

STATE OF LIBYA
GOVERNMENT OF LIBYA
MINISTRY OF TRANSPORT
CIVIL AVIATION AUTHORITY



دولة ليبيا
الحكومة الليبية
وزارة المواصلات
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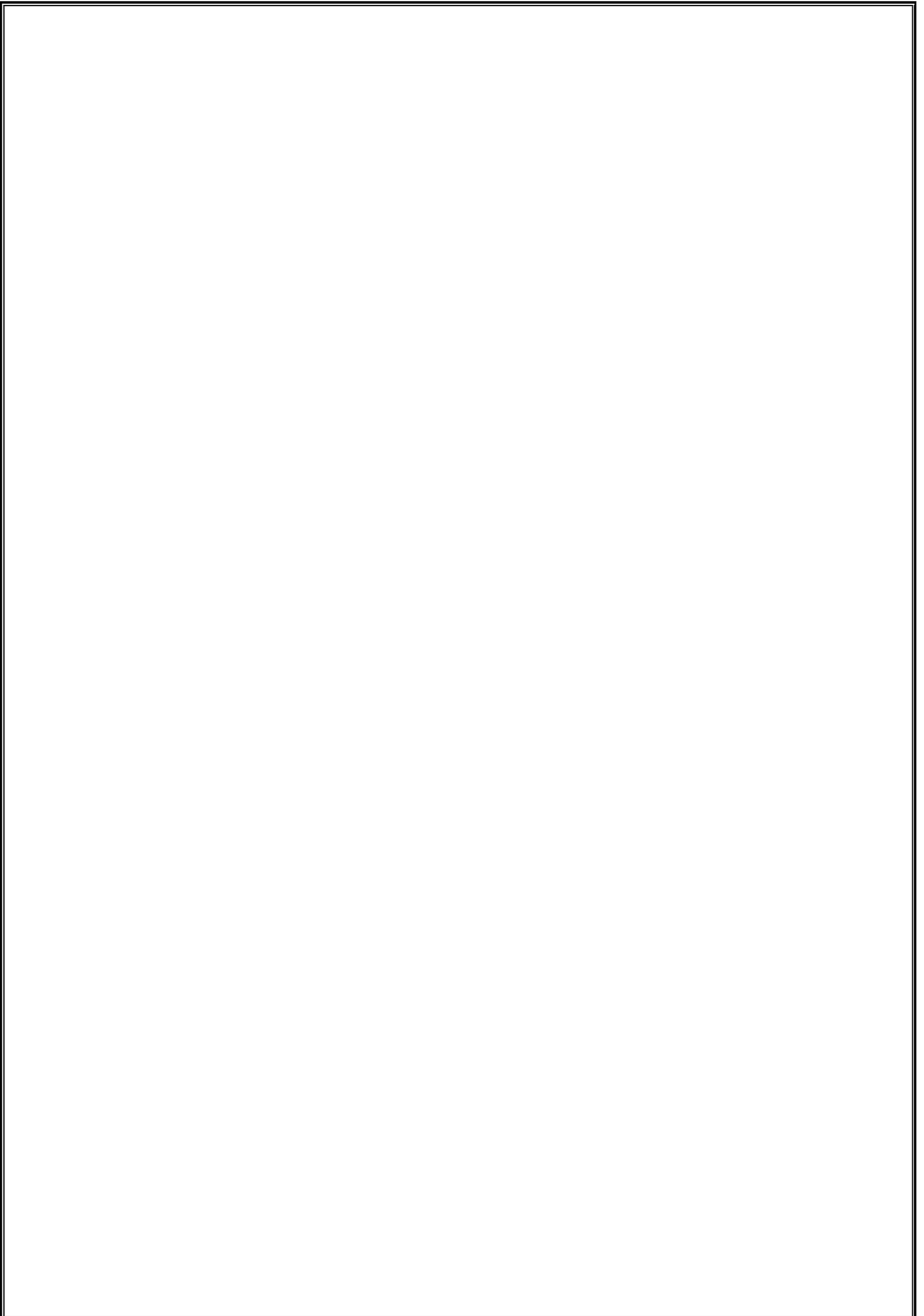
LIBYA CIVIL AVIATION REGULATIONS – CONTINUING AIRWORTHINESS REQUIREMENTS

AMC (Acceptable Means of Compliance) & GM
(Guidance Material)

Part 147

APPROVED MAINTENANCE TRAINING ORGANISATIONS

Initial Issue – August 2016



INTRODUCTION

1. The LyCAA has adopted associated compliance or interpretative and guidance materials to all Continuing Airworthiness regulations which establishes technical requirements and administrative procedures to ensure the continuing airworthiness of aircraft and aeronautical products, parts and appliances, the approval of organisations and personnel involved in these tasks. The documents are based on EASA Acceptable Means of Compliance (AMCs) and Guidance Materials (GMs)
2. Unless specifically stated otherwise, clarification will be based on this material or other EASA documentation, therefore, reference to EASA in this document may still be used for clarification and guidance.
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4. Copies of this publication can be obtained from the following address:
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Signed on 30 August 2016, by:

Capt. Nasereddin Shaebelain
Director General

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SUBPART A - GENERAL

GM 147.A.01 General

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

SUBPART B - ORGANISATIONAL REQUIREMENTS

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 LYCARs, examples of typical aircraft maintenance manuals and service bulletins, airworthiness directives, aircraft and component records, release documentation, procedures manuals and aircraft maintenance programs.
2. Except for the LYCARs, 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 LYCAR it is not necessary to duplicate such a facility subject to student access being under controlled supervision.

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 LYCAR.147.130(b) and an examination manager with the responsibility of managing the relevant LYCAR.147 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 LYCAA verifying and being satisfied that all functions can be properly carried out in combination.
3. When the organisation is also approved against other LYCARs which contain some similar functions then such functions may be combined.

AMC 147. A.105 (b) Personnel requirements

Application should be completed for each person nominated to hold a position including accountable manager as required by LYCAR . 147.105 (b)].

AMC 147. A.105 (f) Personnel requirements

Any person accepted by the LYCAA prior to LYCAR.147 entry into force may continue to be accepted in accordance with LYCAR.147.105(f)

[APPENDIX II provides criteria to establish the qualification of the instructors, knowledge examiners and practical 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. 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.

GM 147. A.105 (f) Personnel requirements

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

GM 147. A.105 (g) Personnel requirements

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

GM 147. A.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.

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 LYCAA is an authorised person when investigating the records system for initial and continued approval or when the LYCAA 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

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 LYCAR.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 avionics equipment means appropriate in relation to the particular subject module or sub-module of LYCAR.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 LYCAR.147.100(d), that there may be an agreement with a maintenance organisation approved under LYCAR.145 to access such parts, etc.

GM 147. A.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.

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.

AMC 147. A.125 Records

1. All records can be either a paper or computer system or any combination of both.
2. Paper systems should use robust material which can withstand normal handling and filing. The record should remain legible throughout the required retention period. Computer systems may be used to control and keep all records. However, the systems used should have at least a backup system which should be continuously be updated whenever a change on the records status. Each terminal is required to contain program safeguards against the ability of unauthorised personnel to alter the database.

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

1. The independent audit procedure should ensure that all aspects of LYCAR.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 LYCAR.147 or a competent person acceptable to the LYCAA. 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 to another LYCAR 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:
 - a) a pre-audit procedure should be established whereby the LYCAR.147 approved maintenance training organisation should audit a prospective sub-contractor to determine whether the services of the sub-contractor meet the intent of LYCAR.147.
 - b) a renewal audit of the subcontractor should be performed at least once every 12 months to ensure continuous compliance with the LYCAR.147 standard.
 - c) the sub-contract control procedure should record audits of the sub-contractor 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. A.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 LYCAR.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.
6. 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.

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 [examiners and in accordance with the requirements of LYCAR.66].

GM 147. A.135 Examinations

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

AMC 147. A.140 Maintenance Training Organisation Exposition

1. A recommended format of the exposition is included in Appendix [I].
2. When the maintenance training organisation is approved in accordance with any other LYCAR which also requires an exposition, the exposition required by the other LYCAR 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 LYCAR.147.140 and a cross reference index is included based upon 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 Appendix [I] item 2.18 plus a list of sub-contractors as required by LYCAR 147.140 (a) 12 and detailed in Appendix [I] item 1.7.

4. The LYCAA may approve a delegated exposition approval system for all changes other than those affecting the approval.

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 LYCAR.147 approval has been temporarily extended to include the sub-contractor. It therefore follows that those parts of the sub-contractor's facilities, personnel and procedures involved with the LYCAR.147 approved maintenance training organisation's students should meet requirements of LYCAR.147 for the duration of that training or examination and it remains the LYCAR.147 organisation's responsibility to ensure such requirements are satisfied.
2. The maintenance training organisation approved under LYCAR.147 is not required to have complete facilities and personnel for training that it needs to sub-contract but it should have its own expertise to determine that the sub-contractor meets the LYCAR.147 standards. Particular attention should be given to ensuring that the training that is delivered also meets the requirements of LYCAR.66 and the aircraft technologies as appropriate.
3. The contract between the maintenance training organisation approved under LYCAR.147 and the sub-contractor should contain:
 - a provision for the LYCAA to have right of access to the sub-contractor;
 - a provision for the sub-contractor to inform the LYCAR.147 approved maintenance training organisation of any change that may affect its LYCAR.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 examination;
- The qualification of the examiners and their currency.

In particular, emphasis should be put when such 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 the 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.]

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

The pre audit procedure should focus on establishing compliance with the training and examination standards set out in LYCAR.147 and LYCAR.66.

The fundamental reason for allowing a maintenance training organisation approved under LYCAR.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 LYCAR.66 modules.

The reason for allowing the subcontracting of training modules 1 to 6 and 8 to 10 of Appendix I to LYCAR.66 is that most of the related subjects can generally also be taught by training organisations not specialized in aircraft maintenance and the practical training element as specified in LYCAR.147.200 does not apply to them. On the contrary training modules 7 and 11 to 17 of Appendix I to LYCAR.66 are specific to aircraft maintenance and include the practical training element as specified in LYCAR.147.200. The intent of the "limited subcontracting" option as specified

in LYCAR.147.145 is to grant LYCAR.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 is that the related subjects can generally also be imparted by certain organisations specialized 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 LYCAR.147 organisation itself).

SUBPART C APPROVED BASIC TRAINING COURSE

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

Each licence category or subcategory basic training course may be subdivided into modules or sub-modules of knowledge and may be intermixed with the practical training elements subject to the required time elements of LYCAR.147.200 (f) [and] (g) being satisfied.

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

1. Where the maintenance training organisation approved under LYCAR.147 contracts the practical training element either totally or in part to another organisation in accordance with LYCAR.147.100 (d), the organisation 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 in an actual maintenance working environment.

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

1. In order to follow pedagogical and human factors principles, the maximum 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 for aircraft visit. In exceptional cases, the LYCAA may allow deviation from this standard when it is properly justified that the proposed number of hours follows pedagogical and human factor 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 is performed at the same time.
2. The minimum participation time for the trainee to meet the objectives of the course should not 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 LYCAR.66 aircraft maintenance engineer licence in subcategory A1 to subcategory B1.1 or B2 should not be less than 1600 hours and for conversion from holding a LYCAR.66 aircraft maintenance engineer 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 LYCAR.66 aircraft maintenance engineer 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 LYCAR.66 aircraft maintenance engineer 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 LYCAR.66 aircraft maintenance engineer 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.

AMC 147. A.205 Basic knowledge examinations

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

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

Where the maintenance training organisation approved under LYCAR.147 contracts the practical training element either totally or in part to another organisation in accordance with LYCAR.147.100(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 LYCAR.147.200 (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 the AMC to LYCAR.66 provides criteria for the competence assessment performed by approved assessors (and APPENDIX II of LYCAR 147 provides criteria to establish the qualification of practical assessors).

SUBPART D AIRCRAFT TYPE/TASK TRAINING

AMC 147. A.300 Aircraft type/task training

1. Aircraft type training may be sub-divided in airframe type training, powerplant type training, or avionic systems type training. A maintenance training organisation approved under LYCAR. 147 may be approved to conduct airframe type training only, powerplant type training only, avionics/electrical systems type training or any combination thereof.
2. Airframe type training course means type training course including all relevant aircraft structure and electrical and mechanical systems excluding the powerplant.
3. Powerplant type training course means 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 large variety of aircraft that can have the same engine type installed.
5. Avionic/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.

APPENDIX I TO AMC 147. A.140

MAINTENANCE TRAINING ORGANISATION EXPOSITION (MTOE)

1. The following subject headings form the basis of the MTOE required by [LYCAR.147.140.]
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 LYCARs, 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 sub-contractors as per LYCAR.147.145(d)
- 1.8. General description of facilities at paragraph 1.6 addresses
- 1.9. Specific list of courses approved by the LYCAA1.10. 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 basic knowledge & practical 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

- 2.13. Conduct of basic practical assessments
- 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 [knowledge & practical] instructors
- 3.7. Qualifying the examiners [and practical assessors]
- 3.8. Records of qualified instructors, examiners [& practical assessors]

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

APPENDIX II TO AMC 147. A.105 (f)**GUIDELINES FOR QUALIFYING LYCAR.147 INSTRUCTORS, KNOWLEDGE EXAMINERS, PRACTICAL ASSESSORS AND LYCAR.145 PRACTICAL ASSESSOR****PURPOSE**

The objective of this appendix is to provide guidance to all LYCAR 147 and LYCAR 145 organisations for initial assessment for qualifications/authorisation of knowledge instructors, knowledge examiners and practical assessors and also provides guidance for renewal of such authorisations.

ENGINEERING INSTRUCTORS REQUIREMENTS**General**

- (a) All instructors employed/contracted in a LYCAR 147 approved maintenance training organisation should have completed an Instructional Techniques training with a reputable training provider and should be able to demonstrate thorough understanding of LYCAR.147, LYCAR.66, company's MTOE and related internal training procedures.
- (b) All instructors, knowledge examiners and practical assessors employed by the organisation should be listed in Part 1.5 of the company's MTOE and should be in possession of valid document that clearly indicates the scopes and limitations of their approvals/qualifications issued in accordance with the approved MTOE.
- (c) Record for all instructors, knowledge examiners and practical assessors must be maintained in accordance with LYCAR.147.110.
- (d) All instructors, knowledge examiners and practical assessors may hold other positions within the training organisation. All such roles should be identified against the holders at appropriate places within the MTOE.
- (e) If an instructor has not been involved in any instructional activity for a period of 2 years, he/she is required to undergo the 35 hours updating training as described in the following paragraphs, complete a number of sit ins and be assessed as competent in accordance with approved procedures of the organisation.

Type Training Instructors

- (a) The criteria for qualifying/authorising a type training instructor must either be:
 - (1) Hold an aircraft maintenance engineer's license endorsed with the type of aircraft relevant to the type course to be taught and should have completed an instructional techniques course (No previous aircraft type instructional experience).

The instructor should deliver his/her first lecture of the relevant type course (or the appropriate subject if his/her intended scope is to be limited to that subject only) in presence of another qualified instructor as observer. It is not mandatory that observation is made over the entire period of a type course or by a single observer; it may be done on a representative sampling basis by various persons having the appropriate qualification. Observer should raise an evaluation report for each topic/subject area and should clearly make recommendation whether the instructor's performance is satisfactory to independently conduct the training or highlight the areas where more training/development is needed if otherwise. After receiving satisfactory evaluation report from the observer(s), the appropriate post-holder may issue authorisation with appropriate scopes and limitations to the instructor in accordance with the approved MTOE procedure.

OR

- (2) Hold an aeronautical/electrical or mechanical engineering degree and formally completed a formal instructional technique course.

In such a case, the prospective instructor should successfully complete a type course relevant to the category taught. He/she should attend at least two "sit-Ins" lessons in the type training to be delivered

by him/her. The instructor should deliver his/her first lecture of the relevant type course (or the appropriate subject if his/her intended scope is to be limited to that subject only) in presence of another qualified instructor as observer. It is not mandatory that observation is made over the entire period of a type course or by a single observer; it may be done on a representative sampling basis by various persons having the appropriate qualification. Observer should raise an evaluation report for each topic/subject area and should clearly make recommendation whether the instructor's performance is satisfactory to independently conduct the training or highlight the areas where more training/development is needed if otherwise. After receiving satisfactory evaluation report from the observer(s), the appropriate post-holder may issue authorisation with appropriate scopes and limitations to the instructor in accordance with the approved MTOE procedure.

OR

(3) Instructors with acceptable and verifiable previous experience commensurate with the intended scopes of type trainings may be granted authorisation in accordance with approved procedures if they have completed the appropriate type trainings and can demonstrate knowledge of LYCAR.66, LYCAR 147, MTOE, relevant company procedures and formally completed a formal instructional technique course.

(b) All instructors are required to undergo updating training every 2 years. The updating training should cumulatively consist of at least 35 hours and may be spread over the 2 years period. Such trainings can take form of attending lectures, seminars, symposia etc and should include activities related to awareness of latest training techniques, specific technical upgrade/variation to the aircraft. Record of each activity of the updating training should be maintained for each instructor, knowledge examiner and practical assessor in the organisation with clearly stated dates and venues where the training was conducted.

Basic Skill Instructor

(a) The criteria for qualifying/authorising a basic skills instructor must be either be:

(1) Applicant should hold appropriate LYCAR.66 aircraft maintenance license

OR

(2) hold an aeronautical/electrical or mechanical engineering degree and formally completed a formal instructional technique course.

The prospective instructor should attend training on relevant LYCAR.147 modules to be taught by him/her. He/she should attend at least two "sit-ins" lessons in the relevant module training to be delivered by him/her. The prospective instructor should then deliver his/her first lecture of the relevant module in presence of another qualified instructor as observer. It is not mandatory that observation is made over the entire period of a module or by a single observer; it may be done on a representative sampling basis by various persons having the appropriate qualification. Observer should raise an evaluation report for each topic/subject area and should clearly make recommendation whether the instructor's performance is satisfactory to independently conduct the training or highlight the areas where more training/development is needed if unsatisfactory. After receiving satisfactory evaluation report from the observer(s), the appropriate post-holder may issue authorisation with appropriate scopes and limitations to the instructor in accordance with the approved MTOE procedure.

OR

- (3) Instructors with acceptable verifiable previous experience commensurate with the intended scopes of basic trainings may be granted authorisation in accordance with approved procedures.

OR

- (4) For instructors involved with teaching of only Module 1 and Module 2, an academic teaching qualification relevant to the modules being taught is acceptable. Such instructors may be granted authorisation in accordance with approved procedures if they have completed the appropriate relevant trainings and can demonstrate knowledge of LYCAR.66, LYCAR.147, MTOE and relevant company procedures.

(b) All basic instructors are required to undergo updating training every 2 years. The updating training should cumulatively consist of at least 35 hours and may be spread over the 2 years period. Such trainings can take form of attending lectures, seminars, symposia and should include activities related to awareness of latest training techniques etc. Record of each activity of the updating training should be maintained for each instructor, knowledge examiner and practical assessor in the organisation with clearly stated dates and venues where the training was conducted.

KNOWLEDGE EXAMINER REQUIREMENTS

General

- (a) All knowledge examiners must demonstrate an understanding of LYCAR.147 and LYCAR.66 requirements and working knowledge of the organisation's MTOE and related procedures.
- (b) A knowledge examiner may also hold other positions within the training organisation like an instructor or a practical assessor. Such other roles must be clearly identified in the organisation MTOE and the multiple roles should not impose any kind of constraint on the capability of the holder to discharge his duties. Also knowledge examiner should not be involved in any activity related to examination for the subject area for which he/she was an instructor.

Qualification criteria for knowledge examiner

- (a) Following is the criteria for qualifying a knowledge examiner. A knowledge examiner should comply with all of the following requirements before he/she can be approved/authorised as a knowledge examiner:
- (1) He/she should be conversant with the aircraft basic/type course for which he/she is acting as knowledge examiner.
 - (2) Should have excellent understanding with LYCAR.66 syllabus requirements regarding the level and number of questions for which being approved as knowledge examiner
 - (3) Should be able to compile both essay (for basic modules only) and multiple choice examination in the subject area and in case of essay examination, should be able to prepare model answer sheet detailing the marking guide.
 - (4) Should realize that the purpose of the essay is to allow the examiner to determine if candidates can express themselves in a clear and concise manner in the form of a written response, in

a technical report format using the technical language of the aviation industry. The essay examinations also allow assessing, in part, the technical knowledge retained by the individual and with a practical application relevant to a maintenance scenario.

- (5) Should be able to mark and analyze the students' responses and provide feedback to the instructor/subject matter experts/training manager regarding any inconsistencies with the examination results or process.

PRACTICAL ASSESSOR REQUIREMENTS

General

It is a requirement that all practical experience submitted to LYCAA for the purpose of licence issue or type rating endorsement be verified by an approved practical assessor. An approved practical assessor assumes the role of a LYCAA designated examiner for assessment of the practical competency of a candidate for issue/endorsement of a licence.

(b) Individual tasks in On Job Training (OJT) logbook or type experience schedule of inspections can be signed/verified by any appropriately qualified person and need not be verified by an approved assessor. However, the role of the approved assessor is to assess the holder on the tasks listed in the logbook/schedule and recommend the applicant for issue of license/rating if found competent in the required skills.

(c) LYCAR.147 and/or LYCAR.145 organisations should establish a procedure to qualify and approve practical assessors in the organisation MTOE/MOE.

(d) A practical assessor may hold other positions within the training organisation like an instructor or a certifying staff. Such other roles must be clearly identified in the organisation MTOE/MOE and the multiple roles should not impose any kind of constraint on the capability of the holder to discharge his duties.

Qualification criteria for practical assessor

Following is the eligibility criteria for applying to LYCAA for approval as a practical assessor.

1. Be proficient and have sufficient experience or knowledge in:
 - (a) Human performance and safety culture;
 - (b) The aircraft type (necessary to have the certifying staff privileges in case of CRS issues);
 - (c) Training/coaching/testing skills (practical assessor course);
 - (d) Instructional tools to use;
2. Understand the objective and the content of the practical elements of the training that is being assessed;
3. Have interpersonal skills to manage the assessment process (professionalism, sincerity objectivity and neutrality, analysis skills, sense of judgment, flexibility, capability of evaluating the supervisor's or instructor's reports, handling of trainee's reactions to failing assessment with the cultural environment, being constructive, etc.);

4. Be ultimately designated by the organisation to carry out the assessment. The roles may be combined for:

- the assessor and the instructor for the practical elements of the Type Rating Training; or
- the assessor and the supervisor for the On-the-Job Training

provided that the objectives associated with each role are clearly understood and that the competence and qualification criteria according to the company's procedures are met for both functions. Whenever possible (depending on the size of the organisation), it is recommended to split the roles (two different persons) in order to avoid any conflicts of interests.

When the functions are not combined, the role of each function should be clearly understood.