PERSONNEL

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Barbados Civil Aviation Department

BCAD Document PLAC-010

AIRCRAFT MAINTENANCE ENGINEER'S LICENSES

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CERTIFICATION PAGE

This document, hereafter known as the Aircraft Maintenance Engineer (AME) Licensing Standards Manual, sets out the standards, agreed to by the member states of the Regional Aviation Safety Oversight System (RASOS) and adopted by Barbados, for the training of candidates for Aircraft Maintenance Engineer Licences, as well as the procedures to be used in assessing the knowledge and skill level of applicants for the Licence. It also identifies the categories and ratings to be used, as well as the privileges, scope and limitations of the Licence.

Provided that the effective date of each page incorporated in this copy of the Manual is the same as the date entered in the List of Effective Pages, then this Manual is approved for use by the Barbados CAD as the official guidance document, ensuring a harmonized approach to the training and licensing of Aircraft Maintenance Engineers. This document must be read in conjunction with the applicable Barbados Civil Aviation Regulations.

All amendments to this document must first be approved by the Barbados CAD, on the recommendation of the Airworthiness & the Personnel Licensing division, and then authorized by the Director of Civil Aviation who will sign the Manual Revision Record (Page 4) and List of Effective Pages (Page 6).

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Director of Civil Aviation – DCA Barbados

MANUAL REVISION RECORD

On receipt of revisions, insert and remove the affected pages **immediately**. Enter the date on which the revision is inserted and the Revision number, then sign or initial for the entry. If a revision is not received, it may be requested from RASOS.

MANUAL NUMBER:

REVISION	APPROVED BY (Director of Civil Aviation)	EFFECTIVE DATE	ENTERED BY	SIGNATURE & DATE
Revision 0	**E .A. ARCHER**	**November 01, 2007**	**C. SIMMONS**	**C. SIMMONS 2007-11-01**
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NOTE: This page must not be replaced. It must be retained in the Manual and used to record all future revisions.

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E .A. ARCHER
Director of Civil Aviation – DCA

2007-10-30
Date

PART I – GENERAL

1.1 APPLICABILITY

1.1.2 This AME Licensing Standards Manual, applies to the following:

(a) Applicants for Aircraft Maintenance Engineer Licences who are either citizens of Barbados, or prospective contract maintenance employees of operators holding Air Operator Certificates from Barbados.

(b) Holders of Aircraft Maintenance Engineer (AME) Licences issued by Barbados.

(c) Organizations, presently providing, or wishing to provide in the future, training programs for Aircraft Maintenance Engineer candidates.

(d) Operators of aircraft registered in Barbados and holders of Air Operator Certificates issued by Barbados.

1.1.3 The contents of Part I of this document are a synopsis of the applicable sections of the Civil Aviation Regulations governing the Licensing requirements of the Barbados. Parts II, III, IV, & V, as well as the Appendices following, detail the standards and procedures for training, examination and licensing, along with the responsibilities, privileges and limitations that apply to an AME Licence, as agreed to by the Barbados for common use.

1.2 THE AIRCRAFT MAINTENANCE ENGINEER LICENCE

1.2.1 Civil Aviation Regulations dictate that no person shall exercise the privileges of an Aircraft Maintenance Engineer (AME) Licence with respect to aircraft registered in a Barbados, unless that person;

(a) holds a valid and current AME Licence issued pursuant to the Civil Aviation Regulations of that state; or

(b) holds an equivalent Licence from another contracting state, validated by the regulatory body of the Barbados; and

(c) exercises the privileges in accordance with the ratings and limitations endorsed on the Licence, while conforming to the standards detailed in this document.

1.3 REGULATORY REQUIREMENTS

1.3.1 The applicable Civil Aviation Authority (hereinafter referred to as the Authority) shall, on receipt of an application submitted in the form and manner prescribed, take such actions as may be necessary to verify that the applicant satisfies all the requirements specified in the Civil Aviation Regulations and in Part III, Section 3.2 of this document. After such verification, the Authority may grant an Aircraft Maintenance Engineer Licence to the applicant, or endorse the applicant's Licence with a type rating as applicable.

1.3.2 Prior to being granted a Licence, the applicant is required to provide to the Authority, along with the application, documentation that establishes the following:

(a) The applicant's identity,

(b) Proof that the applicant meets the requirements in respect of;

(i) minimum age

(ii) training

(iii) knowledge

(iv) experience

(v) skill

1.3.3 Notwithstanding the above, the Authority is responsible for ensuring, as much as is possible, that any person that is granted an AME Licence is a person fit to exercise the privileges that accompany the Licence.

1.4 PERIOD of VALIDITY of an AME LICENCE

1.4.1 Subject to the recency requirements of Part III, Section 3.4, an Aircraft Maintenance Engineer Licence will remain valid for two years from the date of issue or renewal of the Licence.

PART II - APPROVED TRAINING

2.1 REQUIREMENT FOR COURSE APPROVAL

2.1.1 Pursuant to the applicable Civil Aviation Regulations, no course will be accepted for the purposes of this document as an Aircraft Maintenance Engineer (AME) training course, either for basic training, or type rating endorsement, unless that course has first been approved by the Authority.

2.1.2 Only courses meeting the standards detailed in Appendix "B" will be approved.

2.1.3 The Authority may, at its discretion, exempt a person from attending a basic course if the person can demonstrate to the satisfaction of the Authority that, he/she, under the guidance and supervision of a licensed aircraft maintenance engineer, has completed:

(a) a structured program of self-study, utilizing such reading material as may be specified for a student on an approved course;

(b) a satisfactorily documented on-the-job training program: and

(c) at least four years work experience, on a broad range of tasks, in aircraft maintenance.

2.1.4 No person shall be considered for the addition of a type rating to a Licence unless that person has satisfactorily completed an ATA 104 Level III standard type rating endorsement training course, approved by the Authority, or;

(a) In the case of single piston engine powered aircraft with an MCTOM of 2730 kg or less, satisfactory completion of an approved Basic Aircraft Maintenance training course, along with an oral examination and demonstrated compliance with the experience requirements detailed in Appendix "A", will be considered sufficient basis on which to grant a type or class rating.

(b) For piston-engine powered aircraft with an MCTOM greater that 2730 kg but no more than 5700kg, if there is no available type course, then an approved self-study program including a minimum of six months on-the-job training on the aircraft type, completed under the guidance of an AME, may be accepted as a substitute.

2.2 **APPROVAL OF COURSES** (*Refer to Appendix "B" for further details*)

2.2.1 Persons applying for approval of a course shall submit the following details for review prior to the scheduled start of the course as stated in the regulations of the applicable state:

(a) the course syllabus, including the number of hours assigned to each topic;

(b) the location and a general description of the training facility;

(c) the credentials of the instructor, or the organization, providing the course;

(d) a full set of the documentation to be used on the course; and

(e) confirmation that an Airworthiness Inspector may attend the first course at the applicant's full cost, in order to have the course evaluated for approval.

PART III – OBTAINING AN AME LICENCE

3.1 GENERAL

3.1.1 This section explains the procedures for the issue, endorsement, or renewal of an Aircraft Maintenance Engineer (AME) Licence.

3.2 REQUIREMENTS FOR THE GRANT OF A LICENCE

3.2.1 The Application Process:

(a) Applications must be submitted on an "AME Licence Application" form, issued by the Authority. An AME Logbook, or other appropriate document, showing the applicant's experience and certified by a supervising AME, as well as any applicable training records, must be submitted for review along with the application.

(b) All supporting documents shall be either original documents, or be notarized as certified true copies of the original documents. They shall not be in abbreviated or coded form and must either be in the English language or be a translation certified by an accredited translator.

(c) Following a review of the application and supporting documents by the Authority, the application shall be approved if satisfactory, the original documents, such as a Passport, certificate, or identification card, shall be returned and the applicant advised when he/she may sit the required examinations. The application shall remain valid for twenty-four (24) months after the date that the application is approved.

(d) Where all the requirements are not met within twenty-four (24) months, credit for any successfully completed examinations shall be forfeited and a new application must be submitted if the applicant wishes to re-start the process. The new application shall be examined against the requirements in effect at the time of submission.

(e) An applicant who satisfies the requirements for the basic Licence can be granted an additional twelve-month period to complete any aircraft type rating applied for if the application included a request for a type. Except for the aircraft type course, all other requirements have to be met within the initial twenty-four month period.

(f) In order to be issued an AME Licence, an applicant must provide proof of identity and age and must be eighteen (18) years of age or more.

(g) The following may be accepted as proof of identity and age:

(i) A valid passport;

(ii) A valid aviation personnel Licence; or

(iii) A Government-issued picture ID card.

(h) For an aviation personnel Licence to be used, issued by a state other than a Barbados, it must show the date of birth. If the date of birth is not shown, then a Birth Certificate must accompany the Licence.

3.2.2 Training Requirements:

(a) An applicant shall undergo training that meets the standards set out in this document.

(b) Appendix "A" of this document lists the various categories and groups and contains tables that set forth the requirements applicable to each. All applicants shall meet the following requirements:

(i) *Basic Training* - Applicants for the initial grant of an AME Licence shall have satisfactorily completed an approved basic aircraft maintenance training course, in either airframes and power plants, or avionics systems, as applicable. (NOTE: *Refer to Part II, Paragraph 2.1.3, for exceptions*)

(ii) *Type Training* - Where the table of requirements indicates a need for type or group training, the applicant must have satisfactorily completed an appropriate course of training as per Appendix "B" of this document.

3.2.3 Knowledge Requirements

(a) Applicants shall successfully complete written and/or oral examinations on the topics specified in the applicable table of requirements contained in Appendix "A" of this document. Written examinations will include multi-choice papers as well as short-answer essay papers. In the case of applications for additional ratings, categories, or licence groups, credit shall be given for the examinations previously passed in respect of the licence and group(s) already held.

(b) Applicants who fail an examination on the first attempt shall not be examined again on the same subject sooner than fourteen (14) days following the failure. Applicants who fail an examination on the second or subsequent attempt shall not be examined

again on the same subject sooner than thirty (30) days following the failure. An applicant who fails an examination six (6) times will be required to demonstrate that he has received approved remedial training before being allowed to sit the examination again.

3.2.4 Experience Requirements:

(a) Applicants shall have acquired the amount and type of maintenance experience specified in the table of requirements contained in Appendix "A" of this document.

(b) At least six (6) months of the experience claimed shall be in civil aviation maintenance. (NOTE: *Ex-military applicants will receive full credit for all maintenance experience obtained while serving in the military. However, they must complete six months civil experience before being granted a Licence*.)

(c) For all applicants, at least twelve (12) months of the experience claimed must have been on aircraft that have been issued a type certificate by a contracting state.

3.2.5 Skill - Maintenance Tasks:

(a) Applicants for initial issue of a Licence, or for additional ratings in a new group, shall provide proof of having performed a representative selection of maintenance tasks (*Ref. Appendix "H"*) over the full range of applicable systems or structures.

(b) Each task shall be carried out at least once under the direct supervision of an AME, or of another competent individual, trained and experienced on the task being performed. The AME will certify for task completion in the applicant's personal logbook or worksheets (*See Part III, Subsection 3.2.6*) only when he is satisfied with the applicant's competence.

(c) It is not intended that the applicant complete every task listed. However, the quantity and variety of the tasks, certified in the documents presented, must be representative of the work carried out over the applicable period, and must be enough to convince the Authority that the practical experience gained by the applicant is satisfactory.

(d) Each applicant shall also be required to present proof to the Authority that a minimum of ten (10) tasks, which together constitute a true test of his/her proficiency, have been observed and certified by a Maintenance Skill Test Examiner (MSE), appointed by the Authority (*as shown in Appendix "G"*), or by an Aviation Safety Inspector.

(e) Certification by the MSE shall indicate that, in relation to the task, the applicant is competent to:

- **identify** the correct reference document for the performance of the task;
- **select** the proper tools, equipment and materials, and use them as designed;
- **perform** the task correctly without supervision; and
- **complete** the necessary documentation.

(f) Each applicant must be able to read, understand and write the English language with proficiency, in order to interpret maintenance manual instructions, to make satisfactory entries in an Aircraft Logbook, and to complete written reports when necessary as a Licence holder.

3.2.6 Applicant's Work Records

(a) A detailed record of tasks completed, representative of the applicant's experience, must be recorded and certified in a personal logbook, or on other suitable documentation. The aircraft registration and date completed must be included.

(b) The supervising AME, who certifies the tasks, shall be held responsible for the accuracy of the entries in the applicant's records regarding tasks completed while the applicant was under his/her supervision. This person shall also be held responsible for the competency of the applicant in carrying out those tasks.

3.3 TYPE RATING

3.3.1 To obtain a type-rating endorsement the holder must satisfy the following:

(a) For aircraft with an MCTOM greater than 2730 kg but not more than 5700kg, where there is an approved type endorsement course available, meeting the standards in Appendix "B", the applicant will be required to attend the course and obtain a pass mark of at least 75% in a closed-book examination. Where there is no type course available on a particular aircraft type, the applicant will be required to sit an oral examination conducted by a panel of one or more Inspectors.

(b) For single piston engine powered aircraft, with an MCTOM of 2730kg or less, the oral examination that the applicant is required to sit for the initial airframe Licence will include questions on this class of aircraft.

(c) All applicants for type ratings are required to prepare a set of worksheets showing the amount of experience that the applicant has obtained on the aircraft type. Each task entered on these worksheets must include the aircraft registration, date the work was completed and the signature of the supervising AME.

(d) All applicants must submit a completed application form, along with the worksheets, course certificate and proof of grade achieved (where applicable), and the appropriate fee, to the Authority.

3.3.2 A person who has met all the requirements of Part III, Section 3.2, passed both the airframes and engines examinations, and who has acquired the necessary experience on a variety of small aircraft, will have a type rating for one or more aircraft and engine types included on the Licence on initial issue.

3.4 RENEWAL OF A LICENCE

3.4.1 Expiry Date:

(a) The AME Licence contains an expiry date that will normally remain constant as to month and date for each period of validity, except in the case of Part III, Subsection 3.4.3(b) below.

(b) Application for renewal can be made by completion and submission of an ”AME Licence Application” form. Where such application is made prior to the expiration of the Licence, the anniversary date shall remain the same.

(c) The Licence may be renewed at the same time as endorsement for additional ratings or change of address if this occurs within the sixty (60) days immediately prior to expiry.

3.4.2 Application Form Completion:

(a) Details of any training and experience gained since the last application shall be entered in the appropriate section of the form.

(b) The form shall be signed and dated by the applicant.

(c) No application form will be processed unless the renewal fee has been paid.

3.4.3 Requirements for Renewal:

(a) In order to have an AME Licence renewed, the holder must demonstrate to the Authority that he has, over a period of at least six (6) months during the preceding twenty-four (24) months;

(i) performed maintenance on aircraft, or

(ii) supervised the performance of aircraft maintenance, or

(iii) supervised, in an executive capacity [*Ref. Part III, Subsection 3.4.3(c)]*, an aircraft maintenance function, or

(iv) served as an aviation maintenance instructor, or

(v) supervised another aviation maintenance instructor in an aircraft maintenance training course provided by an approved training organization; or

(vi) carried out inspections on aircraft for the purpose of determining airworthiness, or served as a Government Aviation Safety Inspector.

(b) Where the applicant's Licence has expired for -

(i) two years or less, the new bi-annual renewal date shall be the date that the application is approved.

(ii) more than two years, the application may be approved if the applicant can demonstrate that during the elapsed period he has been carrying out one of the functions above while holding a valid Licence from another contracting state.

(c) With reference to Part III, Subsection 3.4.3 (a), the term "executive capacity" includes managerial, regulatory or administrative responsibility for the technical aspects of aviation maintenance but does not include non-technical executive responsibilities.

(d) An AME, unable to meet the requirements for renewal of Part III, 3.4.3 (a) may regain eligibility for renewal by –

(i) performing aircraft maintenance under the supervision of another AME for a minimum period of six (6) months, provided that the second AME is the person certifying the application form attesting to his competency; and

(ii) successfully completing an examination (oral or written, at the discretion of the Authority) on Air Regulations.

3.5 RECENCY REQUIREMENTS

3.5.1 An AME shall not exercise the privileges of his type-rated Licence, or company Type Approval, unless:

(a) within the preceding two (2) years, he/she has been engaged in some form of aircraft maintenance, such as inspection, servicing, or repairs, for at least six (6) months; and

(b) the expiry date of the Licence has not passed.

3.6 CHANGE OF LICENCE INFORMATION

3.6.1 Each AME shall notify the CAD in writing, within thirty (30) days, of any change in permanent address.

3.6.2 An AME who wishes to change the name shown on his/her Licence because of marriage, court order, or other reason, shall submit the request in writing along with documentary evidence of the necessity for the change.

3.6.3 A lost, damaged, or destroyed AME Licence, shall be replaced upon submission of a declaration to that effect, along with the appropriate replacement fee.

3.7 VALIDATION OF FOREIGN LICENCES

3.7.1 A foreign AME Licence will only be validated where an operator is able to demonstrate to the Authority that there is no other option available to the operator, and where such validation will not be required for a period greater than six months.

3.7.2 An applicant for a validation must hold a current and valid Licence, issued by an ICAO contracting state, which meets or exceeds the requirements of ICAO Annex 1.

3.7.3 An applicant may be required to sit and pass an examination on local Air Regulations prior to being granted a validation.

3.7.4 If an applicant for a validation does not meet the requirements as set forth in Part III, Subsection 3.7.1 and 3.7.2, then he/she will also be required to successfully complete short-answer essay and oral examinations before being granted a validation.

PART IV - CERTIFICATION PRIVILEGES & LIMITATIONS

4.1 PRIVILEGES OF AN AME LICENCE

4.1.1 General

(a) The primary function of an AME is to certify for the completion of maintenance tasks performed on aeronautical products or components of the type indicated on the Licence. This may take the form of a Certificate of Release to Service (CRS), a Maintenance Release, a Duplicate Inspection, or a Certificate of Fitness for Flight.

(b) Pursuant to the Civil Aviation Regulations, only an individual holding a valid, current and appropriately type-rated AME Licence may exercise certification privileges with respect to the completion of the tasks listed in Paragraph 4.1.1(a).

4.1.2 Maintenance Release

(a) A person signing a **Maintenance Release** is certifying that the maintenance task to which the Release refers, being a task performed on an aircraft registered in a Barbados, its power plant (s), its avionics systems, or on any of its components, or appliances, has been performed in accordance with the manufacturer's instructions and the requirements of the Civil Aviation Regulations of the State of Registry.

(b) When issuing a Maintenance Release for work performed by others, the Licence holder assumes responsibility and must therefore satisfy himself that the work has been completed to the manufacturer's instructions and that all applicable regulatory requirements have been met before certifying.

(c) A Maintenance Release may be entered on a worksheet, job card, or the current page of an aircraft's Technical Logbook.

(d) A Maintenance Release for Non-Destructive Testing (NDT) may only be issued by an AME if he/she is the holder of an appropriately type-rated Licence, and is restricted to inspections done by the Colour Contrast Dye Penetrant technique using a Field Kit. All other certifications for NDT must be done by an appropriately approved/authorized person, working under the authority of an AMO, with the CRS for the aircraft being completed in the Technical Log by an AME.

4.1.3 Certificate of Release to Service

(a) An aircraft must not fly, after any maintenance task has been performed, unless a Certificate of Release to Service has been entered in the Technical Logbook by an AME who has affixed his signature, Licence number, the date, the reason for the completion of and the details of, the maintenance task performed.

NOTE: *This does not apply to elementary tasks performed on a private aircraft, with an MCTOM of 2730 kg or less, by the owner or operator holding a valid pilot's Licence*.

(b) A person signing a Certificate of Release to Service is certifying that the aircraft conforms to its applicable Type Certificate, that all required maintenance tasks have been completed as required and that the aircraft, including its power plant(s), components, equipment, appliances and systems, is in all respects fit for flight;

(c) A Certificate of Release to Service shall only be issued when the signatory is satisfied that all maintenance tasks, scheduled or unscheduled, have been properly carried out and accurately recorded, and that the testing of any affected systems and return of the aircraft to a serviceable state has been completed, with due regard to the use of;

(i) up-to-date instructions including manuals, drawings, specifications, any mandatory modifications/inspections and company procedures;

(ii) recommended tooling and test equipment which is currently calibrated where applicable, the correct replacement parts and materials; and

(iii) a working environment appropriate to the work being carried out.

4.1.4 Duplicate Inspection

(a) Whenever any system which can change *the flight path, attitude, or propulsive force* of an aircraft, is disturbed (including the flight, engine and propeller controls, the related system controls and associated operating mechanisms), *or whenever any defect is reported* on such a system, a Duplicat*e* Inspection of the system is required after re-assembly, or after satisfactory inspection if no re-assembly is required, and prior to flight.

(b) A Duplicate Inspection is first carried out and certified by one appropriately rated AME and then subsequently carried out and certified by *a second appropriately rated AME who took no part in the re-assembly*. The two inspections must be carried out as near as is practicable after each other and the system must not be disturbed

between the first and second inspections or the full Duplicate Inspection will have to be done again. (NOTE*: See Appendix "C").*

(c) A person signing a **Duplicate Inspection** is certifying that the affected system has been inspected for condition, assembly, installation, and correct functioning.

(d) The Inspection consists of a visual portion to ensure that the disturbed elements of the control path have been re-assembled correctly, have been routed and secured as per the Maintenance Manual and are free to move as designed. It also consists of an operational portion, or function check, to ensure that the controls operate freely and function as designed. Each AME must carry out each part independently of the other person.

(e) After assembly and before the first flight after major overhaul, a Duplicate Inspection is required of all vital points along the entire control path of all systems described in Paragraph 4.1.4 (a) above. A check to ensure full freedom and correct operation of each system must be done after all covers and fairings are installed. This is the final operation done to establish the integrity of the system.

(f) In the event that a system has only been disturbed at one or two points, the visual part of the Inspection may be done at those points only, however, the operation of the complete system must be checked for full freedom and correct function.

(g) Each type of aircraft will have "**vital points**", the integrity of which is critical to the continued airworthiness of the aircraft, in addition to the systems mentioned in Paragraph 4.1.4 (a), where a duplicate inspection may be required after any maintenance task has been completed. These points must be identified and listed by the operator in the Approved Maintenance Program for the aircraft.

4.1.5 Flight Release Certificate

(a) A Flight Release Certificate , signed by an appropriately type-rated AME, indicates that an aircraft is safe for flight, and that it may, under the authority of a Flight Release Certificate issued by the Authority, be released for non-revenue flight.

(b) A Certificate of Fitness for Flight is NOT a Flight Authority in its own right. It is issued by an AME where an aircraft does not have a valid Certificate of

Airworthiness but is required to fly for maintenance purposes and has been inspected by the AME and found to be safe for the intended ferry flight.

(c) Prior to a maintenance ferry flight, the owner/operator must request a Flight Release Certificate from the Authority. The Authority may then issue the Flight Permit with one of the conditions being that a Certificate of Fitness for Flight is issued prior to flight.

4.1.6 Aeronautical Product Categories & Privileges

(a) The **privileges** of an AME Licence holder may be exercised with respect to the following Categories of aeronautical products, or components thereof, when the applicable Category is designated on the Licence;

(i) Category "**A 1**" Airframes (*Non pressurized*)(*Fixed Wing and/or Rotary Wing*).

(ii) Category "**A 2**" Airframes (*Pressurized*)(*Fixed Wing and/or Rotary Wing*).

(iii) Category "**C 1**" Power Plants (*Piston Engines only) or* (*Turbine Engines only*).

(iv) Category "**C 2**" Power plants (*Piston Engines and Turbine Engines)*

(iii) Category "**E**" Avionics Systems (*E1=Excluding Auto Flight//E2 = Including Auto Flight*).

(b) The scope of the privileges is indicated by **ratings** endorsed on the Licence for the specific product or class of products, examples of which may be;

(i) C206 - Referring to the Cessna 206 airframe

(ii) DHC6 - Referring to the De Havilland Twin Otter airframe

(iii) PT6A - Referring to Pratt & Whitney PT6A Turbine Engines

(iv) "Compass Compensation & Adjustment"

(v) "All Single Piston-Engine Fixed Wing Aircraft of 2730 kg or Less MCTOW"

(c) Where an AME does not meet all the requirements for a particular rating, the Licence may, at the discretion of the Authority, be endorsed with a **Limitation** that restricts the AME to those privileges for which the AME is qualified. Examples of Limitations are:

(i) An "**A1**" Licence – *"Limited to non-pressurized airframes only"*.

(ii) A "**C1"** Licence – *"Limited to piston engines only"*.

(d) More explicit details of the Privileges specific to each Licence Category and Rating may be found in Part IV, Section 4.3 and Appendices "F" and "J" of this document.

(e) An employee of the Civil Aviation Authority who is the holder of an AME Licence is not allowed to exercise the privileges of his/her Licence except to certify for work that he/she has done on a Private category aircraft owned and operated by that employee.

4.2 RESPONSIBILITIES AND LIMITATIONS

4.2.1 The holder of a type-rated Licence may only issue certifications as defined in Section 2.0 of this Part. Certification is restricted to repairs, replacements, modifications, mandatory inspections, scheduled or unscheduled maintenance inspections, or any other tasks as described in the Aircraft manufacturer's Maintenance or Service Manuals, FAA Advisory Circular AC43.13-1B/2A as amended, or the equivalent publication issued by the European Aviation Safety Agency (EASA) or Transport Canada. When making these certifications, the holder of a type-rated Licence is responsible for the **Condition**, **Assembly, Installation and Functioning,** of all parts of the airframe, power plant, or avionics system, as applicable, affected by the work carried out.

4.2.2 The holder of a type-rated "A" Licence may NOT issue a Maintenance Release, or Certificate of Release to Service (CRS), in respect of an airframe or component where work has been done involving the repair, replacement, or modification, by riveting, bonding, welding, or laminating, or the manufacture of;

i. a fuselage longeron (stringer), or frame;
ii. a box or truss beam, wing stringer or chord member, wing main rib, or spar;
iii. a seat support brace or bracket;
iv. an engine mount assembly or part thereof;
v. repairs to fiber-reinforced plastic/epoxy primary structures;
vi. covering of a complete fuselage or airfoil with cotton, linen, polyester, or glass-fiber fabric;
vii. disturbing of individual parts of units which are supplied as bench-tested units, except for the replacement or adjustment of items normally replaceable

or adjustable in service where subsequent functioning may be proved without the use of test apparatus used for normal functioning check;

viii. repairs to any surface, of damage extending more than six inches (6") in length in any direction, where the surface is subject to pressurization loads;

ix. any repair to aircraft skin, whether or not subject to pressurization loads, where the use of a support, jig, or fixture is required;

4.2.3 The holder of a type-rated "C" Licence may NOT issue a CRS for;

i. repairs to a wooden, or composite bladed, propeller;

ii. re-assembly of the crankcase of a reciprocating engine;

iii. overhaul or re-assembly of a turbine engine or turbine engine module;

iv. repairs to a propeller that is beyond the limits recommended in the manufacturer's maintenance manual or service instructions;

v. re-assembly of a controllable pitch or variable-pitch propeller;

vi. an engine mount assembly or part thereof.

4.2.4 The holder of a Category "A" Licence may issue Certificates of Release to Service, in relation to aircraft for which the Licence is Type-rated, for the replacement of instruments, and the replacement of such parts in the electrical, automatic pilot and radio systems;

i. as are included in the syllabus for the approved type course attended;

ii. that do not require the use of specialized test equipment*; and

iii. that can be tested using the aircraft's systems on the ground.

(*NOTE: *The multi-meter (AVO), when used for continuity checks and to confirm voltage, but not for adjustments or specific readings, and the Pitot-Static test set when used for leak testing only, are not considered specialized test equipment and may be used by an AME. However, the AME must first have been trained in the use of the specific Pitot-Static test set*.)

4.2.5 The holder of an "E" Licence may issue a Maintenance Release for work carried out on any aircraft system covered under the group or groups for which his/her Licence is endorsed, provided that for a fixed wing aircraft, it has an MCTOM of 5700 kg or less, and for a rotary wing aircraft, an MCTOM of 2730 kg or less. For a fixed wing aircraft with an MCTOM of more than 5700 kg (or 2730 kg for a rotorcraft), the holder of an "E"

Licence must have received a type endorsement course on that aircraft prior to making any certification. The Licence holder must retain documentary proof of the successful completion of each endorsement course on his training file. Certification privilege for an "E" Licence is limited to the removal and replacement of components, system testing, troubleshooting, repairs to wiring, connectors, or installations, as well as any calibration or adjustment described in the Aircraft Maintenance Manual. The holder is NOT allowed to open any component, or to carry out any repair to a component, unless the procedure to be carried out is specifically defined in the Aircraft Maintenance Manual.

4.3 AME LICENCE GROUPS AND RATINGS

4.3.1 Groups and Classes

(a) With respect to the endorsement of AME Licences, aircraft and other aeronautical products are divided into groups as indicated in Appendix "A".

(b) Some types of small aircraft are eligible to be grouped together under a single rating due to their similarity and simplicity of design and construction. With such a rating, a Licence holder has certification privileges for any aircraft falling within that class or group (*e.g. "All single piston-engine aircraft with an MCTOM of 2730 kg or less"*). The rating must be clearly defined on the Licence.

4.3.2 Individual Type Rating Designators

(a) Aircraft types are identified on the Licence by ICAO alpha-numeric designators. When an AME Licence is endorsed with a type designator (e.g. "**C206" -** *representing the Cessna 206*), the Licence holder may exercise the privileges of the Licence only in respect of the type, or types, shown on the Licence. The designators used will be those issued by ICAO in **Doc 8643**. Aircraft with an MCTOM greater than 5700 kg will not be endorsed on any AME Licence issued after January 31, 2007. Any work performed on aircraft of that size must be certified by an Approved Maintenance Organization (AMO), or an AOC holder approved to use an "equivalent system of maintenance".

(b) Training details concerning particular ratings are found in the Table of Requirements (Appendix A), which should be read in conjunction with Appendix "B".

4.3.3 Rotorcraft Ratings

(a) An applicant for a rotorcraft type rating must first successfully complete an approved training program that includes rotorcraft flight control systems, rotor blade maintenance, rotor head and power transmission design and operation, along with the required practical experience, before being allowed to sit the examination.

(b) An applicant who has successfully completed an approved basic maintenance training course and an "A" Licence examination that covers both fixed-wing and rotorcraft, will be eligible, after all type training, work experience and oral examination requirements have been met, to hold both rotorcraft and fixed-wing ratings.

4.3.4 Compass Compensation & Adjustment

(a)In order to obtain a Compass Compensation endorsement, an applicant must;

(i) be the holder of an "E" Licence, or type-rated "A1/2" Licence;

(ii) present documented evidence of training in direct-reading compass compensation, given by the holder of a valid Licence, endorsed for that rating, or by a qualified instructor,

(iii) present evidence of completion of at least two (2) supervised compass swings, carried out under supervision, on two aircraft during the preceding six (6) months; and

(iv)submit a properly completed Aircraft Maintenance Engineer's Licence application form, together with the required fee and his/her Licence, to the CAA licensing office.

4.4 APPROVED MAINTENANCE ORGANIZATIONS

4.4.1 General

(a) The Authority may, at its discretion and under the conditions established within the Regulations, grant authority to an Approved Maintenance Organization (AMO), or to an operator who has it's own approved maintenance organization, to issue certification privileges to Aircraft Maintenance Engineers permanently employed by that entity.

(b) When such authority is given, the head of the Quality Department of the AMO is charged to carry out the function using the same criteria that the Authority uses when issuing a type rating to an AME, as defined in the procedures approved by the Authority for the operator. These privileges will apply only to aircraft maintained by the AMO and will exist only while the AME is employed to that AMO.

PART V - PERFORMANCE STANDARDS

5.1 GENERAL

5.1.1 Continuing Airworthiness – Instructions, Tools & Materials

(a) Each person performing preventative maintenance, corrective maintenance, or modifications, on an aircraft, engine, propeller, or related component, shall use the methods, techniques and practices prescribed in the current manufacturer's maintenance manuals, or instructions for Continued Airworthiness, prepared by its manufacturer, or other methods, techniques and practices approved by the Authority (*Ref. Paragraph 5.1.1 (c) below*) and documented in the operator's Maintenance Control Manual where applicable. He/she shall use such tools, equipment and test apparatus as is necessary to assure completion of the work in accordance with accepted industry practices. Where the use of special equipment or test apparatus is recommended by the aircraft manufacturer, or by an equipment manufacturer, then only that equipment or apparatus, or an equivalent approved by the Authority, must be used.

(b) Each person performing preventative maintenance, corrective maintenance, or modifications, shall do that work in such a manner, and use materials of such a quality, that the condition of the aircraft, airframe, engine, propeller, or related component worked on, will be at least equal to its original or properly altered condition (with regard to aerodynamic function, structural strength, resistance to vibration and deterioration and all other qualities affecting airworthiness).

(c) Acceptable methods, techniques, and practices for the maintenance of aircraft and aircraft components may be found in the FAA Advisory Circular AC 43.13-1B/2A as revised, published by the United States Department of Transport, or the equivalent document when published by the European Aviation Safety Agency, or Transport Canada.

5.1.2 Criteria for Performing Inspections

(a) Each person performing an inspection, required either by the scheduled maintenance program, or by an unscheduled event, shall perform the inspection;

(i) so as to determine whether the aircraft, or portions thereof under inspection, meets all applicable airworthiness requirements; and

(ii) in accordance with the instructions and procedures specified in the aircraft's approved maintenance manual.

(b) Each person performing periodic inspections (weekly, 100-hour, annual, etc.,) shall do so using an approved checklist, which;

(i) may be provided by the manufacturer, or prepared by the operator, or AMO, provided that it is no less restrictive than the manufacturer's checklist and has been approved by the Authority; and

(j) must include the scope and detail of the items being inspected.

(c) Each person issuing a CRS for a 100-hour, annual, or higher inspection, shall ensure that on completion of the inspection the aircraft's engine(s) are run and that function checks are done on all critical systems, to ensure satisfactory performance in accordance with the manufacturer's recommendations.

5.2 MAINTENANCE RECORDS

5.2.1 General

(a) Civil Aviation Regulations require that no person make, or cause to be made, in any aircraft maintenance document, any -

(i) fraudulent, intentionally misleading, or false entry, in any record or report that is required to be made, kept, or used to show compliance; or

(ii) reproduction or alteration, for fraudulent purpose, of any record, report, or entry; or

(iii) change to any entry which hides or obliterates the entry.

(b) All entries should be made in English, in block capitals, using black or dark blue indelible ink.

5.2.2 Responsibility for Recording Work

(a) Whenever work is carried out on an aircraft, it is the responsibility and duty of each AME involved, to ensure that an adequate record of the work carried out is maintained. This is particularly important where such work carries on beyond a working shift or day, or is handed over from one person to another.

(b) The work accomplished, even if only disassembly or disturbance, should be recorded at the end of each work period, or prior to undertaking a disassociated task and should include open entries to reflect the restorative action required prior to aircraft release. It is also the duty of each AME to consider the effect such work may have, directly or indirectly, on items which fall under the responsibility of other persons.

5.3 AME DUTY PERIOD LIMITATIONS

5.3.1 In recognition of the deteriorating effect of extended working periods on the efficiency and clarity of thought of the human mind, and therefore in the interests of safety, it is necessary to limit the duty period of the AME. Consequently, no AME shall exercise, or be forced to exercise, his Licence privileges if he has been on duty for;

(a) more than thirteen (13)* consecutive hours; or

(b) more than sixty (60)* hours in any seven (7) day period.

5.3.2 At the completion of any shift of twelve (12)* or more consecutive hours in length, an AME may not exercise his Licence privilege for at least eleven (11)* hours.

5.3.3 A duty period is considered to start when an AME reports for work at his normal workstation, or at any assigned station, and to finish when he has stopped working and departs the work station.

** NOTE: These time periods are recommended by ICAO in the "Human Factors Guidelines for Aircraft Maintenance" Manual (Doc 9824) Appendix "H" to Chapter 3, Page 3H2*

APPENDIX "A"

Training & Work Experience Requirements for Licence Categories A, C & E

Licence Applied For		Experience Required							Training Required
CATEGORY	GROUP	TOTAL MAINTENANCE EXPERIENCE	FIXED WING EXPERIENCE	ROTARY WING EXPERIENCE	PISTON ENGINES	TURBINE ENGINES	AVIONICS SYSTEMS	TYPE EXPERIENCE	**Refer to ICAO Training Manual [Doc 7192 D1 - Aircraft Maintenance Engineers], Appendix 2 to Chapter 1 and then Chapters 3 – 12, for syllabus details. The references below indicate the Chapter and section required for each Licence Group.**
									CHAPTERS AND SECTIONS SPECIFIC TO EACH GROUP
(All)	**ALL LICENCE CATEGORIES**	48							Chapter 3 (All) Chapter 4 (4.3 – 4.6) Chapter 9 (All)
A1	**AIRFRAMES**: Fixed Wing, Rotary Wing (Unpressurized).		12					6	4.7, 5.3, 5.4, 10.3 – 10.5,
A2	**AIRFRAMES:** Fixed Wing, Rotary Wing (Pressurized).			12				6	4.8, 5.3, 5.5, 10.3 – 10.5,
C1	**ENGINES**: Piston Engines.				12			6	6.3, 6.4, 6.6, 11.3 – 11.5,
C2	**ENGINES**: Turbo-jet, Turbo-Prop & Turbo-Shaft.					12		6	6.4, 6.5, 6.6, 11.3 – 11.5,
E1	**AVIONICS SYSTEMS**: Elect, Radio, & Instruments.						24	6*	7.3 – 7.7, 8.5, 8.6, 12.3 – 12.4, 12.6 – 12.8
E2	**AVIONICS SYSTEMS**: All **E1** systems, plus Auto Flight & Flight Mgmt.						24	6*	7.3 – 7.7, 8.3 – 8.6, 12.3 – 12.8.

(See overleaf for instructions on how to read this Table) ***** For aircraft above 5700kg only

Table 1 (See instructions overleaf)

APPENDIX "A" (Continued)

Instructions for using Table 1

1. To identify the training required for a particular discipline, go to the first column and locate the applicable Category (***A1/ A2, C1/C2, E1*** *or* ***E2***) and then look for the Group classification (e.g. *Fixed-wing, Rotary-wing or Piston Engines or Turbine Engine)*. Finally, read across horizontally to the column labelled "Training required", to identify the applicable Chapter and Section of the ICAO Maintenance Training Manual Doc 7192D1 containing the syllabus for the Group. (*Note that the first row under Category and Group is common to all Licences*)

2. To identify the experience requirement for a particular discipline, follow the same procedure as in Paragraph 1 above, but after identifying the applicable Category and Group, go to the "Experience Required" columns where the figures provided indicate the Group experience requirement in months. "Total Maintenance Experience", in the third column, includes experience in the maintenance of some combination of aircraft, airframes, power plants, aircraft systems, structures, or components. This total time will be inclusive of the minimum experience required in each group prior to the granting of a Licence as indicated in months under the applicable column.

3. A person applying for an Airframe and Engine Licence with a rating on a Cessna 206 would therefore require:

   (a) 48 months total maintenance experience (Including [b], [c], [d] & [e] below).

   (b) 12 months fixed-wing experience

   (c) 12 months piston engine experience

   (d) 6 months on the Cessna 206

   (e) 6 months on the Continental O-520/Lycoming O-540

   (f) A training program that includes Chapter 3, Ch. 4(*4.3 – 4.7*), Ch. 5 (*5.3 & 5.4*), Ch. 6 (*6.3, 6.4, & 6.6*), Ch. 9, Ch. 10 (*10.3 – 10.5*), & Ch. 11 (*11.3 – 11.5*).

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APPENDIX "B"

Training Course Requirements

A. Basic AME Training Course – Requirements for Approval

1. The syllabus to be used for an Aircraft Maintenance Engineer (AME) basic training course can be found in the ICAO publication Doc.7192D1. All applicants seeking approval for such a course must demonstrate to the Authority that the course syllabus conforms to the syllabus published in that document. Appendices 1 and 2 to Chapter 1 of the document show the training modules required for each category of Licence.
2. Courses may be tailored individually to suit the particular environment in which the AME will be working. Examples of course content are as follows:

Licence Required	Course Content	Course Duration (Approximate)	Expected Working Environment
"A2" & "C2" with no Limitations	Pressurized airframes, fixed and rotary wing airframes, turbo-jet engines, turbo-props and piston engines, as well as basic avionics familiarization.	124 weeks	Any industry position
"A1" & "C1" Limited to light piston engine aircraft.	Un-pressurized fixed-wing airframes and piston engines only.	108 weeks	Light aircraft only
"A2" & "C2" Limited to turbine and turbo-prop engines only.	Pressurized airframes, turbine engines and turbo-props.	109 weeks	International Air Carrier
"A1" & "C2" Limited to rotary wing aircraft.	Rotary wing airframes, piston engines, turbine engines.	115 weeks	Helicopter operators only

Table 1

APPENDIX "B" (Continued)

Training Course Requirements

B. General Training Guidelines

Each course submitted by an Operator or Maintenance Organization for approval will be treated individually on its own merit. The following basic guidelines must however, be first satisfied before approval can be considered. Please note that items 7, 8, 9 and 10 are specific to Type Endorsement training only:

1) Instruction must be given by trained instructors, however, assistance may be provided by an AME licensed on the type as necessary.
2) Classroom time must be spent in an enclosed area, adequately lit and ventilated, free from distraction, with suitable seating and writing facilities available.
3) "Closed Book" examinations must be held at the end of each section of the course, with an invigilator in attendance and the pass mark must be seventy-five (75) percent.
4) Training manuals and handouts must be available for each student, sufficient to allow the student to study each section on his own time.
5) A complete set of course material, including the syllabus, course time allocation, and credentials of the Instructor (or organization) must be provided to the Authority.
6) The final examination results of each section or module of the course, as well as a copy of the Certificate issued to each successful student, must be retained by the operator on the student's training record file.
7) Persons requesting Licence endorsement must submit certified copies of the above results to the Authority.
8) The duration of the course must compare favourably with the time indicated in Table 2 of Appendix "B" (*Page 38 of this Manual*).
9) Time allocated to visits to the actual aircraft, or system mock-ups, should be approximately one (1) hour per each seven (7) hours of classroom time.
10) Space for one Airworthiness Inspector must be made available on the first course, at the applicant's full cost, in order to have the course approved.

APPENDIX "B" (Continued)

Training Course Requirements

C. Type Endorsement Course Approval Standards and Objectives

The AME Licence issued by the Barbados, authorizing persons to sign Certificates of Release to Service for aircraft, conforms to that described in ICAO Annex 1, Chapter 4, Sub-section 4.2.2.2 (a). To meet the training requirements necessary for the issue of such a Licence, the ATA 104 Level III standard is specified as the baseline for all aircraft Type Endorsement training courses being approved by the Authority. The course objectives, depending on the category of Licence being applied for, must prepare the student to:

1) Carry out inspections and functional checks on aircraft systems, power plants, avionics systems, accessories and components, as specified in the aircraft maintenance manual, including engine ground run and associated system checks.
2) Interpret readings and indications provided by BITE and other information systems.
3) Correlate information for the purpose of making decisions in respect to fault diagnosis and rectification.
4) Recognize a defect, identify the specific system or component fault, take the necessary rectification action and document correctly the actions taken.
5) Recall and observe all safety precautions when working around the aircraft.
6) Be familiar with the normal functions, indications and maintenance procedures associated with, each aircraft and power plant system.
7) Recall the location of all principal components and the procedures for replacement of components peculiar to the aircraft type.
8) Identify and use the family of ATA 100 reference manuals.

D. Company "Type Approval" Courses

The requirements specified in Section "C" above also apply to courses conducted by aircraft maintenance training institutions, operators, or maintenance organizations, either in-house or contracted out, that are training licensed maintenance personnel as a prerequisite to issuing company approvals that include Certificates of Release to Service for aircraft.

APPENDIX "B" (Continued)

Type Training Course Requirements

E. Minimum Recommended Type Endorsement Course Time Requirements

AIRCRAFT TYPE	RECOMMENDED COURSE TIME
Britten-Norman Islander	40 hours
Dornier 228/Twin Otter/ Shorts 360	80-120 hours
De Havilland DHC8/ATR 42	120-160 hours
Boeing B727/MD80	160-200 hours
Airbus A320/A340	200-280 hours

(***Representative*** aircraft types and manufacturers' course hours – for guidance only)

Table 2

NOTE (1): *Some aircraft type endorsement courses include airframe and engine interface only, with engine courses being required on a supplemental basis, relative to the individual student's previous experience and qualifications. Other courses may include Avionics Modules that may add up to two weeks, or eighty (80) hours, to the basic airframe and power plant course. Each course, therefore, needs to be assessed on an individual basis.*

NOTE (2): *Once a course has been approved, as many repeat courses as the Operator requires may be held without consultation with the Authority, provided that the same standards are maintained and that there is no change in content, time or instruction.*

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APPENDIX "C"

Duplicate Inspection Items - Mandatory

A. Items requiring Duplicate Inspection include, but are not necessarily limited to, the systems listed below. However, all the systems listed below **must** have a Duplicate Inspection after any work is done on any section or component of the control path from the pilot's input device to the final active component in the system.

B. Each aircraft will have other "**Vital Points**" where Duplicate Inspections may be required due to the potential for catastrophic failure and individual operational experience. Operators will therefore, in agreement with the Authority, add these points to the list below for inclusion in their individual maintenance programs for approval by the Authority.

- Engine fuel control (Throttle)
- Engine fuel shut-off (High Pressure Cock)
- Engine reverse thrust controls
- Propeller controls
- Aileron system (and tab) controls
- Elevator system (and tab) controls
- Rudder system (and tab) controls
- Wing trailing edge flap system controls
- Wing leading edge device controls (slats/slots/flaps)
- Horizontal stabilizer trim system controls
- Lift dumping system controls (Spoilers/Speed Brakes)
- Landing gear extension/retraction controls (See Paragraph D below)

C. The phrase "Control System" refers to the entire control run and its applicable operating surface, (or final visible moving part for engine controls) starting with the manually operated lever or input device with which the pilot initiates the system operation.

D. Replacement of a wheel or brake assembly does not require a Duplicate Inspection, however, the disturbance of any component in the control run between the retraction lever and the landing gear strut, or installation of a strut, will require one.

APPENDIX "D"

Approved Maintenance Organizations - Areas of Responsibility

A. Structural Work

Individual Licences will not be issued which include privileges for the certification of maintenance tasks related to any work on the structures and components listed below that could be considered as major repairs, major modifications, refurbishing or overhaul.

- Wooden structures
- Composite Structures
- Tubular Structures

B. Specialized Services

Privileges will not be granted either for the Specialized Services listed. The responsibility for completing and certifying such work will be the responsibility of Aircraft Maintenance Organizations which have been approved for those specific functions:

- Welding
- Non-Destructing Testing (*Ultra Sound, X-ray, Flourescent Dye, & Magnetic Particle*).

C. Other Services

The following services may also be provided by Approved Maintenance Organizations if so authorized by the applicable Authority.

- Quality Assurance
- Boroscope Inspections

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APPENDIX "E"
AME Licence Examination Format

1. General Information

5.4 All multi-choice examinations are web-based and accessible from a computer terminal at the Examination Center operated by the Authority. The questions are randomly selected from a databank managed by the Authority and as a result no two papers are the same.

5.5 Where written papers are used, these are short-answer, essay-type questions, designed to be answered using only a few sentences.

5.6 The pass-mark for each paper, multi-choice or written, is seventy-five [75] percent and all examinations must be passed before a Licence can be granted.

2. Examination: Air Regulations/Airworthiness/Human Factors (All candidates)

(a) This examination is commonly referred to as the "General" and will include two multi-choice sections. The first section will be an Air Law paper comprising thirty [30] questions on air regulations. The second section, combining Airworthiness, Standard Practices and Human Factors topics, will total one hundred and thirty [130] questions. Normally, a candidate will complete both sections at one sitting.

(b) In addition, there is a written paper consisting of four essay-type short answer questions. This paper is available only after the candidate has sat and passed the multi-choice paper.

(c) In the case of an applicant from another state presenting a Licence for validation or conversion, a member state will have the option of allowing that applicant sit and pass the Air Regulations section only, prior to granting the validation or conversion.

3. Examination: Basic Airframes

(a) The Basic Airframes examination consists of one hundred and sixty [160]multi-choice questions, twenty [20] of which apply to pressurized airframes only.

(b) In addition, there is a written paper consisting of four essay-type short answer questions. This paper is available only after the candidate has sat and passed the multi-choice paper.

(c) An applicant may wish to sit only for an un-pressurized airframe Licence, in which case, that applicant will not be required to do the twenty questions relating to pressurization. However, if successful, the applicant will be granted an "A" Licence restricted to un-pressurized airframes of 5700kg or less MCTOW.

4. Examination: Basic Power Plants

(a) The Basic Power Plants examination will normally consist of one hundred and eighty [180] multi-choice questions, with one hundred [100] of these being questions on turbine engines.

(b) In addition, there is a written paper consisting of four essay-type short answer questions. This paper is available only after the candidate has sat and passed the multi-choice paper.

(c) An applicant requesting a Licence that will be restricted to piston engines only will be required to successfully complete only the eighty [80] multi-choice piston engine questions and four short-answer questions.

5. Avionics

(a) For the Avionics **E1** examination there will be two multi-choice papers, each having one hundred [100] questions. One paper will include Standard Practices, Electrics [AC & DC] and Instruments, while the other will cover Radio Communication and Radio Navigation. In addition, there is a written paper consisting of four essay-type short answer questions.

(b) The **E2** multi-choice paper, Consisting of fifty [50] questions, will cover Auto-Flight, Flight Management and Flight Director systems, but this paper will be available only after the candidate has sat and passed the E1 Licence examinations. There will be no short-answer paper for the E2 exam.

6. Airframes (Rotary Wing)

(a) Applicants wishing to obtain a Rotary Wing airframe type rating must first have successfully completed the General, Basic Airframes and Basic Power Plants examinations.

(b) A separate Rotary Wing multi-choice examination, consisting of fifty [50] questions, must then be successfully completed. No short-answer paper will be required.

(c) On successful completion of the above, the applicant will then have to sit and pass an oral examination on the type helicopter for which the rating was requested.

7. Oral Examinations

(a) Oral examinations are scheduled after the successful completion of all written and multi-choice examinations.

(b) Oral examinations are used to review any ambiguities that may become evident after successful completion of all of the written and multi-choice papers and for the issue of type ratings where applicable.

(c) The examination takes the format of a direct question and answer and/or discussion session between the candidate and one or more Airworthiness Inspectors.

8. Marking of Examination Papers

(a) Multi-choice papers are marked by computer immediately after the candidate completes the exam.

(b) Short-answer papers are marked using an answer template that indicates what points are expected for each answer and how many marks are awarded for each point. All short-answer examination results are cross-checked to ensure that the potential for error or bias is reduced to an absolute minimum.

9. Type Rating Examinations

(a) Persons applying for type ratings (*which will only be granted on aircraft with an MCTOM of 5700kg or less*) will be required to sit and pass an oral examination.

(b) For all applicants who have successfully completed a course at an ATO, and who have demonstrated evidence of sufficient experience on aircraft of 2730kg or less, this oral will be combined with the oral examination that the applicant sits for the initial issue of a Licence.

(c) All persons applying for type ratings on aircraft with an MCTOM greater than 2730kg but not more than 5700kg will be required to first attend and pass an approved type endorsement course with a Grade of 75% or higher. Where there is no Type course available, refer to Part II, Subsection 1.4 (b).

APPENDIX "F"

Table of Privileges

Licence Category	Privileges
A1/2 (*Without type rating*) or **C1/2** (*Without type rating*) **(A Licence will not normally be issued unless at least one aircraft type rating is endorsed on the Licence.)**	(1) No certification privileges. (2) The holder, after having received a type endorsement course and having obtained the required work experience, may apply to the Authority for a type rating. (3) The holder, after having received a type endorsement course, may be granted certifying authority by the head of the Quality Department of an AMO approved to grant such authority.
A1/2 (*With Type Rating*) Ref: ICAO Annex 1, Chapter 4, Paragraphs 4.2.2.1 and 4.2.2.2 (a) (2)	(1) Issue a Maintenance Release for work completed on an aircraft or component, including Duplicate Inspections, repairs, component and accessory replacements, modifications, servicing and system tests on the airframe and systems of any aircraft on which the holder is type rated. (2) Issue a Maintenance Release for the replacement of avionics components where no specialized test equipment, or procedure such as soldering, or connector pin replacement, is required, and the Licence holder has received training on the affected system as a part of his/her approved type course, on any aircraft endorsed on the Licence as a Type rating. (3) Issue a Certificate of Release to Service [CRS] for the satisfactory completion of a scheduled or unscheduled inspection and the return of the aircraft to service. .
C1/2 (*With Type Rating*) Ref: ICAO Annex 1, Chapter 4, Paragraphs 4.2.2.1 and 4.2.2.2 (a) (2)	(1) Issue a Maintenance Release for work completed on a power plant, or power plant component, including Duplicate Inspections, repairs, component and accessory replacements, modifications, servicing and system tests on any power plant on which the holder is type rated.
E1 Ref: ICAO Annex 1, Chapter 4, Paragraphs 4.2.2.1 and 4.2.2.2 (a) (3)	(1) Issue a Maintenance Release for repairs, component and accessory replacements, modifications, scheduled and unscheduled inspections, on installed avionics systems *(other than Auto Flight & Flight Management systems)*on all aeroplanes of 5700 kg or less MCTOM (Rotorcraft of 2730 kg or less). (2) Issue a Maintenance Release for system repairs, component and accessory replacements, modifications, and inspections, scheduled or unscheduled, on installed avionics systems *(other than Auto Flight & Flight Management systems)* on all aeroplanes of more than 5700 kg MCTOM, when type trained on the aircraft.
E2	Issue a Maintenance Release for Auto Flight, Flight Management and Flight Director systems in addition to all **E1** privileges shown above.

APPENDIX "G"

Maintenance Skill Test Examiner (MSE)

A. **QUALIFICATIONS**

The person being appointed as a MSE shall have:

1. A minimum of five (5) years experience as the holder of a type-rated AME Licence (or Type Approval)
2. Preferably functioned as either a Quality Assurance Inspector or former Inspector.
3. No history of regulatory enforcement action or serious disciplinary action.

B. **APPOINTMENT**

The person shall be:

1. Appointed by the Authority and issued with a Certificate of Appointment.
2. Appointment is for two years at a time, renewable by mutual agreement.

C. **TASK SELECTION**

The procedure for task selection shall be that:

1. The MSE selects a minimum of ten (10) tasks, ensuring variety in the tasks sufficient to confirm the candidate's competence in the category in which the Licence is being applied for.
2. The tasks may be carried out at any time during or after the training period, provided that the applicant has already completed the training necessary to complete the task to the required standard.

D. **PERFORMANCE STANDARDS**

In order to satisfy the MSE of his/her competency, the applicant shall:

1. Identify and use the correct document and specific reference to carry out the task.
2. Select the correct tools/equipment to carry out the task.
3. Use the tools/equipment as taught during training.
4. Select the correct fluid, materials or replacement part, using the Parts Catalogue or other approved document.
5. Carry out the task as per the Maintenance Manual or other approved document.
6. Dispose of any unserviceable parts, waste materials, or waste fluids as taught during training.
7. Complete the required paperwork and sign for job completion.
8. Clean and replace the tools/equipment on completion.

E. **CERTIFICATION**

The procedure for certifying the competence of the applicant shall be that:

1. An MSE shall certify the task completion only if he is satisfied that the task has been completed satisfactorily in <u>all</u> its phases.
2. The final certification trainee's application form, signifying readiness to sit the Licence examination, may be completed either by an MSE, by an AME supervising the training, or by the Quality Manager of an Operator or AMO.

F. **RE-TESTING**

In the event that a candidate is not able to complete a task satisfactorily, the MSE shall indicate to the candidate in writing what area, or areas require further practice or training, and how soon the candidate should return. At least four (4) weeks should be allowed before any re-examination.

G. **REMUNERATION**

(To be determined if necessary)

APPENDIX "H"
Examples of Representative Tasks

ATA: 05 (Time limits/Maintenance Checks)
100 hr or Annual Check – Small Aircraft
"B" or "C" Check – Large Aircraft
Airworthiness Directive compliance – Check records
Component life limit compliance – Check records
Inspection following heavy landing
Inspection following lightning strike

ATA: 06 (Dimensions/Areas)
Perform symmetry check
Locate components by Station Number

ATA: 07 (Lifting and Shoring)
Jack aircraft nose or tail wheel
Jack complete aircraft
Sling or trestle major component

ATA: 08 (Levelling/Weighting)
Level aircraft
Weigh aircraft
Prepare weight and balance amendment
Check aircraft against equipment list

ATA: 09 (Towing and Taxing)
Tow aircraft as tractor driver
Tow aircraft as team member

ATA: 10 (Parking and Mooring)
Tie down aircraft
Park, secure and cover aircraft
Position aircraft in dock
Secure rotor blades/propellers

ATA: 11 (Placards and Markings)
Check aircraft for correct placards
Check aircraft for correct markings

ATA: 12 (Servicing)
Refuel aircraft
De-fuel aircraft
Check tire pressures
Check engine oil level
Check hydraulic fluid level
Check hydraulic accumulator pressure
Charge pneumatic system
Lubricate aircraft (undercarriage/flaps)
Connect ground power
Service toilet/water system
Perform pre-flight check

ATA: 21 (Air Conditioning & Pressurization)
Replace receiver-dryer
Replace combustion heater
Replace outflow valve
Replace vapor cycle unit
Replace air cycle machine
Replace coalescent bag
Replace cabin blower
Replace heat exchanger
Replace pressurization controller
Replace temperature/pressure sensor
Clean outflow valves
Function test air conditioning/heating system
Function test pressurization system
Troubleshoot faulty system

ATA: 22 (Auto Flight)
Install flight control servo unit
Ring bridle cables
Replace controller
Replace amplifier
Function check operation of auto-pilot
Function check operation of auto-throttle
Function check operation of yaw damper
Function check and adjust servo clutch
Perform autopilot gain adjustments
Function check Mach trim system
Check auto-land system
Check flight management system
Check stability augmentation system
Troubleshoot faulty system

ATA: 23 (Communications)
Replace VHF communications transceiver
Replace VHF/UHF/HF antenna
Replace VHF selector panel
Replace HF communications transceiver
Replace static discharge wicks
Check operation of radios
Perform antenna VSWR check
Perform SELCAL operational check
Perform operational check of PA system
Function check audio integrating system
Repair coaxial cable
Troubleshoot faulty system

APPENDIX "H" (Continued)

ATA: 24 (Electrical Power)
Charge lead/acid battery
Check nickel-cadmium battery
Check battery capacity
Replace main battery
Replace battery cells
Deep-cycle nickel-cadmium battery
Replace generator/alternator
Replace circuit breaker
Test voltage regulator
Adjust voltage regulator
Replace voltage regulator
Repair/replace electrical feeder cable
Troubleshoot faulty electrical system
Amend electrical load analysis report

ATA: 25 (Equipment/Furnishings)
Replace carpets
Replace crew seats
Replace passenger seats
Check inertia reels
Check seats/belts for security & condition
Check emergency equipment
Check ELT for regulatory compliance
Inspect lavatory waste bin door and seal
Change cabin configuration
Replace overhead bin passenger service unit

ATA: 26 (Fire Protection)
Check operation of fire warning system
Check cabin fire extinguisher contents
Check lavatory smoke detector system
Check engine fire bottle contents
Install new engine fire bottle
Replace engine fire bottle squib
Troubleshoot faulty system

ATA: 27 (Flight Controls)
Replace horizontal stabilizer
Replace elevator
Replace aileron
Replace rudder
Replace trim tabs
Install control cable and fittings
Replace flap
Replace flap actuator
Replace powered flight control unit
Adjust trim tab
Check and adjust cable tension
Check control surface range of travel
Check turnbuckle assembly and locking
Troubleshoot faulty system

ATA: 28 (Fuel)
Replace booster pump
Replace fuel selector
Replace fuel tank cells
Check/Change fuel filter
Flow check system
Check calibration of fuel quantity gauges
Check operation of feed/selectors valves
Check fuel tank sumps for contamination
Check fuel quantity using drip or drip-less sticks

ATA: 29 (Hydraulics)
Replace engine driven pump
Replace standby pump
Replace accumulator
Replace hydraulic system filters
Service hydraulic system with fluid
Check operation of shut off valve
Check indicating systems
Perform functional checks
Troubleshoot faulty system

ATA: 30 (Ice and Rain Protection)
Install windshield wiper motor
Repair/replace de-icing boot
Check operation of system
Replace window heat controller
Troubleshoot system

ATA: 31 (Indicating/Recording Systems)
Replace flight data recorder
Replace cockpit voice recorder
Replace clock
Replace panel vibrator
Replace master caution unit
Replace FDR
Perform FDR calibration
Perform FDR data retrieval
Troubleshoot faulty system

APPENDIX "H" (Continued)

ATA: 32 (Landing Gear)
Build up wheel
Replace main wheel
Replace nose wheel
Replace shimmy damper
Rig nose wheel steering cylinder
Replace shock strut seals
Replace main/nose gear actuator
Replace brake unit
Replace brake control valve
Service shock strut with fluid & air
Bleed brakes
Replace skid control generator
Replace skid control box
Replace skid control valve
Test anti-skid unit
Test gear retraction
Change bungee
Adjust micro switches
Change struts
Troubleshoot faulty system

ATA: 33 (Lights)
Repair/replace rotating beacon
Repair/replace landing lights
Repair/replace navigation lights
Repair/replace interior lights
Repair/replace emergency lighting
Repair/replace floor path lighting
Check emergency lighting system
Troubleshoot faulty system

ATA: 34 (Navigation)
Calibrate compass
Replace airspeed indicator
Replace altimeter
Replace air data computer
Replace VOR receiver
Replace ADI
Replace HSI
Check pitot static system for leaks
Check operation of directional gyro
Functional check weather radar
Functional check GPWS
Functional check TCAS
Functional check DME
Functional check ATC Transponder
Functional check flight director system
Functional check INS/IRS
Check calibration of ADF system
Update flight management system
Check calibration of altimeter system
Troubleshoot faulty system

ATA: 34 (Navigation - continued)
Check marker beacon system
Check GPS if installed

ATA: 35 (Oxygen)
Inspect on board oxygen equipment
Purge and recharge oxygen system
Replace regulator
Replace oxygen generator
Replace oxygen cylinder
Test crew oxygen mask deployment
Troubleshoot faulty system

ATA: 36 (Pneumatic Systems)
Replace filter
Replace compressor
Replace pressure regulator valve
Replace pressure sensor
Replace check valve
Adjust pneumatic regulator
Check for leaks
Troubleshoot faulty system

ATA: 37 (Vacuum Systems)
Replace vacuum pump
Check/replace filters
Adjust regulator
Troubleshoot faulty system

ATA: 38 (Water/Waste)
Replace water pump
Replace faucet
Replace toilet pump/vacuum unit
Troubleshoot faulty System

ATA: 45 (Central Maintenance System)
Retrieve data from CMU
Replace CMU
Perform BITE check
Troubleshoot faulty system

ATA: 49 (Airborne Auxiliary Power)
Install APU
Inspect hot section
Troubleshoot faulty system

ATA: 51 (Structures)
Sheet metal repair
Fibre glass repair
Fabric repair
Corrosion removal & re-protection
Apply protective treatment

APPENDIX "H" (Continued)

ATA: 52 (Doors)
Rig/Adjust locking mechanism
Adjust air stair system
Check operation of emergency exits
Test door warning system
Replace door pressure seal
Replace door-mounted evacuation slide
Troubleshoot faulty system

ATA: 56 (Windows)
Replace windshield
Replace window
Restore transparency

ATA: 57 (Wings)
Skin Repair
Recover fabric wing
Replace tip and rib
Check incidence/rig

ATA: 61 (Propeller)
Assemble propeller after transportation
Replace propeller
Replace governor
Adjust governor
Perform static functional checks
Check operation during ground run
Inspect propeller for damage/limits
Check blade tracking
Check setting of micro switches
Dress out blade damage
Dynamically balance prop
Troubleshoot faulty system

ATA: 62 (Main Rotors)
Install rotor assembly
Replace blades
Replace damper assembly
Check blade tracking
Check static balance
Check dynamic balance
Troubleshoot faulty system

ATA: 63 (Rotor Drive)
Replace mast
Replace drive coupling
Replace clutch/freewheel unit
Replace drive belt
Install main gearbox
Check gearbox chip detectors

ATA: 64 (Tail Rotors)
Install rotor assembly
Replace blades

ATA: 65 (Tail Rotor Drive)
Replace bevel gearbox
Replace universal joints
Overhaul bevel gearbox
Install drive assembly
Check chip detectors

ATA: 67 (Rotorcraft Flight Controls)
Install swash plate
Install mixing box
Adjust pitch links
Rig collective system
Rig cyclic system
Rig anti-torque system
Check assembly and locking
Check operation and sense
Troubleshoot faulty system

ATA: 71 (Power Plant)
Build up QEC (quick engine change)
Replace power plant
Repair cooling baffles
Repair cowling
Adjust cowl flaps
Repair faulty wiring
Troubleshoot

ATA: 72 (Piston Engines)
Remove/Install reduction gear
Replace cylinder head
Top overhaul
Check crankshaft run-out
Check tappet clearance
Check compression
Extract broken stud
Install Heli Coil insert
Perform ground run
Establish/Check reference RPM
Troubleshoot engine fault

ATA: 72 (Turbine Engines)
Replace module
Hot section inspection
Inspect fan/compressor blades for damage
Blend out damage to fan blade
Engine ground run and adjustment
Trend monitoring/gas path analysis
Troubleshoot system fault

APPENDIX "H" (Continued)

ATA: 73 (Fuel and Control-Pistons)
Replace engine driven pump
Adjust automatic mixture control
Adjust automatic boost control
Install carburetor/injector
Adjust carburetor/injector
Clean injector nozzles
Replace primer line
Check carburetor float setting
Troubleshoot faulty system

ATA: 73 (Fuel and Control - Turbines)
Replace Fuel Control Unit (FCU)
Replace engine driven fuel pump
Clean/Test fuel nozzles
Clean/Replace filters
Adjust FCU
Troubleshoot system fault

ATA: 74 (Ignition Systems, Piston)
Change magneto
Change ignition vibrator
Change plugs
Test plugs
Check H.T. leads
Install new leads
Check timing
Check system bonding
Troubleshoot faulty system

ATA: 74 (Ignition Systems, Turbine)
Check glow plugs/igniters
Check H.T. leads
Check ignition unit
Replace ignition unit
Troubleshoot faulty system

ATA: 75 (Engine Air)
Replace pneumatic duct
Change pressure regulating & shut off valve

ATA: 76 (Engine Controls)
Rig thrust lever
Rig RPM control
Rig mixture HP cock lever
Rig power lever
Check control synchronization (multi-engine)
Check control for assembly and locking
Check control for range and sense
Adjust pedestal micro-switches
Troubleshoot faulty system

ATA: 77 (Engine Indicating)
Replace engine instruments
Replace oil temperature bulb
Replace thermocouples
Replace tachometer
Replace EPR transmitter
Troubleshoot faulty system

ATA: 78 (Exhaust - Piston)
Replace exhaust gasket
Inspect welded repair
Pressure check cabin heater muff
Troubleshoot faulty system

ATA: 78 (Exhaust - Turbine)
Inspect exhaust nozzle
Change shroud assembly
Replace thrust reverse door
Replace thrust reverse control valve
Replace thrust reverse actuator

ATA: 79 (Engine Oil)
Change engine oil
Check filter(s)
Adjust pressure relief valve
Replace oil tank
Replace oil pump
Replace oil cooler
Replace firewall shut off valve
Perform oil dilution
Troubleshoot faulty system

ATA: 80 (Starting)
Replace starter
Replace start relay
Replace start control valve
Check cranking speed
Troubleshoot faulty system

ATA: 81 (Power Recovery Turbines)
Replace PRT
Replace turbo-blower
Replace heat shields
Replace waste gate
Adjust density controller

ATA: 83 (Accessory Gear Boxes)
Replace gearbox
Replace drive shaft
Inspect chip detector

APPENDIX "I"
Definitions

Aeroplane: A power-driven heavier-than-air aircraft, deriving its lift in flight chiefly from aerodynamic reactions on surfaces which remain fixed under given conditions of flight.

Aircraft: Any machine that can derive support in the atmosphere from the reactions of the air other than the reactions of the air against the earth's surface.

Airframe: The main structure of an aircraft, including its fuselage, lifting surfaces, control surfaces and all systems but excluding its power plant(s).

Aircraft Category: Classification of aircraft according to specified basic characteristics, e.g. aeroplane, helicopter, glider, free balloon.

Aircraft Maintenance Engineer (AME): A person trained and authorized by a Contracting State to issue a certificate confirming that an aircraft is in conformance with its Type Certificate and is fit for flight (airworthy). The term is interchangeable with the term Aircraft Maintenance Technician (AMT) used by some states, as per ICAO Annex 1, Chapter 4, Section 4.2.

Aircraft Maintenance Engineer Training Course: A training course conducted under special curricula and supervision approved by a Contracting State to train Aircraft Maintenance Engineers in accordance with the requirements of Annex 1, Chapter 4 and Doc 7192D1

Airworthy: A term indicating that an aircraft conforms to its Type Certificate and is serviceable.

Alteration: Any change in configuration and /or design of an aircraft or any of its components (*Modification*).

AME Licence: A document issued by a State in conformance with the requirements of ICAO Annex 1, Chapter 4, authorizing an Aircraft Maintenance Engineer to certify aircraft registered in that State as being airworthy.

Approved: Accepted by a Contracting State as suitable for a particular purpose.

Approved Maintenance Organization: An organization approved by a Contracting State, in accordance with the requirements of Annex 6, Part 1, Chapter 8 – Aeroplane Maintenance, to perform maintenance on aircraft or parts thereof and operating under supervision approved by the State.

Assembly: The fitting together of parts to form a complete structure or unit.

Authority: The term "the Authority" refers to the Government agency, department, division, or authority, of the state in which either an aircraft is registered, or a candidate is applying for a Licence, whichever is applicable.

Avionics: A term designating any electronic device, including its electrical part, for use in an aircraft, including radio, automatic flight control and instrument systems.

BITE: Abbreviation (or acronym) for "Built-In Test Equipment" installed in modern complex aircraft to assist maintenance staff to troubleshoot aircraft defects or conduct routine system tests.

Certificate of Release to Service: A certification in an aircraft's technical log signed by a type-rated AME, which confirms that all maintenance has been satisfactorily completed on the aircraft and that the aircraft is therefore airworthy.

Complex Aircraft: An aircraft with an MCTOM of more than 2730kg, powered by an electronically controlled turbine engine, or fitted with an electronic flight information system (EFIS).

Condition: State of fitness of a component or structure.

Engine: A machine that uses heat energy to develop mechanical power, the aircraft engine is the source of power that either by driving a propeller, or by exhaust flow, provides the propulsive force for the aircraft.

Functioning: Carrying out a normal activity or purpose, or operating in a normal and proper mode and role.

Helicopter: A heavier-than-air aircraft supported in flight chiefly by the reactions of the air on one or more power-driven rotors on substantially vertical axes. *Helicopters, along with Gyroplanes, may be referred to as Rotor Craft or Rotary-winged craft.*

Install: To place an item securely in its normal and proper position, ready for use.

Large Aeroplane: An aeroplane with a maximum certificated take-off mass greater than 5700 kg.

Maintenance: The performance of any task or combination of tasks, required to ensure the continuing airworthiness of an aircraft, including an inspection, overhaul, repair, replacement, defect rectification, or modification.

Maintenance Release: A certification confirming that the maintenance work to which it relates has been completed in a satisfactory manner, either in accordance with the approved data and the procedures described in the maintenance organization's procedures manual or under an equivalent system.

MCTOM: The "Maximum Certificated Take-off Mass" is the maximum total mass with which an aircraft is allowed to lift into the air and is established at the time that the aircraft is certified by the Regulatory body of the State of Design and Manufacture.

Power Plant: The engine of an aircraft along with its accessories and auxiliary wiring, ducting and piping, as well as the other associated components located inside the engine cowlings.

Small Aeroplane: An aeroplane with a maximum certificated take-off mass of 5700 kg or less.

Vital Point: A structural point on an aircraft, the integrity of which is essential to the continuing airworthiness of the aircraft, where an improperly completed installation, repair, or re-assembly, could result in catastrophic failure.

APPENDIX "J"
Airframe & Engine Type Rating Designators (Incl. Engine Groups)

The airframes listed in the first column of Table 1-1 and 1-2 below have been assigned the designators shown in the second column by ICAO for identifying aircraft types (***See Doc. 8643***). Refer to Doc 8643 for any designators not shown in this listing. Table 1-3 shows examples of airframe group and class ratings that can be granted while Table 1-4 shows how similar engine types may be grouped together and granted as a class rating.

Airframe	Designator
Air Tractor AT 301/401/501	**AT3P**
Air Tractor AT-502	**AT5T**
Bell 47	**B47G**
Bell 206/206L Jet Ranger	**B06**
Beech Model 18	**BE18**
Beech Model 33-36	**BE35**
Beech King Air 90	**BE90**
Beechcraft Queen Air	**BE88**
Beechcraft Duke	**BE60**
Beechcraft 99	**BE99**
Beech Musketeer/Sierra	**BE23**
Bombardier DHC-6	**DHC6**
Cessna 150 Series	**C150**
Cessna 152 Series	**C152**
Cessna 170	**C170**
Cessna 172 Series	**C172**
Cessna 177	**C177**
Cessna 180	**C180**
Cessna 185	**C185**
Cessna 182 Series	**C182**
Cessna 188 Ag Wagon	**C188**
Cessna 205	**C205**
Cessna 206 Series	**C206**
Cessna 207 Series	**C207**
Cessna 208 Caravan Series	**C208**
Cessna 210 Series	**C210**
Cessna T303 Crusader	**C303**
Cessna 310	**C310**
Cessna 320	**C320**
Cessna 335	**C335**
Cessna 336	**C336**
Cessna 337	**C337**
Cessna 340	**C340**

Table 1-1

APPENDIX J (Continued)

Airframe	Designator
Cessna 401	**C401**
Cessna 402	**C402**
Cessna 404 Titan	**C404**
Cessna 411	**C411**
Cessna 414 & 421	**C414**
Cessna 441 Conquest	**C441**
Cessna 425 Corsair	**C425**
Piper Cub	**J3**
Piper L18 Super Cub	**PA18**
Piper PA20 Pacer	**PA20**
Piper PA22 Tri-Pacer & Colt	**PA22**
Piper PA23-235 Apache	**PA23**
Piper PA23-250 Aztec	**PA27**
Piper PA24 Comanche	**PA24**
Piper Pawnee PA25	**PA25**
Piper PA28 Cherokee	**PA28**
Piper PA32 Cherokee Six	**PA32**
Piper PA30/39 Twin Com	**PA30**
Piper PA34 Seneca	**PA34**
Piper PA 31 Navajo Series	**PA31**
Piper PA31T Cheyenne	**PAY1**
Piper Pawnee Brave	**PA36**
Piper PA42 Cheyenne III	**PAY3**
Piper PA38 Tomahawk	**PA38**
Piper PA44 Seminole	**PA44**
Piper PA46 Malibu	**PA46**
Raytheon B1900 C & D	**B190**
Raytheon Beech Baron B58	**BE58**
Raytheon Beech King Air 90	**BE9L**
Raytheon King Air 100	**BE10**
Raytheon King Air 200	**BE20**
Raytheon King Air 300	**BE300**
Raytheon King Air 350	**BE350**
Rockwell (Ayres) Thrush	**SS2P**
Robinson R22	**R22**
Robinson R44	**R44**
Schweizer/Hughes 300/600	**H269**
Schweizer 330/333	**S330**
Shorts 330	**SH33**
Shorts 360	**SH36**

Table 1-2

APPENDIX "J" (Continued)

Examples of Airframe Group Ratings
- Airframes: Fixed-wing
Examples of Airframe Class Ratings
- Rotary-wing airframes of 2730kg or less MCTOM. - Fixed-wing airframes of 2730kg or less MCTOM. - Cessna single piston engine powered airframes of 2730 kg or less MCTOM. - Un-pressurized fixed-wing airframes of 5700kg or less MCTOM. - Fixed-wing airframes of 5700kg or less MCTOM. - Piper twin piston engine powered airframes of 5700 kg or less MCTOM.

Table 1-3

APPENDIX J (Continued)

Engine Model	Recommended Class Rating	
Continental C90	- Un-supercharged piston engines, excluding diesel engines, with a maximum rating of 200kW (268bhp).	- Piston engines, excluding diesel engines, with a maximum rating of 500kW (670bhp).
Continental A65		
Continental E185		
Continental C145		
Continental O-200		
Lycoming O-235		
Continental O-300		
Lycoming O-320		
Continental O-360		
Lycoming O-360		
Lycoming O-435		
Continental O-470		
Lycoming O-480		
Continental O-520		
Lycoming O-540		
Lycoming O-541		
Continental O-550		
Lycoming O-720		
Including Turbo-charged models of the above engines		
P&W R-985AN		- Un-supercharged radial piston engines, with a maximum rating of 900kW (1210bhp)
P&W R1340		
Wright R1820		

Engine Type & Model		Designator
P&W PT6A-6/21	(410kW)	**PT6A**
P&W PT6A-27/28	(462kW)	
P&W PT6A-41/42	(850kW)	
P&W PT6A-65/67	(850 – 1063kW)	
P&W PT6A-112/114	(336 – 373kW)	
RR Allison 250-C20	(313kW)	**RA250**
Williams-Rolls FJ44	(340kW)	**FJ44**
Garrett TPE331-6/8/10	(474kW)	**TPE331**
P&WJT15D	(979kW)	**JT15D**

The engines listed below in Table 1-4, Column 1, may be grouped and issued as a single class rating, as indicated in either the second or third columns, as applicable.

Table 1-4

APPENDIX "K"

Transition Policy & Procedures

1. Policy

1.1 The harmonization of the AME licensing system within Barbados will not result in any current Licence holder losing individual ratings or privileges already held under the system operated by the state that granted the Licence.

1.2 All persons currently training for their AME Licence, persons operating training schools, and persons who have not yet applied for the grant of a Licence, will be required to meet all the standards set out in this manual.

1.3 All persons applying for airman Licences as of November 1, 2007 will be granted Licences based on the training, experience and examination standards, as well as the categories, ratings, groups and privileges defined in this manual.

1.4 It is the responsibility of the Barbados CAD to ensure that any Licence holder whose training or experience level is deemed to fall short of that required for the new "RASOS-standard" Licence, is either required to attain the acceptable level before renewal, or is issued a Licence endorsed with the appropriate limitations.

1.5 A Licence issued in any RASOS State will be accepted as the basis for granting equivalent privileges by Barbados.

2. Procedures

2.1 Persons holding "A" and "C" Licences issued by Barbados will have their Licences replaced by the new "RASOS-standard" Licence, with all current ratings carried forward, during the normal renewal process.

2.2 Persons holding "X" Electrics, "R" Radio, and "X" Instruments Licences will have those Licences replaced by the new "RASOS-standard" "E1" Licence during the normal renewal process.

2.3 Persons holding an "X" Auto Pilot Licence, with training and six months experience on Flight Management systems, in addition to the licences mentioned in Paragraph 2.2 above, will have their Licences replaced by the new "RASOS-standard" "E2" Licence during normal renewal.

2.4 Persons holding "M" Licences will have their Licences replaced by the new "A" and "C" Licence, with the appropriate type ratings if any, during normal renewal.

2.5 Persons holding “M” Licences, who have had the required training but no work experience on piston engines, will have their “C” Licences restricted to “Turbine Engines Only” until they obtain the required six months experience.

2.6 Persons who holding “M” Licences, restricted to piston engines and un-pressurized airframes will have their “A” and “C’ Licences similarly restricted.

2.7 Persons holding “aircraft” type ratings will have these replaced with the equivalent airframe and power plant ratings on renewal.

3. General Notes

3.1 This document does not supersede the current Regulations of Barbados.

3.2 In the event that any item, or situation arising, is either not covered by this document, or is dealt with ambiguously, then the matter should be brought to the attention of the Barbados CAD office at the first opportunity.

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