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AIRCRAFT MAINTENANCE TRAINING ORGANISATION (FIN EMAR 147)

This military aviation directive establishes the requirements to be met by an organisation seeking approval as a maintenance training organisation (MTO) for military aircraft and defines the duties and privileges of entities applying for or holding an MTO approval.

Enabling act:

Aviation Act
(864/2014; section 6; and section 7)

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APPENDIXES

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ABBREVIATIONS

EASA	European Union Aviation Safety Agency
EDA	European Defence Agency
EMAR	European Military Aiworthiness Requirements
FIMAA	Finnish Military Aviation Authority
MAWA	Military Aiworthiness Authorities
MTO	Maintenance Training Organisation
MTOE	Maintenance Training Organisation Exposition

INTRODUCTION

This directive is compatible with EMAR 147 Edition no. 1.1 as published and approved by the Military Airworthiness Authorities (MAWA) Forum under the umbrella of the European Defence Agency (EDA). The numbering of subparts and paragraphs is identical to those used in EMAR 147 Edition no. 1.1.

This directive may also be used as a basis for the assessment of equivalent foreign organisations.

The Finnish version is a translation of the original document in English. However, in case of a discrepancy, the Finnish translation will prevail.

1 REQUIREMENTS

SECTION A TECHNICAL REQUIREMENTS

SUBPART A – GENERAL

147.A.05 Scope

This section establishes the requirements to be met by an Organisation seeking approval as a Maintenance Training Organisation (MTO) to conduct training and examination as specified in SIM-He-Lt-030.

147.A.10 General

An MTO shall be a legal entity, a part of a legal entity or part of a military organisation.

147.A.15 Application

- a) An application for an approval or for the amendment of an existing approval shall be made to the Finnish Military Aviation Authority (FIMAA) in an agreed form and manner.
- b) An application for or for the change to an approval shall include the following information:
 1. The registered name and address of the applicant;
 2. The address of the MTO 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, as necessary and proper operation of all planned training and examination including fieldtraining.
- b) Fully enclosed appropriate accommodation 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 session shall not exceed a level conducive to an effective learning environment.
 - 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 MTO 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 FIMAA shall require access to any such organisation and the written agreement shall specify this access.

- e) In the case of a Military 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) At any session in practical training, the number of attending students per supervisor or assessor should be limited so as to ensure appropriate implementation of high-quality teaching.
- 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. The requirements of this paragraph are equally applicable to other storage media (e.g. electronic etc.)
- i) A library shall be provided containing all technical material appropriate to the scope and level of training undertaken.

147.A.105 Personnel requirements

- a) The MTO shall appoint an Accountable Manager who has corporate authority for ensuring that all training commitments can be carried out to the standard required by this directive. The Accountable Manager shall:
 - 1. Ensure that all necessary resources are available to accomplish training commitments in accordance with 147.A.130 (a) to support the organisation approval.
 - 2. Establish and promote the quality policy specified in 147.A.130(b).
 - 3. Demonstrate a basic understanding of this directive.

- b) A person or group of persons, whose responsibilities include ensuring that the MTO is in compliance with the requirements of this directive, 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 MTO shall contract/appoint 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, knowledge examiner and practical 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 by the FIMAA or in accordance with a procedure and to a standard agreed by the FIMAA.
- g) The instructors, knowledge examiners and practical assessors shall be specified in the MTO Exposition (MTOE) 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.

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

- a) The MTO shall maintain a record of all instructors, knowledge examiners and practical assessors for a minimum period of 5 years after termination

of their employment or assignment within the MTO. 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.

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 may 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) shall 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) shall have an appropriate selection of aircraft, engines, aircraft parts, avionics equipment, armaments, escape systems and other relevant military-specific systems.
- d) The Military Aircraft Type Training organisation as specified in 147.A.100(e) shall have access to the appropriate aircraft type. Synthetic training devices may be used when such synthetic training devices ensure adequate training standards.

147.A.120 Maintenance training material

- a) Maintenance training course material (taking into account the classification) shall be provided to the student and cover as applicable:

1. The basic knowledge syllabus specified in SIM-He-Lt-030 for the relevant aircraft type; and
 2. The type course content required by SIM-He-Lt-030 for the relevant aircraft type.
- b) Students shall have access to examples of maintenance documentation and technical information in the library as specified in 147.A.100(i).

147.A.125 Records of students

The MTO shall keep all student training, examination and assessment records for at least twenty years following completion of the particular student's course.

147.A.130 Training procedures and quality system

- a) The MTO shall establish procedures acceptable to the FIMAA to ensure proper training standards and compliance with all relevant requirements in this directive.
- b) The MTO 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, preventive and corrective actions.

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. In such a case the student shall not take any examination for at least 12 months after the date of the incident unless the FIMAA approves otherwise. The FIMAA 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 FIMAA shall be informed of any such occurrence within one calendar month.

147.A.140 Maintenance Training Organisation Exposition (MTOE).

- a) The MTO shall provide an exposition for use by the MTO describing the organisation and its procedures and containing the following information:
 - 1. A statement signed by the Accountable Manager confirming that the MTOE and any associated manuals define the MTO's compliance with this directive and shall be complied with at all times. Where the Accountable Manager is not the Chief Executive Officer or the senior military commander of the organisation, the Chief Executive Officer or the senior military commander of the organisation shall sign that statement.
 - 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 (a)2, including matters on which they may deal directly with the FIMAA on behalf of the MTO.

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4. A MTO chart showing associated lines of responsibility of the person(s) specified in subparagraph (a)2.
 5. A list of the instructors, knowledge examiners and practical assessors.
 6. A general description of the training and examination facilities located at each address specified in the MTO's approval certificate, and if appropriate any other location, as required by 147.A.145(b).
 7. A list and details of the maintenance training courses which form the extent of the approval.
 8. The MTO's exposition amendment procedure.
 9. The MTO's procedures, as required by 147.A.130(a).
 10. The MTO'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 MTO's exposition and any subsequent amendments shall be approved by the FIMAA.
 - c) Notwithstanding paragraph (b) minor amendments to the exposition may be approved through an exposition procedure (also called indirect approval).
 - d) Where an MTO has an extant EASA Part 147 approval, those parts of the organisation's EASA Part 147 exposition that are equally applicable to satisfy the requirements of this directive will generally be accepted by the FIMAA as equivalent in respect of the exposition of this directive. In this

case it is permissible that only those regulations that are military specific need be addressed in the exposition of this directive; those regulations covered by read-across of the sections of the EASA exposition document shall be identified and the EASA document clause reference quoted.

147.A.145 Privileges of the Maintenance Training Organisation

- a) The MTO may carry out the following as permitted by and in accordance with the MTOE:
1. Basic training courses to the SIM-He-Lt-030 syllabus, or part thereof.
 2. Aircraft type/task training courses in accordance with SIM-He-Lt-030, or part thereof.
 3. NOT APPLICABLE
 4. The issue of certificates following successful completion of the approved basic or Military 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 MTOE.
- c) By derogation to paragraph (b), the MTO 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 MTOE. Such locations need not be listed in the MTOE.

- d)
1. The MTO may subcontract the conduct of basic theoretical training, Military Aircraft Type Training and related examinations to a non MTO only when under the control of the MTO quality system.
 2. The subcontracting of basic theoretical training and examination is limited to SIM-He-Lt-030 Appendix 1 modules 1, 2, 3, 4, 5, 6, 8, 9 and 10.
 3. The subcontracting of Military Aircraft Type Training and examination is limited to powerplant, avionic systems, armaments, escape systems and other relevant military-specific systems.
- e) An organisation shall not be approved to conduct examinations unless approved to conduct the corresponding training.
- f) NOT APPLICABLE.

147.A.150 Changes to the Maintenance Training Organisation

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

147.A.155 Continued validity of approval

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

147.A.160 Findings of non-compliance

- 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 FIMAA access to the MTO'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, the holder of the MTO approval shall define a corrective action plan and demonstrate corrective action to the satisfaction of the FIMAA within a period agreed with this authority.

SUBPART C - 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 all subjects of the relevant aircraft type as specified in SIM-He-Lt-030.
- c) The knowledge examination element shall cover a representative cross section of all subjects 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 SIM-He-Lt-030 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 and minimum number of practical training hours to be completed on basic training courses shall be in accordance with Appendix 1.
- g) The duration of conversion courses between (sub)categories shall be determined by the MTO through an assessment of the basic training syllabus and the related practical training needs.

147.A.205 Basic knowledge examinations

Basic knowledge examinations shall:

- a) Be in accordance with the standard defined in SIM-He-Lt-030.
- 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 SIM-He-Lt-030.

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).

SUBPART D – AIRCRAFT TYPE/TASK TRAINING**147.A.300 Aircraft type/task training**

An MTO shall be approved to carry out SIM-He-Lt-030 aircraft type and/or task training or part thereof, subject to compliance with the standard specified in SIM-He-Lt-030.

147.A.305 Aircraft type examinations and task assessments

An MTO approved in accordance with 147.A.300 to conduct Military Aircraft Type Training or part thereof, shall conduct the related aircraft type examinations or aircraft task assessments specified in SIM-He-Lt-030 subject to compliance with the aircraft type and/or task standard specified in SIM-He-Lt-030.

SECTION B PROCEDURES FOR NATIONAL MILITARY AIRWORTHINESS AUTHORITY

TO BE ADDED LATER IF REQUIRED.

2 TRANSITIONAL PROVISION

This directive comes into force 1.6.2020.

A maintenance training organisation shall apply for an approval as described in this directive within six months from the coming into force of this directive.

3 EXEMPTIONS

The Finnish Military Aviation Authority may grant exemptions from this directive on the basis of a well-founded application addressing the exceptional features of the activities in question.

Director

Colonel, M.Sc. (Tech.)

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BASIC TRAINING COURSE DURATION AND MINIMUM PRACTICAL TRAINING HOURS

The duration and minimum number of practical training hours to be completed on a basic training course shall be as follows:

Basic Course	Duration (Theory) (See Note 1)	Duration (Practical) (See Note 1)	Minimum Practical Training Hours for maximum reduction in experience requirements (See Note 2)
A1	-	-	520
A2	-	-	420
A3	-	-	520
A4	-	-	520
B1.1	-	-	960
B1.2	-	-	800
B1.3	-	-	960
B1.4	-	-	960
B2	-	-	960
A (Module 50-55 Extensions)	-	-	(See Note 1)
B1 (Module 50-55 Extensions)	-	-	(See Note 1)
B2 (Module 50-55 Extensions)	-	-	(See Note 1)

Notes:

1. To be specified by the FIMAA (if req'd).
2. These are the minimum practical training hours required for an individual to be able to claim reductions in the experience requirements as detailed in SIM-He-Lt-030 66.A.30(a)1(iii) and SIM-He-Lt-030 66.A.30(a)2(iii).