



GOVERNMENT OF INDIA  
**DIRECTORATE GENERAL OF CIVIL AVIATION**  
OPP. SAFDARJUNG AIRPORT, NEW DELHI - 110 003

# **CAR 147**

## **APPROVED BASIC MAINTENANCE TRAINING ORGANISATION**

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## **GENERAL**

### **FOREWORD**

Rule 133B of the Aircraft Rules 1937 stipulates that organizations engaged in the aircraft maintenance training shall be approved.

Subsequent to the release of CAR 66, on 1<sup>st</sup> December 2011, it was essential to harmonize training requirements for the maintenance training organizations to international standards. CAR 147 (Basic) is based on EASA Part 147.

CAR-147 (Basic) specifies the requirements to be met by organizations seeking approval to conduct aircraft maintenance training and examination as specified in CAR 66. The CAR 147 (Basic) specifies conditions for issue, renewal, suspension and revocation of certificates attached to the approval and privileges thereof.

Initially the basic knowledge examination will be conducted by DGCA, however, once the systems and procedures are well established and the DGCA is confident that the institutes are mature to conduct the knowledge examination, they may be allowed to conduct knowledge examinations in phased manner, on behalf of DGCA.

This CAR provides the technical standards and guidelines for the approval of aircraft maintenance training organizations.

CAR 147 (Basic) for training organizations is issued under the provision of Rule 133A of the Aircraft Rules, 1937 and shall be applicable from 01 March 2018.

## **RECORD OF REVISION**

### **Initial Issue (Revision 0)**

The CAR 147 (Basic) provides the common technical standards and guidelines to conduct approved aircraft maintenance training courses, to conduct examinations if permitted and to issue training course completion certificates (Certificate of Recognition).

# **SECTION A TECHNICAL REQUIREMENTS**

## SUBPART A

### GENERAL

#### 147. A.01 Applicability

This CAR is applicable to:-

- a) Approved Aircraft /Engine manufacturing and maintenance organizations registered in India and intends to impart basic aircraft maintenance training on Aircraft, Power plant and its system.
- b) The existing training Organization approved under CAR Section 2 Series E may be considered for approval under this CAR provided they make long term viable agreement and technical arrangement with approved maintenance organisation for imparting practical to cover the scope of approval.

#### 147. A.05 Scope

This section establishes the requirements to be met by organizations seeking approval to conduct Basic maintenance training as specified in CAR-66 and in accordance with Rule 133B of the Aircraft Rules, 1937.

#### 147. A.10 General

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

#### GM to 147.A.10 General

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

#### 147. A.15 Application

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

#### AMC147.A.15 Application

In a form and in a manner prescribed by the DGCA means that the application should be made on a CA Form 12a given in Appendix IV to AMC of this CAR, with the following enclosures.

- a) Organization's registration certificate



- b) Soft and hard copy of MTOE and associated procedure manuals
- c) Form 4 in respect of responsible managers.
- d) Para wise CAR-147 compliance report along with relevant supporting documents.
- e) Applicable fees as per Rule 133C of Aircraft Rules, 1937.

*Note: Organization's registration certificate means a certificate issued by the Registrar of Companies.*

## **SUBPART B ORGANIZATIONAL REQUIREMENTS**

## SUBPART B ORGANIZATIONAL 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 30. Institute may induct maximum two batches of students per category in a year.
  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) The 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 organization is unable to provide such facilities, viable arrangements may be made with another organization located conveniently to provide such workshops and / or approved maintenance facilities under long term written agreement and technical arrangements specifying the conditions of access to all relevant areas and use thereof. The agreement shall include provision for issuance of airport entry passes if any. The DGCA shall require access to any such contracted organisation and the legal agreement and technical arrangement shall specify this access.
 

*Note 1: Maintenance training organization shall develop an interface manual / SOP with control procedures to manage and administer the course agreeable to both the primary training organization approval holder and the maintenance organisation acceptable to DGCA.*

*Note 2: Arrangements made for imparting practical training with Approved aircraft maintenance organisation should be documented in the organisation exposition.*

*Note 3: An approved AMO may have contract with only one institute at particular location.*
- (e) Reserved.
- (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 instructor's 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 commensurate to the scope and level of training under-taken.

**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 CARs and other DGCA regulations examples of typical aircraft maintenance manuals and service bulletins, Airworthiness Directives, aircraft and component records, release documentation, procedures manuals and aircraft maintenance programme.
2. Except for the CARs and DGCA regulations, the remainder of the documentation should represent typical examples for both large and small aircraft and cover both aeroplane 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 to147.A.100 (i) Facility Requirements**

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

**147. A.105 Personnel requirements**

- (a) The organization shall appoint an Accountable manager who has corporate authority for ensuring that all training commitments can be financed and carried out to the standard required by this CAR.
- (b) A person or group of persons, whose responsibilities include ensuring that the maintenance training organization is in compliance with the requirements of this CAR, 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 organization shall have sufficient staff to plan / perform knowledge and practical training, conduct knowledge examination and practical assessments in accordance with the approval.
- (d) By derogation to point (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 DGCA.
- (g) The knowledge examiners and practical assessors shall be specified in the Organization 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 organization (an organization with the capacity to provide training for 50 students or more) should appoint a training manager with the responsibility of managing the training organization on a day to day basis. Such person could also be the Accountable manager. In addition, the organization should appoint a quality manager with the responsibility of managing the quality system as specified in paragraph 147.A.130 (b) and an examination manager with the responsibility of managing the relevant CAR147 Subpart C examination system. Such person(s) may also be an instructor and/or examiner.
2. The smaller maintenance training organization (an organization with the capacity to provide training for less than 50 students) may combine any or all of the subparagraph (1) positions subject to the DGCA verifying and being satisfied that all functions can be properly carried out in combination.
3. When the organization is also approved against other CARs which contain some similar functions then such functions may be combined.

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

With the exception of the accountable manager, a CA Form 04 should be completed for each person nominated to hold a position required by 147.A.105(b). An example of CA form 04 is included in Appendix II to AMC.

**GM to 147.A.105 (b) Personnel requirements**

The number of post holders for CAR 147 approved organization may depend upon its size and complexity and acceptable to DGCA. DGCA may consider need for a specific person to be nominated as post holder depending upon the responsibility shared. In general guideline in a CAR 147 organization there should be minimum.

- The Training Manager (possibly his deputy in a large organization)
- Quality Manager (possibly his deputy in a large organization)
- Examination Manager

**GM to 147.A.105 (c) Personnel requirements**

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

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

Any person currently accepted by the DGCA in accordance with the regulations prior to CAR147 coming into force may continue to be accepted in accordance with 147.A.105 (f).

Appendix-V to AMC 147.A.105 (f) provides Guidance for assessing the qualifications, skills, competency and the revalidation of CAR-147 Instructors, Knowledge Examiners and Practical Assessors.

**GM to 147.A.105 (f) Personnel requirements**

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

**GM to 147.A.105 (g) Personnel requirements**

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

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

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

**GM to 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.

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

- a) The organization shall maintain a record of 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 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 organizations quality system.

3. Persons authorized to access the system should be maintained at a minimum to ensure that records cannot be altered in an unauthorized manner or that such confidential records become accessible to unauthorized persons.
4. The DGCA may investigate the records system for issuance of initial and renewal approval or when it has cause to doubt the competence of a particular person.

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

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

#### **147. A.115 Instructional equipment**

- a) Each classroom shall have appropriate presentation / instructional 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 point 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 basic maintenance facilities as specified in point 147.A.100 (d) must have an appropriate selection of aircraft, engines, aircraft parts / equipment's and avionics equipment.
- d) Reserved
- e) The training organization shall have a long-term viable contract with documented technical agreement and procedures with aircraft maintenance organization with regard to facility, instructors, assessors, examiners etc. if desirous of utilizing the facility for practical training so as to have the uninterrupted availability of the facility for the entire length of the course for students to become eligible to acquire license.

#### **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 CAR-66 being instructed. For example, the turbine engine module should require the provision of sufficient parts from different types of turbine engine to show what such parts look like, what the critical areas are from a maintenance viewpoint and to enable disassembly/assembly exercises to be completed.
2. Appropriate aircraft, engines, aircraft parts and avionics equipment means appropriate in relation to the particular subject module or sub module of CAR-66 being instructed. For example, category B2 avionic training should require, amongst other equipment, access to at least one type of installed autopilot and flight director

system such that maintenance and system functioning can be observed and therefore more fully understood by the student in the working environment.

3. "Access" may be interpreted to mean, in conjunction with the facilities requirement of 147.A. 100 (d), that there may be agreement with a maintenance organisation approved under CAR-145 to access such parts, etc.

#### **GM to 147.A.115 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 CAR-66 for the relevant aircraft maintenance licence category or subcategory.
  2. Reserved
- 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 organization shall keep all student training, examination and assessment records for a period of ten years.

In case the institute having privilege for conduction of examination on behalf of DGCA, the above records shall be kept for unlimited period.

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

- a) The organization shall establish procedures acceptable to the DGCA to ensure proper training standards and compliance with all relevant requirements in this CAR.



b) The organization 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.
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 CAR-147 compliance should be checked at least once in every 12 months and may be carried out as one complete single exercise or subdivided over a 12-month period in accordance with a scheduled plan.
2. In a small maintenance training organisation the independent audit function may be contracted to another maintenance training organization approved under CAR-147 or a competent person acceptable to the DGCA. 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 CAR 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 CAR 147 approved basic training organisation should audit a prospective sub-contractor to determine whether the services of the sub-contractor meet the intent of CAR 147.
  - II. a renewal audit of the subcontractor should be performed at least once every 12 months to ensure continuous compliance with the CAR 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 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 to 147.A.130 (b) Training Procedures and Quality System**

1. The primary objective of the quality system is to enable the training organization to satisfy itself that it can deliver properly trained students and that the organization remains in compliance with CAR 147.
2. The independent audit is a process of routine sample checks of all aspects of the training organization'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 organization (an organization 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 organization 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 examination papers and associated authorized documentation shall be disqualified from taking the examination and may not take any examination for at least 12 months after the date of the incident. The DGCA 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 DGCA 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 Examiners.

**GM to 147.A.135 Examinations**

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

**147. A.140 Maintenance training organization exposition**

(a) The organization shall provide an exposition for use by the organization describing the organization and its procedures and containing the following information:

1. a statement signed by the accountable manager confirming that the maintenance training organization exposition and any associated manuals define the maintenance training organization's compliance with this CAR and shall be complied with at all times.
2. The title(s) and name(s) of the person(s) nominated in accordance with 147.A.105 (b).
3. The duties and responsibilities of the person(s) specified in subparagraph 2, including matters on which they may deal directly with the DGCA on behalf of the maintenance training organization.
4. a maintenance training organization 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 organization'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 organization's exposition amendment procedure.
9. The maintenance training organization's procedures, as required by 147.A.130(a).
10. The maintenance training organization's control procedure, as required by 147.A.145(c), when authorized to conduct training, examination and assessments in locations different from those specified in 147.A.145 (b).
11. A list of the locations pursuant to 147.A.145 (b).
12. Reserved

- (b) The maintenance training organization's exposition and any subsequent amendments shall be approved by the DGCA.
- (c) Notwithstanding point (b) minor amendments to the exposition may be approved through an exposition procedure (hereinafter called indirect approval).

**AMC 147.A.140 Maintenance training organization exposition**

- 1. A recommended format of the organization's exposition is included in Appendix 1.
- 2. Reserved
- 3. Reserved
- 4. The DGCA may approve a delegated Organization exposition approval system for all changes other than those affecting the approval.

**147. A.145 Privileges of the maintenance training organization**

- (a) The maintenance training organization may carry out the following as permitted by DGCA and in accordance with the maintenance training organization exposition:
  - 1. Basic training courses to the CAR-66 syllabus, or part thereof.
  - 2. Reserved
  - 3. the examinations on behalf of the DGCA (when permitted).
  - 4. The issue of certificates in accordance with Appendix III following successful completion of the approved basic aircraft maintenance training courses and examination specified in sub paragraph (a)(1) 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 maintenance training organization exposition.
- (c) Reserved
- (d)
  - 1. Reserved
  - 2. Reserved
  - 3. Reserved.
- (e) An organisation may not be approved to conduct examinations unless approved to conduct the corresponding training.
- (f) Reserved

**AMC CAR 147.A.145 (d) Privileges of the basic maintenance training organization:**

Reserved

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

Reserved

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

Reserved

**AMC CAR 147.A.145 (f) Privileges of the basic maintenance training Organization**

Reserved

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

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

**147. A.155 Continued validity**

- (a) An approval shall be issued for a period not exceeding five years and shall be limited to the validity of the contractual agreement with the maintenance organisation (if applicable). It shall remain valid subject to:
  - 1. the organization remaining in compliance with this CAR, in accordance with the provisions related to the handling of findings as specified under 147.A.160; and
  - 2. the DGCA officials being granted access to the organization including contracted organisation to determine continued compliance with this CAR and
  - 3. The certificate not being surrendered or revoked.
  - 4. Contracted organizations shall remain in compliance with the organisation approval requirements of DGCA and terms and conditions of the contract

5. The approval of the organization may be withdrawn / limited if the organization has not inducted any batch of student consecutive for two years.

(b) Upon surrender or revocation, the approval shall be returned to the DGCA.

### **AMC 147.A.155 Continued Validity**

1. (a). The organization should be subjected to following oversight program to remain compliant with CAR 147 for the purpose of continued validity.

- (i) Internal audit by independent audit system of the organization.
- (ii) Regulatory audit by DGCA
- (iii) Surveillance of different areas of CAR 147 approval by DGCA
- (iv) Spot check by DGCA.

(b) Internal audit programme for the succeeding 12 months period should provide at the time of making application for renewal of approval and audit should be submitted to DGCA within 15 days of their completion.

(c) It will be the responsibility of training manager to ensure findings emanating from any of the oversight programme are handled as per the procedure specified under 147.A.160

### **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 DGCA officials access to the organization'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 maintenance training organization approval shall define a corrective action plan and demonstrate corrective action to the satisfaction of the DGCA within a period agreed by DGCA.

(d) Failure to complete the rectification of any level 1 finding within three days of written notification shall entail revocation, suspension or limitation by the DGCA, of the maintenance training organisation approval in whole or in CAR.

Level 1 findings shall be addressed immediately and intimated to the respective DGCA office. DGCA office shall confirm/verify compliance action to ensure that the hazard to safety has been resolved.

Level 2 findings must be resolved within a short time not exceeding 30 days.

# **SUBPART C**

## **AIRCRAFT BASIC TRAINING**

## **SUBPART – C**

### **THE APPROVED BASIC TRAINING COURSE**

#### **147.A . 200 The Approved Basic Training Course**

- (a) The approved basic training course shall consist of basic knowledge training, Knowledge examination, practical training and a practical assessment.
- (b) The knowledge training element shall cover the subject matter for a category or subcategory aircraft maintenance licence as specified in CAR-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 CAR-66 complete module
- (e) The practical assessment element shall cover the practical training and determine whether the student is competent at using tools and equipment and working in accordance with maintenance manuals.
- (f) The duration of basic training courses shall be in accordance with Appendix I of this CAR.
- (g) The duration of conversion courses between (sub) categories shall be determined through an assessment of the basic training syllabus and the related practical training needs.

#### **AMC 147.A.200 (b) The Approved Basic Training Course**

Each 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 147.A.200 (f) and (g) being satisfied.

#### **AMC 147. A. 200 (d) The Approved Basic Training Course**

1. Where the maintenance training organisation approved under CAR 147 contracts the practical training element either totally or in part under long term contract and technical arrangement with another organisation in accordance with 147.A. 100(d), the organisation in question should ensure that the practical training elements are properly carried out. Practical training facility shall be as per the scope of approval of the training organization.
2. At least 30% of the practical training element should be carried out in an actual maintenance working environment. The list of such practical training element required to be documented in the organisation MTOE. The practical task should cover cross representative sections of the aircraft systems and listed ATA chapter wise.



**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 DGCA 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 CAR 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 CAR 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 CAR 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 CAR 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 CAR 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 CAR-66.

- (b) be conducted without the use of training notes.
- (c) cover a representative cross section of subjects from the particular module of training completed in accordance with CAR-66.
- (d) Shall be conducted by DGCA

**AMC 147. A. 205 Basic Knowledge Examination**

Reserved

**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 point CAR147.A.200 (e)

**AMC 147. A. 210 (a) Basic Practical Assessment**

Where the maintenance training organisation approved under CAR147 contracts the practical training element either totally or in part to another organisation in accordance with 147.A.100 (d) and chooses to nominate practical assessors from the other organisation, the organisation in question should ensure that the basic practical assessments are carried out.

**AMC 147. A. 210 (b) Basic Practical Assessment**

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

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



(B.S. Bhullar)  
Director General of Civil Aviation

**Appendices to  
Technical Requirements**

**Appendix I****Basic Training Course Duration**

The minimum duration of complete basic courses

| <b>Basic Course</b> | <b>Duration (In Hours)</b> | <b>Theoretical training Ratio (In %)</b> |
|---------------------|----------------------------|--|
| A 1                 | 800                        | 30 to 35                                 |
| A 2                 | 650                        | 30 to 35                                 |
| A 3                 | 800                        | 30 to 35                                 |
| A 4                 | 800                        | 30 to 35                                 |
| B 1.1               | 2400                       | 50 to 60                                 |
| B 1.2               | 2000                       | 50 to 60                                 |
| B 1.3               | 2400                       | 50 to 60                                 |
| B 1.4               | 2400                       | 50 to 60                                 |
| B 2                 | 2400                       | 50 to 60                                 |
| B3                  | 1000                       | 50 to 60                                 |

**Appendix II**

**Government of India  
Directorate General of Civil Aviation**

**CA Form 11A**

**APPROVAL CERTIFICATE  
BASIC MAINTENANCE TRAINING ORGANISATION**

Reference No: \_\_\_\_\_

Pursuant to Rule 133B of Aircraft Rules 1937 and CAR-147 (Basic maintenance training organisation) for the time being in force and subject to the conditions specified below, DGCA hereby certifies:

[COMPANY NAME AND ADDRESS]

as training organization in compliance with Section A of CAR-147 (Basic) maintenance training organisation approved to provide training and conduct examinations listed in the attached approval schedule and issue related certificates of recognition to students using the above reference.

**CONDITIONS**

1. This approval is limited to that specified in the scope of work section of the approved maintenance training organization exposition as referred to in Section A of CAR-147(Basic), and
2. This approval requires compliance with the procedures specified in the approved maintenance training organization exposition, and
3. This approval is valid whilst the training organization remains in compliance with CAR-147 (Basic).
4. Subject to compliance with the foregoing conditions, this approval shall remain valid for duration as specified in the attached validity sheet, unless the approval is surrendered, superseded, suspended or revoked.

Date of original issue .....

Date of this revision.....

Revision No .....

Signed .....

**Government of India**  
**Directorate General of Civil Aviation**

**APPROVAL SCHEDULE**  
**BASIC MAINTENANCE TRAINING ORGANISATION**

Reference No: \_\_\_\_\_

[COMPANY NAME AND ADDRESS]

| CLASS -      | RATING                       | LIMITATION                                   |   |
|--------------|------------------------------|--|---|
| <b>BASIC</b> | B1 (*)                       | B1.1 (*)<br>B1.2 (*)<br>B1.3 (*)<br>B1.4 (*) | AEROPLANES TURBINES (*)<br>AEROPLANES PISTON (*)<br>HELICOPTER TURBINE (*)<br>HELICOPTER PISTON (*) |
|              | B2 (*)                       | B2 (*)                                       | AVIONICS (*)  |
|              | A (*)                        | A.1 (*)<br>A.2 (*)<br>A.3 (*)<br>A.4 (*)     | AEROPLANES TURBINES (*)<br>AEROPLANES PISTON (*)<br>HELICOPTER TURBINE (*)<br>HELICOPTER PISTON (*) |
| Examination  | Permitted/ Not Permitted (*) |  |   |

This Approval schedule is limited to those trainings and examination specified in the scope of work section of the approved maintenance training organization exposition.

Maintenance Training Organization Exposition reference: .....

Date of original issue .....

Date of last revision approved ..... Revision No .....

Signed

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

## **AMC to Appendix II to CAR 147 “Basic Maintenance Training Organisation Approval” referred to in CAR 147**

The following fields on page 2 “Approval Schedule – Basic Maintenance Training Organisation” of the organization approval certificate should be completed as follows:

- Date of original issue: It refers to the date of the original issue of the maintenance training organisation exposition.
- Date of last revision approved: It refers to the date of the last revision of the maintenance training organisation exposition affecting the content of the certificate. Changes to the maintenance training organisation exposition which do not affect the content of the certificate do not require the reissuance of the certificate.
- Revision No: It refers to the revision No of the last revision of the maintenance training organisation exposition affecting the content of the certificate. Changes to the maintenance training organisation exposition which do not affect the content of the certificate do not require the reissuance of the certificate.

**Appendix III**

**Certificates of Recognition referred to in CAR-147 – CA Form 148**

**1. Basic Training**

The CAR-147 basic training certificate template detailed is to be used for recognition of completion of basic training.

| <b>CERTIFICATE OF RECOGNITION<br/>                     CAR-147 APPROVED BASIC TRAINING COURSE</b>   |  |   |
|---|--|---|
| This certificate of recognition covers the theoretical and practical of the basic training course and is issued to:   |  |   |
|   | <input style="width: 100%;" type="text" value="NAME"/>   |   |
|   | <input style="width: 100%;" type="text" value="DATE and PLACE OF BIRTH"/>                      |   |
| <b>By:</b>  | <input style="width: 100%;" type="text" value="Basic Training organisation Name and Address"/> |   |
|   | <input style="width: 100%;" type="text" value="DGCA Approval Reference No"/>                   |   |
| A training organisation approved to provide training in accordance with the requirements of CAR-147 basic training.   |  |   |
| This certificate confirms that the above named person successfully passed the knowledge and practical elements* of the approved basic training course stated below and the related examinations in compliance with CAR-66.  |  |   |
| <table border="1" style="margin: auto; border-collapse: collapse;"> <tr> <td style="padding: 10px;">                     Basic Training course<br/>                     Start and end dates<br/>                     Specify knowledge elements and practical elements                 </td> </tr> </table> |  | Basic Training course<br>Start and end dates<br>Specify knowledge elements and practical elements |
| Basic Training course<br>Start and end dates<br>Specify knowledge elements and practical elements   |  |   |
| Date.....   |  |   |
| Signed.....   |  |   |
| For: [Basic Training organization name].....  |  |   |



## **AMC to Appendix III to CAR-147 “Certificates of Recognition referred to in CAR-147 – CA Forms 148”**

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

Some examples of cases where a DGCA CA 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.

It must be noted that “successful completion of a course” (without the module examinations) means successful completion of the theoretical and practical training including the corresponding practical assessment.

## Appendix to AMC

## Appendix- I

### MAINTENANCE TRAINING ORGANISATION EXPOSITION (MTOE)

1. The following subject headings form the basis of the MTOE required by CAR 147.A.140.
2. Whilst this format is recommended it is not mandatory to prepare the MTOE in this manner as long as a cross-reference index is included in the MTOE and the Part 1 items remain in Part1.
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 organization is approved in accordance with any other Civil Aviation Requirements, 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 organization chart
- 1.5 List of instructional and examination staff  
Note: A separate document may be referenced
- 1.6 List of approved addresses
- 1.7 Reserved
- 1.8 General description of facilities at paragraph 1.6 addresses
- 1.9 Specific list of courses and type examinations approved by DGCA
- 1.10 Notification procedures regarding changes to organization
- 1.11 Exposition and associated manuals amendment procedure

#### **PART 2 - TRAINING AND EXAMINATION PROCEDURES**

- 2.1 Organization 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)
- 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 Organization of examinations

- 2.10 Security and preparation of examination material
- 2.11 Preparation of examination rooms
- 2.12 Conduct of examinations
- 2.13 Control of basic practical assessments
- 2.14 Marking and record of examinations
- 2.15 Storage of examination records
- 2.16 Preparation, control & issue of basic training course certificates
- 2.17 Reserved

### **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 assessors
- 3.8 Records of qualified instructors and examiners

### **PART 4 - APPENDICES**

- 4.1 Example of documents and form used
- 4.2 Syllabus of each training course
- 4.3 Cross reference Index - if applicable

**Appendix II****CA Form 04****Directorate General of Civil Aviation**

Details of Management Personnel required to be accepted as specified in CAR 147 (Basic).

1. Name :

2. Position :

3. Qualification relevant to the item(2) position :

4. Work experience relevant to the item(2) position:

5. Signature :

Date:

On completion, please send this form under confidential cover to DGCA.

**For DGCA use only**

Name and signature of authorized DGCA Officer accepting this person:

**Signature:**

**Date:**

**Name:**

**Office:**



| <b>CAR-147 APPROVAL RECOMMENDATION REPORT CA-FORM 22</b>  |   |                          |                                       |                          |                          |                          |
|---|---|--------------------------|---------------------------------------|--------------------------|--------------------------|--------------------------|
| <b>Part 2: CAR-147 Compliance Audit Review;</b>   |   |                          |                                       |                          |                          |                          |
| The five columns may be labeled and used as necessary to record the approved training/examinations, facility reviewed. Against each column used of the following CAR-147 subparagraphs please either tick (√) the box if satisfied with compliance or cross (X) the box if not satisfied with compliance and specify the reference of the Part 4 finding next to the box or enter NIA where an item is not applicable, or NIR when applicable but not reviewed. |   |                          |                                       |                          |                          |                          |
| <b>Para:</b>  | <b>Subject:</b>                                     | <input type="checkbox"/> | <input type="checkbox"/>              | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 147.A100  | Facility requirements                               |                          |                                       |                          |                          |                          |
| 147.A.105   | Personnel requirements                              |                          |                                       |                          |                          |                          |
| 147.A.110   | Records of instructors, examiners and assessors     |                          |                                       |                          |                          |                          |
| 147.A.115   | Instructional equipment                             |                          |                                       |                          |                          |                          |
| 147.A.120   | Maintenance Training Material                       |                          |                                       |                          |                          |                          |
| 147.A.125   | Records   |                          |                                       |                          |                          |                          |
| 147.A.130   | Training procedures and quality system              |                          |                                       |                          |                          |                          |
| 147.A.135   | Examinations  |                          |                                       |                          |                          |                          |
| 147.A.145   | Privileges of the maintenance training organisation |                          |                                       |                          |                          |                          |
| 147.A.150   | Changes to maintenance training organisation        |                          |                                       |                          |                          |                          |
| 147.A.160   | Findings  |                          |                                       |                          |                          |                          |
| DGCA Officer(s):  |   |                          |                                       | Signature(s):            |                          |                          |
| DGCA office:  |   |                          | Date of CA-Form 22 Part 2 completion: |                          |                          |                          |

| <b>CAR 147 APPROVAL RECOMMENDATION REPORT CA-FORM 22</b>                                   |  |  |
|--|--|--|
| <b>PART 3: Compliance with CAR 147 Maintenance training organisation exposition (MTOE)</b> |  |  |
| <b>Part 1</b>  |  | <b>MANAGEMENT</b>  |
| 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<br>Note: A separate document may be referenced                   |
| 1.6  |  | List of approved addresses   |
| 1.7  |  | Reserved   |
| 1.8  |  | General description of facilities at paragraph 1.6 addresses   |
| 1.9  |  | Specific list of courses approved by the DGCA  |
| 1.10   |  | Notification procedures regarding changes to organisation  |
| 1.11   |  | Exposition and associated manuals amendment procedure  |
| <b>PART 2 TRAINING AND EXAMINATION PROCEDURES</b>  |  |  |
| 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 and practical training   |
| 2.6  |  | Records of training carried out  |
| 2.7  |  | Storage of training record   |
| 2.8  |  | Reserved   |
| 2.9  |  | Organisation of examinations   |
| MTOE Reference:  |  | MTOE Amendment:  |
| DGCA audit staff:  |  | Signature(s):  |
| DGCA office:   |  |  |

| <b>147 APPROVAL RECOMMENDATION REPORT</b>  |  | <b>CA-FORM 22</b>   |
|--|--|---|
| <b>PART 3: Compliance with 147 Maintenance training organisation exposition (MTOE)</b> |  |   |
| 2.10   |  | Security and preparation of examination material                    |
| 2.11   |  | Preparation of examination rooms                                    |
| 2.12   |  | Conduct of examinations   |
| 2.13   |  | Conduct of practical assessments                                    |
| 2.14   |  | Marking and record of examinations                                  |
| 2.15   |  | Storage of examination records                                      |
| 2.16   |  | Reserved  |
| 2.17   |  | Preparation, control & issue of basic training course certificates. |
| 2.18   |  | Reserved  |
| <b>Part 3 Training System Quality Procedures</b>                                       |  |   |
| 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  |
| 3.8  |  | Records of qualified instructors & examiners                        |
| <b>Part 4 Appendices</b>   |  |   |
| 4.1  |  | Example of documents and forms used.                                |
| 4.2  |  | Syllabus of each training course                                    |
| 4.3  |  | Cross reference Index – if applicable                               |
| MTOE Reference:  |  | MTOE Amendment:   |
| DGCA Officer:  |  | Signature(s):   |
| DGCA office:   |  | Date of CA- Form 22 Part 3 completion:                              |



| CAR 147 APPROVAL RECOMMENDATION REPORT  |  |                       | CA- FORM 22       |                |           |
|---|--|-----------------------|-------------------|----------------|-----------|
| <p><b>Part 4: Findings CAR-147 Compliance Status</b><br/>           Each level 1 and 2 findings should be recorded whether it has been rectified or not and should be identified by a simple cross reference to the Part 2 requirement. All non-rectified findings should be copied in writing to the organisation for the necessary corrective action.</p> |  |                       |                   |                |           |
| Part<br>2 or 3<br>ref   | Audit reference(s):<br><br><b>Findings</b> | L<br>e<br>v<br>e<br>l | Corrective action |                |           |
|   |  |                       | Date<br>Due       | Date<br>Closed | Reference |
|   |  |                       |                   |                |           |

**CAR 147 APPROVAL RECOMMENDATION REPORT  
CA- FORM 22**

**PART 5: CAR 147  
approval or continued approval or change recommendation**

Name of Organisation:

Approval Reference:

Audit reference(s):

Applicable CAR-147 amendment status:

The following CAR 147 scope of approval is recommended for this organisation:

Or, it is recommended that the CAR 147 scope of approval specified in CA Form 11A referenced ..... be continued.

Name of recommending DGCA Officer :

Signature of recommending DGCA Officer:

DGCA office:

Date of Recommendation:

CA-Form 22 review (quality check)

Date:

| <b>CA FORM 12a</b>  |  | <b>Appendix IV</b>   |  |
|---|--|--|--|
|   |  | <b>APPLICATION FOR CAR 147<br/>APPROVAL<br/>INITIAL/ CHANGE /RENEWAL<br/>OF APPROVAL</b> |  |
| 1.  | Registered Name of the Applicant   | :  |  |
| 2.  | Trading name (if different)  | :  |  |
| 3.  | Address(es) requiring approval   | :  |  |
| 4.  | Contact Details  |  |  |
|   | Telephone  | :  |  |
|   | Fax No   | :  |  |
|   | E Mail   | :  |  |
| 5.  | <p>Scope of CAR-147 Approval Relevant to this Initial*/Change/<br/>Renewal of* application</p> <p>Does the organisation hold approval under CAR-21*/CAR-145*/CAR-M*</p> <p>*Cross out whichever is not applicable.</p> |  |  |
| 6.  | Name and Position<br>of Accountable Manager  | :  |  |
| 7.  | Signature of Accountable Manager   | :  |  |
| 8.  | Date of Application  | :  |  |
| <u>This form should be sent with requisite fee to be paid to DGCA</u> |  |  |  |

## Appendix-V to AMC 147.A.105 (f)

### **Guidance for assessing the qualifications, skills, competency and the revalidation of CAR-147 Instructors, Knowledge Examiners and Practical Assessors**

#### **1 General**

- 1.1 This document is intended to provide guidance to CAR-147 training organizations, for the initial assessment of qualifications, competencies and skills for the appointment of Instructors, Knowledge Examiners and Practical Assessors. This document also provides guidance for the Continuance / Revalidation of existing CAR-147 Instructors, Knowledge Examiners and Practical Assessors.
- 1.2 The Assessment process and the Continuance / Revalidation process should be developed by the Maintenance Training Organization and referenced in the Maintenance Training Organization Exposition (MTOE).
- 1.3 Training organizations should retain a record of the Instructors, Knowledge Examiners and Practical Assessors training, qualifications and experience.
- 1.4 A record system should be established to record the skills, proficiencies and competencies for the continuance / revalidation of Instructors, Knowledge Examiners and Practical Assessors within the approved training organization. Periodicity of these checks should be recorded and retained in the individual's personal training record file.
- 1.5 The DGCA shall have access to these records during compliance audits.

#### **2. Definitions**

- 2.1 "**Expect**" and "**Should**" are used to indicate strong obligation.
- 2.2 "**May**" is used to indicate discretion.
- 2.3 **Qualification assessment:** A check of the authenticity of the applicants Curriculum Vitae (CV), Training certificates and experience.
- 2.4 **Revalidation Check:** A periodic review carried out by the training organization to check instructors' recency in accordance with the CAR-147 regulation.
- 2.5 **Scope of approval document:** A personal approval document indicates the scope of approval for each Instructor / Examiner / Practical Assessor. The document should list subjects and or modules that the individual is approved to deliver / examine / assess.
- 2.6 "**Shall**" and "**Must**" are used to indicate a mandatory requirement.
- 2.7 **Skills Test:** demonstration of knowledge and skill.
- 2.8 **Update training:** The scope of this training can include, but is not restricted to: changes in technologies, new instructional techniques and knowledge of aircraft maintenance processes etc.

#### **3. Instructor Requirements**

##### **3.1 General**

- 3.1.1 All Instructors, whether permanently or temporally employed, must have undergone an instructor techniques course and be able to demonstrate an understanding of the CAR-66 and CAR-147 regulatory requirements. Additionally they should have a practical working knowledge of the

Maintenance Training Organizations Exposition (MTOE) and associated training procedures.

- 3.1.2 All Instructors, Knowledge Examiners and Practical Assessors permanently employed within the CAR-147 must be listed in Part 1.5 of the MTOE, (List of Maintenance Training Instructors, Knowledge Examiners and Practical Assessors).
- 3.1.3 Instructors may also hold other positions within the training organizations, i.e. Knowledge Examiner, Practical Assessor; these other roles must be clearly identified against the individual within the MTOE.

### **3.2 Reserved**

### **3.4 Basic skills instructor**

- 3.4.1 The basic criteria for an aircraft Basic skills instructor must be, to either:
  - a) Comply with any of the requirements listed in 3.1 and
  - b) Hold a CAR 66 aircraft maintenance engineer license applicable to the relevant category/sub-category or
  - c) Provide evidence of previous employment as a basic mechanical or electrical engineering training instructor or
  - d) Provide evidence of previous employment as a technical training instructor
- 3.4.2 On meeting the criteria as stated above; the prospective instructor should attend training on the specific CAR 66 module to be taught. Ideally the Instructor should attend a number of lesson “sit-ins” of the specific CAR 66 module course he has to deliver, in a monitored environment, attended and assessed by either, the training manager, or his delegated representative, as part of the organisations assessment process, prior to the instructor being approved to deliver a course.

### **3.5 Update training for the instructor**

- 3.5.1 Update training should consist of 35 hours; it may be sub-divided during 24 months into more than one element and may include such activities as awareness of the latest training techniques, attendance at relevant lectures and symposiums etc. Records should indicate when update training was scheduled and when it took place for each instructor / examiner and practical assessor.

### **3.6 CAR-147 Requirements:**

- 3.6.1 All CAR-147 Instructors should be listed in Part 1.5 of the MTOE. (List of Training Instructors, Knowledge Examiners and Practical Assessors). This list should identify the scope of authorization for each instructor i.e. B1, B2, etc. The CAR-147 organization should ensure that the scope of authorization for each instructor, including any sub-contracted instructor, is current and applicable to the subject being taught.
- 3.6.2 The CAR-147 organizations should ensure that all staff remain conversant with the requirements of CAR-66 /CAR-147 and associated AMC’s and Guidance Material through update training.
- 3.6.3 CAR-147 training organizations that employ sub-contracted instructors should maintain a record of the courses instructed and identify the amount of experience gained in each discipline.
- 3.6.4 A record of instructor / examiner recency check should be retained, by the CAR-147 training organization, demonstrating at least 35 hours of update training carried out over a 24-month period.

## 4. Knowledge Examiner Requirements

### 4.1 General

- 4.1.1 All Knowledge Examiners must be able to demonstrate an understanding of the CAR-66 and CAR-147 regulatory requirements and a practical working knowledge of the MTOE document and associated training procedures.
- 4.1.2 All CAR-147 Knowledge examiners should be listed in Part 1.5 of the MTOE, (List of Training Instructors, Knowledge Examiners and Practical Assessors).
- 4.1.3 A Knowledge Examiner may also hold other positions within the training organization, i.e. Instructor or Practical Assessor; these other roles must be clearly identified against the individual within the MTOE.  
*Note: A Knowledge Examiner shall not prepare an examination question paper or invigilate an examination in a subject area where he/she has acted as an Instructor.*
- 4.1.4 An organization may appoint a Chief Knowledge Examiner. This person should submit a DGCA CA Form 04 to the DGCA for approval prior to inclusion into the MTOE Para 1.2.  
*Note: Knowledge Examiners listed in the MTOE Para 1.5, appointed by a Chief Knowledge Examiner, are not required to submit a DGCA CA Form 04.*

### 4.2 Qualifying the Knowledge Examiner

- 4.2.1 The Knowledge Examiner must be:
- a) Conversant with the type of course/s being taught  
and
  - b) Conversant with the CAR-66 syllabus that details the level of number and level of questions per module  
and
  - c) Able to compile multi choice question papers  
and
  - d) Able to mark and analyze the students responses and provide feedback to the instructor / training manager, detailing any inconsistencies with the examination results or process.

## 5. Practical Assessor Requirements

### 5.1 General

- 5.1.1 All CAR-147 nominated Practical Assessors, whether permanently or temporally employed, must demonstrate an understanding of the CAR-66 and CAR-147 regulatory requirements; additionally they should demonstrate a practical working knowledge of the MTOE document and associated training procedures.
- 5.1.2 Practical Assessors should be listed in Part 1.5 of the MTOE, (List of Training Instructors, Knowledge Examiners and Practical assessors). List should identify the scope of authorization for each Practical Assessor i.e. B1, B2, etc.
- 5.1.3 Practical Assessors may also hold other positions within the training organizations, i.e. Instructor or Knowledge Examiner; these other roles must be clearly identified against the individual within the MTOE.
- 5.1.4 The Practical Assessor should assist instructional personnel in developing the practical training tasks and assessment criteria.

5.1.5 An organization may appoint a Chief Practical Assessor; this person should submit a DGCA CA Form 04 to the DGCA for approval prior to inclusion into the MTOE Para 1.2.

**Note:** *Practical Assessors listed in the MTOE Para 1.2, appointed by the Chief Assessor are not required to submit a DGCA CA Form 04.*

## **5.2 Qualifying the Practical assessor**

5.2.1 The Practical Assessor must either:

a) Hold a current aircraft type authorization, issued by a CAR-145 organization, and successfully completed formal instructional / facilitators techniques course and completed an assessor training course.

Or

b) Hold a supervisory position or, a position of responsibility, as an avionic or mechanical practitioner within a CAR-145 maintenance environment and can prove practical experience of 6 months within the last 24 months.

Or

c) A person who has been nominated by a CAR-147 training organization and can demonstrate the experience and skills outlined in either a) or b) above.

5.2.2 All CAR-147 / CAR-145 nominated Practical Assessors should be listed in Part 1.5 of the MTOE. (List of Training Instructors, Knowledge Examiners and Practical Assessors). This list should identify the scope of authorization for each Practical Assessor i.e. B1, B2, etc.

## **6 The continuation of an Instructor, Knowledge Examiner and Practical Assessors authorization.**

### **6.1 General**

6.1.1 CAR-147.A.105 Personnel Requirements, states: "Instructors and Knowledge examiners shall undergo update 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".

This training should consist of a minimum of 35 hours within the 24-month period; in addition, training school personnel are to remain conversant with the latest revision of the CAR-147 regulations, AMC's, Guidance notes. They should also be conversant with the respective organizations MTOE and associated training procedures.

6.1.2 CAR-147 training organizations should ensure that personnel training records, including records of qualifications, update training and experience is retained for each Instructor, Knowledge Examiner and Practical Assessor.

## **7. Revalidation of Authorization**

### **7.1 General**

7.1.1 In order for an Instructor, Knowledge examiner or Practical assessor authorization to be revalidated following expiry/ withdrawal, the maintenance-training organization should implement a reinstating procedure that will cover the relevant training disciplines associated with the authorization concerned.

7.1.2 The criteria for reinstating should take into consideration the length of time the individual has been away from that specific training environment or discipline.

- 7.1.3 Any Instructor, Knowledge examiner or Practical assessor who has passed 24-month period without exercising the privileges of his authorization, as a minimum, must undergo 35 hours update training + Training School procedures and processes + 2 monitored training sessions with another instructor.