



**Maldives Civil Aviation Authority**  
**Republic of Maldives**

**Maldivian Civil Aviation Regulations**

# **MCAR-147 Approved Maintenance Training Organisations**

**Issue 2, Amendment 0, 01 November 2014**

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## List of Effective Pages

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## Section A — TECHNICAL REQUIREMENTS



## Subpart A — GENERAL

### 147.A.5 Scope

This section establishes the requirements to be met by organisations seeking approval to conduct training and examination as specified in MCAR-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 be approved under more than one part of the Maldivian Civil Aviation Regulations.

Commented [AM1]: SARI does not have the requirement of 147.A.10 but the GM to this requirement is included??!

#### **147.A.15 Application**

(a) An application for an approval or for the change of an existing approval shall be made on a form and in a manner established by 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.

#### **AMC 147.A.15 Application**

In a form and in a manner prescribed by the CAA means that the application should be made on a CAA Form 12.

## 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

- 1. For approved basic maintenance training courses this means holding and ensuring reasonable access to copies of all Parts and national aviation legislation, examples of typical aircraft

maintenance manuals, service bulletins, airworthiness directives, aircraft and component records, release documentation procedures manuals and aircraft maintenance programmes.

2. Except for the ~~Parts and~~ national aviation regulations 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 147.100(i) Facility requirements**

Where the organisation has an existing library of regulations, manuals and documentation required by another part of the Maldivian Civil Aviation Regulations, 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 regulation.
- (b) A person or group of persons, whose responsibilities include ensuring that the maintenance training organisation is in compliance the requirements of this regulation, shall be nominated. Such person(s) must 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/perform 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 or in accordance with a procedure and to a 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**

- 1. The larger maintenance training organisation (an organisation with the capacity to provide training for 50 students or more) should appoint 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 appoint a quality manager with the responsibility of managing the quality system as specified in paragraph MCAR-147.130(b) and an examination manager with the responsibility of managing the relevant MCAR-147 Section I Subpart C or Subpart D examination system. Such person(s) may also be an instructor and/or examiner.
- 2. The smaller maintenance training organisation (an organisation with the capacity to provide training for less than 50 students) may combine any or all of the sub-paragraph (1) positions subject to the competent authority verifying and being satisfied that all functions can be properly carried out in combination. Personnel involved in quality audit functions should be independent from the functions detailed in (1).

3. When the organisation is also approved against other parts of the Maldivian Civil Aviation Regulations which contain some similar functions then such functions may be combined.

**AMC 147.A.105(b) and (g) Personnel requirements**

With the exception of the accountable manager, a CAA Form 4 should be completed for each person nominated to hold a position required by MCAR-147.105(b). An example of an EASA Form 4 is included in Appendix II to AMC.

**Commented [AM2]:** EASA has applied AMC to (b) only in the new revision but SARI has for both.

This AMC is not applicable to (g) as that paragraph requires the nominated persons to be specified on the MTOE

**AMC 147.A.105(f) Personnel requirements**

Any person currently accepted by the CAA prior to MCAR-147 coming into force may continue to be accepted in accordance with MCAR-147.A.105(f).

Paragraph 3 of Appendix III to AMC to Part-66 provides criteria to establish the qualification of assessors.

**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 147.105 (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.

**GM 147.105 (f) Personnel requirements**

It is recommended that potential instructors be trained in instructional techniques.

**GM 147.105(g) Personnel requirements**

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

**GM 147.105(h) Personnel requirements**

1. Records should show for each instructor/examiner when the updating training was scheduled and when it took place.
2. 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**

- 1. 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:
  - a. Name
  - b. Date of Birth
  - c. Personnel Number
  - d. Experience
  - e. Qualifications
  - f. Training history (before entry)
  - g. Subsequent Training
  - h. Scope of activity
  - i. Starting date of employment/contract
  - j. If appropriate – ending date of employment/contract.
- 2. The record may be kept in any format but should be under the control of the organisations quality system.
- 3. 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.
- 4. The CAA **is an authorised person when** investigating the records system for initial and continued approval or when it has cause to doubt the competence of a particular person.

#### **GM 147.110 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 avionic 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.

#### **AMC 147.A.115(c) Instructional equipment**

1. An appropriate selection of aircraft parts means appropriate in relation to the particular subject module or sub-module of MCAR-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.
2. Appropriate aircraft, engines, aircraft parts and avionic equipment means appropriate in relation to the particular subject module or sub-module of MCAR-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.
3. "Access" may be interpreted to mean, in conjunction with the facilities requirement of MCAR-147.100(d), that there may be an agreement with a maintenance organisation approved under MCAR-145 to access such parts, etc.

#### **GM 147.115(a) Instructional equipment**

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



#### **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 MCAR-66 for the relevant aircraft maintenance licence category or subcategory and,
  2. the type course content required by MCAR-66 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 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 **at least five years following completion of the particular student's course, an unlimited period.**

#### **147.A.130 Training procedures and quality system**

- (a) The organisation shall establish procedures acceptable to the 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.

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

- 1. The independent audit procedure should ensure that all aspects of MCAR-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.
- 2. In a small maintenance training organisation the independent audit function may be contracted to another maintenance training organisation approved under MCAR-147 or a competent person acceptable to the CAD. 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.
- 3. Where the maintenance training organisation is also approved under another part of the Maldivian Civil Aviation Regulations requiring a quality system, then such quality systems may be combined.
- 4. When training or examination is carried out under the sub-contract control system:
  - i. a pre audit procedure should be established whereby the MCAR-147 approved maintenance training organisation' should audit a prospective sub-contractor to determine whether the services of the sub-contractor meet the intent of MCAR-147.
  - ii. a renewal audit of the subcontractor should be performed at least once every 12 months to ensure continuous compliance with the MCAR-147 standard.
  - iii. the sub-contract control procedure should record audits of the subcontractor and to have a corrective action follow-up plan.
- 5. 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 147.130 (b) Training procedures and quality system**

- 1. 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 MCAR-147.

2. 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.
3. 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.
4. 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.
5. 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 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. The competent authority 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. The competent authority must be informed of any such occurrence within one calendar month.

#### **AMC 147.A.135 Examinations**

- 1. Examinations may be computer or hard copy based or a combination of both.
- 2. The actual questions to be used in a particular examination should be determined by the examination staff.

#### **GM 147.135 Examinations**

The competent authority 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 regulation 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 duties and responsibilities of the person(s) specified in subparagraph 2, including matters on which they may deal directly with the competent authority 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 (a)(2).
  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.
  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 authorised 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 competent authority.
- (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**

1. A recommended format of the exposition is included in AMC Appendix I.
2. When the maintenance training organisation is approved in accordance with any other part of the Maldivian Civil Aviation Regulations which also requires an exposition, the exposition required by the other regulation 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 MCAR-147.140 and a cross reference index is included based upon AMC Appendix I.
3. When training or examination is carried out under the sub-contract control system the maintenance training organisation exposition should contain a specific procedure on the control of sub-contractors as per AMC Appendix I item 2.18 plus a list of sub-contractors as required by MCAR-147.140(a)(12) and detailed in AMC Appendix I item 1.7.
4. The competent authority may approve a delegated exposition approval system for all changes other than those affecting the approval.

Commented [AM3]: Inconsistently applied in SARI-147?

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#### **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 the MCAR-66 syllabus, or part thereof.
  2. aircraft type/task training courses in accordance with MCAR-66.
  3. the examinations on behalf of the CAA, including the examination of students who did not attend the 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 paragraph (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 MCAR-66, Appendix I, Modules 1, 2, 3, 4, 5, 6, 8, 9 and 10.  
3. The subcontracting of type training and examination **is limited to powerplant and avionic systems.**
- (e) An organisation may not be approved to conduct examinations unless approved to **conduct training-conduct the corresponding training.**
- (f) **By derogation from point(e), an organisation approved to provide basic knowledge training may also be approved to provide type examination in the cases where type training is not required.**

**Commented [AM4]:** SARI is not limited to powerplant and avionic systems. Rather it says 'systems' only.

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

1. When training or examination is carried out under the sub-contract control system it means that for the duration of such training or examination, the MCAR-147 approval has been temporarily extended to include the subcontractor. It therefore follows that those parts of the sub-contractor's facilities, personnel and procedures involved with the MCAR-147 approved maintenance training organisation's students should meet requirements of MCAR-147 for the duration of that training or examination and it remains the MCAR-147 organisation's responsibility to ensure such requirements are satisfied.

2. The maintenance training organisation approved under MCAR-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 MCAR-147 standards. Particular attention should be given to ensuring that the training that is delivered also meets the requirements of MCAR-66 and the aircraft technologies as appropriate.
3. The contract between the maintenance training organisation approved under MCAR-147 and the subcontractor should contain:
  - (a) a provision for the CAA to have right of access to the sub-contractor;
  - (b) a provision for the subcontractor to inform the MCAR-147 approved maintenance training organisation of any change that may affect its MCAR-147 approval, before any such change takes place.

#### **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 of the examinations;
- 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 licence. The organisation should justify how they run type examinations for single piston-engine helicopters in the case of a B1.4 licence.

#### **GM 147.145 (d) Privileges of the maintenance training organisation**

1. The pre audit procedure should focus on establishing compliance with the training and examination standards set out in MCAR-147 and MCAR-66.
2. The fundamental reason for allowing a maintenance training organisation approved under MCAR-147 to sub-contract 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 MCAR-66 modules.
3. The reason for allowing the subcontracting of **only** training modules 1 to 6 and 8 to 10 of **Appendix I to MCAR-66** is that 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 MCAR-147.200 does not apply to them. On the contrary, training modules 7 and 11 to 17 of **Appendix I to MCAR-66** are specific to aircraft maintenance and include the practical training element as specified in MCAR-147.200. The intent of the “limited subcontracting” option as specified in MCAR-147.145 is to grant MCAR-147 approvals only to those organisations having themselves at least the capacity to teach on aircraft maintenance specific matters.



### **GM 147.145 (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 avionic systems is 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 avionic 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 MCAR-147 organisation itself).

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#### **147.A.150 Changes to the maintenance training organization**

- (a) The maintenance training organisation shall notify the CAA of any proposed changes to the organisation that affect the approval before any such change takes place, in order to enable the CAA to determine continued compliance with this **regulation** and to amend if necessary the maintenance training organisation approval certificate.
- (b) The CAA may prescribe the conditions under which the maintenance training organisation may operate during such changes unless the CAA determines that the maintenance training organisation approval must be suspended.
- (c) Failure to inform the 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 a maximum period of one year. It 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. the CAA being granted access to the organisation to determine continued compliance with this regulation; and
  3. the certificate not being suspended, surrendered or revoked.
- (b) Upon suspension, surrender or revocation, the approval shall be returned to the CAA.

#### ~~AMC 147.A.155(2)~~

- ~~1. Authority access should be authorized by the organization during working hours only.~~
- ~~2. Operational constraints may lead the organization not to authorised competent authority access to the organisation's facility. In such case the organization should propose alternative dates to the competent authority to access its facility.~~
- ~~3. The organization should not reject more than two written requests from the competent authority to authorise access to its facility.~~

**Commented [AM5]:** This AMC is part of SAR Part-147 but it is the intent of CAA Maldives to file differences to this AMC. Refer also to 147.A.160(a)2. It is inconsistent with CAR Part 3

#### 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 the 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.

Commented [AM6]: Reserved in SARI.

(b) A level 2 finding is any non-compliance with the training process other than level 1 findings.

Commented [AM7]: SARI states 'this Part' but it is not in italics indicating a change was intended.

(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 the CAA within a period agreed with this authority.

## 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 **A**, **B-1** or **B-2** aircraft maintenance licence as specified in MCAR-66.
- (c) The knowledge examination element shall cover a representative cross section of subject matter from the paragraph (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 MCAR-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.

Commented [a.mohamed8]: It might be beneficial to go to I 149/2011 here.

### AMC 147.A.200 The approved basic training course

For the purpose of this paragraph, a training hour means 60 minutes training, without pauses.

Commented [AM9]: This AMC is not deleted in SARI. Moved to AMC 147.A.200(f)

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

Each licence 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 MCAR-147.A.200(f) to (g) inclusive being satisfied. (f) and (g) being satisfied.

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

- 1. Where the maintenance training organisation approved under MCAR-147 sub-contracts the practical training element either totally or in part to another organisation in accordance with MCAR-147.100(d), the approved organization in question should ensure that the practical training elements are properly carried out.
- 2. At least 30% of the practical training element should be carried out in an actual maintenance working environment.

Commented [AM10]: Contract and Subcontract?

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

1. 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, the competent authority 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.

2. 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 MCAR-66 aircraft maintenance licence in subcategory A1 to subcategory B1.1 or B2 should not be less than 1600 hours and for conversion from holding a MCAR-66 aircraft maintenance licence 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 MCAR-66 aircraft maintenance licence 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 MCAR-66 aircraft maintenance licence 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 MCAR-66 aircraft maintenance licence 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 MCAR-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 MCAR-66.

#### **AMC 147.A.205 Basic knowledge examinations**

The CAA may accept that the maintenance training organisation approved under MCAR-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 MCAR-147 contracts the practical training element either totally or in part to another organisation in accordance with MCAR-147.A.100(d) and chooses to nominate practical assessors from the other organisation, the organization 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 MCAR-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 III to AMC to MCAR-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 MCAR-66 aircraft type and/or task training subject to compliance with the standard specified in 66.A.45.

#### AMC 147.A.300 Aircraft type/task training

1. Aircraft type training may be sub-divided in airframe type training and/or powerplant type training and/or avionics electrical systems type training courses. A maintenance training organisation approved under MCAR-147 may be approved to conduct airframe type training only, powerplant type training only or, avionics electrical systems type training only or any combination thereof.
2. Airframe type training means a type training course including all relevant aircraft structure and electrical and mechanical systems excluding the powerplant.
3. Powerplant type training course means a type training course on the bare engine, including the build-up to a quick engine change unit.
4. The interface of the engine/airframe systems should be addressed by either airframe or powerplant type training course. In some cases, such as for general aviation, it may be more appropriate to cover the interface during the airframe course due to the large variety of aircraft that can have the same engine type installed.
5. Avionic electrical systems type training course means type training on avionics 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 MCAR-66 subject to compliance with the aircraft type and/or task standard specified in MCAR-66.A.45.

## Section B — PROCEDURES FOR THE AUTHORITY

[INTENTIONALLY LEFT BLANK]


## APPENDICES TO THE REGULATIONS

## Appendix I Basic Training Course Duration

Minimum duration of complete basic courses

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 – CAA Form II



**CIVIL AVIATION DEPARTMENT**  
REPUBLIC OF MALDIVES

Reference  
**MV-147-XXXX**

بِسْمِ اللَّهِ الرَّحْمَنِ الرَّحِيمِ

### MAINTENANCE TRAINING AND EXAMINATION ORGANISATION APPROVAL CERTIFICATE

Pursuant to Civil Aviation Regulations for the time being in force and subject to the conditions specified below, the Civil Aviation Authority hereby certifies:

**[COMPANY NAME]**  
[ADDRESS LINE 1]  
[ADDRESS LINE 2]  
[ADDRESS LINE 3]  
[ADDRESS LINE 4]

as a maintenance training organization in compliance with **Section A of** MCAR-147, 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 as referred in **Section A of** MCAR-147, and
2. This approval requires compliance with the procedures specified in the approved maintenance training organisation exposition
3. This approval is valid whilst the approved maintenance training organisation remains in compliance with MCAR-147
4. Subject to compliance with the foregoing conditions, this approval shall remain valid for a **maximum period of one year** unless the approval has **been renewed** or previously been surrendered, superseded, suspended or **revoked**.

**Date of Original Issue:**  
**Date of this Revision:**  
**Revision Number**  
**Expiry Date:**

**Signed:**  
**For the Civil Aviation Authority**

### MAINTENANCE TRAINING AND EXAMINATION APPROVAL SCHEDULE

Reference: MV-147-XXXX

Organisation: [COMPANY NAME AND ADDRESS]

CLASS	RATING	LIMITATIONS	
BASIC (**)	B1 (**)	TB1.1 (**)	AEROPLANES TURBINE (**)
		TB1.2 (**)	AEROPLANES PISTON (**)
		TB1.3 (**)	HELICOPTERS TURBINE (**)
		TB1.4 (**)	HELICOPTERS PISTON (**)
	B2 (**)	TB2 (**)	AVIONICS (**)
	A (**)	TA1.1 (**)	AEROPLANES TURBINE (**)
		TA1.2 (**)	AEROPLANES PISTON (**)
		TA1.3 (**)	HELICOPTERS TURBINE (**)
		TA1.4 (**)	HELICOPTERS PISTON (**)
TYPE/TASK (**)	C (**)	T4 (**)	[ROUTE AIRCRAFT TYPE] (**)
	B1 (**)	T1 (**)	[ROUTE AIRCRAFT TYPE] (**)
	B2 (**)	T2 (**)	[ROUTE AIRCRAFT TYPE] (**)
	A (**)	T3 (**)	[ROUTE AIRCRAFT TYPE] (**)

This approval schedule is limited to those trainings and examinations specified in the scope of work section of the approved maintenance training organisation exposition,

Maintenance Training Organisation Exposition reference:

Date of Original Issue:

Date of this Revision:

Revision Number

Expiry Date:

Signed:

For the Civil Aviation Authority

## Appendix III Certificates of Recognition – CAA Forms 148 and 149

### I. Basic Training/Examination

The MCAR-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 I to MCAR-66.

<p style="text-align: center;"><b>CERTIFICATE OF RECOGNITION</b> <b>Reference: MV.147.[XXXX].[YYYY]</b></p> <p style="text-align: center;"><b>MCAR-147 APPROVED BASIC TRAINING COURSE OR BASIC EXAMINATION</b></p> <p style="text-align: center;">This certificate of recognition is issued to:</p> <p style="text-align: center;">[NAME] [DATE and PLACE OF BIRTH]</p> <p style="text-align: center;">By:</p> <p style="text-align: center;">[COMPANY NAME AND ADDRESS] <b>Reference: MV.147.[XXXX]</b></p> <p>By (may be pre-printed) a maintenance training organisation approved to provide training and conduct examinations within its approval schedule and in accordance with the requirements of MCAR-147 by Maldives Civil Aviation Authority, approval reference (may be pre-printed) .....</p> <p>This certificate confirms that the above named person either successfully passed the approved basic training course <sup>(**)</sup> or the basic examination <sup>(**)</sup> stated below in compliance with MCAR-147 for the time being in force.</p> <p style="text-align: center;"><b>[SPECIFY BASIC TRAINING COURSE or and BASIC EXAMINATION AND DATE COMPLETED or PASSED]</b></p> <p style="text-align: center;"><b>[LIST OF MCAR-66 MODULES / DATE OF EXAMINATION PASSED]</b></p> <p>Date: .....</p> <p>Signed: ..... <b>Certificate No:</b> .....</p> <p>For: (may be pre-printed) [COMPANY NAME]</p>
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CAA Form 148 (Issue 1, xx Yyy 2014)

Page 1 of 1

(\*\*) Delete as appropriate



## 2. Type Training/Examination

The MCAR-147 training certificate as detailed below ~~may 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 should be deleted as applicable and the course type box should detail whether only the theoretical elements ~~or the practical elements~~ were covered or whether theoretical and practical elements were covered.

The training certificate ~~must shall~~ clearly identify if the course is a complete course ~~or a partial course (such as an airframe or powerplant or avionics/electrical course)~~ or a course based upon the applicant previous experience ~~(e.g. A340 course for A320 technicians)~~ 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: MV.147.[XXXX].[YYYY]

**MCAR-147 APPROVED AIRCRAFT TYPE MAINTENANCE TRAINING COURSE OR AIRCRAFT  
TYPE EXAMINATION**

This certificate of recognition covers the theoretical/practical elements of the type training course  
(delete as appropriate) and is issued to:

[NAME]

[DATE and PLACE OF BIRTH]

By:

[COMPANY NAME AND ADDRESS]

Reference: MV.147.[XXXX]

By (may be pre-printed) a maintenance training organisation approved to provide training and  
conduct examinations within its approval schedule and in accordance with the requirements of  
MCAR-147, by Maldives Civil Aviation Authority, approval reference (may be pre-printed) .....

This certificate confirms that the above named person either successfully passed the theoretical (\*\*)  
and/or practical elements (\*\*) of the approved aircraft-type training course stated below and the  
related examinations in compliance with MCAR-147 for the time being in force, or aircraft-type  
examination stated below:

[AIRCRAFT TYPE TRAINING COURSE (\*\*)]

[START and END DATES]

[SPECIFY THEORETICAL ELEMENTS OR PRACTICAL ELEMENTS]

and/or

[AIRCRAFT TYPE EXAMINATION (\*\*)]

[END DATES]

Date: .....

Signed: .....

Certificate No: .....

For: (may be pre-printed) [COMPANY NAME]

## AMC to Appendix III to MCAR-147 "Certificates of Recognition – CAA Forms 148 and 149"

As stated in Appendix III to MCAR-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 an CAA Form 148 could be issued are the following:

- After successful completion of a full basic course in one licence (sub)category including successful completion of the examinations of all the corresponding modules.
- After successful completion of a full basic course in one licence (sub)category without performing examinations. The examinations may be performed at a different Part-147 organisation (this organisation will issue the corresponding Certificate of Recognition for those examinations) or at the competent authority.
- After successful completion of all module examinations corresponding to a licence (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) mean successful completion of the theoretical and practical training including the corresponding practical assessment.

**Commented [AM11]:** What is the impact on MCAR-66.A.30 experience requirements?

Note a basic shall meet all the requirements of 147.A.200 which requires examinations.

**(APPENDICES TO THE AMC — RESERVED)**

## Appendix I: 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 material 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 part(s) of the Maldivian Civil Aviation Regulations 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. 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 subcontractors 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 the competent authority
- 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 subcontractors

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