BELIZE:

CIVIL AVIATION (APPROVED MAINTENANCE ORGANIZATIONS) REGULATIONS, 2025

ARRANGEMENT OF REGULATIONS

BELIZE:

STATUTORY INSTRUMENT

No. 84 of 2025

REGULATIONS made by the minister responsible for Civil Aviation in exercise of the powers conferred upon him by section 4, 5, 8, 9, and 32 of the Civil Aviation Act, Chapter 239 of the Substantive Laws of Belize, Revised Edition 2020, and all other powers thereunto him enabling.

(Gazetted 14th June, 2025).

WHEREAS, Belize is a member of the Central American Organisation for the Control of Air Avigation Services (Coporacion Centroamerica de Servicios de Navegacion Aerea) (hereinafter referred to as "COCESNA");

AND WHEREAS, COCESNA has made certain regulations for the control of civil aviation (hereinafter referred to as "the COCESNA Regulations");

AND WHEREAS, in common with other countries in the region, it would be expedient for Belize to adopt the COCESNA Regulations with such modifications as may be necessary;

AND WHEREAS, the Regulations contains in the Schedule, hereto are based on the COCESNA Regulations, as amended to suit the conditions of Belize;

NOW THEREFORE, in exercise of the powers conferred upon the Minister by sections 4, 5, 8, 9, and 32 of the Civil Aviation Act, the following Regulations are made.

Citation.

1. These Regulations may be cited as the

CIVIL AVIATION (APPROVED MAINTENANCE ORGANIZATIONS) REGULATIONS, 2025.

COCESNA Regulations to have the force of law.

2. The COCESNA Regulations, as modified, contained in the Schedule, shall have the force of law in Belize.

Penalty.

3. Every person who contravenes of fails to comply with these Regulations commits an offence and is liable on summary conviction to the penalty provided in section 30 of the Act.

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BELIZE DEPARTMENT OF CIVIL AVIATION

BCAR 145

SCHEDULE
[regulation 2]

BCAR- 145 APPROVED MAINTENANCE ORGANIZATIONS

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SECTION – 1 **BCAR 145**

SECTION 1 – REQUIREMENTS

PRESENTATION AND GENERAL

1. PRESENTATION

1.1. Section one of BCAR 145 is presented in one column on loose pages, each page is identified by the date of issue or amendment when it was incorporated.

1.2. Section one is written using Arial 10. Explanatory notes are not considered requirements; if they exist, they will be written in Arial font 8.

2. GENERAL INTRODUCTION

2.1. Section one includes the requirements to apply the regulation and to comply with the certification requirements and the supervision of the BDCA activity established by the Interrnational Civil Aviation Organization (ICAO) for the Maintenance Organizations.

2.2. This document is based on Annex 8 Thirteenth Edition July 2022 amendment 109 issued and published by the International Civil Aviation Organization (ICAO).

BELIZE DEPARTMENT OF CIVIL AVIATION

SECTION – 1 **BCAR 145**

BCAR 145.1 General

(a) The BDCA shall grant the approval as BCAR-145 Approved Maintenance Organisation hereinafter referred to as BCAR-145 AMO for maintenance activities in aircraft and/or aircraft components when the applicant proves compliance with the requirements established in this regulation.

(b) No maintenance organization may advertise as an approved maintenance organisation until an Approval Certficate has been issued to that facility by the Director of the BDCA.

(c) An approved maintenance organisation shall not advertise in any manner whatsoever, any statement that is false or misleading.

(d) An advertisement by an approved maintenance organisation shall clearly state the certificate number of the approved maintenance organisation

(e) A non-approved maintenance organisation that is subcontracted under the quality system of a BCAR-145 AMO or accepted maintenance organisation is limited in its activities and is not allowed to perform any aircraft base maintenance service, a complete maintenance service in a workshop, a restoration or overhaul to an engine, an engine module, or propeller.

No organization shall act as a BCAR-145 AMO without having an Approval Certificate, herein after referred to as BCAR-145 AC, or beyond its approved ratings.

(f) No organization shall advertise that it is a BCAR-145 AMO unless it is a holder of an approved BCAR-145 AC.

(g) Every BCAR-145 AMO shall have a corresponding BCAR-145 AC and Approval Schedule in force in order to perform maintenance tasks for aircraft or aircraft components.

(h) Requirements for the small BCAR-145 AMOs are described in Annex 1 to this Section I.

(i) Foreign Maintenance Organizations may be accepted in whole or in part if:

(1) The BDCA decides that there is a need to carry out maintenance tasks on aircraft registered in Belize or aircraft components to be installed on Belize-registered aircraft;
(2) The organization has been approved by the aviation authority of an ICAO contracting State and the certification standards are equivalent to BCAR – 145;
(3) No significant issues are open from surveillance performed by local aviation authority;
(4) Evaluation performed by inspectors of BDCA is satisfactory.

BCAR 145.3 Effectivity

(a) Subsequent revisions to this BCAR 145 shall come into force once the corresponding Statutory Instrument is published in the Government Gazette

BELIZE DEPARTMENT OF CIVIL AVIATION

SECTION – 1 **BCAR 145**

BCAR 145.5 Definitions
(See IEM 145.5)

Refer to BCAR 05 Definitions and Units of Measurements

BCAR 145.10 Applicability

This BCAR establishes:

(a) The requirements for the issuance of an approved maintenance organisation certificate for the maintenance, preventive maintenance, repairs and modifications of Belize-registered aircraft and their associated components; and the operating rules for a maintenance organization approved under this BCAR-145.

BCAR 145.13 Inspection Authority and Access to Documentation

(a) An approved maintenance organisation shall

(1) Permit the BDCA inspectors or authorised representatives assigned by the Director to inspect its facilities and any of its contracted maintenance facilities at any time to determine compliance with these Regulations; and

(2) Ensure that arrangement for maintenance, preventive maintenance, repairs or modifications by a sub-contractor includes provisions for inspections of the facilities of the contractor by the BDCA inspectors or authorised representatives assigned by the Director.

(3) The BCAR-145 AMO shall provide the BDCA with any information, document, manual, or any record regarding its Approval Certificate.

(4)

(5) In addition, BDCA inspectors or authorised representatives assigned by the Director shall have the authority to collect any information, document, manual, photographs, or any record in physical or digital format regarding the Approval Certificate of the AMO.

BCAR 145.15 Application and Issuance

(a) A person who wishes to apply for an approved maintenance organisation certificate with an appropriate rating to perform maintenance, preventive maintenance, repairs and modifications on Belize-registered aircraft and their associated components shall

(1) Apply to the Director in the prescribed form.

(2) Pay the prescribed fee.

(3) Be at least 18 years of age.

(4) Be able to or have persons employed who can read, speak, write and understand the English language.

(5) Meet the requirements of this BCAR.

(b) An application referred to in paragraph (a), shall be accompanied by

(1) One copy of the maintenance organization exposition of the applicant which meets the requirements of these Regulations, and which shall be approved by the Director.

(c) Where the applicant referred to in paragraph (a)(4), does not read, speak, write, and understand the English language, but employs a person who can read, speak, write, and understand the English language, that person shall have a management and technical function in his approved maintenance organisation.

(d) An applicant under this Regulation shall ensure that the procedures and specifications set out in the maintenance organization exposition referred to in paragraph (b) (1) are implemented prior to the issue of the aircraft maintenance organisation certificate by the BDCA.

(e) Nothing in paragraph (d) shall be construed as authorising the applicant to exercise the privileges of an aircraft maintenance organisation certificate before that certificate is issued by the BDCA in accordance with BCAR 145.17

BCAR 145.17 Process to obtain a BCAR - 145 Approval Certificate

(a) The Director may, after an evaluation of the application and subsequent inspection of the proposed facilities of the applicant, issue an approved maintenance organisation certificate to an applicant where he/she is satisfied that the applicant

(1) meets the requirements of these Regulations.

(2) has implemented all the procedures and specifications set out in his maintenance organization exposition.

(3) is properly and adequately equipped to perform maintenance, repairs, or modifications on Belize-registered aircrafts or its associated components for which he seeks approval; and

(4) has paid all fees as prescribed by the Director.

(b) The Director shall not issue an approved maintenance organisation certificate

(1) where the applicant

(i) does not meet the requirements of these Regulations

(ii) has provided incomplete, inaccurate, fraudulent or false information in applying for the approved maintenance organisation certificate.

(c) In order to obtain an approval certificate, the applicant shall undergo a five phases certification process in accordance with the following:

(1) **PHASE 1**. Pre-application: It is the procedure that an applicant follows to receive the information concerning the granting of a BCAR -145 AC. During this phase, the first meeting between the applicant and the Director takes place. In addition, there is an exchange of information about the service the applicant wants to provide, and the guidelines set by the BDCA regarding standards, procedures, responsibilities, and attributions for that service, as well as information about the technical documents the applicant shall submit.

(2) **PHASE 2**. Formal application: The applicant submits the application to the BDCA as BCAR - 145 Maintenance Organization for its approval. This phase includes an assessment to the management personnel, the schedule of events, and the handing over of the corresponding documents to the BDCA.

(3) **PHASE 3**. Evaluation: The BDCA goes through the documents submitted and informs the applicant about the discrepancies found, if any; if not, the BDCA issues the approval or acceptance of the application.

(4) **PHASE 4.** Technical demonstrations: The BDCA conducts an inspection of the maintenance organization of the applicant, its personnel, documents, procedures, facilities, and equipment, to verify if they match the ones established in the MOE.

(5) **PHASE 5**. Certification: Once the previous phases have been completed satisfactorily, the BDCA will issue a BCAR -145 AC with its ratings.

(d) No organization will be granted an approval to carry out any type of maintenance activities without concluding the certification process described in the previous paragraph(s).

BCAR 145.20 Content of the Approval Certificate and Approval Schedule
(See Appendix A & IEM 145.20)

(a) An approved maintenance organization certificate issued in BCAR 145.17 shall consist of

(1) A one page Approval Certificate signed by the Director.

(2) An Approval Schedule with the ratings in accordance with what is established in Table 1 of Appendix A of this BCAR-145.

(b) The Approval Certificate shall contain the following:

(1) Certificate number specifically assigned to the approved maintenance organisation by the BDCA,

(2) Name and location of the main place of business of the approved maintenance organisation, along with its contact numbers and email addresses,

(3) Date of issue and date of expiry,

(4) Terms of the approval, and

(5) Signature of the Director

(c) The Approval Schedule shall contain the following:

(1) Class, Ratings and Limitations of maintenance approved to the AMO,

(2) Signature of the Director,
(3) Date of original issue and date of current issue

(4) The date of expiry of the Approval Schedule shall be the same as shown in the Approval Certificate.

BCAR 145.23 Transfer of Approval Certificate

(a) The BCAR-145 Approval Certifcate is exclusively personal and is not transferable

BCAR 145.25 Facility Requirements
(See AMC 145.25)

(a) This Part prescribes the requirements for housing, facilities, equipment, and materials for the issue of an approved maintenance organisation certificate.

(b) An approved maintenance organisation shall provide the necessary housing and facilities in the required quantity and quality that meet the standards required for the issuance of the certificate and ratings that the approved maintenance organisation holds.

(c) An approved maintenance organisation shall provide the necessary housing and other facilities that would allow proper performance of all planned work and protection of personnel, plants and equipment, tools, and materials from weather elements.

(d) An approved maintenance organisation shall ensure that

(1) the work environment is safe and appropriate to the tasks to be carried out, always observing proper temperature and lightning conditions or special requirements applicable to particular tasks without impairing the effectiveness of personnel,

(2) the office accommodation is appropriate for the management of planned work including the quality management, planning, and technical records,

(3) specialized workshops and bays are segregated, as appropriate, to ensure that the environment and work area contamination is minimized,

(4) secure storage facilities are provided for parts, equipment, tools, and materials,

(5) storage conditions ensure segregation of serviceable aircraft components and materials from unserviceable aircraft components, materials, equipment, and tools,

(6) the storage conditions are in accordance with the instructions of the manufacturers, to prevent deterioration of and damage to stored items; and

(7) access to storage facilities is restricted to authorised personnel

BCAR 145.30 Requirements for the Management Personnel
(See AMC 145.30)

(a) This Part prescribes the requirements for the management personnel of a maintenance organisation to be issued an Approval Certificate.

(b) An approved maintenance organisation shall employ the necessary personnel to plan, perform, supervise, inspect, and certify the work performed.

(c) An applicant for an approved maintenance organisation certificate shall nominate a person as the Accountable Manager, who irrespective of other functions, is accountable on behalf of the organization and acceptable to the BDCA. He shall be responsible for establishing and promoting the safety and quality policy with corporate authority for ensuring that maintenance, preventive maintenance, repairs and modifications for which the approved maintenance organisation is authorised to perform can be financed and carried out to the standard required by the BDCA.

(d) The Accountable Manager shall nominate a management person or group of management persons (hereinafter referred to as "the nominated managers") whose responsibilities include ensuring that the approved maintenance organisation follows these Regulations.

(e) The Accountable Manager shall nominate a senior person with responsibility for monitoring the quality system of the approved maintenance organisation, including the associated feedback system having direct access to the Accountable Manager to keep him properly informed on quality and compliance matters.

(f) The nominated managers shall represent the maintenance management structure of the approved maintenance organisation reporting to the Accountable Manager and responsible for all functions of the approved maintenance organisation specified in these Regulations. The BDCA requires the nominated managers to be identified and their acceptance requests together with their professional and academic history (resumés) to be submitted in the format shown on Appendix E of this BCAR-145.

(1) The Director of Maintenance (or equivalent position) shall comply with the following:

(i) Possess a Belize Type II Aircraft Maintenance Technician License

(ii) Has five years experience in maintaining the same aircraft category and aircraft class the AMO is intended to maintain including one year in the capacity of returning aircraft to service.

(iii) Has one year supervisory experience maintaining the same aircraft category and class the AMO is intended to maintain.

(2) The Quality Manager (or equivalent position) shall comply with the following:

(i) Possess a Belize Type II Aircraft Maintenance Technician License.

(ii) Has five years experience in maintaining the same aircraft category and aircraft class the AMO is intended to maintain, including one year in the capacity of returning aircraft to service.

(iii) Has attended at least 40 hours training in quality systems and audits in the preceding 24 months.

(g) A company authorized to issue a certificate of release to service referred to in paragraph (l), shall specify the scope and limits of such company authorisation and contains a unique company authorisation number in respect of each certifying staff.

(h) An approved maintenance organization shall ensure that certifying staff meet the qualification requirements of BCAR APL and receive initial and continuous training in their assigned tasks and responsibilities by the program specified in their MOE.

(i) An approved maintenance organisation shall ensure that the training program referred to in BCAR 145.31(b), includes training in knowledge and skills related to human performance, including coordinationordination with other maintenance personnel and flight crew.

(j) An approved maintenance organisation shall include procedures in the maintenance organization exposition for the performance of maintenance and issue of a certificate of release to service in respect of maintenance of Belizean aircraft and their associated aircraft components approved by the Director.

(k) Notwithstanding paragraph (l), an approved maintenance organisation may submit procedures in the maintenance organization exposition for approval by the BDCA, for the issue of company authorisation to qualified persons specified under the following circumstances, subject to compliance with the conditions stated for each circumstance:

(1) for a repetitive pre-flight airworthiness directive that specifically states that the flight crew may carry out such airworthiness directive, the approved maintenance organisation may issue a limited certification authorisation to the pilot in command, or co-pilot subject to being satisfied that sufficient practical training has been carried out to ensure that such pilot in command or co-pilot can accomplish the airworthiness directive to the required standard; and

(2) for the unforeseen circumstances where an aircraft is grounded at a location not having an approved maintenance organisation, the organisation contracted to provide maintenance support may issue a one-time authorisation to a person at that location who has at least 5 years of experience and holds a valid aircraft maintenance technician license rated for the aircraft type requiring certification, or an equivalent certificate issued by a Contracting State subject to the approved maintenance organisation obtaining and holding on file, evidence ofthe experience and license of such person.

(l) Where a certificate of service release was issued under paragraph (k)(2), the approved maintenance organisation shall report to the BDCA such event within 7 days of the issuance of such authorisation.

(m) Where the maintenance performed and certified under paragraph (k)(2) could affect flight safety, such maintenance and associated systems shall be re-checked and re-certified at the first opportunity by an authorised aircraft maintenance technician of the approved maintenance organisation

BCAR 145.31 Maintenance Personnel
(See AMC 145.31)

(a) An approved maintenance organisation shall establish and control the competence of personnel involved in any maintenance, maintenance management, inspection, and quality audit by an acceptable procedure agreed upon by the BDCA. In addition to the specialized knowledge to carry out their task, competence shall include the understanding of the application of the appropriate elements of human factors and human performance to the positions of these persons in the organization.

(b) The BCAR 145 AMO shall establish and put into practice, for its maintenance personnel, an initial training programme and continuation (recurrent) training programme appropriate to their assigned tasks and responsibilities, at least every two years, to ensure that they update their knowledge regarding advance in technology, AMO procedures and human factors.

(c) An approved maintenance organisation shall maintain updated records of all maintenance personnel within its organisation, which shall include details of any aircraft maintenance technician licence or authorisation held and all technical trainings completed.

BCAR 145.32 Specialized Services Personnel (NDT)
(See AMC 145.32)

(a) An approved maintenance organisation shall ensure that persons who carry out or control a continued airworthiness non-destructive test (NDT) of aircraft structures or aircraft components shall be qualified for the non-destructive test to a standard prescribed by the BDCA.

(b) All personnel who carry out non-destructive tests (NDT) of aircraft structures or components shall be qualified for the particular type of non-destructive test in accordance with regulations recognised internationally, such as the EN 4179 from Europe, NAS 410, MIL-STD, ASNT or ATA Specification 105 from the United States.

(c) An approved maintenance organisation shall establish internal procedures to qualify the personnel carrying out non-destructive tests (NDT) and these procedures shall be approved by the BDCA.

BCAR 145.35 Certifying Staff
(See IEM 145.35)

(a) The applicant for an approved maintenance organisation certificate shall submit procedures in his maintenance organization exposition for the issue of company authorisation to qualified personnel of the organisation to act as certifying staff, for approval by the BDCA.

(b) An approved maintenance organisation shall issue or re-issue a company authorisation in writing to appropriately qualified technicians within its organisation, to issue a maintenance release for aircraft and their associated aircraft components following satisfactory completion of maintenance.

(c) An approved maintenance organisation may issue or re-issue a company authorisation to a qualified person where that person:

(1) holds a valid type II aircraft maintenance technician licence issued under the BCAR APL or an equivalent authorisation approved by the BDCA, based on his qualifications, knowledge, and experience,

(2) has an adequate understanding of the relevant aircraft and aircraft components to be maintained and for which authorisation privileges are sought and is thoroughly familiar with the relevant approved maintenance organisation systems and procedures,

(3) has successfully completed initial and continuation (recurrent) training in his assigned tasks and responsibilities in accordance with a programme approved by the BDCA,

(4) has successfully completed training in knowledge and skills related to human performance, including coordination with other maintenance personnel and flight crew,

(5) has satisfied the experience and skills requirements in accordance with the training programme approved by the BDCA; and

(6) has satisfied all other requirements of the maintenance organization exposition for the issue of the company authorisation.

(d) A person-issued company authorisation by an approved maintenance organisation in paragraph (b) and (c), shall be referred to as a "certifying staff" under these Regulations.

(e) An approved maintenance organisation shall ensure that all certifying staff has been engaged on the maintenance of operating aircraft systems or associated aircraft components as appropriate, specified in his company authorisation and have exercised the privileges of his certification authorisation for at least 6 cumulative months in any consecutive 24-months period.

(f) An approved maintenance organisation shall ensure that all certifying staff receives sufficient continuation (recurrent) training in each 24 months period to ensure that they have current knowledge ~~of~~ in advance in technology, AMO procedures and human factor issues.

(g) An approved maintenance organisation shall establish a programme for the continuation (recurrent) training and procedures to ensure compliance with paragraph (f) as one of the requirements for the issue and re-issue of a company authorisation to certifying staff.

(h) An approved maintenance organisation shall assess current and prospective certifying staff for their competence, qualification, and capability to carry out intended certifying duties in accordance with the maintenance organization exposition before the issue or re-issue of a company authorisation as appropriate.

(i) The Quality Manager, responsible for the quality system, shall establish procedures for the issue of company authorisation in the maintenance organization exposition and be responsible for the issue of company authorisations to certifying staff on behalf of the approved maintenance organisation.

(j) The Quality Manager, responsible for the quality system referred to in paragraph (i), may delegate to other qualified persons under his direct control, the issue of company authorisations in accordance with procedures specified in the maintenance organization exposition approved by the BDCA.

(k) An approved maintenance organisation shall maintain updated records of all certifying staff within its organisation, which shall include details of any aircraft maintenance technician licence or authorisation held, all technical trainings completed and the scope and limitations of their authorisation.

(l) The approved maintenance organisation, referred to in paragraph (k), shall provide each certifying staff with a copy of his company authorisation, which may be in hard copy or electronic format.

(m) All certifying staff shall produce their company authorisation to the BDCA or his authorised representative upon request or within a reasonable time.

BCAR 145.37 Rest and Duty Limitation for Mechanics

(a) A person shall not be assigned, nor shall any person perform maintenance on an aircraft, unless that person has had a minimum rest of 8 hours prior to commencing duty.

(b) The approved maintenance organisation shall relieve a person performing maintenance functions from all duties for 24 consecutive hours during any 7 consecutive days period.

(c) Work time records of all personnel involved in maintenance activities shall be made available by the organisation upon request by the BDCA.

BCAR 145.40 Equipment, Tools and Materials
(See AMC 145.40)

(a) The organisation shall have available and use the necessary equipment, tools and materials to perform the approved scope of work.

(1) Where the manufacturer specifies a particular tool or equipment, the organisation shall use that tool or equipment, unless the use of alternative tooling or equipment is approved by the BDCA via procedures specified in the MOE.

(2) Equipment and tools shall be permanently available, except in the case of any tool or equipment that is so infrequently used that its permanent availability is not necessary. Such cases shall be detailed in an MOE procedure.

(3) An organisation approved for base maintenance shall have sufficient aircraft access equipment and inspection platforms/dockings such that the aircraft can be properly inspected.

(b) The organisation shall ensure that all tools, equipment and particularly test equipment, as appropriate, are controlled and calibrated according to an officially recognised standard at a frequency to ensure serviceability and accuracy. Records of such calibrations and traceability to the standard used shall be kept by the organization and made available to the BDCA upon request.

(c) An approved maintenance organisation shall establish and keep all records of calibrations and standards used for calibration for 2 years from the date the equipment was withdrawn from service or destroyed.

BCAR 145.42 Acceptance of Components

(a) All components are accepted in accordance with BCAR 21 prior to entering the receiving AMO, they shall be classified and appropriately segregated into the following categories:

(1) Components which are in a satisfactory condition, released on a Form 1 (F-1) or equivalent and marked in accordance with BCAR - 45.

(2) Unserviceable components which shall be maintained in accordance with this section.

(3) Unsalvageable components which are classified in accordance with BCAR- 145.42 (d).

(4) Standard parts used on an aircraft, engine, propeller, or another aircraft component when specified in the manufacturer's illustrated parts catalogue and/or the maintenance data.

(5) Material both raw and consumable used in the course of maintenance when the organisation is satisfied that the material meets the required specification and has appropriate traceability

(6) All material must be accompanied by documentation clearly relating to the material and containing conformity to specification statement plus both the manufacturing and supplier source.

(b) Prior the installation of a component, the organisation shall ensure that the particular component is eligible to be fitted when different modification and/or airworthiness directive standards may be applicable.

(c) The organisation may fabricate a restricted range of parts to be used while undergoing work within its own facilities provided procedures are identified in the MOE.

(d) Components which have reached their certified life limit or contain a non-repairable defect shall be classified as unsalvageable and shall not be permitted to re-enter the component supply system unless certified life limits have been extended or a repair solution has been approved according to BCAR 43

BCAR 145.45 Maintenance Data
(See AMC 145.45)

(a) An approved maintenance organisation shall ensure that all airworthiness and maintenance data appropriate to support the work performed is received, held, and used in the performance of maintenance including modifications and repairs of an aircraft, component or process specified in the maintenance organization exposition.

(b) Applicable airworthiness and maintenance data specified in paragraph (a) refer to

(1) any applicable requirements, procedures, airworthiness directive, operational directive or information issued by the BDCA,

(2) any applicable airworthiness directive issued by the Civil Aviation Authority of a Contracting State which issued the original type certificate;

(3) any applicable data, such as, but not limited to, maintenance and repair manuals, issued by an organisation approved by the Civil Aviation Authority of the Contracting State, for type certificate holder, supplemental type certificate holders and any other organisation approved to publish such data by the appropriate Civil Aviation Authority of Contracting States; and

(4) any applicable standard, such as but not limited to, maintenance standard practices issued by a Civil Aviation Authority of any Contracting State, institute or organisation and recognized by the BDCA as an acceptable standard for maintenance

(c) An approved maintenance organisation shall establish procedures that ensure that, where found, any inaccurate, incomplete, or ambiguous procedures, practices, information or maintenance instructions contained in the maintenance data used by maintenance personnel is recorded and notified to the author of the maintenance data.

(d) An approved maintenance organisation shall not modify airworthiness and maintenance data unless such approved maintenance organisation submits to the BDCA for approval, an amendment to the maintenance organization exposition for any such proposed modifications.

(e) The maintenance instruction in paragraph (d) refers to an instruction on how to carry out a particular maintenance task and shall not authorise the design of repairs and modifications.

(f) An approved maintenance organisation shall establish procedures in the maintenance organization exposition to ensure that appropriate action is taken in the case of damage assessment and the need to use only approved repair data.

(g) An approved maintenance organisation shall provide a common work card or worksheet system for use throughout relevant parts of the organisation.

(h) Work cards and worksheets referred to in paragraph (g) may be computer generated and held on an electronic data base; subject to having adequate safeguards against unauthorised alteration and a backup electronic data base, which is updated within 24 hours of any entry being made to the main electronic data base.

(i) Where the approved maintenance organisation provides maintenance service for an operator who requires the use of his work cards and worksheet system to be used, the approved maintenance organisation shall establish procedures to ensure the correct completion of the aircraft operator work cards and worksheets.

(j) An approved maintenance organisation shall ensure that all applicable maintenance data is readily available for use when required by maintenance personnel.

(k) An approved maintenance organisation shall ensure that all maintenance data is kept current.

(l) Where an approved maintenance organisation provides maintenance service for an operator who controls and provides maintenance data, the approved maintenance organisation shall require that such operator provides written confirmation that all such maintenance data is current, work orders specifying the amendment status of the maintenance data to be used or a copy of the maintenance data amendment list.

BCAR 145.47 Production Planning
(See AMC 145.47)

(a) The approved maintenance organisation shall have a maintenance man-hour plan showing that the organisation has sufficient personnel to plan, perform, supervise, inspect, issue maintenance release and monitor the quality of the activities performed by the organisation in accordance with the approval and to ensure safe completion of the maintenance work.

(b) An approved maintenance organisation shall have a procedure to re-assess work intended to be carried out when actual personnel availability is less than the planned staffing level for a particular work period or shift.

(c) An approved maintenance organisation shall have a system appropriate to the amount and complexity of the work to be performed, to plan the availability of all necessary personnel, tools, equipment, materials, maintenance data and facilities to ensure the safe completion of the maintenance work.

(d) Where an approved maintenance organisation plans maintenance tasks and organises shifts, human performance limitations shall be considered.

(e) When it is required to hand over the continuation or completion of a maintenance action for reasons of shift or personnel change over, an approved maintenance organisation shall ensure that relevant information is adequately communicated between outgoing and incoming personnel in accordance with a procedure acceptable to the BDCA.

BCAR 145.50 Maintenance Release
(See AMC 145.50, IEM 145.50, Appendix B and IEM Appendix B)

(a) A Maintenance Release shall be issued by an appropriate certifying staff on behalf of the approved maintenance organisation when such certifying staff is satisfied that all maintenance required by the operator of the Belizean aircraft or its associated components has been properly carried out by the approved maintenance organisation in accordance with procedures specified in the maintenance organization exposition of the approved maintenance organisation, taking into account the availability and use of the maintenance data specified in BCAR 145.45.

(b) Where maintenance has been performed on an aircraft component, which is not installed on an aircraft, a maintenance release shall be issued for such maintenance and another maintenance release shall be issued after the proper installation of such aircraft component on an aircraft when such action occurs.

(c) A maintenance release shall contain:

(1) basic details of the maintenance carried out including detailed reference of the approved data used,

(2) the date such maintenance was completed,

(3) the name, unique authorisation number of the certifying staff and his/her signature or stamp,

(4) name and certificate number of the approved maintenance organisation; and

(5) an airworthiness compliance statement.

(d) Certifying staff shall not issue a maintenance release on behalf of an AMO where such certifying staff or the AMO knows non-compliances which could affect flight safety.

BCAR 145.55 Maintenance Records
(See AMC 145.55)

(a) An approved maintenance organisation shall record all details of maintenance work carried out on Belizean aircraft and its associated components, in a form acceptable to the BDCA. As a minimum, the organization shall retain records necessary to prove that all requirements have been met for issuance of the maintenance release.

(b) An approved maintenance organisation shall provide a copy of each maintenance release to the aircraft operator, together with a copy of any specific airworthiness data used for repairs or modifications carried out.

(c) An approved maintenance organisation shall retain a copy of all detailed maintenance records and any associated airworthiness data for two years from the date the aircraft or aircraft component was issued a maintenance release.

(d) Where an organization approved under this Regulation teminates its operation, all retained maintenance records covering the last two years shall be distributed to the last owner or customer of the respective aircraft or component or shall be stored as specified by the BDCA.

(e) Records kept in accordance with 145.55 a) shall be maintained in a form and format that ensures readability, security, and integrity of the records at all times.

(f) Where an air operator contracts an approved maintenance organisation to keep his maintenance records, maintenance release and any associated airworthiness data, such approved maintenance organisation shall retain the records in accordance with BCAR OPS 1.920

BCAR 145.60 Reporting of Faults, Malfunctions and Defects
(See AMC 145.60)

(a) An approved maintenance organisation shall report on a prescribed form to the BDCA any faults, malfunctions, defects and other occurrences that cause or might cause adverse effects on the continuing airworthiness of the aircraft or any identified condition that could present a serious hazard to the aircraft or any of its components.

(b) The approved maintenance organization shall establish an internal occurrence reporting system as detailed in the MOE to enable the collection and evaluation of such reports, including the assessment and extraction of those occurrences to be reported under paragraph a). The procedure shall identify adverse trends, andcorrective actions taken or to be taken by the AMO to address deficiencies and include evaluation of all known relevant information relating to such occurrences and a method to circulate the necessary information.

(c) All reports referred to in paragraph (a), shall be made in a form and manner prescribed by the BDCA and contain all pertinent information about the condition known to the approved maintenance organisation.

(d) In addition to what is established in paragraph a), where the approved maintenance organisation is contracted by an air operator to carry out maintenance, the approved maintenance organisation shall report to the air operator any condition affecting the aircraft or aircraft component.

(e) Reports required by this BCAR shall be submitted within 3 working days following the day of discovery or identification of a failure, malfunction or defect causing the possible unsafe condition.

BCAR 145.65 Safety and Quality Policy, Maintenance Procedures and Quality System
(See AMC 145.65)
(See IEM 145.65(d))

(a) The BCAR-145 AMO shall establish a safety and quality policy for the organization to be included in the MOE under BCAR 145.70.

(b) The BCAR-145 AMO shall establish procedures acceptable to the BDCA, considering human factors and human performance to ensure good maintenance practices and compliance with the requirements of this BCAR-145, such that aircrafts and its associated components may be properly issued a maintenance release.

(1) Concerning aircraft line and base maintenance, the organization shall establish procedures to minimise the risk of multiple errors and capture errors on critical systems and ensure that no person is required to maintain and inspect concerning a maintenance task involving some elements of disassembly/reassembly of several components of the same type fitted to more than one system on the same aircraft during a particular maintenance check. However, when only one person is available to carry out these tasks then the organization's work card or worksheet shall include an additional stage for re-inspection of the work by this person after completion of all the same tasks.

(2) Maintenance procedures shall be established to ensure that damage is assessed, and modifications and repairs are carried out using approved data.

(3) The competence of personnel involved in the performance of maintenance, supervision, management, and quality audits for an approved maintenance organisation shall be established and controlled in accordance with procedures and to standards approved by the BDCA.

(4) The competence of personnel referred to in paragraph (4), shall include an understanding of the application of human factors and human performance issues appropriate to the functions of such persons in the organisation.

(c) The BCAR-145 AMO shall establish an independent quality system acceptable to the BDCA to ensure good maintenance practice and compliance with all relevant requirements in this regulation, such that aircrafts and its associated products may be properly issued a maintenance release, that includes the following:

(1) Independent audits to monitor compliance with required aircraft/aircraft component standards and adequacy of the procedures to ensure that all maintenance is properly performed. In small BCAR-145 AMO the independent audit part of the quality system may be contracted to another BCAR-

145 AMO or a person with appropriate technical knowledge and proven satisfactory audit experience acceptable for the BDCA, and

(2) A quality feedback reporting system to the person or group of persons specified in BCAR 145.30 (d) and ultimately to the accountable manager that ensures proper and timely corrective action is taken in response to reports resulting from the independent audits established to meet the BCAR 145.65 (c)(1).

BCAR 145.66 Safety Management System

(a) Approved maintenance organizations providing services to operators of aeroplanes or helicopters engaged in commercial air transport shall implement a safety management system (SMS) acceptable to the BDCA.

(b) A safety management system shall clearly define lines of safety accountability throughout maintenance organization, including a direct accountability of safety on the part of the senior management.

(c) The SMS of an approved maintenance organization shall:

(1) be established in accordance with the framework elements contained in Appendix D; and

(2) be commensurate with the size of the service provider and the complexity of its aviation products or services.

BCAR 145.67 Programme to Control the Use of Alcohol and Drugs

(a) Every holder of a BCAR-145 AC shall establish a programme to control the use of alcohol and drugs for those employees involved in activities related to aircraft maintenance tasks or that in any way may affect the flight safety.

(b) The control methods shall be applied on schedule, at random, or by suspicion on situations and after an air accident or incident.

(c) Every holder of a BCAR-145 AC contracting the activities mentioned in the previous paragraph (a), shall ensure that the sub-contractor has established in its own company an independent programme to detect these substances.

(d) In the case that a BCAR-145 AMO forms part of the structure of an air operator, and this operator meets the requirements established in BCAR OPS 1, it will not be necessary that the BCAR-145 AMO establishes an additional or independent control programme required in this paragraph.

(e) The BCAR-145 AMO shall develop this control programme mentioned in paragraph (a) as well as its related procedures and methods. A reference can be made in the MOE; however, the same can be developed in a separate document and must be approved by the BDCA.

BCAR 145.70 Maintenance Organization Exposition (MOE)
(See AMC IEM 145.70)

(a) The maintenance organization exposition of the approved maintenance organisation and any subsequent amendments thereto shall be approved by the BDCA prior to use.

(b) An approved maintenance organisation shall set out the procedures, means and methods in its maintenance organization exposition by which it intends to operate.

(c) The approved maintenance organisation shall ensure that the maintenance organization exposition referred to in paragraph (b), is provided for the use and guidance of the organisation and all maintenance personnel are familiar with those parts of the maintenance organization exposition that are relevant to the maintenance work they perform.

(d) A maintenance organization exposition under this Regulation shall contain details of the following subjects as set out in the Approved Maintenance Organisation Standard (see Appendix C):

(1) a statement signed by the Accountable Manager of the approved maintenance organisation and where the Chief Executive Officer is not the Accountable Manager, also by such Chief Executive Officer, confirming that the maintenance organization exposition and any associated manuals of the approved maintenance organisation follow these Regulations and shall be complied with at all times,

(2) an organisation chart showing associated chain of responsibility of the management personnel specified in paragraph (4); the specific scope of work required by the approved maintenance organisation to satisfy the relevant requirements needed for obtaining an approval to issue maintenance release in respect of maintenance of Belizean aircraft and their associated aircraft components,

(3) the titles and names of the management personnel approved by the BDCA which may be kept separate from the maintenance organization exposition but shall be kept current and available for review by the BDCA when requested,

(4) the duties and responsibilities of the management personnel and the matters on which they may deal directly with the BDCA on behalf of the approved maintenance organisation,

(5) a current list of certifying staff and the scope of their authorization, both may be kept separate from the maintenance organization exposition but the list and the procedures to establish and maintain such list shall be available for review by the BDCA,

(6) a description of the procedures used to establish the competence of maintenance personnel,

(7) instructions and information necessary to allow all personnel to perform their duties with a high degree of safety,

(8) general description of manpower resources,

(9) a specification of the organisation's scope of work relevant to the extent of approval,

(10) a description of the method used for the completion and retention of maintenance records,

(11) a description of the procedures for preparing the maintenance release and the circumstances under which it is to be signed,

(12) a description, where applicable, of additional procedures for complying with maintenance procedures and requirements of the respective air operator,

(13) a description of the procedures for complying with the reporting requirements of BCAR 145.60,

(14) a procedure for receiving, amending, and distributing, within the approved maintenance organisation, all necessary airworthiness data from the type certificate holder or the type design organisation,

(15) a general description of the facilities located at each address specified in the approved maintenance organisation certificate,

(16) The procedures and quality system established by the BCAR-145 AMO in accordance with that stated under BCAR 145.25 to BCAR 145.95 inclusive.

(17) the notification procedure to be used by the approved maintenance organisation when requesting approval to the BDCA for changes to the approved maintenance organisation,

(18) procedures to be adopted by the approved maintenance organisation when making amendments to the maintenance organization exposition, including submissions to the BDCA,

(19) the procedures adopted by the AMO and approved by the BDCA, to ensure good maintenance practices and compliance with all relevant requirements of these Regulations,

(20) the procedures of the approved maintenance organisation for establishing and maintaining an independent quality system to monitor compliance with, and the adequacy of, the procedures to ensure good quality maintenance practices and airworthy aircraft and aircraft components,

(21) the safety and quality policy, including the safety management system, of the approved maintenance organisation,

(22) the procedures of the approved maintenance organisation to perform internal audits, including methods and frequency of such evaluations, and procedures for reporting results to the Accountable Manager for review and action,

(23) a list of operators, where appropriate, to which the approved maintenance organisation provides aircraft maintenance services,

(24)a list of subcontracted organisations and activities, where applicable, as specified in 145.75 (a) (2) and

(25)a list of the line maintenance locations and procedures of the approved maintenance organisation, where applicable

(e) The system to monitor compliance referred to in paragraph (d) (20) shall include a feedback system to the nominated managers specified in BCAR 145.30, and ultimately to the Accountable Manager to ensure, as necessary, corrective action is taken in response to reports resulting from independent audits established to meet the requirements under BCAR 145.65.

(f) A maintenance organization exposition and any other manual referred therein shall:

(1) be in a form that is easy to revise and contain a system which allows personnel to determine current revision status,

(2) have the date of the last revision printed on each page concerned,

(3) not be inconsistent with the Regulations made thereunder,

(4) not be inconsistent with the approval certificate, and

(5) include a reference to the appropriate Regulations.

(g) In addition to the matters set out in paragraph (d), the maintenance organization exposition referred therein may be produced either

(1) in a series of parts;

(2) as a series of volumes; or

(3) as a single document.

(h) An approved maintenance organisation shall ensure that all amendments to its maintenance organization exposition, which are necessary to keep the information contained therein current, are submitted to the BDCA for approval.

(i) An approved maintenance organisation shall ensure that all amendments to its approved maintenance organization exposition are provided promptly to all persons of the approved maintenance organisation to whom the manual has been issued.

(j) For the development of the maintenance organization exposition, it is necessary to follow the structure and content established in Appendix C of section 1 of this BCAR 145.

BCAR 145.75 Privileges of a BCAR-145 AMO
(See IEM 145.75)

(a) An approved maintenance organisation may perform the following tasks as permitted by, and in accordance with, its maintenance organization exposition:

(1) maintain a Belize-registered aircraft and its associated aircraft components for which it is approved at the location identified in the approved maintenance organisation certificate,

(2) arrange for maintenance of a Belize-registered aircraft and its aircraft components for which it is approved at another organisation that is working under the quality system of the approved maintenance organisation, within the limitations of his approved maintenance organisation certificate,

(3) maintain a Belize-registered aircraft and its aircraft components for which it is approved, at any location, subject to need for such maintenance arising either from the unserviceability of the aircraft component, or from the necessity of supporting occasional line maintenance subject to the conditions specified on the approved maintenance organisation certificate and the procedures in the maintenance organization exposition,

(4) maintain a Belize-registered aircraft and its aircraft components for which it is approved, at a location identified as a line maintenance location, capable of supporting minor maintenance where the maintenance organization exposition permits such activities and lists such locations,

(5) maintain a Belize-registered aircraft and its associated aircraft components in support of a specific air operator where such air operator has requested the services of the approved maintenance organisation at locations other than its main base where it has a rating in its approval certificate, approved by the BDCA to maintain the aircraft of that specific air operator at the requested location, and

(6) issue a maintenance release in respect of paragraphs (1) through (5) upon completion of maintenance in accordance with the ratings and limitations of its Approval Certificate.

(b) An approved maintenance organisation:

(1) shall not contract out the maintenance, preventive maintenance, modification or alteration of a complete type of certified aircraft or associated component for which it is rated unless approved to do so by the BDCA, and

(2) shall not certify a Belize-registered aircraft or its associated aircraft components where the entire maintenance of such Belize-registered aircraft or its associated aircraft components has been sub-contracted.

(c) An AMO shall not contract out maintenance, preventive maintenance, modification or alteration of a complete type-certified product to a non-approved maintenance organisation.

(d) An approved maintenance organisation shall not maintain or modify any Belize-registered aircraft and its associated aircraft components for which it is rated at a place other than its premises unless

(1) the maintenance activities would be performed in the same manner as when performed at its premises and in accordance with these Regulations,

(2) all necessary personnel, equipment, material, technical and approved standards are available at the place where the work is to be done,

(3) the maintenance organization exposition provides approved procedures governing work to be performed at a place other than its premises, and

(4) it informs the BDCA and receives approval in writing for each task prior to undertake such task.

BCAR 145.80 Limitations of a BCAR-145 AMO
(See IEM 145.80)

(a) An approved maintenance organisation shall not perform maintenance on a Belize-registered aircraft and its associated aircraft components for which it is rated unless it has available the required housing:

(1) facilities;

(2) equipment;

(3) tools;

(4) material;

(5) maintenance data;

(6) approved technical data; and

(7) appropriately trained maintenance and certifying staff.

BCAR 145.85 Changes to the BCAR–145 AMO
(See IEM 145.85)

(a) Where the holder of an approval certificate intends to make changes to his certificate in relation to:

(1) the name of the organisation,

(2) the location of the organisation,

(3) the housing, facilities, equipment, tools, materials, procedures, work scope and certifying staff that could affect the approved maintenance organisation rating,

(4) the ratings held by the approved maintenance organisation, whether granted by the BDCA or held through an approved maintenance organisation certificate issued by another Contracting State,

(5) additional locations of the organisation,

(6) the Accountable Manager, and

(7) the list of management personnel identified in the MOE,

He shall provide written notification to the BDCA of his intention to make such change.

(b) Upon receipt of the notification referred to in paragraph (a), the BDCA shall notify the applicant of any special procedures to be followed for amending his approval certificate.

(c) An application referred to in paragraph (a), shall be

(1) in the prescribed form,

(2) accompanied by the prescribed fee, and

(3) accompanied by the required amendment to the maintenance organization exposition for approval by the BDCA.

(d) The BDCA may approve the amendment of an approval certificate and issue a new approval certificate with the old approval certificate number where he is satisfied that the applicant continues to meet the required standards and other requirements under these Regulations, and

(1) is properly and adequately equipped to perform maintenance on Belize-registered or their associated aircraft components for which the amendment is sought; and

(2) has paid all fees as prescribed by the BDCA.

(e) Where the amendment to an approval certificate involves a change of ownership, the applicant shall provide the BDCA with such evidence of the change of ownership.

(f) Notwithstanding paragraph (d), the BDCA may assign a new approval certificate number to the amended certificate where the amendment involves a change of ownership specified in paragraph (e).

(g) Notwithstanding paragraph (d), the BDCA may, where an approval has been granted for the amendment, prescribe in writing, the conditions under which the approved maintenance organisation may continue to operate during any period of implementation of the changes referred to in paragraph (a).

(h) Any changes made to an approval certificate in paragraph (a) without the required notification or approval shall be ineffective unless approved by the BDCA.

(i) The BDCA may suspend an approval certificate where the holder of such certificate makes any change listed in paragraph (a), to the approved maintenance organisation without

(1) notifying the BDCA, and

(2) having such amendment approved by the BDCA.

(j) Where changes are made to an approved maintenance organisation in breach of this Regulation, the BDCA may suspend the approval certificate.

BCAR 145.90 Continued Validity of Approval

(a) A certificate issued to an approved maintenance organisation by the BDCA shall be valid for 5 years, unless:

(1) it is surrendered to the BDCA by the approved maintenance organisation,

(2) it is suspended or revoked by the BDCA,

(3) the holder of the approval certificate no longer has a fixed base of operation;

(4) the holder of the approval certificate no longer meets the requirements of this BCAR 145.

(5) Notwithstanding paragraph a), the validity of the approval certificate may be less than 5 years if requested by the certificate holder or prescribed by the BDCA.

(b) The holder of an approved maintenance organisation certificate shall return the approval certificate to the BDCA when it is suspended or revoked by the BDCA.

(c) A valid approved maintenance organisation certificate shall continue to remain in force on the condition that;

(1) the holder of the approval certificate maintains compliance with these Regulations,

(2) the BDCA is permitted access at any time, to the facilities of the approved maintenance organisation to conduct inspections to determine continued compliance with these Regulations,

(3) the holder of the approved maintenance organisation certificate has not surrendered such certificate to the BDCA, and

(4) the approved maintenance organisation certificate has not been suspended or revoked by the BDCA.

(d) Where an approved maintenance organisation is no longer in compliance with these Regulations, the BDCA may suspend or revoke its certificate

(e) Where the holder of an approved maintenance organisation certificate intends to renew his certificate, he shall:

(1) apply to the BDCA in the prescribed form,

(2) submit his application no less than 60 days before the current certificate expires, and

(3) pay the prescribed fee.

(f) The BDCA may, after an evaluation of the application for renewal of an approval certificate and an inspection of the facilities of the AMO, renew the approval certificate when he is satisfied that the applicant:

(1) meets the requirements of these Regulations,

(2) has maintained all the procedures and specifications set out in is maintenance exposition,

(3) continues to be properly and adequately equipped to perform maintenance of Belize-registered aircraft or its associated aircraft components for which he is rated; and

(4) has paid all fees as prescribed by the BDCA.

BCAR 145.95 Exemptions
(See IEM 145.95)

(a) The BDCA may exempt an organization from a requirement in BCAR–145 AMO when satisfied that a situation exists, not envisaged by a BCAR–145 requirement, and subject to compliance with any supplementary condition(s). This shall be approved by the BDCA to ensure an equivalent level of safety in that particular situation.

(b) The holder of the approval certificate shall keep a record of the exemptions granted.

BCAR 145.100 Revocation, Suspension, Limitation or Refusal to Issue or Re-issue of the BCAR – 145 Approval Certifcate
(See IEM 145.100)

(a) The BDCA may, on reasonable grounds, and after due enquiry, revoke, suspend, limit, or refuse the issue or renewal of the BCAR-145 AC, if the BDCA is not satisfied that the holder of the approval certificate continues to meet the requirements of BCAR–145.

BELIZE DEPARTMENT OF CIVIL AVIATION

Appendix A

BCAR -145 AMO RATINGS

(See BCAR -145.20)

Except as stated in Annex 1 for small BCAR -145 AMOs, Table 1 outlines all the possible ratings to be issued for a BCAR 145 AMO. The rating can vary from a single class and subclass to a rating with limitations to all the classes and ratings.

In addition to Table 1, the BCAR - 145 approved maintenance organization is required by BCAR-145.20 to indicate scope of work in the MOE. The BCAR-145.70(d) (9) also refers to the same scope of work and it shall be clarified that the capability list is one of the ways to express such scope.

Within the classes and ratings approved by the BDCA, the scope of work specified in the MOE defines the exact limits of approval. Thus, these components must be compatible with each other.

Category A class rating means that the BCAR -145 approved maintenance organization may carry out maintenance on the aircraft and any component (including engines/APUs) only whilst such components are fitted to the aircraft except that such components can be temporarily removed for maintenance when such removal is expressly permitted. The limitation section will specify the scope of such maintenance thereby indicating the extent of approval. Category A is subdivided in base and/or line maintenance. A BCAR -145 approved maintenance organization can be approved for base or line maintenance or for both. A BCAR -145 approved maintenance organization that has facilities to carry out line maintenance in the maintenance main base also requires a line maintenance rating. The MOE on its section 1.9 “scope of work of the organization” should reflect such activity permitted by the BDCA.

Category B class rating means that the BCAR 145 approved maintenance organization may carry out maintenance on the uninstalled engine/APU and engine/APU components only whilst such components are fitted to the engine/APU except that such components can be temporarily removed for maintenance when such removal is expressly permitted by the engine/APU manual to improve access for maintenance. The limitation section will specify the scope of such maintenance thereby indicating the extent of approval. A BCAR-145 approved maintenance organization with a category B class rating may also carry out maintenance of an installed engine during 'base' and 'line' maintenance subject to a control procedure in the MOE acceptable to the Director. The MOE section 1.9 “Scope of work of the organisation” should reflect such activity permitted by the BDCA.

Category C class rating means that the BCAR-145 approved maintenance organization may carry out maintenance on uninstalled components (excluding engines and APUs) intended for fitment to the aircraft or engine/APU. The limitation section will specify the scope of such maintenance thereby indicating the extent of approval. A BCAR-145 approved maintenance organization with a category C class rating may also carry out maintenance on an installed component during base and line maintenance or at an engine/APU maintenance facility subject to a control procedure in the MOE acceptable to the BDCA Authorities. The MOE on its section 1.9 “Scope of work of the organization” should reflect such activity permitted by the BDCA.

Category D class rating is a self contained class rating not necessarily related to a specific aircraft, engine or other component. The subclass D1 is for - Non Destructive Testing (NDT). The MOE on its section 1.9 “Scope of work of the organization” should reflect such activity permitted by the BDCA.

Category E class rating means that the BCAR-145 approved maintenance organization can carry out maintenance tasks to uninstalled propellers in an aircraft. The limitation section will specify the scope of such maintenance thereby indicating the extent of approval. A BCAR -145 approved maintenance organization with a category E class rating may carry out maintenance tasks to propellers installed in an aircraft during base or line maintenance subject to a control procedure in the MOE acceptable to the BDCA. The MOE on its section 1.9 “Scope of work of the organisation” should reflect such activity permitted by the BDCA.

The 'limitation' section is intended to give the BDCA maximum flexibility to customise the approval to the needs of the BCAR-145 approved maintenance organization. Table 1 specifies the types of possible limitations. The BDCA will specify in this section the manufacturer of the aircraft, type, and series or group of series or the groups of ‘piston single engine aircrafts’ or ‘piston Lycoming engines not supercharged’ as well as any other limitation considered relevant.

When a lengthy capability list is used which could be subject to frequent amendments, then such amendments shall be in accordance with a procedure acceptable to the BDCA and shall be included in the MOE. The procedure should address the issues of who is responsible for capability list amendment control and the actions that need to be taken for amendment. Such actions include ensuring compliance with the BCAR-145 for components or services added to the list.

Table 2 identifies the ATA specification 100 chapter for the category C component rating.

A BCAR -145 approved maintenance organization which employs only one person to both plan and carry out all maintenance can only hold a limited scope of approval rating.

BELIZE DEPARTMENT OF CIVIL AVIATION

SECTION – 1 **BCAR 145**

TABLE 1
Approved ratings
(BCAR – 145 AMO)

CLASS	RATING	LIMITATION	BASE	LINE
A Aircraft	**A1** Aeroplanes/ above 5.700 Kg.	Will state type/series and/or maintenance task(s)		
	A2 Aeroplanes/ 5.700 Kg. and below	Will state manufacturer/groups/types/serie and/or maintenance task(s)		
	A3 Helicopters	Will state manufacturer/groups/types/series and/or maintenance task(s)		
B Engines	**B1** Turbine	Will state manufacturer/types/series and/or maintenance task(s)		
	B2 Piston	Will state manufacturer/types/ series and/or maintenance task(s)		
	B3 APU	Will state manufacturer/ types/ series and/or maintenance task(s)		
C Components (other than complete engines / APUs)	**C1** Air Cond & Press **C2** Auto flight **C3** COMMs/NAV. **C4** Doors & Hatches **C5** Electrical Power **C6** Equipment **C7** Engine / APU **C8** Flight Controls **C9** Fuel / Airframe **C10** Helicopter Rotors **C11** Helicopter Trans **C12** Hydraulic **C13** Instruments **C14** Landing Gear **C15** Oxygen **C16** Pneumatic **C17** Protection ice/rain/fire **C18** Windows **C19** Structural	Will state aircraft type, or aircraft manufacturer, or component manufacturer and cross reference to a capability list and the maintenance task(s)		
D Specialised Services	**D1** Non-Destructive Testing (NDT)	Will state NDT method(s) and industry standards		

E Propellers	**E1 Fixed Pitch** **E2 Variable Pitch**	Will state manufacturer/ type/ series and/or maintenance tasks

TABLE 2

CATEGORY C versus ATA 100

CLASS	RATING	ATA CHAPTERS
C Components (other than complete engines or APUs)	C1 Air Cond & press	21
	C2 Auto Flight	22
	C3 Comms and Nav	23 – 34
	C4 Doors – Hatches	52
	C5 Electrical Power	24 – 33
	C6 Equipment	25 – 38 – 45
	C7 Engine / APU	49 – 71 – 72 – 73 – 74 – 75 – 76 – 77 –78 – 79 – 80 – 81 – 82 – 83
	C8 Flight Controls	27 – 55 – 57.40 – 57.50 – 57.60 – 57.70
	C9 Fuel – Airframe	28
	C10 Helicopter –Rotors	62 – 64 – 66 – 67
	C11 Helicopter- Trans	63 – 65
	C12 Hydraulic	29
	C13 Instruments	31
	C14 Landing Gear	32
	C15 Oxygen	35
	C16 Pneumatic	36 – 37
	C17 Protection ice/ rain/ fire	26-30
	C18 Windows	56
	C19 Structures	53 – 54 – 57.10 – 57.20 – 57.30
E Propellers	E1 Fixed Pitch E2 Variable Pitch	61

Appendix B

CERTIFICATE OF RELEASE TO SERVICE (COMPONENTS)/FORM ONE (F-1)

(See BCAR 145.50 and IEM Appendix B)

INTRODUCTION

This appendix covers the forms of the certificates of release to service of components or parts of components after carrying out maintenance tasks. The equivalent Form to the F-1 is the "JAA Form One" from the JAA, the "FAA Form 8130-3" from the FAA, and the "TCCA Form 24-0078" from Transport Canada.

PURPOSE AND SCOPE

The purpose of the Certificate is to release items/components/parts hereinafter referred to as item(s) after manufacture and to release maintenance work carried out on such items under the approval of the BDCA, and to allow items removed from one aircraft/aircraft components to be fitted to the same or another aircraft/aircraft component. This is the authorised certificate to release to service components.

The Certificate is to be used for export/import purposes, as well as for domestic purposes, and serves as an official certificate for items from the manufacturer/ BCAR - 145 AMO to its owners/operators. The certificate is not a delivery or shipping note.

The certificate can only be issued by the BCAR -145 AMO for those items within its capability list or scope of the approval.

The Certificate may be used as a rotable tag by utilising the available space on the reverse side of the certificate for any additional information and despatching the item with two copies of the certificate so that one copy may be eventually returned with the item to the BCAR -145 AMO. The alternative solution is to use existing rotable tags and also supply a copy of Form One (F-1).

Under no circumstances may a Form One (F-1) be issued for any item when it is known that the item has a defect considered a serious hazard to flight safety.

A Form One (F-1) should not be issued for any item when the AMO knows that the item is unserviceable except in the case of an item undergoing a series of maintenance processes at several BCAR -145 AMOs and the item needs a certificate for the previous maintenance process carried out for the next BCAR -145 AMO to accept the item for subsequent maintenance processes. In block 12 of Form One (F-1) a clear statement of limitation should be endorsed.

Form One (F-1) shall not be used as certificate for release to service for maintenance carried out to an aircraft.

BELIZE DEPARTMENT OF CIVIL AVIATION

SECTION – 1 BCAR 145

1.	2. AUTHORISED RELEASE CERTIFICATE F – 1	3. Form Tracking Number
4. BCAR – 145 Approved Maintenance Organisation Name and Address		5. Work order / Contract / Invoice Number.

6. Item	7. Description	8. Part Number	9. Qty.	10. Serial / Batch Number	11. Status / Work

12. Remarks

13a. Certifies that the items identified above were manufactured in conformity to: ☐ Approved design data and are in condition for safe operation ☐ Non-approved design data specified in block 12		14a. ☐ BCAR -145.50 Release to service Certifies that unless otherwise specified in block 12, the work identified in block 11 and described in block 13, was accomplished in accordance with BCAR -145 and in respect to that work the items are considered ready for release to service.	
13b. Authorized Signature	13c. Approval / Authorization Number	14b. Authorized Signature	14c. BCAR – 145 AC Number
13.d. Name	13e. Date (d/m/y)	14d. Name	14e. Date (dd/mmm/yyyy)

CERTIFICATE OF RELEASE TO SERVICE – F-1

USER/INSTALLER RESPONSABILITIES

NOTE:

1. It is important to understand that existence of the document alone does not automatically constitute authority to install the part / component / assembly.

2. Where the user/installer works in accordance with the National Regulations of an Airworthiness Authority different from the BDCA, it is essential that the user/installer ensures that his/her Airworthiness Authority accepts parts/components/assemblies from the BDCA.

3. Statements 13 and 14 do not constitute installation certification. In all cases the aircraft maintenance record must contain an installation certification issued in accordance with this BCAR 145 by the user/installer before the aircraft may be flown.

BELIZE DEPARTMENT OF CIVIL AVIATION

Appendix C
STRUCTURE AND CONTENT OF THE MOE

(See BCAR 145.70)

The maintenance organization exposition (**MOE**) should contain the information, as applicable, specified in this Appendix. The information may be presented in any subject order as long as all applicable subjects are covered.

Small BCAR – 145 organizations may combine the various items to form a simple manual more relevant to their needs.

PART 0. BCAR - OPS GENERAL ORGANIZATION

This section reserved for those BCAR -145 AMO who are also approved BCAR - OPS operators.

PART 1. MANAGEMENT

1.1 Corporate commitment by the accountable manager.
1.2 Description and policy of the Safety and Quality System and Safety Management System.
1.3 Management personnel.
1.4 Management personnel name, duties and responsibilities (List of Management Personnel).
1.5 Management organisation chart
1.6 List of certifying staff.
1.7 Manpower resources.
1.8 General description of the facilities at each address intended to be approved.
1.9 Scope of work (Capability List) of the BCAR -145 AMO.
1.10 Notification procedure to the BDCA regarding changes to the organization's activities/ approval/ location/ personnel.
1.11 Amendment or revision procedures to the MOE.
1.12 Inspection authority and access to documentation by the BDCA.
1.13 Programme to control the use of drugs and alcohol.

PART 2. MAINTENANCE PROCEDURES

2.1 Supplier evaluation and subcontract control procedure.
2.2 Acceptance/inspection of aircraft components and material from outside contractors.
2.3 Storage, tagging and release of aircraft components and material to aircraft maintenance.
2.4 Acceptance of tools and equipment.
2.5 Calibration of tools and equipment.
2.6 Use of tooling and maintenance equipment by staff (including alternate tools).
2.7 Cleanliness standards of maintenance facilities and environmental monitoring.

BELIZE DEPARTMENT OF CIVIL AVIATION

SECTION – 1 **BCAR 145**

2.8 Maintenance instructions of the BCAR -145 AMO and its relationship to aircraft/aircraft component manufacturers' instructions

2.9 Description of the procedures to receive, evaluates, amend, and distribute all the airworthiness information within the organization established in BCAR -145.45.

2.10 Repair procedure.

2.11 Compliance with operators aircraft maintenance programmes

2.12 Procedures to analyse and implement Airworthiness Directives (AD)/ Mandatory continuing airworthiness information

2.13 Optional modification procedure.

2.14 Maintenance documentation in use and its completion

2.15 Technical record control including description of the methods used to complete or retain such records.

2.16 Rectification of defects arising during base maintenance.

2.17 Procedure for the competence of authorised personnel.

2.18 Procedures for the release to service in accordance with BCAR 145.50.

2.19 Records of the BCAR - OPS operators.

2.20 Procedures to report failures, malfunctions and defects to the BDCA.

2.21 Return of defective aircraft components to store.

2.22 Defective components to outside contractors.

2.23 Control of computer maintenance record systems.

2.24 Control of man-hour planning versus scheduled maintenance work.

2.25 Control of critical tasks (AMC 145.65 (b) (3)).

2.26 Reference to specific maintenance procedures such as -

- Engine running procedures,
- Aircraft pressure run procedures,
- Aircraft towing procedures,
- Aircraft taxing procedures.
- Work away from base or work shop including occasional Line maintenance

2.27 Procedures to detect and rectify maintenance errors.

2.28 Shift/task handover procedures.

2.29 Procedures for notification of maintenance data inaccuracies and ambiguities to the type certificate holder.

2.30 Procedures for the control of any specialised process.

2.31 Production planning procedures:

- Establishement of a clear work order
- Procedures for establishing all necessary resources are available before commencement of work (manpower with required capabilities, tools, equipment, parts, material, maintenance data, documentation, facilities etc.)
- Procedures for organizing maintenance personnel without undue time pressure and providing all necessary support during maintenance, including rest and duty time of maintenance personnel.

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- Consideration of human performance limitations (Circadian rhythm / 24 hours body cycle...)
- Planning of critical tasks and task that need dual inspection.

PART L2. LINE MAINTENANCE PROCEDURES

L2.1 Line maintenance control of aircrafts, components, tools, equipment etc.
L2.2 Line maintenance procedures related to servicing/fuelling/de-icing etc.
L2.3 Line maintenance control of defects and repetitive defects.
L2.4 Line procedure for completion of technical log.
L2.5 Line procedure for pooled parts and loan parts.
L2.6 Line procedure for return of defective parts removed from aircraft.
L2.7 Line procedure control of critical tasks per (AMC 145.65 (b) (3)).

PART 3. QUALITY SYSTEM PROCEDURES

3.1 Quality audit of organization procedures.
3.2 Quality audits of the product.
3.3 Quality audits remedial action procedures.
3.4 Certifying staff and maintenance personnel qualification and training procedures
3.5 Certifying staff, auditors, and maintenance personnel records.
3.6 Qualification and training procedures for quality audit personnel
3.7 Qualifying inspectors / supervisors.
3.8 Qualifying mechanics.
3.9 Procedures to control non compliance situations with aircraft and aircraft component maintenance tasks (see BCAR – 145.50 (d)).
3.10 Procedures for the control of changes to the MOE in accordance with BCAR -145.70 (c).
3.11 Qualification procedure for specialised activities such as NDT welding, etc.
3.12 Control of manufacturers and other maintenance working teams.
3.13 Human factors training procedure.
3.14 Assessment of the proficiency of personnel.
3.15 Quality audit of sub-contractors (or acceptance of accreditation by third parties, e.g. use of NDT organizations approved by a State regulatory body other than the BDCA).
3.16 Safety Management System procedures.

PART 4. OPERATOR DOCUMENTS

4.1 Contracted BCAR - OPS operators.
4.2 Operator procedures and paperwork.
4.3 Operators record completion.

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SECTION – 1 **BCAR 145**

PART5. CONTRACTS AND FORMS

5.1 Sample of documents.

5.2 List of sub-contractors as per BCAR 145.75 (b).
5.3 List of maintenance locations as per BCAR 145.75 (d).
5.4 List of contracted BCAR -145 AMOs as per BCAR 145.70 (a) (18).

PART 6. BCAR - OPS MAINTENANCE PROCEDURES

This section is reserved for that BCAR -145 AMOs who is also BCAR -OPS operators.

The details of such procedures can be found in the BCAR - OPS.

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SECTION – 1 **BCAR 145**

Appendix D
FRAMEWORK FOR A SAFETY MANAGEMENT SYSTEM (SMS)

This appendix specifies the framework for the implementation and maintenance of an SMS. The framework comprises four components and twelve elements as the minimum requirements for SMS implementation:

1. Safety policy and objectives
1.1 Management commitment
1.2 Safety accountability and responsibilities
1.3 Appointment of key safety personnel
1.4 Coordination of emergency response planning
1.5 SMS documentation

2. Safety risk management
2.1 Hazard identification
2.2 Safety risk assessment and mitigation

3. Safety assurance
3.1 Safety performance monitoring and measurement
3.2 The management of change
3.3 Continuous improvement of the SMS

4. Safety promotion
4.1 Training and education
4.2 Safety communication

1. Safety policy and objectives
1.1 Management commitment
1.1.1 The approved maintenance organizations shall define its safety policy in accordance with international and national requirements. The safety policy shall:

a) reflect organizational commitment regarding safety, including the promotion of a positive safety culture;

b) include a clear statement about the provision of the necessary resources for the implementation of the safety policy;

c) include safety reporting procedures;

d) clearly indicate which types of behaviours are unacceptable related to the service provider's aviation activities and include the circumstances under which disciplinary action would not apply;

e) be signed by the accountable executive of the organization;

f) be communicated, with visible endorsement, throughout the organization; and

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g) be periodically reviewed to ensure it remains relevant and appropriate to the service provider.

1.1.2 Taking due account of its safety policy, the approved maintenance organizations shall define safety objectives. The safety objectives shall:

a) form the basis for safety performance monitoring and measurement as required by 3.1.2;
b) reflect the service provider's commitment to maintain or continuously improve the overall effectiveness of the SMS;
c) be communicated throughout the organization; and
d) be periodically reviewed to ensure they remain relevant and appropriate to the service provider.

Note: Guidance on setting safety objectives is provided in the Safety Management Manual (ICAO Doc 9859).

1.2 Safety accountability and responsibilities

The approved maintenance organizations shall:
a) identify the accountable executive who, irrespective of other functions, is accountable on behalf of the organization for the implementation and maintenance of an effective SMS;
b) clearly define lines of safety accountability throughout the organization, including a direct accountability for safety on the part of senior management;
c) identify the responsibilities of all members of management, irrespective of other functions, as well as of employees, with respect to the safety performance of the organization;
d) document and communicate safety accountability, responsibilities and authorities throughout the organization; and
e) define the levels of management with authority to make decisions regarding safety risk tolerability.

1.3 Appointment of key safety personnel
The approved maintenance organizations shall appoint a safety manager who is responsible for the implementation and maintenance of the SMS.

1.4 Coordination of emergency response planning
The approved maintenance organizations required to establish and maintain an emergency response plan for accidents and incidents in aircraft operations and other aviation emergencies shall ensure that the emergency response plan is properly coordinated with the emergency response plans of those organizations it must interface with during the provision of its products and services.

1.5 SMS documentation
1.5.1 The approved maintenance organizations shall develop and maintain an SMS manual that describes its:
a) safety policy and objectives;
b) SMS requirements;
c) SMS processes and procedures; and
d) accountability, responsibilities and authorities for SMS processes and procedures.

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1.5.2 The approved maintenance organizations shall develop and maintain SMS operational records as part of its SMS documentation.

2. Safety risk management

2.1 Hazard identification

2.1.1 The approved maintenance organizations shall develop and maintain a process to identify hazards associated with its aviation products or services.

2.1.2 Hazard identification shall be based on a combination of reactive and proactive methods.

2.2 Safety risk assessment and mitigation

The approved maintenance organizations shall develop and maintain a process that ensures analysis, assessment and control of the safety risks associated with identified hazards.

3. Safety assurance

3.1 Safety performance monitoring and measurement

3.1.1 The approved maintenance organizations shall develop and maintain the means to verify the safety performance of the organization and to validate the effectiveness of safety risk controls.

Note: An internal audit process is one means to monitor compliance with safety regulations, the foundation upon which SMS is built, and assess the effectiveness of these safety risk controls and the SMS. Guidance on the scope of the internal audit process is contained in the Safety Management Manual (SMM) (Doc 9859).

3.1.2 The approved maintenance organization's safety performance shall be verified in reference to the safety performance indicators and safety performance targets of the SMS in support of the organization's safety objectives.

3.2 The management of change

The approved maintenance organizations shall develop and maintain a process to identify changes which may affect the level of safety risk associated with its aviation products or services and to identify and manage the safety risks that may arise from those changes.

3.3 Continuous improvement of the SMS

The approved maintenance organizations shall monitor and assess its SMS processes to maintain or continuously improve the overall effectiveness of the SMS.

4. Safety promotion

4.1 Training and education

4.1.1 The approved maintenance organizations shall develop and maintain a safety training programme that ensures that personnel are trained and competent to perform their SMS duties.

4.1.2 The scope of the safety training programme shall be appropriate to each individual's involvement in the SMS.

4.2 Safety communication

The service provider shall develop and maintain a formal means for safety communication that:

a) ensures personnel are aware of the SMS to a degree commensurate with their positions;

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b) conveys safety-critical information;
c) explains why particular actions are taken to improve safety; and
d) explains why safety procedures are introduced or changed.

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Appendix E
MANAGEMENT PERSONNEL CV FORMAT

Please submit this form to the BDCA along with the respective certificates

Name of candidate: _____

Position for which candidate is proposed: _____

Technical licence and number: _____

Educational background – List the educational institutions you have attended

Institution	Country	From	To	Degree obtained

Work history – List the companies you have worked with in the past 5 years

Company	Country	From	To	Position

Technical trainings – List all trainings related to the position you are being proposed

Accountable Manager Signature _____

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SECTION 1 BCAR 145

Annex 1 to BCAR – 145

Small BCAR-145 AMOs

(a) Applicability: this Annex 1 to the BCAR-145 is only applicable for a BCAR-145 AMO that employs from 2 to 5 persons involved in maintenance tasks, including: mechanics, certifying staff, accountable manager, director of maintenance, and quality manager.

(b) Scope of approval rating:

(1) A BCAR-145 AMO based upon 2 to 5 persons. This BCAR-145 AMOs is limited on their scope of approval rating in accordance with their capabilities.

(c) BCAR-145 requirements for small BCAR-145 AMOs.

(1) General: The BCAR-145 requirements not described in this Annex 1 will be applied as stated in BCAR-145.

(2) Requirements for a BCAR-145 AMO based upon 2 to 5 persons:

(i) **BCAR 145.30**

The minimum requirement is 2 persons working full time meeting the BCAR-145 requirements for certifying staff. One of these persons shall occupy the director of maintenance position (maintenance technician) and the other person shall occupy the quality manager position (quality auditor). Any of these persons can also occupy the accountable manager position if he meets the corresponding requirements. But the "maintenance technician" should be the certifying person to retain the independence of the "quality audit engineer" to carry out audits. Nothing prevents either engineer from undertaking maintenance tasks providing that the "maintenance engineer" issues the maintenance release.

The quality audit engineer should have similar qualification and status to “maintenace engineer” for reasons of credibility, unless he/she has proven track-record in aircraft quality assurance, in which case some reduction in the extent of maintenance qualifications may be permitted.

The quality monitoring function can be contracted in accordance with the terms established by the one-person organizations.

The initial training requirements for the personnel described in paragraph 145.30 shall be established according to the requirements applicable to his position.

Continuation (recurrent) training shall be conducted by the quality manager, unless the organization chooses another BCAR 145 AMO or approved training organisation, and it shall focus on changes, modifications to aircraft and/or components for what the organization is approved, including seminars on regulations, or updated courses in some of the aircraft the organization has the ratings for.

SECTION 2 – ACCEPTABLE MEANS OF COMPLIANCE AND INTERPRETATIVE/EXPLANATORY MATERIAL

GENERAL & PRESENTATION

1. GENERAL

1.1. This section contains the acceptable means of compliance (AMC) and interpretative/explanatory material that has been agreed for inclusion in BCAR-145.

1.2. If a specific paragraph does not have AMC or IEM, it is considered that no supplementary material is required.

2. PRESENTATION

2.1. The numbers preceded by the acronyms AMC and IEM indicate the paragraph number of the BCAR -145 it refers to.

2.2. The acronyms are defined as follows:

2.1.1 Acceptable Means of Compliance (AMC) illustrates a means, or several alternative means, but not necessarily the only possible means to comply with a specific paragraph of the BCAR-145.

2.1.2 Interpretative/Explanatory Material (IEM) helps to illustrate the meaning of a regulation.

2.3. The text in this section is written using Arial 10, explanatory notes which are not part of the AMCs and IEMs are written using Arial 8.

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SECTION – 2 **BCAR 145**

IEM 145.5 Definitions
(See BCAR-145.5)

1. Regarding the “Accountable Manager” definition, it is normally intended to mean the chief executive officer, who by virtue of position has overall (including financial) responsibility for running the organisation. The Accountable Manager may be the Accountable Manager for more than one organisation and is not required to be necessarily knowledgeable on technical matters as the MOE defines the maintenance standards. When the accountable manager is not the chief executive officer, the BDCA Authorities will need to be assured that such an Accountable Manager has direct access to chief executive officer and has a sufficiency of ‘maintenance funding’ allocation.

2. With regard to the “line/base maintenance of aircraft” definition, to be subject of maintenance works due to the large range of aircrafts going from small ones to big ones for commercial transport, as well as to the great differences in the maintenance programmes of different manufacturers, it is not advisable to classify line or base maintenance by check classifications based on letters or flying hours (C-check, D-check, 100 hours check , etc) on the contrary, it is advisable to classify them by type of work to be carried out.

3. “Line maintenance” should be understood as any maintenance that is carried out before flight to ensure that the aircraft is fit for the intended flight. Line maintenance may include:

3.1. Trouble shooting

3.2. Defect rectification

3.3. Component replacement using external test equipment if required. Component replacement may include components such as engines and propellers.

3.4. Scheduled maintenance and/or checks including visual inspections, preflights that will detect obvious unsatisfactory conditions/discrepancies but do not require extensive in-depth inspection. It may also include internal structure, systems and power plant items which are visible through quick opening access panels/doors.

3.5. Minor repairs and modifications which do not require extensive disassembly and can be accomplished by simple means.

3.6. For temporary or occasional cases (AD's, SB's) the Quality Manager may accept base maintenance tasks to be performed by a line maintenance organisation provided all requirements are fulfilled to carry out the tasks appropriately and safely.

4. Maintenance tasks falling outside these criteria are Base Maintenance.

Note: Aircraft maintained in accordance with "progressive" type programmes should be individually assessed in relation to this paragraph. The decision to allow some "progressive" checks to be carried out should be determined by the assessment that all tasks within the check can be carried out safely to the required standards at the designated line maintenance station.

IEM 145.20 Content of the Approval Certificate and its Ratings
(See BCAR 145.20)

Appendix A contains a table listing all classes and ratings possible under a BCAR - 145 approvals.

AMC 145.25(b) Facility Requirements
(See BCAR 145.25 (b))

1. For base maintenance of aircraft, this means that aircraft hangars should be both available and large enough to accommodate aircraft on planned base maintenance. Where the hangar is not owned by the BCAR -145 AMO it may be necessary to establish proof of tenancy. In addition, the sufficiency of hangar space to carry out planned base maintenance will need to be demonstrated by the preparation of a projected aircraft hangar visit plan. For aircraft component maintenance, this means that aircraft component workshops should be large enough to accommodate the components on planned maintenance.

2. For line maintenance of aircraft, hangars are not essential, but it is recommended that access to hangar accommodation be demonstrated for usage during inclement weather for minor scheduled work.

AMC 145.25(c) Facility Requirements
(See BCAR 145.25 (c))

1. Protection from the weather elements relates to the normal prevailing local weather elements that are expected throughout any twelve-month period. Aircraft hangar and aircraft component workshop structures should be to a standard that prevents the ingress of rain, wind, and dust etc. Aircraft hangar and aircraft component workshop floors should be sealed to minimise dust generation.

AMC 145.25 (d)(2) Facility Requirements
(See BCAR 145.25 (d)(2))

1. Office accommodation in this case means office accommodation such that the incumbents, whether they are management, planning, technical records, quality or certifying staff, can carry out their designated tasks in a manner that contributes to good
aircraft maintenance standards. In addition, aircraft maintenance staff should be provided with an area where they may study maintenance instructions and complete maintenance records in a proper manner.

2. It is acceptable to combine any or all of the above requirements into one office subject to the staff having sufficient room to carry out assigned tasks.

AMC 145.25 (d) Facility Requirements.

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SECTION – 2 **BCAR 145**

An Approved Maintenance Organisation shall ensure that its housing and facilities, for the organisation under BCAR 145.25, meet the following minimum standards:

a) for ongoing maintenance of aircraft, aircraft hangars shall be available and large enough to accommodate aircraft during maintenance activities;

b) where the hangar is not owned by the Approved Maintenance Organisation, the Approved Maintenance Organisation should

i. establish proof of authorization to use hangar;

ii. demonstrate sufficiency of hangar space to carry out planned base maintenance by preparing a projected aircraft hangar visit plan relative to the maintenance programme;

iii. update the aircraft hangar visit plan on a regular basis;

iv. ensure, for aircraft component maintenance, aircraft component workshops are large enough to accommodate the components on planned maintenance;

v. ensure aircraft hangar and aircraft component workshop structures prevent the ingress of rain, hail, ice, snow, wind and dust, etc.;

vi. ensure workshop floors are sealed to minimize dust generation; and

vii. demonstrate access to hangar accommodation for usage during inclement weather for minor scheduled work and/or lengthy defect rectification;

c) aircraft maintenance staff shall be provided with an area where they may study maintenance instructions and complete maintenance records in a proper manner;

d) hangars used to house aircraft together with office accommodation shall be such as to ensure a clean, effective, and comfortable working environment to include the following:

i. temperatures should be maintained at a comfortable level;
ii. dust and any other airborne contamination should be kept to a minimum and not permitted to reach a level in the work task area where visible aircraft/component surface contamination is evident;

iii. lighting should be such as to ensure each inspection and maintenance task can be carried out; and

iv. noise levels should not be permitted to rise to the point of distracting personnel from carrying out inspection tasks. Where it is impractical to control the noise source, such personnel should be provided with the necessary personal equipment to stop excessive noise causing distraction during inspection tasks;

v. where a particular maintenance task requires the application of specific environmental conditions different from the foregoing, then such conditions shall be observed. (Specific conditions are identified in the approved maintenance instructions.)

e) where the working environment for line maintenance deteriorates to an unacceptable level with respect to temperature, moisture, hail, ice, snow, wind, light, dust or other airborne contamination; the particular maintenance or inspection tasks shall be suspended until satisfactory conditions are re-established.

f) for both base and line maintenance where dust or other airborne contamination results in visible surface contamination, all susceptible systems shall be sealed until acceptable conditions are re-established;

g) storage facilities for serviceable aircraft components shall be clean, well ventilated and maintained at an even dry temperature to minimize the effects of condensation;

h) standards and recommendations of the Manufacturer shall be followed for specific aircraft components;

i) storage racks shall provide sufficient support for large aircraft components such that the component is not distorted; and

j) all aircraft components, wherever practicable, shall remain packaged in protective material to minimize damage and corrosion during storage.

AMC 145.30 (a) Management personnel requirements
(See BCAR 145.30(a))

1. To ensure that the BCAR -145 AMO meets the requirements of such BCARs:

1.1 The person or persons nominated should represent the management structure of the organisation and be responsible for all functions specified in BCAR -145. In the case of bigger organisations, these functions may be subdivided or combined in different ways.

1.2 The BCAR -145 AMO should have an Accountable Manager, a Director of Maintenance, and a Quality Manager; the last two should report to the Accountable Manager. Depending on the size of the BCAR 145 AMO, under the Director of Maintenance, the Base Maintenance Manager, Line Maintenance Manager, and Workshop Manager can be located; those managers shall report to the Director of Maintenance. The BCAR -145 AMO shall also establish a replacement or representation programme, in the case of lengthy absence of said manager(s).

1.3 The Accountable Manager is responsible for ensuring that all necessary resources are available to accomplish maintenance in accordance with BCAR - 145.65 (b).

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1.4 The Director of Maintenance (or equivalent position) is responsible for all the technical areas of the BCAR -145 AMO. He is also responsible for all corrective actions resulting from the quality compliance monitoring in accordance with the BCAR -145.65 (c).

1.5 The Base Maintenance Manager is responsible for ensuring that all maintenance required to be carried out in the hangar, plus any defect rectification carried out during base maintenance, is carried out to the design and quality standards specified in BCAR -145.65 (b). The Base Maintenance Manager is also responsible for all corrective actions resulting from the quality compliance monitoring in his area in accordance with BCAR -145.65 (c).

1.6. The line maintenance manager is responsible for ensuring that all maintenance required to be carried out including line defect rectification is carried out to the quality standards specified in BCAR -145.65 (b). The line maintenance manager is also responsible for any corrective action resulting from the quality compliance monitoring in his area in accordance with BCAR -145.65(c).

1.7. The workshop manager is responsible for ensuring that all work on aircraft components is carried out to the quality standards specified in BCAR -145.65 (b). The workshop manager is also responsible for any corrective action resulting from the quality system implementation in his area in accordance with BCAR -145.65(c).

1.8. The quality manager is responsible for the quality system specified in BCAR 145.65 (c), as well as quality system feedback.

1.9. The title “Manager” specified under the previous paragraphs 2 to 8 may be changed for others the organisation considers convenient, but the titles and the persons have chosen to carry out these functions should be reported to the BDCA. For all these, the BDCA requires the managers mentioned above to be identified and their acceptance requests together with their professional and academic history to be submitted.

2.

The maintenance organisation will have an organisational structure depending on the number of its activities.

NOTE: Certifying staff may report to any of the managers specified depending upon which type of control the approved maintenance organisation uses (for example - licensed mechanics/independent inspection/dual function supervisors etc.) so long as the quality compliance monitoring staff specified in BCAR 145.65 (c) (1).

Examples of possible BCAR -145 AMOs

This AMC shows two possible organisational structures. The main objective is to prove that the quality system shall depend directly on the accountable manager and never on any of the production areas. Every BCAR -145 AMO shall have the organisational structure more appropriate for its needs, following the previous premise.

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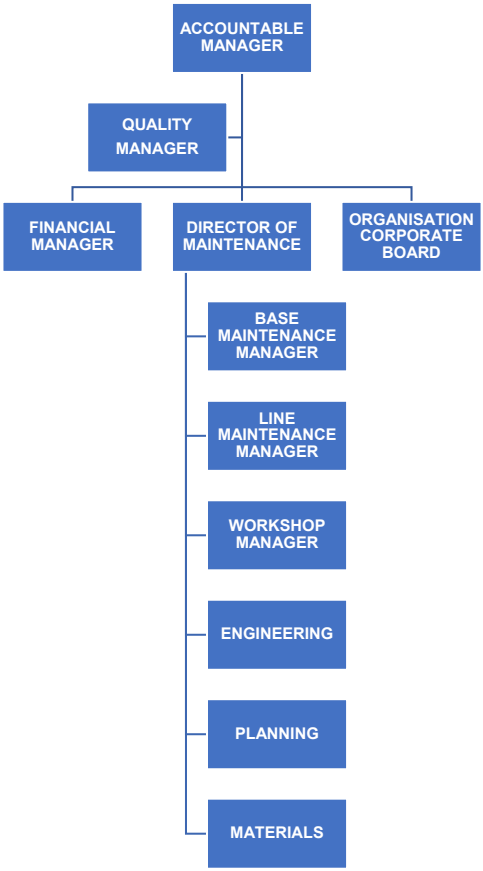
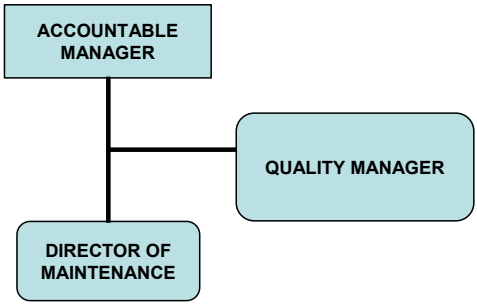
A. TYPICAL LARGE ORGANISATION



B. TYPICAL SMALL ORGANISATION



NOTE: Those are two examples of "typical" organisations.

Every BCAR -145 AMO may choose the organisational structure more convenient only if the Quality System Manager reports directly to the Accountable Manager and he is not operationally dependent form the production area.

AMC 145.30 (e) Management Personnel Requirements
(See BCAR -145.30 (e))

The responsibility assigned to the quality manager regarding the quality system includes requesting remedial action as necessary by the BCAR 145.30 (e), Accountable Manager and Director of Maintenance as appropriate.

AMC 145.31 (a) Maintenance personnel
(See BCAR -145.31(a))

1. The referenced procedure requires among others that planners, mechanics, inspectors, supervisors, specialised services staff, and certifying staff are assessed for competence by 'on the job' evaluation and/or by examination relevant to their job role within the organisation before unsupervised work is permitted.

2. To assist in the assessment of competence, job descriptions are recommended for each job role in the organization. Basically, the assessment should establish that:

2.1 Planners are able to interpret maintenance requirements into maintenance tasks, and have an appreciation that they have no authority to deviate from the maintenance data.

2.2 Mechanics and inspectors can carry out maintenance tasks to any standard specified in the maintenance data and will notify supervisors of mistakes requiring rectification to re-establish required maintenance standards.

2.3 Specialised service staff can carry out specialised maintenance tasks to the standard specified in the maintenance data and will both inform and await instructions from their supervisor in any case where it is not possible to complete the specialised maintenance in accordance with the maintenance data.

2.4 Supervisors can ensure that all required maintenance tasks are carried out and where not completed or where it is evident that a particular maintenance task cannot be carried out to the maintenance data, and then such problems will be reported to a superior for appropriate action. In addition, for those supervisors who also carry out maintenance tasks that they understand such tasks should not be undertaken when incompatible with their management responsibilities.

2.5 Certifying staff can determine when the aircraft or aircraft component is ready to release to service and when it should not be released to service.

3. All personnel specified above shall acquire knowledge of organisation procedures relevant to their role.

4. Quality audit staff is able to monitor compliance with BCAR -145 identifying noncompliance in an effective and timely manner in order that the BCAR -145 AMO may remain in compliance with BCAR -145.

5. In respect to the understanding of the application of human factors and human performance issues, maintenance, management, and quality audit personnel, as established in BCAR 145.31 (b), should be assessed for the need to receive Initial Human Factors training, but in any case, all maintenance, management, and quality audit personnel should receive Human Factors continuation training. This should concern to a minimum:

5.1. Post holders, Managers, Supervisors.

5.2 Certifying staff, technicians and mechanics.

5.3. Technical support personnel in departments such as: maintenance, planning, engineering, technical records.

5.4. Quality control/assurance staff

5.5. Specialised services staff

5.6. Human factors staff/ human factors trainers

5.7. Store department staff, purchasing department staff

5.8 Ground equipment operators

5.9 Contract staff in the above categories

6. Initial Human Factors training should normally cover all the topics of the Training Syllabus in paragraph 10, either as a dedicated course or else integrated within other training. The syllabus may be adjusted to reflect the nature of the BCAR -145 AMO. It can also be adjusted to meet the nature of work for each function within the organisation. For example:

6.1 Small organisations not working in shifts may cover in less depth subjects related to teamwork and communication.

6.2 Planners may cover in more depth the scheduling and planning objectives of the syllabus and in less depth the objective of developing skills for shift work.

6.3 Depending on the result of the evaluation in paragraph 5, initial training should be provided to personnel within 6 months of joining the BCAR -145 AMO, but temporary staff may need to be trained shortly after joining the organisation to cope with the duration of employment.

6.4 Personnel being recruited from another BCAR -145 AMO and temporary staff should be assessed for the need to receive any additional Human Factors training to meet the new BCAR -145 standards.

7. The purpose of Human Factors continuation training is primarily to ensure that staff remains current in terms of human factors and to collect feedback on Human Factors issues. Consideration should be given to the possibility that such training has the involvement of the quality department. There should be a procedure to ensure that feedback is formally passed from the trainers to the quality department to initiate action where necessary.

8. Human Factors continuation training should be of sufficient duration in each two years period in relation to relevant quality audit findings and other internal/external sources of information available to the organisation on human errors in maintenance.

9. Human Factors training may be conducted by the BCAR -145 AMO or independent trainers or any training organisations acceptable to the BDCA.

10. The Human Factors training procedure should be specified in the MOE section 3.13.

11. Training content for the Human Factors initial course: the training content includes the topics and sub-topics for human factors training. The BCAR -145 AMO can combine, divide, or change the order of any topic of the programme to adapt it to its needs, only if at the end of the programme all the aspects have been covered at an appropriate level for the BCAR -145 AMO and its personnel. Some of the topics should be covered by other types of training (for example, safety and hygiene in the

workplace, supervision, and management assessments, etc); in this case, it is not necessary to repeat the courses. Examples and illustrations will be used whenever possible, especially when talking about incident and accident reports.

11.1 The contents should refer to the existent national laws when the content of the training is related to them.

11.2 The contents should refer to guidance material or circulars when it corresponds, for example, ICAO human factors training manual.

11.3 The topics can be related to maintenance engineering, whenever possible, it is advisable to avoid unnecessary information.

General / introduction to Human Factors

The need to adress human factors
Statistics
Incidents

a) Safety culture / factors of the organisation

b) Human error

i. Models of errors and theories
ii. Types of errors in the maintenance tasks
iii. Violations
iv. Implications of errors
v. Avoiding and managing errors
vi. Human reliability

d) Human performance & limitations
Vision

i. Hearing
ii. Information processing
iii. Attention and perception
iv. Situational awareness
v. Memory
vi. Claustrophobia and physical access
vii. Motivation
viii. Fitness & Health
ix. Stress
x. Workload management
xi. Fatigue
xii. Alcohol, medication, drugs
xiii. Physical work

xiv. Repetitive tasks / complacency

e) Environment

i. Peer pressure
ii. Stressors
iii. Time pressure and deadlines
iv. Workload
v. Shift work
vi. Noise and fumes
vii. Illumination
viii. Climate and temperature
ix. Motion and vibration
x. Complex systems
xi. Hazards in workplace
xii. Lack of manpower
xiii. Distractions and interruptions

f) Procedures, information, tools and practices

i. Visual inspections
ii. Work logging and recording
iii. Procedure- practice/mismatch/norms
iv. Technical documentation – access and quality

g) Communication

i. Shift/ task handover
ii. Dissemination of information
iii. Cultural differences

h) Teamwork

i. Responsibility
ii. Management, supervision, and leadership
iii. Decision making

i) Professionalism and integrity

i. Keeping up to date; currency
ii. Error provoking behavior
iii. Assertiveness

j) Organisation of the HF programme (Human Factors)

i. Reporting errors

ii. Disciplinary policy
iii. Error investigation
iv. Actions to address problems
v. Feedback

AMC 145.32 (a) Specialised Services Personnel (NDT)
(See BCAR 145.32 (a))

1. Continued airworthiness non-destructive testing means such testing specified by the type certificate holder /aircraft or component in his manuals to determine the continued fitness of the product to operate safely.

2. Appropriately qualified staff means the levels defined in regulations (4179:2000) EN 4179 from Europe or the rules NAS 410, MIL-STD, ATA Specification 105 and/or ASNT from the United States.

3. Non-destructive test means any one or more of the following: dye penetrant, magnetic particles, eddy current, ultrasonic and radiographic methods including X-ray and gamma ray.

4. In addition, it should be noted that new methods are and will be developed for this type of activities that have not been considered by any standard. Until standards regarding these new methods are not official, the BDCA shall assure that the personnel working with those methods have been trained and qualified according to the recommendations of the manufacturers/suppliers of such equipment.

5. Any BCAR-145 AMO that carries out continued airworthiness non destructive testing should establish internal procedures to qualify the personnel carrying out such tasks and these procedures should be acceptable by the BDCA.

6. Boroscoping and other techniques such as delamination coin tapping are non-destructive inspections rather than non-destructive testing. The BDCA shall ensure in all cases that the personnel who carry out and interpret such inspections are properly trained for their competence with the process. For the BCAR-145, these tasks are not considered “specialized tasks” and therefore, they are not listed in Appendix A under class rating D1.

7. The referenced standards, methods, training, and procedures to qualify the NDT personnel should be specified in the MOE, section 3.11.

8. Specialised services include any specialised activity as, but not limited to, non-destructive testing (NDT), requiring special staff training or qualification. The BCAR-145.31(a) establishes the qualifications necessary for the personnel. In addition, it is necessary to establish the control procedures for all the specialized tasks in the MOE, section 2.28.

IEM 145.35 Certifying Staff
(See BCAR 145.35)

The maintenance certifying staff stated in these rules is the personnel participating during the carryout of maintenance or the personnel working as supervisor or inspector of a certain task. In this sense, they are an important element for the AMO quality system due to the fact that they participate in a certain process. The organisations shall determine the better way to use these resources to ensure that the final maintenance certification is made precise knowledge of the compliance with the corresponding procedures.

AMC 145.35 (b)(2) Certifying Staff
(See BCAR 145.35 (b)(2))

"Adequate understanding of the relevant aircraft and/or aircraft component(s) to be maintained together with the associated organisation procedures" means that the person has received training and passed an examination or has relevant maintenance experience and passed an examination on the product type and associated organisation procedures such that the person understands how the product functions, what are the more common defects with associated consequences.

AMC 145.35 (b)(3) Certifying Staff

1. Continuation training is a two-way process to ensure that certifying staff remain current in terms of procedures, human factors and technical knowledge and that the BCAR -145 AMO receives feedback on the adequacy of its procedures. Due to the interactive nature of this training, consideration should be given to the possibility that such training has the involvement of the quality department to ensure that feedback is actioned.

2. Continuation training should cover changes in relevant requirements such as BCAR -145, changes in organisation procedures and the modification standard of the products being maintained plus human factor issues identified as sources of errors. It should also address instances where staff failed to follow procedures and the reasons why particular procedures are not always followed.

3. Continuation training should be of sufficient duration in each 2-year period and it may be split into a number of separate elements. The time of the courses will depend on the subjects covered in terms of technology as well as the findings found by the quality system. The content of the courses should be constantly analysed and eventually redesigned according to the needs of the organisation.

4. The method of training is intended to be a flexible process and it will depend on the possibilities and size of the BCAR -145 AMO. The courses can be internal o contracted to external approved training organisations. The elements, general content, and length of such training should be specified in the MOE, approved by the BDCA.

5. The continuation training programme should include all the certifying staff and when the training will take place, the elements of such training and an indication that it was carried out reasonably on time as planned. This information should be transferred to the certifying staff personal records.

6. The referenced procedure should be specified in the MOE, section 3.4

7. The training programme shall include human factors training according to the AMC 145.31 (a) (11).

AMC 145.35 (c) Certifying Staff
(See BCAR 145.35 (c))

The BCAR 145 AMO certification authorisation should be in a style that makes its scope clear to certifying staff and any person authorised by the BDCA that may require examining the authorisation. Where codes are used to define scope, a cross reference should be established in the authorisation or a cross reference should be available.

AMC145.35 (d) Certifying Staff
(See BCAR 145.35 (d))

The requirement established for certifying staff, to carry out maintenance to components, included in this section recognises the possibility that even if there is not a specific license to relase to service components, experience, or trainings necessary to compensate one aspect with the other. The purpose of this AMC is to provide the acceptance criteria to be considered in cases where the acceptability established by BCAR 145.35 (d) is considered. It is also important to recognise that the maintenance refered in this paragraph does not include maintenance
contrary to the requirements stated in this regulation, including what is related to the use of technical data to carry out maintenance. It is also important to emphasize the fact that the maintenance organisation is responsible for assigning workshop work and the person responsible for the carry out of maintenance or inspection.

Acceptable training criteria:

1. Formal specialised training provided by the manufacturer of the product or by a certified school is acceptable according to the regulatory requirements of the State where it is located or provided by an Approved Maintenance Organisation or credited school or university, or

2. On the other hand, courses subject to consideration of the BDCA and which content has been considered acceptable will be acceptable. In this case, the courses will be considered acceptable if they consider at least the following criteria:

2.1 A complete specialised training syllabus to be given has been submitted.

2.2 Detail of the number of hours to be spend in the classroom and the amount of hours to be spent in the workshop or laboratory.

2.3 Detail of the evaluation system to be used and the schedule for mid-terms and final test.

2.4 A method that shows that the student has finished satisfactorily the specialised training including the number of hours spent and the final grade.

3. Continuing training shall be subject to consideration to be evaluated only once unless important changes are made after.

4. Training shall be designed in such way that most of the training time is spent in the workshop or laboratory.

5. Training shall be given according to the syllabus and cover all basic knowledge required for the specific task to be developed, including procedures, practices, inspection methods, materials, tools, machinery, and equipment and it shall not be confused with on-the-job training.

AMC 145.35 (g) Maintenance Certifying Staff
(See BCAR 145.35 (g))

1. As stated in BCAR 145.35 (g), with one exception, all prospective certifying staffs are required to be assessed for competence, qualification, and capability related to intended certifying duties. There are several ways in which such assessment may be carried out, but the following points need to be considered to establish an assessment procedure that fits the particular BCAR -145 AMO.

2. Competence and capability can be assessed during the working hours of the person under the supervision of either another certifying person or a quality auditor for sufficient time to arrive at a conclusion. Sufficient time could be as little as a few weeks if the person is fully exposed to relevant work. It is not practical to assess against the complete spectrum of intended duties and this should not be done. When the person has been recruited from another BCAR -145 AMO and was a certifying person in that organisation then, it is reasonable to accept a written confirmation from the person responsible for running the quality system of this BCAR -145 AMO about the qualification of that person.

3. Qualification assessment means collecting copies of all documents that attest to qualification, such as the licence and/or any authorisation held. This should be followed by a confirmation check with the organisation(s) that issued such document(s) and finally a comparison check for differences between the product type ratings on the qualification documents and the product type maintained by the BCAR -145 AMO. This latter point may reveal a need for product type differences training.

4. The referenced procedure should be specified in the MOE, section 3.4

AMC 145.35 (j) Certifying Staff
(See BCAR 145.35 (j))

1. The certifying staff personnel record should have at least the following information:

1.1 Name and surname

1.2 Date of birth

1.3 Basic training

1.4 Type training

1.5 Continuation training

1.6 Experience

1.7 Qualifications relevant to the approval

1.8 Scope of the authorisation

1.9 Date of the first issue of the authorisation

1.10 If appropriate, expiration date of the authorisation

1.11 Identification number of the authorisation

2. The record may be kept in any format but should be controlled by the quality department. This does not mean that the quality department should run the record system

3. Persons authorised to access the system should be maintained at a minimum to ensure that records cannot be altered in an unauthorised manner or that such confidential records become accessible to unauthorised persons.

4. The certifying staff should be given reasonable access on request to his/her own record.

5. The BDCA should have unlimited access to the record system during the approval/modification/reissue process of the BCAR -145 AMO, during the routine inspections, or during a possible investigation of an accident or incident.

6. In the case a certifying person ceases employment with the BCAR - 145 AMO or his/her authorisation withdraws, the BCAR -145 AMO should keep the record for at least two years. In addition, the certifying staff should be furnished on request with a copy of their record on leaving the organisation.

7. In the case of loosing the certifying authorization, its holder should communicate the situation immediately to the BCAR -145 AMO.

AMC 145.40(a) Equipment, Tools, and Material
(See BCAR 145.40 (a))

1. Once the applicant for approval has determined the intended scope of approval for consideration by the BDCA, it will be necessary to show that all tools and equipment as specified in the maintenance data can be made available when needed. All such tools and equipment that require to be controlled in terms of servicing or calibration should be clearly identified and listed in a control register including any personal tools and equipment that the BCAR -145 AMO agrees can be used. For every element in the control register, a service and calibration date control should be established.

2. "The necessary material to perform the scope of work" means readily available raw material and aircraft components in accordance with the manufacturer's recommendation unless the BCAR -145 AMO has an established spares provisioning procedure.

AMC 145.40 (b) Equipment, Tools, and Material
(See BCAR 145.40 (b))

1. The control of these tools and equipment requires that the BCAR -145 AMO has a procedure to inspect/service and, where appropriate, calibrate such items on a regular basis and indicate to users that the item is within any inspection or service or calibration time-limit. A clear system of labelling all tooling, equipment and test equipment is therefore necessary giving information on when the next inspection or service or calibration is due and if the item is unserviceable for any other reason where it may not be obvious. A register should be maintained for all precision tooling and equipment together with a record of calibrations and standards used.

2. Inspection, service, or calibration on a regular basis should be in accordance with the equipment manufacturer's instructions except where the BCAR – 145 can show by results that a different time period is appropriate in a particular case. This regular frequency should be included in the MOE, section 2.5 of the BCAR -145 AMO and they should be accepted by the BDCA.

   The new equipment and tools should be proved before being used, considering its appropriate calibration status by means of the corresponding calibration certificate.

   Note: In this case, equipment means the equipment, tools, instruments, and elements considered independent or being part of the tools or equipment that require calibration.

AMC 145.42(c) Acceptance of Components

1. The agreement by the BDCA for the fabrication of parts by the approved maintenance organisation should be formalised through the approval of a detailed procedure in the Maintenance Organisation Exposition. This AMC contains principles and conditions to be considered for the preparation of an acceptable procedure.

2. Fabrication, inspection assembly and test should be clearly within the technical and procedural capability of the organisation;

3. All necessary data to fabricate the part should be approved either by the competent authority or the type certificate (TC) holder or supplemental type certificate (STC) holder.

4. Items fabricated by an organisation approved under BCAR-145 may only be used by that organisation in the course of overhaul, maintenance, modifications, or repair of aircraft or components undergoing work within its own facility. The permission to fabricate does not constitute approval for manufacture, or to supply externally and the parts do not qualify for certification on Form One. This prohibition also applies to the bulk transfer of surplus inventory, in that locally fabricated parts are physically segregated and excluded from any delivery certification.

5. Fabrication of parts, modification kits etc for onward supply and/or sale may not be conducted by an organisation approved under BCAR-145.

6. The data specified in paragraph 3 may include repair procedures involving the fabrication of parts. Where the data on such parts is sufficient to facilitate fabrication, the parts may be fabricated by an organisation approved under BCAR-145. Care should be taken to ensure that the data include details of part numbering, dimensions, materials, processes, and any special manufacturing techniques, special raw material specification or/and incoming inspection requirement and that the approved organisation has the necessary capability. That capability should be defined by way of exposition content. Where special processes or inspection procedures are defined in the approved data which are not available at the organisation the organisation can not fabricate the part unless the TC/STC-holder gives an approved alternative.

7. Examples of fabrication under the scope of a BCAR-145 approval can include but are not limited to the following:

(a) Fabrication of bushes, sleeves and shims
(b) Fabrication of secondary structural elements and skin panels.
(c) Fabrication of control cables.
(d) Fabrication of flexible and rigid pipes.
(e) Fabrication of electrical cable looms and assemblies.
(f) Formed or machined sheet metal panels for repairs.

All the above fabricated parts should be in accordance with data provided in overhaul or repair manuals, modification schemes and service bulletins, drawings or otherwise approved by the competent authority.

Note: It is not acceptable to fabricate any item to pattern unless an engineering drawing of the item is produced which includes any necessary fabrication processes and which is acceptable to the competent authority.

8. Where a TC-holder or an approved production organisation is prepared to make available complete data that is not referred to in aircraft manuals or service bulletins but provides manufacturing drawings for items specified in parts lists, the fabrication of these items is not considered to be within the scope of approval unless agreed otherwise by the competent authority following a procedure specified in the exposition.

9. Inspection and Identification
Any locally fabricated part should be subjected to an inspection stage before, separately, and preferably independently from, any inspection of its installation. The inspection should establish full compliance with the relevant manufacturing data, and the part should be unambiguously identified as fit for use by stating conformity to the approved data. Adequate records should be maintained of all such fabrication processes including, heat treatment and the final inspections. All parts, except those having not enough space, should carry a part number which clearly relates it to the manufacturing/inspection data. Additional to the partnumber the organisation's identity should be marked on the part for traceability purposes.

AMC 145.42(d) Acceptance of Components

1. The following types of components should typically be classified as unsalvageable:

   (a) Components with non-repairable defects, whether visible or not to the naked eye;

   (b) Components that do not meet design specifications, and cannot be brought into conformity with such specifications;

   (c) Components subjected to unacceptable modification or rework that is irreversible;

   (d) Certified life-limited parts that have reached or exceeded their certified life limits, or have missing or incomplete records;

   (e) Components that cannot be returned to airworthy condition due to exposure to extreme forces, heat or adverse environment;

   (f) Components for which conformity with an applicable airworthiness directive cannot be accomplished;

   (g) Components for which maintenance records and/or traceability to the manufacturer can not be retrieved.

2. It is common practice for possessors of aircraft components to dispose of unsalvageable components by selling, discarding, or transferring such items. In some instances, these items have reappeared for sale and in the active parts inventories of the aviation community. Misrepresentation of the status of components and the practice of making such items appear serviceable have resulted in the use of unsalvageable nonconforming Components. Therefore, Organisations disposing of unsalvageable aircraft components should consider the possibility of such components later being misrepresented and sold as serviceable components. Caution should be exercised to ensure that unsalvageable components are disposed of in a manner that does not allow them to be returned to service.

AMC 145.45 (a) Maintenance Data
(See BCAR 145.45 (a))

1. Applicable Data: means the technical data related to any specified aircraft, element or process used to carry out a maintenance task in accordance with the limitations and ratings granted to the maintenance organisation.

2. Approved Data: Technical data that support and describe a repair or major alteration. This data needs to be approved by the State that issued the type certificate. Some sources to obtain the approved data are the following:

   Type certificate data sheets. (TCDS)

Supplemental Type Certificate (STC).

Component Manuals previously approved by the manufacturer.

Airworthiness Directives (ADs).

Service bulletins when they have been approved by the State that approved the type certificate.

Data describing a component that has been approved under a TSO or JTSO

Data describing a component that has been approved under a PMA or the equivalent approval under the European standard.

Structural Repair Manuals when approved by the manufacturer.

AMC 145.45 (b) Maintenance Data
(See BCAR 145.45 (b))

1. Every BCAR -145 AMO should hold and use the following minimum maintenance data relevant to the organisations's approval class rating: updated version of all BCARs related to maintenance including their AMCs and IEMs (example BCAR -145, OPS, LPTA related to mechanics, etc), all the national regulations related to maintenance, procedures, or airworthiness directives applying to the aircraft and/or aircraft components used in the organisation, not only issued by the BDCA but also by the authority of the State that issued the type certificate or the authority of the State of registration depending on every case.

2. In addition to sub-previous paragraph 1, a BCAR -145 AMO with class rating in category A - aircraft should hold and use the following maintenance data where published. The appropriate sections of the operator's aircraft maintenance programme, aircraft maintenance manual, repair manual, supplementary structural inspection document, corrosion control document, service bulletins, service letters, service instructions, modification leaflets, NDT manual, parts catalogue, or any other maintenance document that the holder of the type certificate or supplementary type certificate has published as maintenance data, except in the cases in which the operator/owner of the aircraft provides the BCAR -145 AMO with all the necessary documents, in this case, it is not necessary that the BCAR -145 AMO has the data provided.

3. In addition to sub-paragraph 1 of this section, a BCAR -145 AMO with a class rating Category B-Engines / APUs, should hold and use the following maintenance data where published. The appropriate sections of the engine/APU maintenance and repair manual, service bulletins, service letters, modification leaflets, non-destructive inspection (NDI) manual, parts catalogue and any other maintenance document that the holder of the type certificate has declared as maintenance data, except in the cases in which the operator/owner of the aircraft provides the BCAR -145 AMO with all the necessary documents, in this case, it is not necessary that the BCAR -145 AMO has the data provided.

4. In addition to sub-paragraph 1 of this section, a BCAR -145 AMO with a class rating category C-Components other than engines / complete APUs should hold and use the following maintenance data where published. The appropriate sections of the vendor maintenance and repair manual, service bulletins and service letters plus any document issued by the type certificate holder as maintenance data, except in the cases in which the operator/owner of the aircraft provides the BCAR -145 AMO with all the necessary documents, in this case, it is not necessary that the BCAR -145 AMO has the data provided.

5. "Appropriate sections" of paragraphs 2 and 4 additional maintenance data means in relation to the maintenance work scope at the BCAR -145 AMO. For example, a BCAR -145 AMO carrying out base maintenance should have almost complete set(s) of the maintenance data whereas an organisation carrying out line maintenance may need only the maintenance manual and the parts catalogue.

6. A BCAR -145 AMO only approved in class rating category D – Specialised services, should hold and use following maintenance data where published, regarding every specialised service included in the rating: the BCAR -145, its AMCs and IEMs and the specifications of the processes of the specialised services , except in the cases in which the operator/owner of the aircraft provides the BCAR -145 AMO with all the necessary documents, in this case, it is not necessary that the BCAR -145 AMO has the data provided.

AMC 145.45 (c) Maintenance Data
(See BCAR 145.45 (c))

1. The referenced procedure should ensure that when maintenance personnel discover inaccurate, incomplete, or ambiguous information in the maintenance data, they should record the details. The procedure should then ensure that the BCAR -145 AMO notifies the problem to the author (manufacturer, holder of the type certificate, BDCA, etc) of the maintenance data in a timely manner. A record of such communications to the author of the maintenance data should be retained by the BCAR -145 AMO until such time as the type certificate holder has clarified the issue (for example, checking the maintenance data).

2. The procedure should be included in the MOE, section 2.27.

AMC 145.45 (d) Maintenance Data
(See BCAR 145.45 (d))

1. The referenced procedure should address the need for a practical demonstration by the mechanic to the quality personnel of the proposed modified maintenance instruction. When satisfied, the quality personnel should approve (or not) the modified maintenance instruction and ensure that the type certificate or supplementary type certificate holder is informed of the modified maintenance instruction and no technical objection to the modification proposal has been received from him. The procedure should include a paper/electronic traceability of the complete process from start to finish and ensure that the relevant maintenance instruction clearly identifies the modification. Modified maintenance instructions should only be used in the following circumstances;

1.1. Where the type certificate / supplementary type certificate holders' original intent can be carried out in a more practical or more efficient manner.

1.2. Where the type certificate / supplementary type certificate holders' original intent cannot be achieved by following the maintenance instructions. For example, where a component cannot be replaced following the original maintenance instructions.

1.3. For the use of alternative tools / equipment.

AMC 145.45 (g) Maintenance Data
(See BCAR 145.45 (g))

1. Relevant parts of the organisation mean regarding aircraft base maintenance, aircraft line maintenance, mechanical workshops and avionic workshops. Therefore, for example engine workshops should have a common system throughout such engine workshops that may be different to that in aircraft base maintenance.

2. Complex maintenance tasks should be transcribed onto the workcards or worksheets and subdivided into clear stages to ensure a record of the accomplishment of the maintenance task of particular importance is the need to differentiate and specify, when relevant, disassembly, accomplishment of task, reassembly, and testing. In the case of a lengthy maintenance task involving a succession of personnel to complete such task, it may be necessary to use supplementary workcards or worksheets to indicate what was accomplished by each individual person.

AMC 145.45 (j) and (k) Maintenance Data
(See BCAR 145.45 (j) and (k))

1. To keep data up to date a procedure should be set up to monitor the amendment status of all data and maintain a check that all amendments received are being incorporated.

2. Data being made available to personnel maintaining aircraft means that the data should be available near the aircraft being maintained, for supervisors, mechanics and certifying staff to study. Where computer systems are used, the number of computer terminals should be sufficient in relation to the size of the work programme to enable easy access, unless the computer system can produce paper copies. Where microfilm or microfiche readers/printers are used, a similar requirement is applicable.

AMC 145.47 (a) Production planning
(See BCAR 145.47 (a))

1. Depending on the amount and complexity of work generally performed by the BCAR -145 AMO, the planning system may range from a very simple procedure to a complex organisational set-up including a dedicated planning function in support of the production function.

2. For BCAR 145,the production planning function includes two complementary elements:

a) Scheduling the maintenance work ahead, to ensure that it will not adversely interfere with other work as regards the availability of all necessary personnel, tools, equipment, material, maintenance data, and facilities.

b) During maintenance work, organise maintenance teams and shifts and provide all necessary support to ensure the completion of maintenance without undue time pressure.

3. When establishing the production planning procedure, consideration should be given to the following:

(a) Logistics

(b) inventory control

(c) available space

(d) man-hours estimation

(e) man-hours availability

(f) preparation of work

(g) hangar availability

(h) environmental conditions (access, lighting standards and cleanliness)

(i) Co-ordination with internal and external suppliers, etc.

Scheduling of safety-critical tasks during periods when staff are likely to be most alert.

AMC 145.47 (b) Production planning
(See BCAR 145.47 (b))

Limitations of human performance, in the context of planning safety related tasks, refers to the upper and lower limits, and variations, of certain aspects of human performance (Circadian rhythm / 24 hours body cycle) which personnel should be aware of when planning work and shifts.

AMC 145.47 (c) Production planning
(See BCAR 145.47 (c))

1. The primary objective of the changeover information is to ensure effective communication at the point of handing over the continuation or completion of maintenance actions. Effective task and shift handover depends on three basic elements:

The outgoing person's ability to understand and communicate the important elements of the job or task being passed over to the incoming person.

The incoming person's ability to understand and assimilate the information being provided by the outgoing person.

A formalised process for exchanging information between outgoing and incoming persons and a planned shift overlap and a place for such exchanges to take place.

2. The referenced procedure should be specified in the MOE, section 2.26

AMC 145.47 (d) Production planning
(See BCAR 145.47 (d))

1. Have enough personnel in a BCAR -145 AMO means that at least 60% of the personnel carrying out tasks in the workshops, hangars, or line are regular employees of the organisation to ensure an organisational stability. The personnel contracted for a partial or total period should follow the procedures of the organisation related to their tasks specified in the MOE. For this paragraph, "hired personnel" means personnel hired individually by the BCAR -145 AMO. "Contracted personnel" means persons whose work contracts are with another organisation or company and work for the maintenance organisation under a "company to company" contract.

2. The man-hour plan should include the planned maintenance tasks, except when they can not be planned because the contracts are made for short periods. In this case, these plans should be based on the minimum maintenance tasks that the company should carry out to have commercial viability.

3. The man-hour plan should reflect all the planned maintenance events, including the resources necessary for planning, quality, worksheet production, filling of documents, inspections, and all the tasks related to a maintenance activity (See IEM 145.47 (d)).

4. In the case of base maintenance, the man-hour plan should reflect the use of the personnel for every planned visit of aircrafts to the hangar.
5. For component maintenance, the man-hour plan should consider the repairs to the components during the base maintenance events to avoid delays because of the lack of components.

6. The man-hour amount assigned for the quality monitoring tasks required by BCAR -145.65 (c) should be enough, especially in the case that these personnel must carry out other tasks.

7. The man-hour plan should be reviewed every (3) three months and be updated when necessary.

8. The significant deviations to the man-hour plan, which means 25% or more, should be reported by the managers of this area to the quality manager and the accountable manager to take the appropriate measures.

9. The man-hour plan as well as the procedures to implement it should be specified in the MOE, section 2.22.

IEM 145.47 (d) Production planning
(See BCAR 145.47 (d))

The purpose of demanding a man-hour plan is to prevent the BCAR -145 AMOs from contracting more activities that the ones they can carry out because of commercial reasons or any others and at the same time ensuring that they will be able to fulfil the contracts and commitments, preventing a decrease of the quality of the tasks and jeopardise safety.

AMC 145.50(a) Certificate of release to service
(See BCAR 145.50 (a))

1. A certificate of release to service is necessary before flight at the completion of any package of maintenance specified by the aircraft operator in accordance with BCAR OPS 1.890 (maintenance responsibilities of the operator). The package of maintenance may include any one or combination of the following elements; a check or inspection from the operator's aircraft maintenance programme, airworthiness directives, overhauls, repairs, modifications, component replacements, and defect rectification.

2. New defects or incomplete maintenance work orders identified during the above maintenance should be brought to the attention of the aircraft operator for the specific purpose of obtaining agreement for its retification. In the case where the aircraft operator declines to have such maintenance carried out, BCAR -145.50 (d) will apply.

3. A certificate of release to service is necessary before flight, at the completion of any defect rectification, whilst the aircraft operates flight services between scheduled maintenance.
4. A certificate of release to service is necessary at the completion of any maintenance on an aircraft component whilst off the aircraft.

5. The issuance of Form One (F-1) (see Appendix B) constitutes the certificate of release to service when a component is maintained by one BCAR -145 AMO for another BCAR -145 AMO.

AMC 145.50 (c) Certificate of release to service
(See BCAR 145.50 (c))

1. The certificate of release to service should contain the following statement:

"Certifies that the work specified, except as otherwise specified, was carried out in accordance with BCAR -145 and in respect to that work the aircraft/aircraft component is considered ready for release to service'".

2. The certificate of release to service should relate to the task specified in the manufacturer's maintenance instructions, the maintenance manual, service bulletins, etc, relating them to the specific tasks in the BCAR OPS operator instructions.

3. The date such maintenance was carried out should include when the maintenance took place relative to any life or overhaul limitation in terms of date/flying hours/cycles/landings, etc., as appropriate.

4. When extensive maintenance has been carried out, it is acceptable for the certificate of release to service to summarise the maintenance so long as there is a unique cross-reference to the work-pack containing full details of maintenance carried out. Dimensional information should be retained with the records of the work orders.

5. The person signing the certificate of release to service should use his normal signature. Electronic signatures or any others are only allowed when the signatory can be easily identified and the appropriate measures exist, being satisfactory for the BDCA to avoid any forgery.

AMC 145.50 (d) Certificate of release to service
(See BCAR 145.50 (d))

1. General

1.1. As stated in BCAR OPS 1.890 the aircraft operator is responsible for ensuring that all required maintenance has been carried out before flight. Therefore, it is essential that the BCAR -145 AMO receives clear instructions of all the tasks to be carried out as a work order from the operator. The work instructions should include the specific checking of to be performed to the aircraft according to the maintenance programme approved to the operator, airworthiness directives, repairs, modifications, change of elements and defects that should be carried out.

1.2. Once all the works required by the operator have been carried out, the BCAR -145 AMO issues the corresponding release to service certificate, which refers to the operator's work order.

1.3. If by any reason it is not possible to carry out all the works asked by the operator and this pending works do not affect safety, it should be reported to the operator and the BDCA.

1.4. If the operator is not authorized on his Maintenance Organization Exposition, to postpone maintenance, only the the BDCA will be able to postpone the maintenance that was not carried out. In such case, the certificate of release to service issued by the BCAR -145 AMO will identify non carried out maintenance and will make a written reference to the document and provide copies to the BDCA.

1.5. If the operator is authorized in his MCM to postpone maintenance and pending maintenance does not affect safety, the certificate of release to service issued by the BCAR -145 AMO will identify the operator's MCM procedure granting the authority to postpone maintenance and identify non carried out maintenance.

1.6. When the BCAR -145 AMO identifies defects during the carryout of maintenance to an operator, the AMO shall notify all defects detected to the operator. If the operator is authorised in his MCM to postpone defect rectification, he will be able to postpone those
defects not affecting safety. The certificate of release to service issued by the BCAR -145 AMO should identify the non rectified defects and specify the reference of the MCM procedure of the operator allowing it.

1.7. Another possible cause of incomplete maintenance is that the operator's work instructions are incomplete. In this case, the BCAR -145 AMO shall notify the situation to the operator and the BDCA.

2. Defects putting into risk safety

2.1 The only situation preventing from the application of section (a) above is that the defect found is considered as hazardous for safety in case it is not rectified. In this case the BCAR -145 AMO will not issue a certificate of release to service until the defect is rectified.

2.2 If the aircraft operator does not agree to rectify the defect that could affect safety, the the BCAR -145 AMO shall notify the situation immediately to the BDCA.

3. All this situation should be covered in the MOE, section 2.16

AMC 145.50(e) Certificate of release to service
(See BCAR 145.50 (e))

1. A BCAR -145 AMO can issue a Form One (F-1) for those aircraft components last maintained prior to obtaining the BCAR-145 approval, where the BCAR -145 AMO has established a procedure acceptable to the BDCA to ensure that only aircraft components meeting all other requirements will be issued a Form One (F-1).

IEM 145.50 (e) Certificate of release to service
(See BCAR 145.50 (e))

A non-compliance known to the BCAR -145 AMO which could hazard flight safety means any instances where safe operation could not be assured, or which could lead to an unsafe condition. It typically includes, but is not limited to, significant cracking, deformation, corrosion, or failure of primary structure, any evidence of burning, electrical arcing, significant hydraulic fluid or fuel leakage and any emergency system or total system failure. An Airworthiness Directive overdue for compliance is also considered a hazard to flight safety. As stated in BCAR - 145.50(e) a certificate of release to service may not be issued under these circumstances.

NOTE: An aircraft component which maintenance has been carried out outside the aircraft requires the issuance of a certificate of release to service in reference to such maintenance (Form F-1) and another certificate of release to service referring to its correct assembly in the aircraft when this happens (note in the log).

IEM Appendix B Certificate of Release to Service (Components) / Form One (F-1)
(See BCAR 145-50 and Appendix B)

1.1. The Form One (F-1) should comply with the format attached including block numbers. The size of each block may however be varied to suit the individual application, but not to the extent that would make the certificate unrecognizable. The overall size of the certificate may be modified so long as the certificate remains recognisable and legible.

1.2. All printing or writing should be clear and legible to permit easy reading.

1.3. The Certificate should either be pre-printed, or computer generated. Some blocks can be pre-printed also; such blocks will be specified in paragraph 2 of this IEM. In such case, signatures shall be the original.

1.4. The titles of each block in the Form One (F-1) shall be written in English and the use of abbreviations will be restricted excepting those of common use as APU, NAV, DME, etc. If the form is filled by hand, it shall be written in capital letters for the document to remain legible.

1.5. The space remaining on the reverse side of Form One (F-1) may be used for any additional information but should not include any certification statement.

1.6. The original Form One (F-1) should accompany the items when given to the operator or the owner. A copy should be retained by the BCAR - 145 AMO. Where the F-1 format and data is entirely computer generated, subject to acceptance by the BDCA, it is permissible to retain the copies on a secure database.

1.7. Where a single F-1 was used to release several items, a copy of the original shall accompany every item. The original F-1 should be retained by the BCAR -145 AMO. Failure to retain the original certificate could invalidate the release status of the items.

1.8. Form One (F-1) that accompanies the item may be attached to the item by being placed in an envelope for durability.

1. COMPLETION OF FORM ONE (F-1)

Except as otherwise stated, there should be an entry in all blocks to make the document a valid certificate.

Block1: Pre-printed; Belize.

Block 2: Pre-printed; “CERTIFICATE OF RELEASE TO SERVICE F - 1”.

Block 3: Pre-printed; certificate number. Every certificate shall have a unique number for control and traceability purposes. This number shall be consecutive.

Block 4: Pre-printed; the full name and address plus mailing address if different of the BCAR -145 AMO releasing the items covered by this certificate. Logos are permitted if the logo can be contained within the block.

Block 5: internal numbers such as work order, owner number, or any other internal organisational process such that a fast traceability system can be established.

Block 6: This block is provided for the convenience of the organisation issuing the Certificate to permit easy cross-reference to the 'Remarks' Block 13 using item numbers. Completion is not mandatory.

Block 7: The name or description of the item should be given. Preference should be given to use of the Illustrated Parts Catalogue (IPC) designation.

Block 8: State the Part Number. Preference should be given to use of the IPC number designation.

Block 9: State the number of items being released.

Block 10: State the item Serial Number and/ or Batch Number if applicable, if neither is applicable, state "N/A”

Block 11: Indicate the status of the item being released. One or a combination of these words should be stated in this block:

- *OVERHAULED*. The restoration of a used item by inspection, test, and replacement in conformity with an approved standard.
- *INSPECTED/TESTED*. The examination of an item to establish conformity with an approved standard (*).
- *MODIFIED*. The alteration of an item in conformity with an approved standard (*).
- *REPAIRED*. The restoration of an item to a serviceable condition in conformity with an approved standard (*).
- *RETREADED*. The restoration of a used tyre in conformity with an approved standard (*).
- *REASSEMBLE*. The reassembly of an item in conformity with an approved standard (*)

- (*) Approved Standard means a manufacturing/design/maintenance/quality standard approved by the AAC.

Block 12: It is mandatory to state any information in this block either direct or by reference to supporting documentation that identifies data or limitations relating to the items being released that are necessary for the user/installer to make the final airworthiness determination of the item. Information should be clear, complete, and provided in a form and manner which is adequate for the purpose of making such a determination. If there is no statement, state “NO/None”.

Some of the examples are:

- The identity and issue of maintenance documentation used as the approved standard.
- Airworthiness directives carried out and/or found carried out, as appropriate.
- Repairs carried out and/or found carried out, as appropriate.
- Modifications carried out and/or found carried out, as appropriate.
- Replacement parts installed and/or parts found installed, as appropriate.
- Life limited parts history.
- Deviations from the owner work order

Blocks 13a – 13e Must not be used for maintenance task by the BCAR -145 AMO. These blocks are specifically reserved for the release/certification of newly manufactured items in accordance with BCAR -21.

Block 14 a Contains the required BCAR -145.50(a) release to service statement for all maintenance by BCAR -145 AMO. The certification statement “except as otherwise specified in block 12” is intended to address the following situations:

-The case where the maintenance could not be completed.
-The case where the maintenance deviated from the BCAR -145 procedures.
-The case where the maintenance was carried out in accordance with a non BCAR-145 requirement.
-Whichever case or combination of cases should be specified in block 12.

Block 14b The signature of the certifying staff authorised by the BCAR -145 AMO

Block 14c The BCAR -145 AC number granted by the BDCA to the BCAR -145 AMO.

Block 14d Full name, printed or handwritten, in capital letters of the signatory of block 20.

Block 14e The date of signing the Block 14b release to service. (d/m/y). The month should appear in letters e.g., Jan, Feb, Mar etc. The date and signature of block 14b shall be written at the completion of maintenance.

AMC 145.55(a) Maintenance records
(See BCAR 145.55 (a))

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1. Properly executed and retained records provide owners, operators, and maintenance personnel with information essential in controlling unscheduled and scheduled maintenance, and trouble shooting to eliminate the need for re-inspection and rework to establish airworthiness. As a minimum, records necessary to prove all requirements have been met for issuance of the certificate of release to service including sub-contractor's release documents should be retained. The prime objective is to have secure and easily retrievable records with comprehensive and legible contents. The aircraft record should contain basic details of all serialised aircraft components and all other significant aircraft components installed, to ensure traceability to such installed aircraft component documentation and associated maintenance data. (See BCAR 145.45)

2. Some gas turbine engines are assembled from modules and a true total time in service for a total engine is not kept. When owners and operators wish to take advantage of themodular design, then total time in service and maintenance records for each module is to be maintained. The maintenance records as specified are to be kept with the module and should show compliance with any mandatory requirements pertaining to that module.

3. Reconstruction of lost or destroyed records can be done by reference to other records which reflect the time in service, research of records maintained by repair facilities and reference to records maintained by individual mechanics etc. When these things have been done and the record is still incomplete, the owner/operator may make a statement in the new record describing the loss or destruction and state what is missing. This statement must be sent to the BDCA to be accepted. The BDCA may demand additional maintenance to the aircraft or components envolved.

   NOTE: Additional maintenance may be required, depending on the record information not recovered.

4. The maintenance record can be either a paper or computer system or any combination of both.

5. Paper systems should use robust material which can withstand normal handling and filing. The record should remain legible throughout the required retention period.

6. Computer systems may be used to control maintenance and/or record details of maintenance work carried out. Computer systems used for maintenance should have at least one backup system which should be updated at least within 24 hours of any maintenance. Each terminal is required to contain programme safeguards against the ability of unauthorised personnel to alter the database.

IEM 145.55 (b) Maintenance records
(See BCAR 145.55 (b))

A self-explanatory paragraph that requires the BCAR -145 AMO to give the operator the certificate of release to service including basic details of maintenance carried out, whereas BCAR -145.55(c) requires the BCAR -145 AMO organisation to retain the record of all maintenance.

AMC 145.55(c) Maintenance records
(See BCAR 145.55 (c))

1. The records should be stored in a safe way regarding fire, flood and theft.

2. Computer backup discs, tapes etc. should be stored in a different location from that containing the working discs, tapes etc., in an environment that ensures they remain in good condition.

3. Where a BCAR -145 AMO terminates its operation, all retained maintenance records covering the last two years should be distributed to the last owner/operator of the respective aircraft or component. If it is impossible to trace the owner/operator, the maintenance records should be stored as required by the BDCA.

NOTE: When an aircraft operator contracts a BCAR -145 AMO to file certificates of release to service, as well as any approved data related to associated repairs/ modifications, the retaining period will be the one required by BCAR -OPS Subpart M and not the one specified in BCAR -145.55 (c).

AMC 145.60 Reporting of faults, malfunctions and defects (RFMD).
(See BCAR 145.60)

1. The aim of reporting of faults, malfunctions and defects is

1.1 The RFMD is an essencial part of the monitoring task. The purpose of this system is to collect, investigate, and analyse the information provided in the issued reports to improve safety and not to impose sanctions or any type of corrective measure.

1.2 Specific objectives of the reporting system are:

(a) Make possible an evaluation of the safety implications of every report including previous similar reports to take the necessary measures. This evaluation envolves WHAT and WHAT has occured to prevent similare reports in the future.

(b) Ensure that the acquired knowledge is distributed for other persons and organisations to benefit from that.

1.3 Reporting system is supplementary to the daily control and procedure systems, and it does not try to duplicate or substitute it. The reporting system becomes a tool to identify those occassions in which the routine procedures have failed.

1.4 Reports shall be kept in a data base.

2. Reports to be submitted to the BDCA

2.1 BCAR -145.60 (a) states that the BCAR -145 AMO shall report those situations in which any condition of the aircraft or component has resulted or could have resulted in an insecure condition.

2.2 The fact that the BCAR -145 AMO has sent the required records to the BDCA does not exempt the responsibility to take corrective measures to prevent similar situations in the future. Planned and unplanned actions shall be included in the report to the BDCA.

2.3 When a record affects an aicraft which State of registration is different from the one that issued the BCAR -145 approval, the CAA of the State of registration shall be also notified.

3. Period to send the reports

3.1 The BCAR -145.60 (e) states 3 working days following the knowledge, discovery or identification of a failure, malfunction or defect causing the possible unsafe condition to send the corresponding reports to the BDCA. The period will start on the day after the day of discovery of when the event occurred or since the moment the reporter determined that it could have caused insecure or potentially dangerous conditions.

3.2 There are situations in which it is not necessary an evaluation before the report, and it is notified directly to the BDCA. However, there will be ocassions in which as part of the quality system, situations considered non reportable were after considered reportable.

3.3 Within the 3 working days period to send the report, the level of urgency should be determined by the level of danger detected by means of the finding discovered..

3.4 When it has been determined that a finding can produce hazardous situations, the BDCA must be informed inmmediately about the details available at that time. The initial notification will be followed by the corresponding report within 3 working days .

3.5 When it has been determined that a finding can result in situations less immediate and less dangerous, the delivery of the report could take 3 working days with the purpose of collecting more information regarding that finding.

4. Content of the reports

4.1 Independent from other type of reports required by nacional regulations (AIRPROX), reports shall be sent to the BDCA by any mean considered aceptable. Each report shall be prepared in accordance with form 1030 available in the BDCA and it shall contain at least the following information:

(a) Name of the BCAR -145 AMO

(b) Number of the BCAR -145 AC

(c) Information necessary to identify the aircraft or affected part

(d) Date and place of finding

(e) Summary of the condition

(f) Any other relevant information considered necessary.

(g) For situations affecting systems or components, being monitored or protected by a warning and/or protection system such as the detection/extinguishing of fire, the report shall ALWAYS notify if such systems work appropriately.

5. Report to other organisations

5.1 BCAR -145.60 (d) states that the BCAR -145 AMO shall report also to the BCAR -OPS operator, being the one with whom it has the maintenance contract of its aircraft, any condition affecting aircraft or aircraft component safety in accordance with following section 6.

6. Occurrence that must be reported:

(a) The following lines contain a generic list of the defects, damages, and incidentes that shall be reported to the BDCA by the BCAR -145 AMO. This list is generic and not comprehensive, and it is provided as a guideline for the BCAR -145 AMO to elaborate its own list that should be acceptable to the BDCA, taking into account the level of danger or potential danger related to each finding discovered.

(b) incorrect assembly of parts or components during an aircraft inspection.

(c) Hot bleed air leak that has resulted in structural damage.

(d) Any defect in a life-controlled component causing retirement before completion of its full life.

(e) Any damage or deterioration (e.g., fractures, cracks, corrosion, delamination, disbonding, etc.)

(f) Primary structure or principal structural element (as defined in the manufacturer's repair manual) where such damage or deterioration exceeds allowable limits specified in the repair manual and requires a repair or complete or partial replacement of the element;

(g) Secondary structure which consequently has or may have endangered the aircraft;

(h) The engine, propeller, or rotorcraft rotor system.

(i) Any failure, malfunction, or defect of any system or equipment, or damage found because of compliance with an Airworthiness Directive or other mandatory instruction issued by the BDCA when:

(i) It is detected for the first time,

(ii) Or in repetitive inspections, if applicable, where it exceeds the permissible limits quoted in the instruction and/or published repair/rectification procedures are not available.

(j) Failures in any emergency system or equipment, including emergency exit doors and lightning.

(k) Noncompliance or significant errors in compliance with the required maintenance procedures.

(l) Products, parts, appliances, and materials of unknown or suspicious origin.

(m) Misleading, incomplete, or insufficient data or maintenance procedures that can result in maintenance errors.

(n) Failures, malfunctioning, or defect of ground equipment used for tests and checking of the equipment and aircraft systems when the routine inspection required, and the testing procedures do not clearly identify the problem, and this results in a hazardous situation.

AMC 145.65 (a) Safety, quality and occupational safety policy. Maintenance procedures and quality system
(See BCAR 145.65 (a))

1. The safety quality policy should as a minimum include a statement committing the BCAR -145 AMO to:

   (a) Recognise safety as a prime consideration at all times.

   (b) Apply Human factors principles.

   (c) Encourage personnel to report maintenance related errors/incidents.

   (d) Recognise that compliance with procedures, quality standards, safety standards, and regulations is the duty of all personnel.

   (e) Recognise the need for all personnel to co-operate with the quality auditors.

AMC 145.65 (b) Safety, quality and occupational safety policy. Maintenance procedures and quality system
(See BCAR 145.65 (a)(2))

1. Maintenance procedures should be held current such that they reflect best practice within the BCAR - 145 AMO. It is the responsibility of all employees of the BCAR -145 AMO to report any differences via their organisation's internal occurrence reporting mechanisms.

2. All procedures, and changes to those procedures, should be verified and validated before use where practicable.

3. All technical procedures should be designed and presented in accordance with good human factors principles.

AMC 145.65 (b)(2) Safety, quality and occupational safety policy. Maintenance procedures and quality system
(See BCAR 145.65 (b)(2))

Specialised services include any specialised activity, such as, but not limited to non-destructive testing or welding requiring skills and/or qualification. BCAR -145.32 covers the qualification of personnel but, in addition, there is a need to establish maintenance procedures that cover the control of any specialised process.

AMC 145.65 (b)(3) Safety, quality and occupational safety policy. Maintenance procedures and quality system
(See BCAR 145.65 (b)(3))

1. The purpose of this procedure is to minimise the rare possibility of an error being repeated whereby the identical aircraft components are not reassembled thereby compromising more than one system. One example is the remote possibility of failure to reinstall engine gearbox access covers or oil filler caps on all engines of a multiengined aircraft resulting in major oil loss from all engines.

   Another example is the case of removal and refitment of oil filler caps, a reinspection of all oil filler caps should be carried out after the last oil filler cap has supposedly been refitted.

2. Procedures should be established to detect and rectify maintenance errors that could, as minimum, result in a failure, malfunction, or defect endangering the safe operation of the aircraft if not performed properly. The procedure should identify the method for capturing errors, and the maintenance tasks or processes concerned.

2.1 In order to determine the work items to be considered, the following maintenance tasks should primarily be reviewed:

   Installation, rigging and adjustments of flight controls.

   Installation of aircraft engines, propellers, and rotors.

   Overhaul, calibration, or rigging of components such as engines, propellers, transmissions, and gearboxes.

Additional information should also be processed, such as:

   Previous experiences of maintenance errors, depending on the consequence of the failure.

   Information arising from the ‘occurrence reporting system’ required by BCAR 145.60

National requirements to detect failures, if applicable.

3. To prevent omissions, every maintenance task or group of tasks should be signed-off. To ensure the task or group of tasks is completed; it should only be signed-off after completion. Work by temporary staff, trainee should be checked by authorised personnel before they sign-off. The grouping of tasks for the purpose of signing-off should allow critical steps to be clearly identified.

   Note: A "sign-off" is a statement by the competent person performing or supervising the work, that the task or group of tasks has been correctly performed. A sign-off relates to one step in the maintenance process and is therefore different to the release to service of the aircraft. "Authorised personnel" means personnel formally authorized to sign-off tasks by the BCAR -145 AMO. "Authorised personnel" are not necessarily "certifying staff".

AMC 145.65(c) Safety, quality and occupational safety policy. Maintenance procedures and quality system
(See BCAR 145.65 (c))

1. The primary objectives of the quality system are to enable the BCAR -145 AMO to ensure that it can deliver a safe product and it remains in compliance with the requirements.

2. An essential element of the quality system is the independent audit.

3. The independent audit is an objective process of routine sample checks of all aspects of the BCAR -145 AMO and its ability to carry out all maintenance to the required standards and includes some product sampling as this is the result of the maintenance process. It represents an objective overview of the complete maintenance related activities and is intended to complement the BCAR -145.50 (a) requirement for certifying staff to be satisfied that all required maintenance has been properly carried out before issue of the certificate of release to service. Independent audits should include a percentage of random audits carried out on a sample basis when maintenance is being carried out. This means some audits during the night for those organisations that work at night.

4. The independent audit should ensure that all aspects of BCAR -145 compliance are checked every 12 months and have been checked over the 12-month period in accordance with a scheduled plan. The independent audit does not require each procedure to be checked against each BCAR -145 AMO product when it can be shown that the procedure is common to more than one product and the procedure has been checked every 12 months without resultant findings. Where findings have been identified, the procedure should be rechecked against other products until the findings have been rectified after which the independent audit procedure may revert to 12 monthly for the particular procedure.

5. The independent audit should sample check one product on each product line every 12 months as a demonstration of the effectiveness of maintenance procedures compliance. It is recommended that procedures and product audits be combined by selecting a specific product example, such as an aircraft or engine or instrument and sample checking all the procedures and requirements associated with the specific product example to ensure that the result should be an airworthy product.

For the independent audit a product includes any product specified in the scope of rating in Appendix 2 and specified in the approval issued for the particular organisation. For example, a BCAR -145 AMO with the capability to maintain aircraft, engines, brakes, and autopilots would need to carry out 4 complete audit sample checks each year. In section 13, there is an example of elements and planning of an audit.

6. The sample check of a product means to witness any relevant testing and visually inspect the product and associated documentation. The sample check should not involve repeat disassembly or testing unless the sample check identifies findings requiring such action.

7. Where the smallest BCAR -145 AMO (an organisation with a maximum of 10 personnel actively engaged in maintenance) chooses to subcontract the independent audit in accordance with BCAR -146.65 (c) (1), the audits referred in sections 4 and 5 should be carried out twice in every 12-month period.

8. Where the BCAR -145 AMO has line stations listed in accordance with BCAR - 145.75 (a)(4), the quality system should describe how these are integrated into the system and include a plan to audit each listed line station at a frequency consistent with the extent of flight activity at the line station. Period between audits of a particular line station should not exceed 24 months.

9. Except as specified otherwise in paragraph 5, the BDCA may agree to increase any of the audit time periods specified in BCAR -145.65 (c) (1) by up to 100% if there are no safety related findings and subject to being satisfied that the BCAR -145 AMO has a good record of rectifying findings in a timely manner.

10. A report should be raised each time an audit is carried out describing what was checked and the resulting findings against applicable requirements, procedures, and products.

11. The independence of the audit should be established by always ensuring that audits are carried out by personnel not responsible for the function, procedure or products being checked. Large BCAR -145 AMOs being an organisation with more than about 500 maintenance staff should have a dedicated quality audit group whose sole function is to conduct audits, raise finding reports and follow up to check that findings are being rectified. Medium size BCAR -145 AMOs, this is with less than 500 persons working in maintenance tasks, can use competent personnel of a section/department without any responsibility in the operation, procedure, or product to audit the section/ department only if the full responsibility of planning and implementation belongs to the Quality Manager. Smallest BCAR -145 AMOs with a maximum of 10 persons in maintenance activities may contract the independent audit element to another BCAR -145 AMO or independent auditors approved by the BDCA

12. The procedure described before should be specified in the MOE, sections 3.1 and 3.2.

13. Example of an audit plan

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SECTION – 2 **BCAR 145**

13.1. Purpose

13.2. The purpose of this plan is to give an example of how an audit plan can be developed to satisfy BCAR - 145.65 (b). This is only an example, being many other alternatives.

13.3 This plan shows the elements that should be covered by the audit. This plan should be adapted to the conditions of every organisation. To this list, a schedule including the date(s) of all the different department of the organisation being audited needs to be added.

Audit Plan

Ref.	Subject	Hangar	Engine	Mech	Avionic
145.20	(c) Approval certificate and rating				
145.25	(a) Facilities-size & segregation				
	(b) Office accommodation				
	(c) Work environment				
	(d) Storage				
	(e) Maintenance main base				
145.30	(a) Management personnel and changes				
	(c) Quality Manager				
	(e) Training processes				
145.32	(a) Specialized services personnel				
145.35	(a) Requirements of the certifying staff				
	(c) Certifying staff, recent experience				
	(d) Certifying staff, continuation training				
	(g) Authorizations to the certifying staff				
	(i) Records of the certifying staff				
145.40	(a) Appropriate equipment				
	(b) Control & calibration of tools & equipment				
145.45	(a)(b) Approved data				
	(d) Modified maintenance data				
	(e) Data approval				
	(g) Data availability				
	(h) Data up to date				
145.47	(d) Personnel Nos & man-hour plan				
145.50	(a) Aircraft/component release to service				
	(b) Contents of the certificates of release to service				
	(d) Controls before the release to service				
145.55	(a) Details on work documents				
	(b) Operator's copy of release				
	(c) 2 year record retention				
145.60	Reporting 39nairworthy findings				
145.65	Procedures according to MOM				

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SECTION – 2 BCAR 145

Ref.	Subject	Hangar	Engine	Mech	Avionic
145.67	Programme to control the use of narcotic drugs, enervating substances, and alcohol				
145.70	MOM up to date				

Audit Plan

Ref.	Subject	Hangar	Engine	Mech	Avionic
2.1	Suppliers & subcontractors				
2.2	Acceptance of parts				
2.3	Parts control in stores				
2.5	Tool calibration				
2.6	Use of tools				
2.7	Cleanliness standards				
2.9	Control of repairs				
2.10	A/C Maintenance programme compliance				
2.11	Airworthiness Directives Control				
2.12	Control of modifications and SB				
2.13	Maintenance Documents used for AD and SB				
2.14	Control of technical records				
2.15	Base maintenance Defects				
2.16	Release to service procedures				
2.18	Defect report to the BDCA/operator				
2.19	Defective parts to stores				
2.20	Parts to outside contractors				
2.21	Computer maintenance systems				
2.22	Man-hour control				
2.23	Control of critical tasks				
2.24	Specific maintenance procedures				
2.26	Shift handover procedures				
2.28	Procedures for the control of any specialised process				
L2.1	Line maintenance : control parts etc				
L2.2	Line servicing control				
L2.3	Line defect control				
L2.4	Technical log completion				
L2.5	Pool & loan parts				
L2.6	Return defective parts to base				
L2.7	Line procedure control of critical tasks				
3.9	Product maintenance exemption control				
3.12	Subcontractor personnel				
3.13	Human factor training procedures				

NOTE 1: In the line station case, all line stations should be audited at the frequency agreed by the BDCA within the limits of the AMC 145.65 (b).

NOTE 2: Reference system used for this example refers to the paragraphs of the BCAR - 145 as well as to the sections of the MOE.

AMC 145.65(c)(2) Safety, quality and occupational safety policy. Maintenance procedures and quality system
(See BCAR 145.65 (c)(2))

1. An essential element of the quality system is the quality feedback system identified in BCAR 145.65 (c) 2 as report system.

2. The quality feedback system may not be contracted to companies or persons outside the BCAR -145 AMO. The principal function of the quality feedback system is to ensure that all findings resulting from the quality audits of the organisation are properly investigated and corrected in a timely manner and to enable the Accountable Manager to be kept informed of any safety issues and the extent of compliance with BCAR -145.

3. Quality audit reports referenced in AMC 145.A.65(c) paragraph 10 should be sent to the relevant department(s) for rectification action giving target rectification dates. Rectification dates should be discussed with such department(s) before the quality department or nominated quality auditor confirms such dates in the report. The relevant department (s) is required to rectify findings and inform the quality department of such rectification in accordance with BCAR 145.65 (c) (2).

4. The Accountable Manager should hold regular meetings with staff of the BCAR -145 AMO to check progress on rectification except that in the large organisations, such meetings may be delegated ona day to day basis to the quality manager subject to the accountable manager meeting at leats wice per year with the senior staff involved to reiew the overall performance and receiving at leats a half yearly summary report on fidings of non-compliance.

5. All records pertaining to the quality audits and the quality feedback system should be retained for at least 2 years after the date of clearance of the finding or for a period sufficient to support the application of changes in the audit periods in accordance with AMC 145.65 (c) (1) section 9.

IEM 145.70(a) Maintenance Organisation Exposition (MOE)
(See BCAR 145.70 (a))

1. The purpose of the Maintenance Organisation Exposition is to set forth the procedures, means, and methods of the BCAR -145 AMO.
2. Compliance with the provisions of the MOE ensures the compliance of the requirements of the BCAR -145 which is a prerequisite to obtaining and retaining a BCAR -145 AMO certificate.

3. From BCAR 145.70 (a) (1) to (13) constitutes the "management" part of the MOE and therefore could be produced as one document and made available to the person(s) described in the BCAR -145.30 (a) who should be reasonably familiar with its contents. The list of Certifying Staff referred in BCAR - 145.70 (a) (6) may be produced as a separate document.

4. BCAR - 145.70(a) (16) constitutes the working procedures of the organisation and they may be produced as any number of separate procedures manuals. It should be remembered that these documents should be cross-referenced from the "management" part of the MOE.

5. Personnel are expected to be familiar with those parts of the MOE that are relevant to the maintenance work they carry out.

6. The BCAR -145 AMO should specify in the MOE who should amend the manual particularly in the case where there are several parts.

7. The quality manager should be responsible for monitoring the amendment of the MOE, unless otherwise agreed by the BDCA, including associated procedures manuals and submission of the proposed amendments to the BDCA. However, the BDCA may agree via a procedure stated in the amendment section of the MOE that some defined class of amendments may be incorporated without prior approval by the BDCA.

8. The MOE should cover four (4) main parts:

8.1. Management

8.2. The maintenance procedures covering all aspects of how aircraft componens may be accepted from outside sources and how the aircraft would be maintained to achieve the required standard.

8.3. The quality system procedures including the methods of qualifying mechanics, inspection, certifying staff, and quality audit personnel.

8.4. Contracted operator procedure and paperwork.

9. The statement signed by the Accountable Manager referred in BCAR -145.70 (a)(2) should embrace the intent of the following paragraph and in fact this statement may be used without amendment. Any modification to the statement should not alter the intent.

"This MOE and any associated referenced manuals define the BCAR – 145 and procedures upon which the BDCA BCAR – 145 approval is based as required by BCAR – 145.70. These procedures are approved by the undersigned and should be complied with, as applicable, when work/orders are being progressed under the terms of the BCAR – 145 approvals.

It is accepted that these procedures do not override the necessity of complying with any new or amended rules published by the BDCA from time to time where these new or amended regulations conflict with these procedures.

It is understood that the BDCA will approve this organisation whilst the BDCA is satisfied that the procedures are being followed and work standards maintained. It is further understood that the BDCA reserves the right to suspend, limit or revoke the BCAR -145 approval certificate of the BCAR -145 AMO if there is evidence that procedures are not followed, or standards not upheld.

*Signature*_____

Place / Date _____

Accountable Manager _____

*For and on behalf of*_____ *(Name of the organisation)"*

Whenever the Accountable Manager changes, it is important to ensure that the new accountable manager sends to the BDCA a new statement with the documents related to his acceptance by the BDCA. Failure to carry out this action could invalidate the BCAR -145 Approval.

10. When a BCAR -145 AMO is approved against any other 145 AMO containing a requirement for a MOE, a supplement covering the differences will suffice to meet the requirements. The supplement must have an index showing where those parts missing from the supplement are covered.

NOTE: Sections from (1) to (13) constitute the "management" part of the MOE.

IEM 145.75 (a)(1) General
(See BCAR - 145.75 (a)(1))

1. A BCAR -145 AMO may also carry out maintenance on any aircraft and / or aircraft component used for any purpose other than commercial air transport within the limitations of the approval.
2. A BCAR -145 AMO may be approved to maintain aircraft/aircraft components not certificated by the BDCA that granted the BCAR -145 approval.

AMC 145.75 (a)(2) Privileges of the organisation

1. Working under the quality system of an organisation appropriately approved under regulation BCAR -145(subcontracting) refers to the case of one organisation, not itself appropriately approved to BCAR -145 that carries out aircraft line maintenance or minor engine maintenance or maintenance of other aircraft components or a specialised service as a subcontractor for a BCAR -145 AMO. To be appropriately approved to subcontract the organisation should have a procedure for the control of such subcontractors as described below. Any BCAR – 145 approved maintenance organisation that carries out maintenance for another BCAR – 145 approved maintenance organisations within its own approval scope is not considered to be subcontracting for the purpose of this paragraph.

Note: For those organisations approved under BCAR -145 that are also certificated by the FAA under FAR Part-145 it should be noted that FAR Part-145 is more restrictive in respect of maintenance activities that can be contracted or sub-contracted to another maintenance organisation. It is

therefore recommended that any listing of contracted or sub-contracted maintenance organisations should identify which meet the BCAR -145 criteria and which meet the FAR Part-145 criteria.

2. Maintenance of engines or engine modules other than a complete workshop maintenance check is intended to mean any maintenance that can be carried out without disassembly of the core engine.

3. Fundamentals of sub-contracting under BCAR -145

3.1 The fundamental reasons for allowing a BCAR -145 AMO to sub-contract certain maintenance tasks are:

(a) To permit the acceptance of specialised maintenance services, such as, but not limited to, plating, heat treatment, plasma spray, fabrication of specified parts for minor repairs / modifications, etc., without the need for direct approval by the competent authority in such cases.

(b) To permit the acceptance of aircraft maintenance up to but not including a base maintenance check as specified in BCAR -145.75 (b) by organisations not appropriately approved under BCAR -145 when it is unrealistic to expect direct approval by the BDCA. The BDCA will determine when it is unrealistic but in general it is considered unrealistic if only one or two organisations intend to use the sub-contract organisation.

(c) To permit the acceptance of component maintenance.

(d) To permit the acceptance of engine or propeller maintenance up to but not including a workshop maintenance check of an engine or propeller as specified in BCAR -175.75 (b) by organisations not appropriately approved under BCAR -145.75 when it is unrealistic to expect direct approval by the BDCA. The determination of unrealistic is as per sub-paragraph (b).

3.2 When maintenance is carried out under the BCAR -145 AMO sub-contract control system it means that for the duration of such maintenance, the BCAR -145 approval has been temporarily extended to include the sub-contractor. It therefore follows that those parts of the sub-contractor's facilities, personnel, and procedures involved with the maintenance organisation's products undergoing maintenance should meet BCAR -145 requirements for the duration of that maintenance and it remains the organisation's responsibility to ensure such requirements are satisfied.

3.3 For the criteria specified in sub-paragraph 3.1 the organisation is not required to have complete facilities for maintenance that it needs to sub-contract, but it should have its own expertise to determine that the sub-contractor meets the necessary standards. However, an organisation cannot be approved unless it has the in – house facilities, procedures and expertise to carry out the majority of maintenance for which it wishes to be approved in terms of the number of class ratings.

3.4 The organisation may find it necessary to include several specialist subcontractors to enable it to be approved to completely certify the release to service of a particular product. Examples could be specialist welding, electro-plating, painting etc. To authorise the use of such subcontractors, the BDCA will need to be satisfied that the organisation has the necessary expertise and procedures to control such sub-contractors.

3.5 An organisation working outside the scope of its approval schedule is deemed to be not approved. Such an organisation may in this circumstance operate only under the sub-contract control of another BCAR -145 AMO.

3.6 Authorisation to sub-contract is indicated by the BDCA accepting the MOE containing a specific procedure on the control of sub-contractors.

4. Principal BCAR - 145 procedures for the control of subcontractors not approved under BCAR -145.

4.1 A pre audit procedure should be established whereby the maintenance organization's subcontract control section, which may also be in BCAR -145.65(b) quality system independent audit section, should audit a prospective sub-contractor to determine whether those services of the sub-contractor that it wishes to use meets the intent of BCAR -145.

4.2 The BCAR -145 AMO needs to assess to what extent it will use the sub-contractor's facilities. As a rule,the organisation should require its own paperwork, approved data and material/spare parts to be used, but it could permit the use of tools, equipment, and personnel from the sub-contractor as long as such tools, equipment and personnel meet the requirements of BCAR -145. In the case of sub-contractors who provide specialised services, it may for practical reasons be necessary to use their specialised services personnel, approved data, and material subject to acceptance by the BCAR -145 AMO.

4.3 Unless the sub-contracted maintenance work can be fully inspected on receipt by the BCAR -145 AMO, it will be necessary for such organisation to supervise the inspection and release from the sub-contractor. Such activities should be fully described in the BCAR -145 AMO procedures. The BCAR -145 AMO will need to consider whether to use its own staff or authorise the sub-contractor's staff.

4.4 The certificate of release to service may be issued either at the sub-contractor or at BCAR -145 AMO facility by staff issued a certification authorisation in accordance with BCAR - 145.30 as appropriate, by the BCAR -145 AMO. Such staff would normally come from the BCAR -145 AMO but may otherwise be a person from the sub-contractor who meets the approved maintenance organisation certifying staff standard which itself is approved by the BDCA via the MOE. The certificate of release to service and the Form 1 will always be issued under the BCAR -145 AMO approval reference.

4.5 The sub-contract control procedure will need to record audits of the subcontractor, to have a corrective action follow up plan and to know when subcontractors are being used. The procedure should include a clear revocation process for sub-contractors who do not meet the BCAR -145 AMO requirements.

4.6 The BCAR – 145 quality audit staff will need to audit the sub-contract control section and sample audit sub-contractors unless this task is already carried out by the quality audit staff as stated in sub-paragraph 4.1.

4.7 The contract between the BCAR -145 AMO and the sub-contractor should contain a provision for the BDCA inspectors to have right of access to the sub-contractor.

IEM 145.80 Limitations on the BCAR – 145 AMO
(See BCAR 145.80)

This paragraph is intended to cover the situation where a BCAR -145 AMO may temporarily not hold all the necessary tools, equipment etc., for an aircraft type or variant it was approved. This paragraph means that the BDCA need not amend the approval to delete the aircraft type or variants on the basis that it is a temporary situation and there is a commitment from the BCAR -145 AMO to re-acquire tools, equipment etc. before maintenance on the type may recommence.

IEM 145.85 (a) Change to the BCAR -145 AMO
(See BCAR 145.85 (a))

The primary purpose of this paragraph is to enable the BCAR -145 AMO to remain approved if agreed by the BDCA during negotiations about any of the specified changes. Without this paragraph, the approval would automatically be suspended in all cases.

IEM 145.95 Exemptions
(See BCAR 145 .95)

To grant an exemption based on what was established in this regulation, the BDCA should establish supplementary conditions oriented to ensure the “interest and public security”. In this sense, the corresponding justifications submitted to request an exemption should be supported according to the following procedures:

1. Regulation or case for which the exemption is being requested.
2. The nature and scope of the regulation or case for which the exemption is being requested.
3. Description of the persons, aircraft, and facilities subject to the exemption requested.
4. Any information, point of view, or comments supporting the exemption.
5. The reasons why the granting of an exemption would be declared of public interest.
6. The supplementary actions to be taken by the petitioner that provide a safety level equivalent to BCAR - 145 or paragraph that is being requested to exempt or the reasons that ensure that the granting of the exemption will not affect negatively public security.
   The exemption applications should be sent in advance. In this sense, the exemption application receipt procedures will be processed according to the periods established by the administrative procedures of the BDCA.

The content of the exemptions when being granted by the BDCA will be the following:

1. Name of the authority granting the exemption

2. Legal provision to grant the exemption

3. The cases in which it can be used, including the period in which it will be valid. It is important to pay attention to the validity duration if this can be affected by an amendment to the requirement.

4. Addressee of the exemption
5. Legal provision which does not apply to those cases

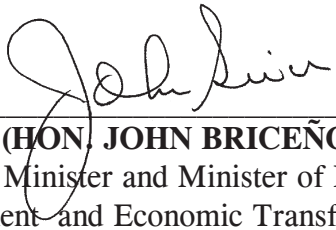
6. Any terms that need to be met when using the exemption

The BDCA keeps a record of each exemption. This record is part of the record being kept for every BCAR -145 approved maintenance organisation that has been approved under this regulation. The recording procedure for each document including the exemptions can be part of the procedures established by each authority granting the exemption.

IEM 145.100 Revocation, suspension, limitation, or refusal to issue or renew the BCAR -145 AC (See BCAR 145.100)

The procedures for these processes will be carried out according to the provisions in force of the BDCA.

MADE by the Minister responsible for civil aviation this 28th day of May, 2025.



(HON. JOHN BRICEÑO)
Prime Minister and Minister of Finance,
Investment and Economic Transformation,
Civil Aviation and E-Governance
(Minister responsible for civil aviation