) A general description of the training and examination facilities located at each address specified in the maintenance training organisation's approval certificate, and if appropriate any other location, as required by 147.A.145(b).
- (7) A list of the maintenance training courses which form the extent of the approval and the course outline and the curriculum of each training course.
- (8) The maintenance training organisation's exposition amendment procedure.
- (9) The maintenance training organisation's procedures, as required by 147.A.130(a)
- (10) The maintenance training organisation's control procedure, as required by 147.A.145(c), when authorized to conduct training, examination, and assessments in locations different from those specified in 147.A.145(b).
- (11) A list of the locations pursuant to 147.A.145(b).
- (12) A list of organisations, if appropriate, as specified in 147.A.145(d).
- (b) The maintenance training organisation's exposition and any subsequent amendments shall be approved by the CAA.
- (c) Notwithstanding paragraph (b) minor amendments to the exposition may be approved through an exposition procedure (hereinafter called indirect approval).

AMC 147.A.140 Maintenance training organisation exposition

- (a) A recommended format of the exposition is included in Appendix IV.
- (b) When the maintenance training organisation is approved in accordance with any other CAR which also requires an exposition, the exposition required by the other CAR may form the basis of the maintenance training organisation exposition in a combined document, as long as the other exposition contains the information required by 147.A.140 and a cross reference index is included based upon Appendix IV.
- (c) When training or examination is carried out under the subcontract control system the maintenance training organisation exposition should contain a specific procedure on the control of subcontractors as per Appendix IV item 2.18 plus a list of subcontractors as required by 147.A.140(a)(12) and detailed in Appendix IV item 1.7.
- (d) The CAA may approve a delegated exposition approval system for all changes other than those affecting the approval.

147.A.145 Privileges of the maintenance training organisation

- (a) The maintenance training organisation may carry out the following as permitted by and in accordance with the maintenance training organisation exposition:
 - (1) Basic training courses to CAR-66 syllabus, or part thereof.
 - (2) Aircraft type/task training courses in accordance with CAR-66.
 - (3) The examinations on behalf of CAA, including the examination of basic or aircraft type training course at the maintenance training organisation.
 - (4) The issue of certificates in accordance with Appendix III following successful completion of the approved basic or aircraft type training courses and examinations specified in subparagraphs (a)(1), (a)(2) and (a)(3), as applicable.
- (b) Training, knowledge examinations and practical assessments may only be carried out at the locations identified in the approval certificate and/or at any location specified in the maintenance training organisation exposition.
- (c) By derogation to point (b), the maintenance training organisation may only conduct training, knowledge examinations and practical assessments in locations different from the paragraph (b) locations in accordance with a control procedure specified in the maintenance training organisation exposition. Such locations need not be listed in the maintenance training organisation exposition.
- (d)
 - (1) The maintenance training organisation may subcontract the conduct of basic theoretical training, type training and related examinations to a non-maintenance training organisation only when under the control of the maintenance training organisation quality system.
 - (2) The subcontracting of basic theoretical training and examination is limited to CAR-66, Appendix A, Modules 1, 2, 3, 4, 5, 6, 8, 9 and 10.
 - (3) The subcontracting of type training and examination is limited to powerplant and avionics systems.
- (e) An organisation may not be approved to conduct only examinations unless approved to conduct training.
- (f) By derogation from point (e), an organisation approved to provide basic knowledge training or type training may also be approved to provide type examination in the cases where type training is not required.

AMC 147.A.145(d) Privileges of the maintenance training organisation

- (a) When training or examination is carried out under the subcontract control system it means that for the duration of such training or examination, the CAR-147 approval has been temporarily extended to include the subcontractor. It therefore follows that those parts of the subcontractor's facilities, personnel and procedures involved with the CAR-147 approved maintenance training organisation's students should meet requirements of CAR-147 for the

duration of that training or examination and it remains the CAR-147 organisation's responsibility to ensure such requirements are satisfied.

- (b) The maintenance training organisation approved under CAR-147 is not required to have complete facilities and personnel for training that it needs to subcontract but it should have its own expertise to determine that the subcontractor meets the CAR-147 standards. Particular attention should be given to ensuring that the training that is delivered also meets the requirements of CAR-66 and the aircraft technologies are appropriate. The subcontracted activities are limited to scope of approval of maintenance training organisation.
- (c) The contract between the maintenance training organisation approved under CAR-147 and the subcontractor should contain:
 - a provision for CAA to have right of access to the subcontractor;
 - a provision for the subcontractor to inform the CAR-147 approved maintenance training organisation of any change that may affect its CAR-147 approval, before any such change takes place.

GM 147.A.145(d) Privileges of the maintenance training organisation

- (a) The pre audit procedure should focus on establishing compliance with the training and examination standards set out in CAR-147 and CAR-66.
- (b) The fundamental reason for allowing a maintenance training organisation approved under CAR-147 to subcontract certain basic theoretical training courses is to permit the approval of maintenance training organisations, which may not have the capacity to conduct training courses on all CAR-66 modules.
- (c) The reason for allowing the subcontracting of training modules 1 to 6 and 8 to 10 only is, most of the related subjects can generally also be taught by training organisations not specialised in aircraft maintenance and the practical training element as specified in 147.A.200 does not apply to them. On the contrary, training modules 7 and 11 to 17 are specific to aircraft maintenance and include the practical training element as specified in 147.A.200. The intent of the 'limited subcontracting' option as specified in 147.A.145 is to grant CAR-147 approvals only to those organisations having themselves at least the capacity to teach on aircraft maintenance specific matters.

GM 147.A.145(d)(3) Privileges of the maintenance training organisation

In the case of type training and examination, the reason for allowing only subcontracting to powerplant and avionics systems are that the related subjects can generally also be imparted by certain organisations specialised in these domains such as the Type Certificate Holder of the powerplant or the OEMs of these avionics systems. In such a case, the type training course should make clear how the interfaces with the airframe are addressed and by whom (the subcontracted organisation or the CAR-147 organisation itself).

AMC 147.A.145(f) Privileges of the maintenance training organisation

When an organisation approved to provide basic knowledge training or type training is also approved to provide type examination in the cases where type training is not required, appropriate procedures in the MTOE should be developed and approved, including:

- The development and the conduct of the type examination;
- The qualification of the examiners and their currency.

In particular, emphasis should be put when such an examination is not regularly conducted or when the examiners are not normally involved in aircraft or activities with technology corresponding to the aircraft type subject to examination. An example would be the case of an organisation providing basic knowledge training only for the B1.1 license. This organisation should justify how they run type examinations for single piston engine helicopters in the case of a B1.4 license.

147.A.150 Changes to the maintenance training organisation

- (a) The maintenance training organisation shall notify CAA of any proposed changes to the organisation that affect the approval before any such change takes place in order to enable CAA to determine continued compliance with this CAR and to amend if necessary, the maintenance training organisation approval certificate.
- (b) CAA may prescribe the conditions under which the maintenance training organisation may operate during such changes unless CAA determines that the maintenance training organisation approval must be suspended.
- (c) Failure to inform CAA of such changes may result in suspension or revocation of the maintenance training organisation approval certificate backdated to the actual date of the changes.

147.A.155 Continued validity

- (a) An approval shall be issued for two (2) years duration and shall remain valid subject to:
 - (1) the organisation remaining in compliance with this regulation, in accordance with the provisions related to the handling of findings as specified under 147.B.130; and
 - (2) CAA being granted access to the organisation to determine continued compliance with this regulation; and
 - (3) The certificate not being surrendered or revoked.
- (b) Upon surrender or revocation, the approval shall be returned to CAA.

147.A.160 Findings

- (a) A level 1 finding is one or more of the following:
 - (1) Any significant non-compliance with the examination process which would invalidate the examination(s).
 - (2) Failure to give CAA access to the organisation's facilities during normal operating hours after two written requests.

-
- (3) The lack of an accountable manager.
 - (4) A significant non-compliance with the training process.
 - (b) A level 2 finding is any non-compliance with the training process other than level 1 finding.
 - (c) After receipt of notification of findings according to 147.B.130, the holder of the maintenance training organisation approval shall define a corrective action plan and demonstrate corrective action to the satisfaction of CAA within a period agreed with CAA.

SUBPART C

THE APPROVED BASIC TRAINING COURSE

147.A.200 The approved basic training course

- (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 license as specified in CAR-66.
- (c) The knowledge examination element shall cover a representative cross section of subject matter from the point (b) training element.
- (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 being carried out relevant to the particular CAR-66 complete module.
- (e) The practical assessment element shall cover the practical training and determine whether the student is competent at using tools and equipment and working in accordance with maintenance manuals.
- (f) The duration of basic training courses shall be in accordance with Appendix I.
- (g) 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.

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

Each license category or subcategory basic training course may be subdivided into modules or submodules of knowledge and may be intermixed with the practical training elements subject to the required time elements of 147.A.200(f) and (g) being satisfied.

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

- (a) Where the maintenance training organisation approved under CAR-147 contracts the practical training element either totally or in part to another organisation in accordance with 147.A.100(d), the organisation in question should ensure that the practical training elements are properly carried out.
- (b) At least 30% of the practical training element should be carried out in an actual maintenance working environment.

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

- (a) In order to follow pedagogical and human factors principles, the maximum number of training hours per day for the theoretical training should not be more than 6 hours. A training hour means 60 minutes of tuition excluding any breaks, examination, revision, preparation, and aircraft visit. In exceptional cases, CAA may allow deviation from this standard when it is properly justified that

the proposed number of hours follows pedagogical and human factors principles. These principles are especially important in those cases where:

- Theoretical and practical training are performed at the same time;
 - Training and normal maintenance duty/apprenticeship are performed at the same time.
- (b) The minimum participation time for the trainee to meet the objectives of the course should not be less than 90 % of the tuition hours. Additional training may be provided by the training organisation in order to meet the minimum participation time. If the minimum participation defined for the course is not met, a certificate of recognition should not be issued.

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

Typical conversion durations are given below:

- (a) The approved basic training course to qualify for conversion from holding a CAR-66 aircraft maintenance license in subcategory A1 to subcategory B1.1 or B2 should not be less than 1600 hours and for conversion from holding a CAR-66 aircraft maintenance license in subcategory A1 to subcategory B1.1 combined with B2 should not be less than 2200 hours. The course should include between 60% and 70% knowledge training.
- (b) The approved basic training course to qualify for conversion from holding a CAR-66 aircraft maintenance license in subcategory B1.1 to B2 or category B2 to B1.1 should not be less than 600 hours, and should include between 80% and 85% knowledge training.
- (c) The approved basic training course to qualify for conversion from holding a CAR-66 aircraft maintenance license in subcategory B1.2 to subcategory B1.1 should not be less than 400 hours, and should include between 50% and 60% knowledge training.
- (d) The approved basic training course to qualify for conversion from holding a CAR-66 aircraft maintenance license in one subcategory A to another subcategory A should not be less than 70 hours, and should include between 30% and 40% knowledge training.

147.A.205 Basic knowledge examinations

Basic knowledge examinations shall:

- (a) Be in accordance with the standard defined in CAR-66.
- (b) Be conducted without the use of training notes.
- (c) Cover a representative cross section of subjects from the particular module of training completed in accordance with CAR-66.

AMC 147.A.205 Basic knowledge examinations

CAA may accept that the maintenance training organisation approved under CAR-147 can conduct examination of students who did not attend an approved basic course at the organisation in question.

147.A.210 Basic practical assessment

- (a) Basic practical assessments shall be carried out during the basic maintenance training course by the nominated practical assessors at the completion of each visit period to the practical workshops/maintenance facility.
- (b) The student shall achieve an assessed pass with respect to 147.A.200(e).

AMC 147.A.210(a) Basic practical assessment

Where the maintenance training organisation approved under CAR-147 contracts the practical training element either totally or in part to another organisation in accordance with 147.A.100(d) and chooses to nominate practical assessors from the other organisation, the organisation in question should ensure that the basic practical assessments are carried out.

AMC 147.A.210(b) Basic practical assessment

An assessed pass for each student should be granted when the practical assessor is satisfied that the student meets the criteria of 147.A.200(e). This means that the student has demonstrated the capability to use relevant tools/equipment/test equipment as specified by the tool/equipment/test equipment manufacturer and the use of maintenance manuals in that the student can carry out the required inspection/testing without missing any defects, can readily identify the location of components and is capable of correct removal/fitment/adjustment of such components. The student is only required to carry out enough inspection/testing and component removal/fitment/adjustments to prove capability. The student should also show an appreciation of the need to ensure clean working conditions and the observance of safety precautions for the student and the product. In addition, the student should demonstrate a responsible attitude in respect to flight safety and airworthiness of the aircraft.

Appendix C to AMC to CAR-66 provides criteria for the competence assessment performed by the designated assessors (and their qualifications).

SUBPART D

AIRCRAFT TYPE/TASK TRAINING

147.A.300 Aircraft type/task training

A maintenance training organisation shall be approved to carry out CAR-66 aircraft type and/or task training subject to compliance with the standard specified in 66.45.

AMC 147.A.300 Aircraft type/task training

Aircraft type training may be sub-divided in airframe and/or powerplant and/or avionics/electrical systems type training courses. A maintenance training organisation approved under CAR-147 may be approved to conduct airframe type training only, powerplant type training only, avionics/electrical systems type training only or any combination thereof.

- (a) Airframe type training course means a type training course including all relevant aircraft structure and electrical and mechanical systems excluding the powerplant.
- (b) Powerplant type training course means a type training course on the bare engine, including the build-up to a quick engine change unit.
- (c) The interface of the engine/airframe systems should be addressed by either airframe or powerplant type training. In some cases, such as for general aviation, it may be more appropriate to cover the interface during the airframe course due to the large variety of aircraft that can have the same engine type installed.
- (d) 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.

147.A.305 Aircraft type examinations and task assessments

A maintenance training organisation approved in accordance with 147.A.300 to conduct aircraft type training shall conduct the aircraft type examinations or aircraft task assessments specified in CAR-66 subject to compliance with the aircraft type and/or task standard specified in 66.45.

Section B

Procedure for Civil Aviation Authority of Oman

SUBPART A

GENERAL

147.B.05 Scope

This section establishes the administrative requirements to be followed by CAA in charge of the application and the enforcement of Section A of this regulation.

147.B.10 Qualification and training

All staff involved in approvals related to this Annex must:

- (a) Be appropriately qualified and have all necessary knowledge, experience, and training to perform their allocated tasks as per CAA qualification criteria.
- (b) Have received training and continuation training on CAR-66 and CAR-147, where relevant.

147.B.15 Acceptable means of compliance

- (a) CAA shall develop acceptable means of compliance that may use to establish compliance with this regulation. When the acceptable means of compliance are complied with, the related requirements of this regulation shall be considered as met. Organisation may propose alternative means of compliance to existing AMC provided that accepted by the CAA.
- (b) The CAA shall keep record of accepted alternative means of compliance.

147.B.20 Record-keeping

- (a) The CAA shall establish a system of record-keeping that allows adequate traceability of the process to issue, renew, continue, vary, suspend, or revoke each approval.
- (b) The records for the oversight of maintenance training organisations shall include as a minimum:
 - (1) The application for an organisation approval.
 - (2) The organisation approval certificate including any changes.
 - (3) A copy of the audit plan.
 - (4) Audit report including checklist.
 - (5) Details of any exemption and enforcement actions.

- (6) Organisation exposition and amendments.
- (7) Record of accepted alternative means of compliance.
- (c) The minimum retention period for the point (b) records shall be three years.

147.B.25 Exemptions

- (a) In certain case, CAA may accept application for exemption to requirement of this regulation, provided that appropriate justification provided by applicant in accordance with CAR-10.
- (b) Any exemptions shall be granted only after compliance with CAR-10.
- (c) All granted exemptions shall be recorded and retained by relevant section of the CAA.

SUBPART B

ISSUE OF AN APPROVAL

This Subpart provides the requirements to issue or vary the maintenance training organisation approval.

147.B.110 Procedure for approval and changes to the approval

- (a) Upon receipt of an application, the CAA shall:
 - (1) review the maintenance training organisation exposition; and
 - (2) verify the organisation's compliance with the requirement of CAR-147
- (b) All findings identified during an audit visit shall be recorded and confirmed in writing to the applicant.
- (c) All findings shall be closed in accordance with 147.B.130 before the initial approval is issued.
- (d) The reference number shall be included on the approval certificate in a manner specified by the CAA.

GM to 147.B.110 Procedure for approval and changes to the approval

- (a) A meeting should be arranged between the applicant and the CAA who issue CAR-147 approvals to determine if the applicant's training activities justify the investigation for issue of CAR-147 approval and to ensure that the applicant understands what needs to be done for CAR-147 approval. This meeting is not intended to establish compliance but rather to see if the activity is a CAR-147 activity.
- (b) Assuming that the applicant's activities come within the scope of CAR-147 approval, instructions should be sent to the CAA staff requesting that an audit of the applicant be carried out and when satisfied that compliance has been established, a recommendation for the issue of approval should be submitted to the CAA. The CAA should determine how and by whom the audit shall be conducted. For example, if the applicant is a large training organisation, it will be necessary to determine whether one large team audit or a short series of small team audits or a long series of single person audits is most appropriate for the particular situation. A further consideration in the case of a combined CAR-145/147 organisation is the possibility to combine the audits.
- (c) Where it is intended that the maintenance training organisation may conduct training and examinations away from the maintenance training organisation address(es) in accordance with 147.A.145(c), then a sample audit should be carried out by the CAA from time to time of the process to ensure that procedures are followed. For practical reasons, such sample audits will need to be carried out when training is being conducted away from the maintenance training organisation address(es).
- (d) The auditing surveyor should ensure that they are always accompanied throughout the audit by a senior member of the organisation making application for CAR-147 approval. Normally this should be the proposed quality manager. The reason for being accompanied is to ensure that the

organisation is fully aware of any findings during the audit. In any case, the proposed quality manager/senior member of the organisation should be debriefed at the end of the audit visit on the findings made during the audit.

- (e) There will be occasions when the auditing surveyor may find situations in the applicant's organisation on which he/she is unsure about compliance. In this case, the organisation should be informed about possible non-compliance at the time of audit and the fact that the situation will be reviewed before a decision is made. The organisation should be informed of the decision within 2 weeks of the audit visit in writing if the decision is a confirmation of non-compliance. If the decision is a finding of being in compliance, a verbal confirmation to the organisation will suffice.
- (f) A change of name of the maintenance training organisation requires the organisation to submit a new application as a matter of urgency stating that only the name of the organisation has changed including a copy of the organisation exposition with the new name. Upon receipt of the application and the organisation exposition, the CAA should reissue the approval certificate valid only up to the current expiry date.
- (g) A name change alone does not require the CAA to audit the organisation, unless there is evidence that other aspects of the maintenance training organisation have changed.
- (h) A change of accountable manager requires the maintenance training organisation to submit such fact to the CAA as a matter of urgency together with the amendment to the accountable manager exposition statement.
- (i) A change of any of the senior personnel specified in 147.A.105(b) requires the maintenance training organisation to submit a Form AWR 032 in respect of the particular person. If satisfied that the qualifications and experience meet the standard required by CAR-147, the CAA should indicate acceptance in writing to the maintenance training organisation.
- (j) A change in the maintenance training organisation's exposition requires the CAA to establish that the procedures specified in the exposition are in compliance with CAR-147 and then to establish if these are the same procedures intended for use within the training facility.
- (k) Any change of location of the maintenance training organisation requires the organisation to make a new application to the CAA together with the submission of an amended exposition. The CAA should follow the procedure specified in 147.B.110(a) and (b) in so far as the change affects such procedure before issuing a new CAR-147 approval certificate.
- (l) The complete or partial reorganisation of a training organisation should require the re-audit of those elements that have changed.
- (m) Any additional basic or aircraft type training courses requires the maintenance training organisation to make a new application to the CAA together with the submission of an amended exposition. For basic training extensions, an additional sample of new examination questions relevant to the modules associated with the extension being sought will be required to be submitted. The CAA should follow the procedure of paragraph 11 in so far as the change affects such procedures unless the CAA is satisfied that the maintenance training organisation has a well-controlled procedure to qualify such change when it is not necessary to conduct the audit elements of the paragraph 11 procedure.

AMC 147.B.110(a) Procedure for approval and changes to the approval

- (a) The audit should be conducted on the basis of checking the facility for compliance, interviewing personnel, and sampling any relevant training course for its conduct and standard.
- (b) The audit report should be made in accordance with CAA procedure.

AMC 147.B.110(b) Procedure for approval and changes to the approval

The date each finding was rectified should be recorded together with the reference document.

147.B.120 Continued validity procedure

- (a) Each organisation shall be completely audited for compliance with this CAR at periods not exceeding 24 months. This shall include the monitoring of at least one training course and one examination performed by the maintenance training organisation.
- (b) Findings shall be processed in accordance with 147.B.130.

AMC 147.B.120(a) Continued validity procedure

- (a) Audits should be conducted to ensure the continuity of the approval; it is not necessary to sample all basic and type training courses, but CAA should sample, as appropriate, one basic and one type training course to establish that training is conducted in an appropriate manner. Nevertheless, the duration of the sampling for each course should not be less than 3 hours. Where no training course is being conducted during the audit, arrangements should be made to return at a later date to sample the conduct of a training course.
- (b) It is not necessary to sample all examinations associated with a training course, but CAA should sample, as appropriate, one basic and one type training course examination.

147.B.125 Maintenance training organisation approval certificate

The maintenance training organisation approval certificate format shall be as detailed in Appendix II.

147.B.130 Findings

- (a) Failure to complete the rectification of any level 1 finding within three (3) days of written notification shall entail revocation, suspension, or limitation by CAA, in whole or in part.
- (b) Action shall be taken by CAA to revoke, limit or suspend in whole or part the approval in case of failure to comply within the time scale granted by CAA in the case of a level 2 finding.

AMC 147.B.130(b) Findings

- (a) In the case of a level 2 finding, CAA may give up to six-month notice of the need for rectification. Dependent upon the seriousness of the level 2 finding(s) CAA may choose a notice period less than six months.
- (b) When CAA chooses to allow six months, the initial notification should be of three-month duration to the quality manager followed by the final three-month notice to the accountable manager.

SUBPART C

***REVOCATION, SUSPENSION AND LIMITATION OF THE MAINTENANCE TRAINING ORGANISATION
APPROVAL***

**147.B.200 Revocation, suspension, and limitation of the maintenance
training organisation approval**

CAA shall:

- (a) Suspend an approval on reasonable grounds in the case of potential safety threat; or suspend, revoke, or limit an approval pursuant to 147.B.130.

Appendices to CAR-147

Appendix I: Basic Training Course Duration

The minimum duration of a complete basic training course shall be as follows:

| Basic course | Duration (in hours) | 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 |
| B3 | 1000 | 50 to 60 |

Appendix II- Maintenance Training Organisation Approval Certificate

MAINTENANCE TRAINING ORGANISATION APPROVAL CERTIFICATE

Reference No:

Pursuant to the Civil Aviation Law and the Civil Aviation rules & regulation of Sultanate of Oman for the time being in force and subject to the condition specified below, the Directorate General for Civil Aviation Regulation of Sultanate of Oman hereby certifies:

NAME OF ORGANISATION

ADDRESS

As a CAR-147 maintenance training organisation approved to provide training and conduct examinations listed in the attached approval schedule and issue related certificates of recognition to students using the above references.

CONDITIONS

1. This approval is limited to that specified in the scope of work section of the approved maintenance training organisation exposition, and
2. This approval requires compliance with the procedures specified in the approved maintenance training organisation exposition, and
3. This approval is valid whilst the approved maintenance training organisation remains in compliance with CAR-147.
4. Subject to compliance with the foregoing conditions, this approval shall remain valid until the date of expiry of attached Approval Schedule unless the approval has previously been surrendered, superseded, suspended, or revoked.

Date of Original issue:

Director General for Civil Aviation Regulation

Date of Current issue:

Signature:

Approval Schedule template

MAINTENANCE TRAINING ORGANISATION

APPROVAL SCHEDULE

ORGANISATION Name:

Reference:

| CLASS | LICENCE CATEGORY | LIMITATION | |
|--|------------------|-----------------------|--|
| BASIC | B1(*) | TB1.1(*) | AEROPLANES TURBINES (*) |
| | | TB1.2(*) | AEROLPLANES PISTON (*) |
| | | TB1.3(*) | HELICOPTERS TURBINE (*) |
| | | TB1.4(*) | HELICOPTERS PISTON (*) |
| | B2(*) | TB2(*) | AVIONICS (*) |
| | B3(*) | TB3(*) | PISTON-ENGINE NON-PRESSURISED AEROPLANES 2000 KG MTOM AND BELOW (*) |
| | A(*) | TA.1 (*) | AEROPLANES TURBINES (*) |
| | | TA.2 (*) | AEROLPLANES PISTON (*) |
| | | TA.3 (*) | HELICOPTERS TURBINE (*) |
| | | TA.4 (*) | HELICOPTERS PISTON (*) |
| TYPE/TASK | C (*) | T4 | [QUOTE AIRCRAFT TYPE] (**) |
| | B1 (*) | T1 | [QUOTE AIRCRAFT TYPE] (**) |
| | B2 (*) | T2 | [QUOTE AIRCRAFT TYPE] (**) |
| | A (*) | T3 | [QUOTE AIRCRAFT TYPE] (**) |
| This approval schedule is limited to those activities specified in the scope of work section of the approved maintenance training organisation exposition. | | | |
| Maintenance Training Organization Exposition Reference: | | | |
| Date of original issue: Date of current issue: Date of Expiry: | | Authorised Signature: | |

A/W Form 3

(*) Delete as appropriate if the organisation is not approved.

(**) Complete with the appropriate rating and limitation.

Note: The CAA may use updated approval schedule as per CAA procedure manual.

AMC to Appendix II to CAR-147 Maintenance Training Organisation Approval referred to in CAR-147

The following fields on page 2 'Maintenance Training and Examination Approval Schedule' of the maintenance training and examination organisation approval certificate should be completed as follows:

- Date of original issue: It refers to the date of the original issue of the maintenance training organisation
- Date of current issue: It refers to the date of the last revision of the maintenance training organisation affecting the content of the certificate. Changes to the maintenance training organisation which do not affect the content of the certificate do not require the reissuance of the certificate.
- Date of Expiry: It refers to the date of the expiry of the maintenance training organisation approval certificate.

Appendix III Certificates of Recognition referred to in CAR-147, CAA Form PEL 148 and PEL 149

1. Basic Training/Examination

The CAR-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.

The training certificate shall clearly identify each individual module examination by date passed together with the corresponding version of Appendix A to CAR-66.

CERTIFICATE OF RECOGNITION

Reference: CAA.CAR 147. [XXXX]. [YYYYY]

The certificate of recognition is issued to:

[NAME]

[DATE and PLACE OF BIRTH]

By:

[COMPANY NAME AND ADDRESS]

Reference: CAA.CAR-147. [XXXX]

a maintenance training organisation approved to provide training and conduct examinations within its approval schedule and in accordance with CAR-147.

This certificate confirms that the above named person either successfully passed the approved basic training course (*) or the basic examination (*) stated below in compliance with Article 32 of Civil Aviation Law Royal Decree No. 76/2019 and Civil Aviation Regulation 147 for the time being in force.

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

[LIST OF CAR-66 MODULES/DATE OF EXAMINATION PASSED]

Date:

Signed:

For: [COMPANY NAME]

(*) Delete as appropriate

CAA Form PEL 148

2. Type Training/Examination

The CAR-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 rating training course.

The certificate shall indicate the airframe/engine combination for which the training was imparted.

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.

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 A340 (CFM) course for A320 technicians. If the course is not a complete one, the certificate shall identify whether the interface areas have been covered or not.

CERTIFICATE OF RECOGNITION

Reference: CAA.CAR 147. [XXXX]. [YYYYY]

The certificate of recognition is issued to:

[NAME]

[DATE and PLACE OF BIRTH]

By:

[COMPANY NAME AND ADDRESS]

Reference: CAA.CAR 147. [XXXX]

a maintenance training organisation approved to provide training and conduct examinations within its approval schedule and in accordance with CAR-147.

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 Article 32 of Civil Aviation Law Royal Decree No. 76/2019 and Civil Aviation Regulation 147 for the time being in force.

[AIRCRAFT TYPE TRAINING COURSE (*)]

[START and END DATES]

[SPECIFY THEORETICAL ELEMENTS OR PRACTICAL ELEMENTS]

and/or

[AIRCRAFT TYPE EXAMINATION (*)]

[END DATE]

Date:

Signed:

For: [COMPANY NAME]

(*) Delete as appropriate

CAA Form PEL 149

AMC to Appendix III to CAR-147 Certificates of Recognition referred to in CAR-147 — CAA Forms PEL 148 and PEL 149

As stated in Appendix III to CAR-147, the CAA Form 148 'Certificate of Recognition for Basic Training/Examination' may be issued after completion of either basic training, basic examination or both basic training and basic examination.

Some examples of cases where a CAA Form PEL 148 could be issued are the following:

- After successful completion of a full basic course in one license (sub) category including successful completion of the examinations of all the corresponding modules.
- After successful completion of a full basic course in one license (sub) category without performing examinations. The examinations may be performed at a different CAR-147 organisation (this organisation will issue the corresponding Certificate of Recognition for those examinations) or at CAA.
- After successful completion of all module examinations corresponding to a license (sub) category.
- After successful completion of certain modules/sub-modules/subjects. It must be noted that 'successful completion of a course' (without the module examinations) means successful completion of the theoretical and practical training including the corresponding practical assessment.

Appendix IV— Maintenance training organisation exposition (MTOE)

1. The following subject headings form the basis of the MTOE required by 147.A.140.
2. Whilst this format is recommended, it is not mandatory to assemble the MTOE in this manner as long as a cross-reference index is included in the MTOE as an Appendix and the Part 1 items remain in Part 1.
3. Part 2, 3 and 4 materials may be produced as separate detailed manuals subject to the main exposition containing the Part 2, 3 and 4 fundamental principles and policy on each item. It is then permitted to delegate the approval of these separate manuals to the senior person, but this fact and the procedure should be specified in paragraph 1.10.
4. Where an organisation is approved in accordance with any other CAR(s) which require an exposition, it is acceptable to combine the exposition requirements by merging the Part 1 items and adding the Parts 2, 3 and 4. When this method is used, it is essential to include the cross-reference index of Part 4 item 4.3.

PART 1 – MANAGEMENT

- 1.1. Corporate commitment by accountable manager
- 1.2. Management personnel
- 1.3. Qualification, duties and responsibilities of management personnel, instructors, knowledge examiners and practical assessor
- 1.4. Management personnel organisation chart
- 1.5. List of instructional and examination staff

Note: A separate document may be referenced

- 1.6. List of approved addresses
- 1.7. List of sub-contractors as per 147.A.145(d)
- 1.8. General description of facilities at paragraph 1.6 addresses
- 1.9. Specific list of courses and type examinations approved by CAA
- 1.10. Notification procedures regarding changes to organisation
- 1.11. Exposition and associated manuals amendment procedure

PART 2 – TRAINING AND EXAMINATION PROCEDURES

- 2.1. Organisation of courses
- 2.2. Preparation of course material
- 2.3. Preparation of classrooms and equipment
- 2.4. Preparation of workshops/maintenance facilities and equipment
- 2.5. Conduct of theoretical training & practical training (during basic knowledge training and type/task training).

- 2.6. Records of training carried out
- 2.7. Storage of training records
- 2.8. Training at locations not listed in paragraph 1.6
- 2.9. Organisation of examinations
- 2.10. Security and preparation of examination material
- 2.11. Preparation of examination rooms
- 2.12. Conduct of examinations (basic knowledge examinations, type/task training examinations and type examinations)
- 2.13. Conduct of practical assessments (during basic knowledge training and type/task training)
- 2.14. Marking and record of examinations
- 2.15. Storage of examination records
- 2.16. Examinations at locations not listed in paragraph 1.6
- 2.17. Preparation, control & issue of basic training course certificates
- 2.18. Control of sub-contractors

PART 3 – TRAINING SYSTEM QUALITY PROCEDURES

- 3.1. Audit of training
- 3.2. Audit of examinations
- 3.3. Analysis of examination results
- 3.4. Audit and analysis remedial action
- 3.5. Accountable manager annual review
- 3.6. Qualifying the instructors
- 3.7. Qualifying the examiners and the assessors
- 3.8. Records of qualified instructors & examiners

PART 4 – APPENDICES

- 4.1. Example of documents and forms used
- 4.2. Syllabus of each training course
- 4.3. Cross-reference index - if applicable