Part 4

Continuing Airworthiness of Aircraft

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SUBPART A: GENERAL

4.001 APPLICABILITY

(a) This Part prescribes the requirements of Vietnam for:
  (1) Certification of aircraft and aeronautical components;
  (2) Issuance of Airworthiness Certificates and other certifications for aircraft components;
  (3) Continued airworthiness of aircraft and aeronautical components;
  (4) Rebuilding and modifications of aircraft and aeronautical components;
  (5) Maintenance and preventive maintenance of aircraft and aeronautical components;
  (6) Aircraft inspection requirements;
  (7) Air operator aircraft maintenance and inspection requirements; and
  (8) Record and store the aircraft maintenance records..

(b) This Part is applicable to the owners and operators of aircraft registered in Vietnam and the persons and organizations that provide maintenance services for these aircraft.

(c) For the purpose of this Part, the word “aircraft” or related words, such as “aeroplane” and “helicopter, includes engines, propellers, power transmissions, rotors components, accessories, instruments, equipment and apparatus including emergency equipment.

4.003 DEFINITIONS

(a) All definitions applicable to this Part are contained in Part 1 (Appendix 1 to 1.007) of these civil aviation regulations.

4.005 ACRONYMS

(a) The meanings of acronyms in this Part are contained in Part 1 (Appendix 1 to 1.008) of these civil aviation regulations.

SUBPART B: AIRWORTHINESS CERTIFICATES & DOCUMENTATION

4.010 APPLICABILITY

(a) This Subpart prescribes the rules applicable to issue, renewal, transfer and surrender of airworthiness certificates.

4.013 ELIGIBILITY & APPLICATION

(a) Any registered owner of a Vietnam registered aircraft, or agent of the owner, may apply for an airworthiness certificate for that aircraft.

(b) Each applicant for an airworthiness certificate shall apply in a form and manner acceptable to the CAAV.

4.015 CLASSIFICATIONS OF AIRWORTHINESS CERTIFICATES

(a) Standard Airworthiness Certificates will be issued for aircraft in the specific category and model designated by the State of Design in the type certificate.

(b) The CAAV may issue a Special Airworthiness Certificate in the form of a:
  (1) Restricted certificate;
  (2) Experimental certificate; or
  (3) Special flight permit.

(c) The CAAV may issue an Export Certificate of Airworthiness for aircraft registered in Vietnam that are being exported to the registry of another Contracting State.

4.017 AMENDMENT OF AIRWORTHINESS CERTIFICATE

(a) The CAAV may amend or modify an Airworthiness Certificate:
  (1) Upon application from an operator.
  (2) On its own initiative.

(b) In cases where the aircraft operator has application to modify the content of airworthiness certificate, within 7 working days from the date of receipt, CAAV reviews, issues Certificate of Airworthiness or notice of refusal in writing, stating the reasons.

4.020 TRANSFER OR SURRENDER OF AIRWORTHINESS CERTIFICATE

(a) An owner shall transfer an Airworthiness Certificate:
  (1) To the lessee upon lease of an aircraft within or outside Vietnam.
  (2) To the buyer upon sale of the aircraft within Vietnam.

(b) An owner shall surrender the Airworthiness Certificate for the aircraft to the issuing CAAV upon sale of that aircraft outside of Vietnam.

4.023 EFFECTIVE DATES OF AIRWORTHINESS CERTIFICATE

(a) Airworthiness Certificates are effective as follows unless sooner surrendered, suspended or revoked, or expired.
  (1) A special flight permit is valid for the period of time specified in the permit.
  (2) A Certificate of Airworthiness shall be renewed or shall remain valid, subject to the laws of the State of Registry, provided that the State of Registry shall require that the continuing airworthiness of the aircraft shall be determined by a periodical inspection at appropriate intervals prescribed by the CAAV having regard to lapse of time and type of service.

(b) When an aircraft imported for registration in Vietnam has a Certificate of Airworthiness issued by another Contracting State, Vietnam may, as an alternative to issuance of its own Certificate of Airworthiness, establish validity by suitable authorisation to be carried with the former Certificate of Airworthiness accepting it as the equivalent of a Certificate of Airworthiness issued by Vietnam. The validity of the authorisation shall not extend beyond the period of validity of the Certificate of Airworthiness or one year, whichever is less.

4.025 AIRCRAFT IDENTIFICATION

(a) Each applicant for an airworthiness certificate shall show that the aircraft is properly registered and marked, including identification plates.

4.027 ISSUE OF STANDARD AIRWORTHINESS CERTIFICATES

(a) The CAAV will issue a Standard Airworthiness certificate if:
  (1) The applicant presents evidence to the CAAV that the aircraft conforms to a type design approved under a type certificate or a supplemental type certificate and to the applicable Airworthiness Directives of the State of Manufacture;
  (2) The aircraft has been inspected in accordance with the performance rules of this Part for inspections and found airworthy by persons authorised by the CAAV to make such determinations within the last 30 calendar days; and
  (3) The CAAV finds after an inspection that the aircraft conforms to type design and is in condition for safe operation.

(b) The CAAV may validate an airworthiness certificate issued by another Contracting State upon registration of the aircraft in Vietnam for the period specified in that certificate.

4.030 AIRWORTHINESS DIRECTIVES

(a) Upon registration of an aircraft in Vietnam, the CAAV will notify the State of Design of the aircraft of the registration in Vietnam, and request that the CAAV receives any and all airworthiness directives addressing that aircraft, airframe, aircraft engine, propeller, appliance, or component part.

(b) Whenever the State of Design considers that a condition in an aircraft, airframe, aircraft engine, propeller, appliance, or component part is unsafe as shown by the issuance of an airworthiness directive by that State, the CAAV will make the requirements of such directives apply to Vietnam registered civil aircraft of the type identified in that airworthiness directive.

(c) The CAAV may identify manufacturer's service bulletins and other sources of data, or develop and prescribe inspections, procedures and limitations, for mandatory compliance pertaining to affected aircraft in Vietnam.

(d) No person may operate any Vietnam registered civil aircraft to which the measures of this Section apply, except in accordance with the applicable directives.

4.033 ISSUE & EXTENSION OF NOISE CERTIFICATE

(a) The aircraft owner shall provide evidence of a noise certificate approved by the State of Design or Manufacturer.

(b) If the document is issued in a language other than English, an English translation shall be provided to the CAAV.

(c) The CAAV shall determine the validity of the noise certificate provided and issue a validation of the applicable noise certificate for each aircraft when issuing the certificate of airworthiness.

4.035 ISSUE OF SPECIAL AIRWORTHINESS CERTIFICATES

(a) The CAAV may issue a Special Airworthiness Certificate to the aircraft that does not qualify for a Standard Certificate.

(b) Aircraft holding Special Airworthiness Certificates shall be subject to operating limitations within Vietnam and may not make international flights. The CAAV shall issue specific operating limitations for each Special Airworthiness Certificate.

(c) The CAAV may issue Special Flight Permits to an aircraft that is capable of safe flight, but unable to meet applicable airworthiness requirements, for the purpose of:

(1) Flying to a base where repairs, modifications, maintenance, or inspections are to be performed, or to a point of storage;
(2) Testing after repairs, modifications, or maintenance have been performed;
(3) Delivering or exporting the aircraft;
(4) Evacuating aircraft from areas of impending danger; and
(5) Operating at weight in excess of the aircraft's maximum Certified Takeoff Weight for flight beyond normal range over water or land areas where adequate landing facilities or appropriate fuel is not available. The excess weight is limited to additional fuel, fuel-carrying facilities, and navigation equipment necessary for the flight.

(d) The CAAV may issue a special flight permit with continuing authorisation issued to an aircraft that may not meet applicable airworthiness requirements but are capable of safe flight, for the purpose of flying aircraft to a base where maintenance or modifications are to be performed. The permit issued under this paragraph is an authorisation, including conditions and limitations for flight, which is set forth in the AOC Holder's specific operating provisions. This permit under this paragraph may be issued to an AOC Holder certificated under Part 12.

(e) In the case of Special Flight Permits, the CAAV shall require a properly executed maintenance endorsement in the aircraft permanent record by a person or organization, authorised in accordance with this Part, stating that the subject aircraft has been inspected and found to be safe for the intended flight.

(f) The operator shall obtain all required overflight authorisations from countries to be overflown on flights outside Vietnam.

4.037 AIRCRAFT FLIGHT MANUAL

(a) The owner or operator shall provide to the CAAV an aircraft flight manual specific to the aircraft when applying for a certificate of airworthiness.

(b) The CAAV shall determine the validity and conformance of the aircraft flight manual with regard to the specific aircraft prior to issue of the certificate of airworthiness.

(c) The aircraft flight manual shall be updated by implementing changes made mandatory by the State of Registry.

SUBPART C: CONTINUED AIRWORTHINESS OF AIRCRAFT & COMPONENTS

4.040 APPLICABILITY

(a) This Subpart prescribes rules governing the continued airworthiness of civil aircraft registered in Vietnam whether operating inside or outside the borders of Vietnam.

4.043 RESPONSIBILITY

(a) The owner of an aircraft or, in the case of a leased aircraft, the lessee, shall be responsible for maintaining the aircraft in an airworthy condition by ensuring that:

(1) All maintenance, overhaul, modifications and repairs which affect airworthiness are performed as prescribed by the CAAV;

(2) Maintenance personnel make appropriate entries in the aircraft maintenance records certifying that the aircraft is airworthy;

(3) The approval for return to service (maintenance release) is completed by a person qualified in accordance with 4.077 to the effect that the maintenance work performed has been completed satisfactorily and in accordance with the prescribed methods; and

(4) In the event there are open discrepancies, the maintenance release includes a list of the uncorrected maintenance items and these items are made a part of the aircraft permanent record.

4.045 GENERAL

(a) No person may perform maintenance, preventive maintenance, or modifications on an aircraft other than as prescribed in this Part.

(b) No person may operate an aircraft for which a manufacturer's maintenance manual or instructions for continued airworthiness has been issued that contains an airworthiness limitation section unless the aircraft is in compliance with:

(1) The mandatory replacement times, inspection intervals, and related procedures specified in that section; or

(2) The alternative inspection intervals and related procedures set forth in the specific operations specifications approved by the CAAV under the maintenance requirements of Part 12; or

(3) An inspection program approved by the CAAV.

(c) No person may operate an aircraft component to which an Airworthiness Directive applies, issued either by the State of Design, or State of Manufacture and adopted for Vietnam-registered aircraft by the CAAV, or by the State of Registry for aircraft operated within Vietnam, except in accordance with the requirements of that Airworthiness Directive.

(d) When the CAAV determines that an airframe or aircraft component has exhibited an unsafe condition and that condition is likely to exist or to develop in other products of the same type design, the CAAV may issue an Airworthiness Directive prescribing inspections and the conditions and limitations, if any, under which those products may continue to be operated.

4.047 Reporting of Failures, Malfunctions & Defects

(a) Owners or operators of aeroplanes over 5,700 kg and helicopters over 3175 kg maximum take-off weight shall report to the CAAV any failures, malfunctions, or defects that result in at least the following information resulting from maintenance and operational experience with respect to continuing airworthiness is transmitted to the CAAV and the State of Design:

(1) Fires during flight and whether the related fire-warning system properly operated;
(2) Fires during flight not protected by a related fire-warning system;
(3) False fire warning during flight;
(4) An engine exhaust system that causes damage during flight to the engine, adjacent structure, equipment, or components;
(5) An aircraft component that causes accumulation or circulation of smoke, vapour, or toxic or noxious fumes in the crew compartment or passenger cabin during flight;
(6) Engine shutdown during flight because of flameout;
(7) Engine shutdown during flight when external damage to the engine or aircraft structure occurs;
(8) Engine shutdown during flight due to foreign object ingestion or icing;
(9) Shutdown during flight of more than one engine;
(10) A propeller feathering system or ability of the system to control overspeed during flight;
(11) A fuel or fuel-dumping system that affects fuel flow or causes hazardous leakage during flight;
(12) An unintended landing gear extension or retraction, or opening or closing of landing gear doors during flight;
(13) Brake system components that result in loss of brake actuating force when the aircraft is in motion on the ground;
(14) Aircraft structure that requires major repair;
(15) Cracks, permanent deformation, or corrosion of aircraft structure, if more than the maximum acceptable to the manufacturer or the CAAV;
(16) Aircraft components or systems malfunctions that result in taking emergency actions during flight (except action to shut down an engine);
(17) Each interruption to a flight, unscheduled change of aircraft en route, or unscheduled stop or diversion from a route, caused by known or suspected technical difficulties or malfunctions;
(18) Any abnormal vibration or buffeting caused by a structural or system malfunction, defect, or failure;
(19) A failure or malfunction of more than one attitude, airspeed, or altitude instrument during a given operation of the aircraft.
(20) The number of engines removed prematurely because of malfunction, failure or defect, listed by make and model and the aircraft type in which it was installed; or
(21) The number of propeller featherings in flight, listed by type of propeller and engine and aircraft on which it was installed.

(b) Each report required by this Section shall:

(1) Be made within 3 days after determining that the failure, malfunction, or defect required to be reported has occurred; and
(2) Include as much of the following information as is available and applicable:
(i) Aircraft serial number;

(ii) When the failure, malfunction, or defect is associated with an article approved under a TSO authorisation, the article serial number and model designation, as appropriate;
(iii) When the failure, malfunction or defect is associated with an engine or propeller, the engine or propeller serial number, as appropriate;
(iv) Product model;
(v) Identification of the part, component, or system involved, including the part number; and
(vi) Nature of the failure, malfunction, or defect.

(c) The CAAV, if the State of Registry of the aircraft, shall submit all such reports upon receipt to the State of Design.

(d) The CAAV, if not the State of Registry of the aircraft, shall submit all such reports upon receipt to the State of Registry.

SUBPART D: AIRCRAFT MAINTENANCE REQUIREMENTS

4.050 APPLICABILITY

(a) This Subpart prescribes the rules governing the maintenance and inspection of Vietnam registered civil aircraft operating within or outside Vietnam.

(b) Unless otherwise approved by the CAAV, this Subpart prescribes the minimum requirements that apply to aircraft operated by the holder of an AOC issued by Vietnam.

(c) Sections 4.057 and 4.060 do not apply to aircraft subject to an continuous maintenance program approved by the CAAV for an AOC holder under the maintenance requirements of Part 12.

4.053 OWNER'S MAINTENANCE RESPONSIBILITIES

(a) The owner of an Vietnam-registered aircraft, or in the case where it is leased, the lessee, shall ensure that, in accordance with procedures acceptable to the CAAV, the:
(1) Aircraft is maintained in an airworthy condition;
(2) Operational and emergency equipment necessary for an intended flight is serviceable; and
(3) Certificate of airworthiness of the aircraft remains valid.

(b) The owner or the lessee shall not operate the Vietnam-registered aircraft unless it is maintained and released to service:
(1) By a maintenance organization approved by the CAAV; or
(2) Under an equivalent system of maintenance approved by the CAAV.

(c) When the maintenance release is not issued by an approved maintenance organization, the person signing the maintenance release shall be licensed in accordance with Part 7 of these regulations.

(d) The owner or the lessee shall ensure that the maintenance of the aeroplane is performed in accordance with a maintenance programme acceptable to the State of Registry.

4.055 MAINTENANCE REQUIRED

(a) Each owner or operator of an aircraft shall:
(1) Have that aircraft inspected as prescribed in this Part and discrepancies repaired as prescribed in the Performance Rules of this Part;
(2) Repair, replace, remove, or inspect any inoperative instruments or items of equipment prior to the next flight, except when the provisions of an approved Minimum Equipment List (MEL) allow for operations with such items inoperative;
(3) Ensure that identifying placard(s) have been installed on the aircraft when listed discrepancies include inoperative instruments or equipment; and

(4) Ensure that maintenance personnel make appropriate entries in the aircraft maintenance records indicating the aircraft has been approved for return to service.

4.057 INSPECTIONS

Annual Inspection

(a) Except as provided in paragraph (c), no person may operate an aircraft unless, within the preceding 12 calendar months, the aircraft has had:

(1) An annual inspection in accordance with this Part and has been approved for maintenance release by a person authorised under this Part; or

(2) An inspection for the issuance of an airworthiness certificate in accordance with this Part.

Note: No inspection performed under paragraph (b) of this Section may be substituted for any inspection required by this paragraph unless it is performed by a person authorised to perform annual inspections and is entered as an "annual" inspection in the required maintenance record.

100-Hour Inspection

(b) Except as provided in paragraph (c), no person may operate an aircraft carrying any person (other than a crew member) for hire, and no person may give flight instruction for hire in an aircraft which that person provides, unless within the preceding 100 hours of time in service:

(1) The aircraft has received an annual or 100-hour inspection and been approved for maintenance release in accordance with this Part or

(2) has received an inspection for the issuance of an airworthiness certificate in accordance with this Part.

Note: The 100-hour limitation may be exceeded by not more than 10 hours while en route to reach a place where the inspection can be done. The excess time used to reach a place where the inspection can be done must be included in computing the next 100 hours of time in service.

Special Exceptions

(c) Paragraphs (a) and (b) of this Section do not apply to:

(1) An aircraft that carries a special flight permit, a current experimental certificate, or a provisional airworthiness certificate;

(2) An aircraft subject to the requirements of Section 4.060 of this Subpart;

(3) Turbine-powered rotorcraft when the operator elects to inspect that rotorcraft in accordance with Section 4.060 of this Subpart.

Other Inspections

(d) The altimeter, altimeter system, transponder and VOR inspections required by Part 10 should accomplished as prescribed by the CAAV.

Note: For these tests and inspections, see Appendix 1 to 4.057 for the altimeter system; Appendix 2 to 4.057 for the ATC transponder; Appendix 3 to 4.057 for the VOR receiver.

4.060 PROGRESSIVE INSPECTION

(a) Each registered owner or operator of an aircraft desiring to use a progressive inspection program shall submit a written request to the CAAV, and shall provide:

(1) A licensed AMT holding an inspection authorisation in accordance with Part 7, an AMO appropriately rated in accordance with Part 5, or the manufacturer of the aircraft to supervise or conduct the progressive inspection;

(2) A current inspection procedures manual available and readily understandable to pilot and maintenance personnel containing, in detail:

(i) An explanation of the progressive inspection, including the continuity of inspection responsibility, the making of reports, and the keeping of records and technical reference material;
(ii) An inspection schedule, specifying the intervals in hours or days when routine and detailed inspections will be performed and including instructions for exceeding an inspection interval by not more than 10 hours while en-route and for changing an inspection interval because of service experience;
(iii) Sample routine and detailed inspection forms and instructions for their use; and
(iv) Sample reports and records and instructions for their use;

(3) Enough housing and equipment for necessary disassembly and proper inspection of the aircraft; and
(4) Appropriate current technical information for the aircraft.

Note 1: The frequency and detail of the progressive inspection shall provide for the complete inspection of the aircraft within each 12 calendar months and be consistent with the current manufacturer's recommendations, field service experience, and the kind of operation in which the aircraft is engaged.

Note 2: The progressive inspection schedule shall ensure that the aircraft, at all times, will be airworthy and will conform to all applicable aircraft specifications, type certificate data sheets, airworthiness directives, and other approved data acceptable to the CAAV. If the progressive inspection is discontinued, the owner or operator shall immediately notify the CAAV, in writing, of the discontinuance.

Note 3: After the discontinuance, the first annual inspection under Part 10 is due within 12 calendar months after the last complete inspection of the aircraft under the progressive inspection.

Note 4: The 100-hour inspection under this Subpart is due within 100 hours after that complete inspection.

Note 5: A complete inspection of the aircraft, for the purpose of determining when the annual and 100 hour inspections are due, requires a detailed inspection of the aircraft and all its components in accordance with the progressive inspection.

Note 6: A routine inspection of the aircraft and a detailed inspection of several components is not considered to be a complete inspection.

4.063 INSPECTION PROGRAMS FOR LARGE & TURBINE AIRCRAFT

(a) Except for aircraft operated under an AOC, the registered owner or operator of each large aeroplane, turbojet multi-engine aeroplane, turbo propeller-powered multi-engine aeroplane, and turbine-powered rotorcraft shall select, identify in the aircraft maintenance records, and use one of the following programs for the inspection of the aircraft:
(1) A current inspection program recommended by the manufacturer;
(2) A inspection program that is part of a continuous maintenance program for that make and model of aircraft currently approved by the CAAV for use by an AOC holder; or
(3) Any other inspection program established by the registered owner or operator of that aircraft and approved by the CAAV.

(b) Each owner/operator shall include in the selected program the name and address of the person responsible for the scheduling of the inspections required by the program and provide a copy of the program to the person performing inspection on the aircraft.

(c) No aircraft shall be approved for maintenance release unless the replacement times for life-limited parts specified in the aircraft specification-type data sheets are complied with and the aeroplane, including airframe, engines, propellers, rotors, appliances, and survival and emergency equipment, is inspected in accordance with an inspection program selected.

(d) Each person wishing to establish or change an approved inspection program shall submit the program for approval by the CAAV and shall include in writing:

(1) Instructions and procedures for the conduct of inspection for the particular make and model aircraft, including necessary tests and checks. The instructions shall set forth in detail the parts and areas of the aircraft components, including survival and emergency equipment required to be inspected; and

(2) A schedule for the inspections that shall be performed expressed in terms of time in service, calendar time, number of system operations or any combination of these.

(e) When an operator changes from one inspection program to another, the operator shall apply the time in service, calendar times, or cycles of operation accumulated under the previous program, in determining time the inspection is due under the new program.

4.065 Amendment of Aircraft Maintenance Programs

(a) Whenever the CAAV finds that revisions to an approved inspection program are necessary for the continued adequacy of the program, the owner or operator shall, after notification by the CAAV, make any changes in the program found to be necessary.

(b) The owner or operator may petition the CAAV to reconsider the notice, within 30 days after receiving that notice.

(c) Except in the case of an emergency requiring immediate action in the interest of safety, CAAV shall consider the recommendations of the owner or operator for a period of 7 working days from the date of receipt of the petition and inform recommenders..

4.067 Repair Assessment for Pressurized Fuselages

(a) No person may operate a pressurized aircraft beyond the flight cycles prescribed by the CAAV for such aircraft unless repair assessment guidelines applicable to the fuselage pressure boundary (fuselage skin, door skin and bulkhead webs) that have been approved by the competent authority of the State of Design or Manufacture having cognizance over the type certificate for the affected aeroplane are incorporated within its inspection program.

Subpart E: Performance Standards

4.070 Applicability

(a) This Subpart prescribes performance standards governing the maintenance and inspection of any aircraft having a Airworthiness Certificate issued by Vietnam or associated aircraft components.

4.073 Authorised Persons: General

(a) The persons authorised to perform maintenance subject to this Subpart include:

(1) A pilot licensed by the CAAV;

(2) A person performing maintenance under the supervision of a aviation maintenance technician;

(3) A aviation maintenance technician;

(4) An AOC holder approved to perform maintenance under an equivalent system; and

(5) An AMO.

(b) This Subpart outlines the privileges and limitations of these entities with respect to the extent and type of work they may perform regarding:

(1) Maintenance,

(2) Preventive Maintenance,

(3) Modification,

(4) Inspection, and

(5) Approvals for maintenance release.

Note: See Appendices 1 through 4 to 4.073 for expanded explanation of these types of work.

4.075 Persons Authorised to Perform Maintenance

(a) No person may perform any task defined as maintenance on an aircraft or aircraft components, except as provided in the following:

(1) A pilot licensed by the CAAV may perform preventive maintenance on any aircraft owned or operated by that pilot, if that aircraft is not approved for use by an AOC holder.

(2) A person working under the supervision of a aviation maintenance technician, may perform the maintenance, preventive maintenance, and modifications that the supervisory aviation maintenance technician is authorised to perform:

(i) If the supervisor personally observes the work being done to the extent necessary to ensure that it is being done properly, and

(ii) If the supervisor is readily available, in person, for consultation.

(3) A licensed aviation maintenance technician may perform or supervise the maintenance or modification of an aircraft or aircraft component for which he or she is rated subject to the limitation of this Part.

(4) An AMO may perform aircraft maintenance within the limits specified by the CAAV.

(5) The AOC holder may perform aircraft maintenance as specified by the CAAV.

(6) A manufacturer holding an AMO may:

(i) Rebuild or alter any aircraft component manufactured by that manufacturer under a type or production certificate;

(ii) Rebuild or alter any aircraft component manufactured by that manufacturer under a TSO Authorisation, a Parts Manufacturer Approval by the State of Design, or Product and Process Specification issued by the State of Design; and

(iii) Perform any inspection required by this Part on aircraft it manufacturers, while currently operating under a production certificate or under a currently approved production inspection system for such aircraft.

4.077 Authorised Personnel to Approve for Maintenance Release

(a) No person or entity, other than the CAAV, may approve an aircraft, airframe, aircraft engine, propeller, appliance, or component part for maintenance release after it has undergone maintenance, preventive maintenance, rebuilding, or modification, except as provided in the following:

(1) A pilot licensed by the CAAV may return his or her aircraft to service after performing authorised preventive maintenance.

(2) A aviation maintenance technician licensed in accordance with Part 7 may approve aircraft and aircraft components for maintenance release after he or she has performed, supervised, or inspected its maintenance subject to the limitations of this Part.

(3) An AMO may approve aircraft and aircraft components for maintenance release as provided in the specifications approved by the CAAV.

(4) An AOC holder may approve aircraft and aircraft components for maintenance release as specified by the CAAV.

(b) Where necessary, CAAV may require examining the performance of maintenance, preventive maintenance, rebuilding or improvement in order to certify allowing operation which defined in paragraph (a) above and approve in writing.

4.080 Persons Authorised to Perform Inspections

(a) No person, other than the CAAV, may perform the inspections required in this Part for aircraft and aircraft components prior to or after it has undergone maintenance, preventive maintenance, rebuilding, or modification, except as provided in the following:

(1) An aviation maintenance technician may conduct the required inspections of aircraft and aircraft components for which he or she is rated and current.
(2) An AMO may perform the required inspections of aircraft and aircraft components as provided in the specifications approved by the CAAV.
(3) An AOC holder may perform the required inspections of aircraft and aircraft components in accordance with specifications issued by the CAAV.

4.083 PERFORMANCE RULES: MAINTENANCE

General

(a) Each person performing maintenance, preventive maintenance, modification or repairs on an aircraft component shall:
(1) Use the methods, techniques, and practices prescribed in the current manufacturer's maintenance manual or instructions for Continued Airworthiness prepared by its manufacturer; and
(2) Comply with airworthiness requirements established by the State of Registry; and
(3) Comply with additional methods, techniques and practices required by the CAAV.

Tools & Equipment

(b) Each person shall use the tools, equipment and test apparatus necessary to assure completion of the work in accordance with accepted industry practices. If the manufacturer involved recommends special equipment or test apparatus, the person performing maintenance shall use that equipment or apparatus or its equivalent acceptable to the CAAV.

Equal to Original Condition

(c) Each person performing maintenance, preventive maintenance, modification or repair on an aircraft component shall do that work in such a manner, and use materials of such a quality, that the condition of the aircraft component worked on will be at least equal to its original or properly altered condition with regard to aerodynamic function, structural strength, resistance to vibration and deterioration, and other qualities affecting airworthiness.

AOC Maintenance Control Manual

(d) The methods, techniques, and practices contained in an operator's maintenance control manual and continuous maintenance program, as approved by the CAAV, will constitute an acceptable means of compliance with the requirements of this Section.

Major Modification or Repair: Substantiating Data

(e) Each person performing a major modification or repair as defined in this Part will use data approved by the CAAV:
(1) The approved data used must be referenced on the form or log entry used to approved the modification or repair for maintenance release.
(2) Acceptable "approved data" is data specifically approved by the following for the modification or repair:
(i) The CAAV;
(ii) The State of Manufacture;
(iii) A Designee authorized by the State of Manufacture for that type modification or repair;
(iv) The State of Design

4.085 PERFORMANCE RULES: INSPECTIONS [GENERAL]

(a) Each person performing an inspection required by the CAAV shall:

(1) Perform the inspection so as to determine whether the aircraft, or portion(s) thereof under inspection, meets all applicable airworthiness requirements; and
(2) If there is an inspection program required or accepted for the specific aircraft being inspected, perform the inspection in accordance with the instructions and procedures set forth in the inspection program.

4.090 Performance Rules: Inspections Unique to Rotorcraft

(a) Each person performing an inspection required on a rotorcraft shall inspect the following systems in accordance with the maintenance manual or Instructions for Continued Airworthiness of the manufacturer concerned:
(1) The drive shafts or similar systems,
(2) The main rotor transmission gear box for obvious defects,
(3) The main rotor and centre section (or the equivalent area), and
(4) The auxiliary rotor on helicopters.

4.093 Performance Rules: Annual & 100 Hour Inspections

(a) Each person performing an annual or 100-hour inspection shall use a checklist while performing the inspection.
(1) The checklist may be of the person's own design, one provided by the manufacturer of the equipment being inspected, or one obtained from another source.
(2) This checklist shall include the scope and detail of the items prescribed by the CAAV.

Note: Appendix 1 to 5.093 lists the components to be included in an annual or 100-hour inspection.

(b) Each person approving a reciprocating-engine-powered aircraft for maintenance release after an annual or 100-hour inspection shall, before that approval, run the aircraft engine or engines to determine satisfactory performance in accordance with the current manufacturer's recommendations of:
(1) Power output (static and idle rpm);
(2) Magnetos;
(3) Fuel and oil pressure; and
(4) Cylinder and oil temperature.

(c) Each person approving a turbine-engine-powered aircraft for maintenance release after an annual or 100-hour inspection shall, before that approval, run the aircraft engine or engines to determine satisfactory performance in accordance with the current manufacturer's recommendations.

4.095 Performance Rules: Airworthiness Limitations

(a) Each person performing an inspection or other maintenance specified in the airworthiness limitations section of a current manufacturer's maintenance manual, or Instructions for Continued Airworthiness, shall perform the inspection or other maintenance in accordance with that section, or in accordance with specifications approved by the CAAV.

Subpart F: Maintenance Records & Entries

4.100 Owner Maintenance Records

(a) The owner/operator of an aircraft shall keep a maintenance record of the entire aircraft to include:
(1) Total time in service (hours, calendar time and cycles, as appropriate) of the aircraft and all life limited parts;
(2) The current status of compliance with all applicable mandatory continuing airworthiness information, including a chronological list of compliance with Airworthiness Directives and methods of compliance;
(3) Appropriate details of modifications and repairs, including when work was performed and the addition or removal of equipment;

(4) The time in service (hours, calendar time and cycles, as appropriate) since the last overhaul of the aircraft or its components subject to a mandatory overhaul life, to include:
  (i) Total time in service;
  (ii) Date of the last overhaul;
  (iii) Time in service since the last overhaul; and
  (iv) Date of the last inspection.
(5) The current status of the aircraft's compliance with the maintenance programme, to include the current inspection status of aircraft;
(6) The detailed maintenance records to show that all requirements for the signing of a maintenance release have been met.
(7) Current empty mass and the location of the centre of gravity when empty;

4.103 OWNER MAINTENANCE RECORDS RETENTION

(a) Each registered owner, operator or lessee, of an aircraft shall retain the following records until the work is repeated or superseded by other work of equivalent scope and detail, or for one year after the signing of the maintenance release:
  (1) Records of the maintenance, preventive maintenance, minor modifications, and records of the 100-hour, annual, and other required or approved inspections, as appropriate, for each aircraft (including the airframe) and each engine, propeller, rotor, and appliance of an aircraft to include:
    (i) A description (or reference to data acceptable to the CAAV) of the work performed,
    (ii) The date of completion of the work performed; and
    (iii) The signature and license number of the person approving the aircraft for maintenance release.

(b) Each registered owner, operator or lessee, of an aircraft shall retain the following records until the aircraft is sold or leased and/or a minimum period of 90 days after the unit to which they refer as been permanently withdrawn from service:
  (1) Records containing the following information:
    (i) The total time-in-service of the airframe, each engine, each propeller, and each rotor.
    (ii) The current status of all life-limited aeronautical components;
    (iii) The time since last overhaul of all items installed on the aircraft which are required to be overhauled on a specified time basis;
    (iv) The current inspection status of the aircraft, including the time since the last inspection required by the inspection program under which the aircraft and its appliances are maintained.
    (v) The current status of applicable Airworthiness Directives including, for each, the method of compliance, the Airworthiness Directive number, and revision date. If the Airworthiness Directive involves recurring action, the time and date when the next action is required.
    (vi) Copies of the forms prescribed by this chapter for each major modification or repair to the airframe and currently installed engines, rotors, propellers, and appliances.
    (vii) Copies of the substantiating data supporting compliance with the airworthiness requirements.

(c) Each AOC holder, whether owner or lessee, shall retain the additional records as required by Part 12.240.

4.105 AVAILABILITY OR TRANSFER OF MAINTENANCE RECORDS

(a) In the event of a temporary change of owner or lessee, the owner or operator of the Vietnam-registered aircraft shall make available or, if acceptable to the CAAV, transfer to the new owner or lessee, at the time of sale or lease, the records identified in this Subpart for that aircraft,

(b) In the event of a permanent change of owner or lessee, the owner or operator of the Vietnam-registered aircraft shall transfer to the purchaser/lessor, at the time of sale or lease, the records identified in this Subpart for that aircraft,

(c) These records may be made available or transferred in plain language form or in coded form at the election of the purchaser/lessor if the coded form provides for the preservation and retrieval of information in a manner acceptable to the CAAV.

4.107 MAINTENANCE RELEASE ENTRIES

(a) Each person who maintains, performs preventive maintenance, rebuilds, or modifies an aircraft or aircraft component shall, when the work is performed satisfactorily, make a certifying entry in the maintenance record of that the maintenance work performed has been completed satisfactorily and in accordance with data and procedures acceptable to the CAAV.

(b) The minimum contents of this maintenance release shall be:

(1) The basic details (or reference to data acceptable to the CAAV) of the maintenance performed;
(2) The date such maintenance was completed;
(3) When applicable, the identity of the approved maintenance organization;
(4) The identity of the authorized person or persons signing the release (name, signature, license number, and kind of license held by the person).

Note: The signature constitutes the approval for maintenance release only for the work performed.

(c) The person performing the work shall enter records of major repairs and major modifications, and dispose of that form in the manner prescribed by the CAAV.

Note: See Appendix 1 to 4.107 for additional maintenance form completion requirements.

(d) A person working under supervision of an aviation maintenance technician may not perform any inspection required in this Part or any inspection performed after a major repair or modification.

4.110 ENTRIES REQUIRED FOLLOWING OVERHAUL & REBUILDING

(a) No person may describe in any required maintenance entry or form, an aircraft component as being overhauled unless:

(1) It has been disassembled, cleaned, inspected as permitted, repaired as necessary, and reassembled using methods, techniques, and practices acceptable to the CAAV; and
(2) It has been tested in accordance with approved standards and technical data, or in accordance with current standards and technical data acceptable to the CAAV, which have been developed and documented by the holder of the type certificate, supplemental type certificate, or a material, part, process, or appliance manufacturing approval.

(b) No person may describe in any required maintenance entry or form an aircraft or other aircraft component as being rebuilt unless it has been disassembled, cleaned, inspected as permitted, repaired as necessary, reassembled, and tested to the same tolerances and limits as a new item, using either new parts or used parts that conform to new part tolerances and limits.

4.113 ENTRIES FOR APPROVAL FOR MAINTENANCE RELEASE

(a) No person may approve for maintenance release or execute a maintenance release for any aircraft component that has undergone maintenance, preventive maintenance, rebuilding, or modification unless:

(1) The appropriate maintenance record entry has been made;
(2) The repair or modification form authorised by or furnished by the CAAV has been executed in a manner prescribed by the CAAV;
(3) If a repair or modification results in any change in the aircraft operating limitations or flight data contained in the approved aircraft flight manual, those operating limitations or flight data are appropriately revised and set forth as prescribed.

Note: Appendix 1 to 4.107 provides additional major repair or modification records requirements.

4.115 CONTENT & FORM FOR ENTRIES FOLLOWING INSPECTIONS

Maintenance Record Entries

(a) The person approving or disapproving the maintenance release of an aircraft component after any inspection performed in accordance with this Part, shall make an entry in the maintenance record of that equipment containing the following information:

(1) Type of inspection and a brief description of the extent of the inspection;

(2) Date of the inspection and aircraft total time in service;

(3) Signature, the license number, and kind of license held by the person approving or disapproving for maintenance release the aircraft component;

(4) If the aircraft is found to be airworthy and approved for maintenance release, the following or a similarly worded statement: "*I certify that this aircraft has been inspected in accordance with (insert type) inspection and was determined to be in airworthy condition";*

(5) If the aircraft is not approved for maintenance release because of needed maintenance, non-compliance with the applicable specifications, airworthiness directives, or other approved data, the following or a similarly worded statement:*I certify that this aircraft has been inspected in accordance with (insert type) inspection and a list of discrepancies and unairworthy items dated (date) has been provided for the aircraft owner or operator;* and

(6) If an inspection is conducted under an inspection program provided for in this Part, the person performing the inspection shall make an entry identifying the inspection program accomplished, and containing a statement that the inspection was performed in accordance with the inspections and procedures for that particular program.

Required Listing of Defects

(b) The person performing any inspection required in this Part who finds that the aircraft is not airworthy or does not meet the applicable type certificate data sheet, airworthiness directives or other approved data upon which its airworthiness depends, shall give the owner/operator a signed and dated list of those defects.

(c) The list of defects of defects described in paragraph (b) shall be retained until the defects are repaired and the aircraft is approved for maintenance release.

SUBPART G: MAINTENANCE PERSONNEL LIMITATIONS, PRIVILEGES & RECENCY

4.120 REST & DUTY LIMITATIONS FOR PERSONS PERFORMING MAINTENANCE FUNCTIONS

(a) No person may assign, nor shall any person perform maintenance functions for aircraft, unless that person has had a minimum rest period of 8 hours prior to the beginning of duty.

(b) No person may schedule a person performing maintenance functions for aircraft for more than 12 consecutive hours of duty.

(c) In situations involving unscheduled aircraft unserviceability, persons performing maintenance functions for aircraft may be continued on duty for:

(1) Up to 16 consecutive hours; or

(2) 20 hours in 24 consecutive hours.

(d) Following unscheduled duty periods, the person performing maintenance functions for aircraft shall have a mandatory rest period of 10 hours.

(e) An AMO or AOC holder shall relieve the person performing maintenance functions from all duties for 24 consecutive hours during any 7 consecutive day period.

4.123 AMT PRIVILEGES & LIMITATIONS

(a) Subject to compliance with the requirements specified in (b) and (c), the privileges of the holder of an aircraft maintenance licence shall be to certify the aircraft or parts of the aircraft as airworthy after an authorized repair, modification or installation of an engine, accessory, instrument, and/or item of equipment, and to sign a maintenance release following inspection, maintenance operations and/or routine servicing.

(b) The privileges of the holder of an aircraft maintenance licence shall be exercised only:

(1) In respect of such:

(i) Aircraft as are entered on the licence in their entirety either under broad categories and/or specifically; or

(ii) Airframes and engines and aircraft systems or components as are entered on the licence either under broad categories and/or specifically; and/or

(iii) Aircraft avionic systems or components as are entered on the licence either under broad categories or specifically;

Note: See Appendix 1 to 4.123 for broad categories associated with work at AMOs.

(2) Provided that the licence holder is familiar with all the relevant information relating to the maintenance and airworthiness of the particular aircraft for which the licence holder is signing a Maintenance Release, or such airframe, engine, aircraft system or component and aircraft avionic system or component which the licence holder is certifying as being airworthy; and

(3) On condition that, within the preceding 24 months, the licence holder has either had experience in the inspection, servicing or maintenance of an aircraft or components in accordance with the privileges granted by the licence held for not less than six months, or has met the provision for the issue of a licence with the appropriate privileges, to the satisfaction of the CAAV.

(c) Except as specified in paragraph (f) of this Section, a licensed AMT may perform or supervise the maintenance, preventive maintenance , or modification of, or after inspection, approve for maintenance release, any aircraft, airframe, aircraft engine, propeller, appliance, component, or part thereof, for which he or she is rated, provided the licensed AMT has:

(1) Satisfactorily performed the work at an earlier date;

(2) Demonstrated the ability to perform the work to the satisfaction of the CAAV;

(3) Received training acceptable to the CAAV on the tasks to be performed; or

(4) Performed the work while working under the direct supervision of a licensed AMT or a licensed aviation repair specialist (ARS) who is appropriately rated and has:

(i) Had previous experience in the specific operation concerned; or

(ii) Received training acceptable to the CAAV on the task to be performed.

(d) Except as specified in paragraph (f) of this Section, a licensed AMT with an airframe rating may after he/she has performed the 100-hour inspection required by this Part on an airframe, or any related part or appliance, and approve and return it to service.

(e) Except as specified in paragraph (f) of this Section, a licensed AMT with a powerplant rating may perform the 100-hour inspection required by this Part on a powerplant or propeller or any related part or appliance, and approve and return it to service.

(f) An AMT with an airframe and/or powerplant rating may not:

(1) Supervise the maintenance, preventive maintenance, or modification of, or approve for maintenance release, any aircraft, airframe, aircraft engine, propeller, appliance, component, or part thereof, for which he/she is rated unless he/she has satisfactory performed the work concerned at an earlier date.

(2) Perform or supervise (unless under the direct supervision and control of an AOC holder that is authorised to perform maintenance, preventative maintenance, or modifications under an equivalent system in accordance with Part 12.
  (i) A major repair or major modification of a propeller; or
  (ii) Any repair or modification of instruments;
(3) Approve for maintenance release:
  (i) Any aircraft, airframe, aircraft engine, propeller, appliance, component, or part thereof after completion of a major modification or major repair; or
  (ii) Any instrument after completion of any repair or modification;
(4) Exercise the privileges of the license unless the licensed AMT understands the current instructions for continued airworthiness and the maintenance instructions for the specific operation concerned.

4.125 AMT Recent Experience Requirements

(a) A licensed AMT may not exercise the privileges of his/her license or rating unless, within the preceding 24 months:
  (1) The CAAV has found that he/she is able to do that work; or
  (2) For at least 6 months within the preceding 24 months:
    (i) Served as an AMT under his/her license and rating;
    (ii) Technically supervised other AMTs;
    (iii) Provided aviation maintenance instruction or served as the direct supervisor of persons providing aviation maintenance instruction for an AMT course or program acceptable to the CAAV;
    (iv) Supervised the maintenance, preventive maintenance, or modification of any aircraft, airframe, aircraft engine, propeller, appliance, component, or part thereof; or
    (v) Been engaged in any combination of these requirements.

4.127 Inspection Authorisation Privileges & Limitations

(a) Except as specified in paragraphs (b) and (c) of this Section, the holder of an Inspection Authorisation (IA) may:
  (1) Inspect and approve for maintenance release any aircraft, airframe, aircraft engine, propeller appliance, component, or part thereof after completion of a major repair or major modification performed in accordance with this Part and done in accordance with technical data approved by the CAAV.
  (2) Perform an annual inspection, or perform or supervise a progressive inspection, according to this Part on any aircraft, except those aircraft on a continuous maintenance program, and approve the aircraft for maintenance release.

(b) The holder of an IA with a current and valid AMT license may not inspect and approve for maintenance release any aeroplane over 5,700 kg maximum take-off weight or any airframe, aircraft engine, propeller, appliance, component, or part thereof which is subject to a maintenance program under this Part or Part 12.

(c) The holder of an IA with a current and valid AMT license may not inspect and approve for maintenance release any aircraft maintained in accordance with a continuous maintenance program approved under this Part or Part 12.

(d) When exercising the privileges of an IA, the holder shall keep it available for inspection by the aircraft owner and the AMT submitting the aircraft, repair, or modification for approval (if any), and shall present it at the request of the CAAV or an authorised representative of the Director General, or at the request of any Federal, State, or local law enforcement officer.

(e) If the holder of an Inspection Authorisation changes his or her fixed base of operation, the holder may not exercise the privileges of the authorisation until he or she has notified the CAAV in writing of the change.

(f) No person may exercise any privilege of an Inspection Authorisation whenever that person no longer:
  (1) Has a fixed base of operation;
  (2) Has the equipment, facilities, or inspection data required by Part 5; or
  (3) Holds a current and valid AMT license.

4.130 AVIATION REPAIR SPECIALIST: PRIVILEGES & LIMITATIONS

(a) An aviation repair specialist may perform or supervise the maintenance, preventive maintenance, or modification of aircraft, airframes, aircraft engines, propellers, appliances, components, and parts appropriate to the designated speciality area for which the aviation repair specialist is licensed and rated, but only in connection with employment by an AMO approved under Part 5 or an AOC holder that is authorised to perform maintenance, preventive maintenance, or modifications under an equivalent system in accordance with Part 12

(b) An aviation repair specialist may not perform or supervise duties unless the aviation repair specialist understands the current instructions of the employing certificate holder and the instructions for continued airworthiness, which relate to the specific operations concerned.

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APPENDICES

APPENDIX 1 TO 4.073: MAJOR MODIFICATIONS (DEFINITION)

(a) Airframe Major Modifications. Major modifications include modifications to the listed aircraft parts, or the listed types of modifications (when not included in the applicable aircraft specifications):

(1) Wings.
(2) Tail surfaces.
(3) Fuselage.
(4) Engine mounts.
(5) Control system.
(6) Landing gear.
(7) Hull or floats
(8) Elements of an airframe including spars, ribs, fittings, shock absorbers, bracing, cowlings, fairings, and balance weights.
(9) Hydraulic and electrical actuating system of components.
(10) Rotor blades.
(11) Changes to the empty weight or empty balance which result in an increase in the maximum Certified weight or centre of gravity limits of the aircraft.
(12) Changes to the basic design of the fuel, oil, cooling, heating, cabin pressurisation, electrical, hydraulic, de-icing, or exhaust systems.
(13) Changes to the wing or to fixed or movable control surfaces which affect flutter and vibration characteristics.

(b) Powerplant Major Modifications. Major powerplant modifications, even when not listed in the applicable engine specifications, include:

(1) Conversion of an aircraft engine from one approved model to another, involving any changes in compression ratio, propeller reduction gear, impeller gear ratios or the substitution of major engine parts which requires extensive rework and testing of the engine.
(2) Changes to the engine by replacing aircraft engine structural parts with parts not supplied by the original manufacturer or parts not specifically approved by the CAAV.
(3) Installation of an accessory which is not approved for the engine.
(4) Removal of accessories that are listed as required equipment on the aircraft or engine specification.
(5) Installation of structural parts other than the type of parts approved for the installation.
(6) Conversions of any sort for the purpose of using fuel of a rating or grace other than that listed in the engine specifications.

(c) Propeller Major Modifications. Major propeller modifications, when not authorised in the applicable propeller specifications, include:

(1) Changes in blade design.
(2) Changes in hub design.
(3) Changes in the governor or control design.
(4) Installation of a propeller governor or feathering system.
(5) Installation of propeller de-icing system.
(6) Installation of parts not approved for the propeller.

(d) Appliance Major Modifications. Modifications of the basic design not made in accordance with recommendations of the appliance manufacturer or in accordance with applicable Airworthiness Directive are appliance major modifications. In addition, changes in the basic design of radio communication and navigation equipment approved under type certification or other authorisation that have an effect on

frequency stability, noise level, sensitivity, selectivity, distortion, spurious radiation, AVC characteristics, or ability to meet environmental test conditions and other changes that have an effect on the performance of the equipment are also major modifications.

APPENDIX 2 TO 4.073: MAJOR REPAIRS (DEFINITION)

(a) Airframe Major Repairs. Repairs to the following parts of an airframe and repairs of the following types, involving the strengthening, reinforcing, splicing, and manufacturing of primary structural members of their replacement, when replacement is by fabrication such as riveting or welding, are airframe major repairs.

(1) Box beams.
(2) Monocoque or semimonocoque wings or control surfaces
(3) Wing stringers or chord members
(4) Spars.
(5) Spar flanges.
(6) Members of truss-type beams.
(7) Thin sheet webs of beams.
(8) Keel and chine members of boat hulls or floats.
(9) Corrugated sheet compression members which act as flange material of wings or tail surfaces.
(10) Wing main ribs and compression members.
(11) Wing or tail surface brace struts.
(12) Engine mounts.
(13) Fuselage longerons.
(14) Members of the side truss, horizontal truss, or bulkheads.
(15) Main seat support braces and brackets.
(16) Landing gear brace struts.
(17) Axles.
(18) Wheels.
(19) Parts of the control system such as control columns, pedals, shafts, brackets, or horns.
(20) Repairs involving the substitution of material.
(21) The repair of damaged areas in metal or plywood stressed covering exceeding six inches in any direction.
(22) The repair of portions of skin sheets by making additional seams.
(23) The splicing of skin sheets
(24) The repair of three or more adjacent wing or control surface ribs or the leading edge of wings and control surfaces, between such adjacent ribs.
(25) Repair of fabric covering involving an area greater than that required to repair two adjacent ribs.
(26) Replacement of fabric on fabric covered parts such as wings, fuselages, stabilisers, and control surfaces.
(27) Repairing, including rebottoming, of removable or integral fuel tanks and oil tanks.

(b) Powerplant Major Repairs. Repairs of the following parts of an engine and repairs of the following types, are powerplant major repairs:

(1) Separation or disassembly of a crankcase or crankshaft of a reciprocating engine equipped with an integral supercharger.
(2) Separation or disassembly of a crankcase or crankshaft of a reciprocating engine equipped with other than spur-type propeller reduction gearing.
(3) Special repairs to structural engine parts by welding, plating, metalising, or other methods.

(c) Propeller Major Repairs. Repairs of the following types to a propeller are propeller major repairs:

(1) Any repairs to or straightening of steel blades.
(2) Repairing or machining of steel hubs.
(3) Shortening of blades.
(4) Retipping of wood propellers.
(5) Replacement of outer laminations on fixed pitch wood propellers.
(6) Repairing elongated bolt holes in the hub of fixed pitch wood propellers.
(7) Inlay work on wood blades.
(8) Repairs to composition blades.
(9) Replacement of tip fabric.
(10) Replacement of plastic covering.
(11) Repair of propeller governors.
(12) Overhaul of controllable pitch propellers.
(13) Repairs to deep dents, cuts, scars, nicks, etc., and straightening of aluminium blades.
(14) The repair or replacement of internal elements of blades.

(d) Appliance Major Repairs. Repairs of the following types to appliances are appliance major repairs:

(1) Calibration and repair of instruments.
(2) Calibration of avionics or computer equipment.
(3) Rewinding the field coil of an electrical accessory.
(4) Complete disassembly of complex hydraulic power valves.
(5) Overhaul of pressure type carburettors, and pressure type fuel, oil, and hydraulic pumps.

APPENDIX 3 TO 4.073: PREVENTIVE MAINTENANCE (DEFINITION)

(a) Preventive Maintenance. Preventive maintenance is limited to the following work, provided it does not involve complex assembly operations.

(1) Removal, installation and repair of landing gear tires.
(2) Replacing elastic shock absorber cords on landing gear.
(3) Servicing landing gear shock struts by adding oil, air, or both.
(4) Servicing landing gear wheel bearings, such as cleaning and greasing.
(5) Replacing defective safety wiring or cotter keys.
(6) Lubrication not requiring disassembly other than removal of non-structural items such as cover plates, cowlings, and fairings.
(7) Making simple fabric patches not requiring rib stitching or the removal of structural parts or control surfaces.
(8) Replenishing hydraulic fluid in the hydraulic reservoir.
(9) Refinishing decorative coating of fuselage, wings, tail group surfaces (excluding balanced control surfaces), fairings, cowling, landing gear, cabin, or cockpit interior when removal or disassembly of any primary structure or operating system is not required.
(10) Applying preservative or protective material to components where no disassembly of any primary structure or operating system is involved and where such coating is not prohibited or is not contrary to good practices.
(11) Repairing upholstery and decorative furnishings of the cabin or cockpit when the repairing does not require disassembly of any primary structure or operating system or interfere with an operating system or affect primary structure of the aircraft.
(12) Making small simple repairs to fairings, non-structural cover plates, cowlings, and small patches and reinforcements not changing the contour so as to interfere with proper airflow.
(13) Replacing side windows where that work does not interfere with the structure of any operating system such as controls, electrical equipment, etc.

(14) Replacing safety belts.
(15) Replacing seats or seat parts with replacement parts approved for the aircraft, not involving disassembly of any primary structure or operating system.
(16) Troubleshooting and repairing broken circuits in landing light wiring circuits.
(17) Replacing bulbs, reflectors, and lenses of position and landing lights.
(18) Replacing wheels and skis where no weight and balance computation is involved.
(19) Replacing any cowling not requiring removal of the propeller or disconnection of flight controls.
(20) Replacing or cleaning spark plugs and setting of spark plug gap clearance.
(21) Replacing any hose connection except hydraulic connections.
(22) Replacing prefabricated fuel lines.
(23) Cleaning fuel and oil strainers.
(24) Replacing and servicing batteries.
(25) Replacement or adjustment of non-structural fasteners incidental to operations.
(26) The installation of anti-misfueling devices to reduce the diameter of fuel tank filler openings provided the specific device has been made a part of the aircraft type certificate data by the aircraft manufacturer, the manufacturer has provided appropriately approved instructions acceptable to the CAAV for the installation of the specific device, and installation does not involve the disassembly of the existing filler opening.

APPENDIX 1 TO 4.057: ALTIMETER SYSTEM TESTS & INSPECTIONS

(a) The Altimeter system and altitude reporting equipment tests and inspections must be conducted by -
  (1) The manufacturer of the aeroplane, or helicopter, on which the tests and inspections are to be performed;
  (2) A certificated repair station properly equipped to perform those functions and holding -
    (i) An instrument rating, Class I;
    (ii) A limited instrument rating appropriate to the make and model of appliance to be tested;
    (iii) A limited rating appropriate to the test to be performed;
    (iv) An airframe rating appropriate to the aeroplane, or helicopter, to be tested; or
  (3) A certificated mechanic with an airframe rating (static pressure system tests and inspections only).

(b) Altimeter and altitude reporting equipment approved under Technical Standard Orders are considered to be tested and inspected as of the date of their manufacture.

(c) Each person performing the altimeter system tests and inspections required by Part 10 shall comply with the following:

I. Static pressure system:
  (1) Ensure freedom from entrapped moisture and restrictions.
  (2) Determine that leakage is within the tolerances established in the aircraft certification rule.
  (3) Determine that the static port heater, if installed, is operative.
  (4) Ensure that no modifications or deformations of the airframe surface have been made that would affect the relationship between air pressure in the static pressure system and true ambient static air pressure for any flight condition.

II. Altimeter:
  (1) Test by an appropriately rated repair facility in accordance with the following subparagraphs. Unless otherwise specified, each test for performance may be conducted with the instrument subjected to vibration. When tests are conducted with the temperature substantially different from ambient temperature of approximately 25 degrees C, allowance shall be made for the variation from the specified condition.

(i) Scale error. With the barometric pressure scale at 29.92 inches of mercury, the altimeter shall be subjected successively to pressures corresponding to the altitude specified in Table I up to the maximum normally expected operating altitude of the aeroplane in which the altimeter is to be installed. The reduction in pressure shall be made at a rate not in excess of 20,000 feet per minute to within approximately 2,000 feet of the test point. The test point shall be approached at a rate compatible with the test equipment. The altimeter shall be kept at the pressure corresponding to each test point for at least 1 minute, but not more than 10 minutes, before a reading is taken. The error at all test points must not exceed the tolerances specified in Table I.

(ii) Hysteresis. The hysteresis test shall begin not more than 15 minutes after the altimeter's initial exposure to the pressure corresponding to the upper limit of the scale error test prescribed in subparagraph (i); and while the altimeter is at this pressure, the hysteresis test shall commence. Pressure shall be increased at a rate simulating a descent in altitude at the rate of 5,000 to 20,000 feet per minute until within 3,000 feet of the first test point (50 percent of maximum altitude). The test point shall then be approached at a rate of approximately 3,000 feet per minute. The altimeter shall be kept at this pressure for at least 5 minutes, but not more than 15 minutes, before the test reading is taken. After the reading has been taken, the pressure shall be increased further, in the same manner as before, until the pressure corresponding to the second test point (40 percent of maximum altitude) is reached. The altimeter shall be kept at this pressure for at least 1 minute, but not more than 10 minutes, before the test reading is taken. After the reading has been taken, the pressure shall be increased further, in the same manner as before, until atmospheric pressure is reached. The reading of the altimeter at either of the two test points shall not differ by more than the tolerance specified in Table II from the reading of the altimeter for the corresponding altitude recorded during the scale error test prescribed in paragraph (b)(i).

(iii) After effect. Not more than 5 minutes after the completion of the hysteresis test prescribed in paragraph (b)(ii), the reading of the altimeter (corrected for any change in atmospheric pressure) shall not differ from the original atmospheric pressure reading by more than the tolerance specified in Table II.

(iv) Friction. The altimeter shall be subjected to a steady rate of decrease of pressure approximating 750 feet per minute. At each altitude listed in Table III, the change in reading of the pointers after vibration shall not exceed the corresponding tolerance listed in Table III.

(v) Case leak. The leakage of the altimeter case, when the pressure within it corresponds to an altitude of 18,000 feet, shall not change the altimeter reading by more than the tolerance shown in Table II during an interval of 1 minute.

(vi) Barometric scale error. At constant atmospheric pressure, the barometric pressure scale shall be set at each of the pressures (falling within its range of adjustment) that are listed in Table IV, and shall cause the pointer to indicate the equivalent altitude difference shown in Table IV with a tolerance of 25 feet.

(2) Altimeters which are the air data computer type with associated computing systems, or which incorporate air data correction internally, may be tested in a manner and to specifications developed by the manufacturer which are acceptable to the Administrator.

III. Integration Test

(1) Automatic Pressure Altitude Reporting Equipment and ATC Transponder System Integration Test. The test must be conducted by an appropriately rated person under the conditions specified in paragraph (a). Measure the automatic pressure altitude at the output of the installed ATC transponder when interrogated on Mode C at a sufficient number of test points to ensure that the altitude reporting equipment, altimeters, and ATC transponders perform their intended functions as installed in the aircraft. The difference between the automatic reporting output and the altitude displayed at the altimeter shall not exceed 125 feet.

IV. Records:

(1) Comply with the provisions of Part 4 as to content, form, and disposition of the records. The person performing the altimeter tests shall record on the altimeter the date and maximum altitude to which the altimeter has been tested and the persons approving the aeroplane for maintenance release shall enter that data in the aeroplane log or other permanent record.

TABLE I TO APPENDIX 1 TO 4.057: ALTITUDE & EQUIVALENT PRESSURE

AltitudeEquivalent pressure (inches of Mercury)Tolerance ±(feet)
-1,00031.01820
029.92120
50029.38520
1,00028.85620
1,50028.33525
2,00027.82130
3,00026.81730
4,00025.84235
6,00023.97840
8,00022.22560
10,00020.57780
12,00019.02990
14,00017.577100
16,00016.216110
18,00014.942120
20,00013.750130
22,00012.636140
25,00011.104155
30,0008.885180
35,0007.041205
40,0005.538230
45,0004.355255
50,0003.425280

TABLE II TO APPENDIX 1 TO 4.057: TEST TOLERANCES

TestTolerance (feet)
Case Leak Test±100
Hysteresis Test
First Test Point (50 percent of maximum altitude)75
Second Test Point (40 percent of maximum altitude)75
After Effect Test30

TABLE III TO APPENDIX 1 TO 4.057: FRICTION

Altitude (feet)Tolerance (feet)
1,000±70
2,00070
3,00070
5,00070
10,00080
15,00090

20,000100
25,000120
30,000140
35,000160
40,000180
50,000250

TABLE IV TO APPENDIX 1 TO 4.057: PRESSURE/ALTITUDE DIFFERENCE

Pressure (inches of Hg)Altitude difference (feet)
28.10-1,727
28.50-1,340
29.00-863
29.50-392
29.920
30.50+531
30.90+893
30.99+974

APPENDIX 2 TO 4.057: TRANSPONDER TESTS & INSPECTIONS

(a) Following any installation or maintenance on an ATC transponder where data correspondence error could be introduced, the integrated system has been tested, inspected, and found to comply with paragraph (c), of Appendix 1 to 4.057.

(b) The tests and inspections specified in this section must be conducted by -

(1) An Approved Maintenance Organization properly equipped to perform those functions and holding-
  (i) A radio rating, Class III;
  (ii) A limited radio rating appropriate to the make and model transponder to be tested;
  (iii) A limited rating appropriate to the test to be performed, or

(2) A holder of a continuous airworthiness maintenance program as provided in Part 12, or

(3) The manufacturer of the aircraft on which the transponder to be tested is installed, if the transponder was installed by that manufacturer.

Note: The ATC transponder tests may be conducted using a bench check or portable test equipment and must meet the requirements prescribed in paragraphs (a) through (j) of this appendix. If portable test equipment with appropriate coupling to the aircraft antenna system is used, operate the test equipment for ATCRBS transponders at a nominal rate of 235 interrogations per second to avoid possible ATCRBS interference. Operate the test equipment at a nominal rate of 50 Mode S interrogations per second for Mode S. An additional 3 dB loss is allowed to compensate for antenna coupling errors during receiver sensitivity measurements conducted in accordance with paragraph (c)(1) when using portable test equipment.

(c) Radio Reply Frequency:

(1) For all classes of ATCRBS transponders, interrogate the transponder and verify that the reply frequency is 1090 ±3 Megahertz (MHz).

(2) For classes 1B, 2B, and 3B Mode S transponders, interrogate the transponder and verify that the reply frequency is 1090 ±3 MHz.

(3) For classes 1B, 2B, and 3B Mode S transponders that incorporate the optional 1090 ±1 MHz reply frequency, interrogate the transponder and verify that the reply frequency is correct.

(4) For classes 1A, 2A, 3A, and 4 Mode S transponders, interrogate the transponder and verify that the reply frequency is 1090 ±1 MHz.

(d) *Suppression:* When Classes 1B and 2B ATCRBS Transponders, or Classes 1B, 2B, and 3B Mode S transponders are interrogated Mode 3/A at an interrogation rate between 230 and 1,000 interrogations per second; or when Classes 1A and 2A ATCRBS Transponders, or Classes 1B, 2A, 3A, and 4 Mode S transponders are interrogated at a rate between 230 and 1,200 Mode 3/A interrogations per second:

(1) Verify that the transponder does not respond to more than 1 percent of ATCRBS interrogations when the amplitude of P2 pulse is equal to the P1 pulse.

(2) Verify that the transponder replies to at least 90 percent of ATCRBS interrogations when the amplitude of the P2 pulse is 9 dB less than the P1 pulse. If the test is conducted with a radiated test signal, the interrogation rate shall be 235 ±5 interrogations per second unless a higher rate has been approved for the test equipment used at that location.

(e) Receiver Sensitivity:

(1) Verify that for any class of ATCRBS Transponder, the receiver minimum triggering level (MTL) of the system is -73 ±4 dbm, or that for any class of Mode S transponder the receiver MTL for Mode S format (P6 type) interrogations is -74 ±3 dbm by use of a test set either:

(i) Connected to the antenna end of the transmission line;

(ii) Connected to the antenna terminal of the transponder with a correction for transmission line loss; or

(iii) Utilized radiated signal.

(2) Verify that the difference in Mode 3/A and Mode C receiver sensitivity does not exceed 1 db for either any class of ATCRBS transponder or any class of Mode S transponder.

(f) *Radio Frequency (RF) Peak Output Power*:

(1) Verify that the transponder RF output power is within specifications for the class of transponder. Use the same conditions as described in (c)(1) (i), (ii), and (iii) above.

(i) For Class 1A and 2A ATCRBS transponders, verify that the minimum RF peak output power is at least 21.0 dbw (125 watts).

(ii) For Class 1B and 2B ATCRBS Transponders, verify that the minimum RF peak output power is at least 18.5 dbw (70 watts).

(iii) For Class 1A, 2A, 3A, and 4 and those Class 1B, 2B, and 3B Mode S transponders that include the optional high RF peak output power, verify that the minimum RF peak output power is at least 21.0 dbw (125 watts).

(iv) For Classes 1B, 2B, and 3B Mode S transponders, verify that the minimum RF peak output power is at least 18.5 dbw (70 watts).

(v) For any class of ATCRBS or any class of Mode S transponders, verify that the maximum RF peak output power does not exceed 27.0 dbw (500 watts).

Note: The tests in (e) through (j) apply only to Mode S transponders.

(g) Mode S Diversity Transmission Channel Isolation: For any class of Mode S transponder that incorporates diversity operation, verify that the RF peak output power transmitted from the selected antenna exceeds the power transmitted from the nonselected antenna by at least 20 db.

(h) Mode S Address: Interrogate the Mode S transponder and verify that it replies only to its assigned address. Use the correct address and at least two incorrect addresses. The interrogations should be made at a nominal rate of 50 interrogations per second.

(i) Mode S Formats: Interrogate the Mode S transponder with uplink formats (UF) for which it is equipped and verify that the replies are made in the correct format. Use the surveillance formats UF = 4 and 5. Verify that the altitude reported in the replies to UF = 4 are the same as that reported in a valid ATCRBS Mode C reply. Verify that the identity reported in the replies to UF = 5 are the same as that reported in a valid ATCRBS Mode 3/A reply. If the transponder is so equipped, use the communication formats UF = 20, 21, and 24.

(j) Mode S All-Call Interrogations: Interrogate the Mode S transponder with the Mode S only all-call format UF = 11, and the ATCRBS/Mode S all-call formats (1.6 microsecond P4 pulse) and verify that the correct address and capability are reported in the replies (downlink format DF = 11).

(i) ATCRBS Only All-Call Interrogation: Interrogate the Mode S transponder with the ATCRBS only all-call interrogation (0.8 microsecond P4 pulse) and verify that no reply is generated.

(ii) Squitter: Verify that the Mode S transponder generates a correct squitter approximately once per second.

(iii) Records: Comply with the provisions of Part 4 as to content, form, and disposition of the records.

APPENDIX 3 TO 4.057: VOR RECEIVER TESTS & INSPECTIONS

(a) Each VOR system of radio navigation used in IFR operations must be;-

(1) Maintained, checked, and inspected under an approved procedure; or

(2) Has been operationally checked within the preceding 30 days, and was found to be within the limits of the permissible indicated bearing error set forth in paragraph (b) or (c) of this Section.

(b) Except as provided in paragraph (c) of this section, each person conducting a VOR check under paragraph (a)(2) of this section shall -

(1) Use, at the aerodrome of intended departure, an approved test signal or a test signal radiated by a certificated and appropriately rated radio approved maintenance organization or, outside Vietnam a test signal operated or approved by an appropriate authority to check the VOR equipment (the maximum permissible indicated bearing error is ±4°); or

(2) Use, at the aerodrome of intended departure, a point on the aerodrome surface designated as a VOR system checkpoint by the CAAV, or, outside Vietnam, by an appropriate authority (the maximum permissible bearing error is ±4°);

(3) If neither a test signal nor a designated checkpoint on the surface is available, use an airborne checkpoint designated by the CAAV or, outside Vietnam, by an appropriate authority (the maximum permissible bearing error is ±6°); or

(4) If no check signal or point is available, while in flight -

(i) Select a VOR radial that lies along the centerline of an established VOR airway;

(ii) Select a prominent ground point along the selected radial preferably more than 20 nautical miles from the VOR ground facility and maneuver the aircraft directly over the point at a reasonably low altitude; and

(iii) Note the VOR bearing indicated by the receiver when over the ground point (the maximum permissible variation between the published radial and the indicated bearing is 6°).

(c) If dual system VOR (units independent of each other except for the antenna) is installed in the aircraft, the person checking the equipment may check one system against the other in place of the check procedures specified in paragraph (b) of this section. Both systems shall be tuned to the same VOR ground facility and note the indicated bearings to that station. The maximum permissible variation between the two indicated bearings is 4°.

(d) Each person making the VOR operational check, as specified in paragraph (b) or (c) of this section, shall enter the date, place, bearing error, and sign the aircraft log or other record. In addition, if a test signal radiated by an approved maintenance organization, as specified in paragraph (b)(1) of this section, is used, an entry must be made in the aircraft log or other record by the organization's representative certifying to the bearing transmitted by the approved maintenance organization for the check and the date of transmission.

APPENDIX 1 TO 4.093: PERFORMANCE RULES: 100-HOUR INSPECTIONS

(a) Each person performing an annual or 100-hour inspection shall, before that inspection, thoroughly clean the aircraft and aircraft engine and remove or open all necessary inspection plates, access doors, fairings, and cowlings.

(b) Each person performing an annual or 100-hour inspection shall inspect, where applicable, the following components:

(1) Fuselage and hull group:

(i) Fabric and skin - for deterioration, distortion, other evidence of failure, and defective or insecure attachment of fittings.

(ii) Systems and components - for improper installation, apparent defects, and unsatisfactory operation.

(iii) The cabin and cockpit group.

(iv) Generally - for uncleanness and loose equipment that might foul the controls.

(v) Seats and safety belts - for poor condition and apparent defects.

(vi) Windows and windshields - for deterioration and breakage.

(vii) Instruments - for poor condition, mounting, marking, and (where practicable) for improper operation.

(viii) Flight and engine controls - for improper installation and improper operation.

(ix) Batteries - for improper installation and improper charge.

(x) All systems - for improper installation, poor general condition, apparent and obvious defects, and insecurity of attachment.

(2) Engine and nacelle group:

(i) Engine section - for visual evidence of excessive oil, fuel, or hydraulic leaks, and sources of such leaks.

(ii) Studs and nuts - for improper torquing and obvious defects.

(iii) Internal engine - for cylinder compression and for metal particles or foreign matter on screens and sump drain plugs. If there is weak cylinder compression, for improper internal condition and improper internal tolerances.

(iv) Engine mount - for cracks, looseness of mounting, and looseness of engine to mount.

(v) Flexible vibration dampeners - for poor condition and deterioration.

(vi) Engine controls - for defects, improper travel, and improper safetying.

(vii) Lines, hoses, and clamps - for leaks, improper condition, and looseness.

(viii) Exhaust stacks - for cracks, defects, and improper attachment.

(ix) Accessories - for apparent defects in security of mounting.

(x) All systems - for improper installation, poor general condition, defects, and insecure attachment.

(xi) Cowling - for cracks and defects.

(3) Landing gear group:

(i) All units - for poor condition and insecurity of attachment.

(ii) Shock absorbing devices - for improper oleo fluid level.

(iii) Linkage, trusses, and members - for undue or excessive wear, fatigue, and distortion.

(iv) Retracting and locking mechanism - for improper operation.

(v) Hydraulic lines - for leakage.

(vi) Electrical system - for chafing and improper operation of switches.

(vii) Wheels - for cracks, defects, and condition of bearings.

(viii) Tires - for wear and cuts.

(ix) Brakes - for improper adjustment.

(x) Floats and skis - for insecure attachment and obvious or apparent defects.

(4) Wing and centre section assembly for:
- (i) Poor general condition,
- (ii) Fabric or skin deterioration,
- (iii) Distortion,
- (iv) Evidence of failure, and
- (v) Insecurity of attachment.

(5) Complete empennage assembly for:
- (i) Poor general condition,
- (ii) Fabric or skin deterioration,
- (iii) Distortion,
- (iv) Evidence of failure,
- (v) Insecure attachment,
- (vi) Improper component installation, and
- (vii) Improper component operation.

(6) Propeller group:
- (i) Propeller assembly - for cracks, nicks, binds, and oil leakage,
- (ii) Bolts - for improper torquing and lack of safety,
- (iii) Anti-icing devices - for improper operations and obvious defects, and
- (iv) Control mechanisms - for improper operation, insecure mounting, and restricted travel.

(7) Avionics/instrument group:
- (i) Avionics/instruments equipment - for improper installation and insecure mounting.
- (ii) Wiring and conduits - for improper routing, insecure mounting, and obvious defects.
- (iii) Bonding and shielding - for improper installation and poor condition.
- (iv) Antenna including trailing antenna - for poor condition, insecure mounting, and improper operation.

(8) Electronic/electrical group:
- (i) Wiring and conduits - for improper routing, insecure mounting, and obvious defects.
- (ii) Bonding and shielding - for improper installation and poor condition.

(9) Each installed miscellaneous item that is not otherwise covered by this listing and/or has instructions for continued airworthiness - for improper installation and improper operation.

APPENDIX 1 TO 4.107: RECORDING OF MAJOR REPAIRS & MAJOR MODIFICATIONS

(a) Each person performing a major repair or major modification shall:
- (1) Execute the major repair and modification form prescribed by the CAAV at least in duplicate that references the approved data used;
- (2) Give a signed copy of that form to the aircraft owner/operator; and
- (3) Forward a copy of that form to the CAAV, in accordance with CAAV instructions, within 48 hours after the aircraft component is approved for maintenance release.

(b) In place of the requirements of paragraph (a), major repairs made in accordance with a manual or specifications acceptable to the CAAV, an AMO may:
- (1) Use the customer's work order upon which the repair is recorded;
- (2) Give the aircraft owner a signed copy of the work order and retain a duplicate copy for at least one year from the date of approval for maintenance release of the aircraft component;

(3) Give the aircraft owner a maintenance release signed by an authorised representative of the AMO and incorporating the following information:
   (i) Identity of the aircraft component;
   (ii) If an aircraft, the make, model, serial number, nationality and registration marks, and location of the repaired area;
   (iii) If an aircraft component, give the manufacturer's name, name of the part, model, and serial numbers (if any); and

(4) Include the following or a similarly worded statement:
   (i) The aircraft component identified above was repaired, overhauled and inspected in accordance with currently effective, applicable instructions of the State of Design and regulatory requirements of the CAAV, and is approved for maintenance release.
   (ii) Pertinent details of the repair are on file at ..... (or are attached).

APPENDIX 1 TO 4.124: ADDITIONAL AMT PRIVILEGES (RATINGS & TASKS)

(a) The person who has the license AMT rating A is only allowed to perform the work under the authority approved on a specific type of aircraft after completion of specific training in accordance with rating A by a maintenance organization in accordance with Section 5 or Section 8. The training will include both theory and practice in accordance with the work will be approved. Completion of the course must be demonstrated by test results / or direct assessment practices implemented by approved organizations in accordance with Part 5 or Part 8.

(b) Unless otherwise stated in paragraph (g), licensed technical staff AMT with rating B1, B2 and C only to perform his particular aircraft type rating on the type aircraft that is approved.

(c) Unless otherwise stated in paragraph (h), rating may only be granted after the applicant has completed training course approved by CAAV or conducted by maintenance training organization is CAAV approved in accordance with Part 8.

(d) The training to upgrade aircraft type for technical staff with rating of B1 or B2 must include the theory and practice and includes courses related to the functions specified in paragraph (c) of 7.353. Theory and practice training must complied with the specific requirements prescribed by the CAAV.

(e) Training program for AMT licensed staff with rating C type must comply with the specific requirements prescribed by the CAAV. In the case of AMT with rating C has a degree in aerospace engineering, training of the first aircraft to be equivalent to level B1 or B2, practical training is not required.

(f) The completion of the training specified in paragraph (b) to (e) must be demonstrated by test results. The test results must meet the training requirements prescribed by the CAAV. Testing for AMT licensed staff with rating B1, B2 and C must be performed by an approved training organization in accordance with Part 8 or approved by training organizations conducted the approved aircraft type upgrade training.

(g) Contrary to the provisions of paragraph (b), for the type of aircraft is not large aircraft (takeoff weight greater than 5700 kg), the licensed with rating B1 and B2 can perform discretion if the license has the record for the group of aircraft suitable or group of manufacturers unless the CAAV determines the complexity of the aircraft involved must be approved separately.
   (1) Rating of the aircraft by manufacturer may be granted upon compliance with the rating type of aircraft class 2 representing a group of manufacturers.
   (2) Full group rating will be issued upon full compliance with the requirements of the rating type of 3 aircraft types' representative of a group of manufacturers. However, the full group rating is not granted for B1 personnel on the aircraft with 2 jet turbine engine and more.
   (3) Groups will include:
      (i) For a license for rating type B1 or C: Engine piston helicopter or turbine engine helicopters; single-engine piston aircraft with a metal structure; aircraft many engine piston-metal structure;

single-engine piston aircraft with a wooden structure; aircraft many piston engines - wooden structure; single-engine piston aircraft – have body structure made of composite materials; aircraft many piston engines - composite structure; aircraft turbine engine; aircraft and turbine engine

(ii) For the rating type B2 and C licenses: aircraft; helicopter

(h) In contrast to the provisions of paragraph (c), rating for the aircraft is not large aircraft may also be granted on the basis of the complete test on the rating type of aircraft involved B1, B2 and C, and has sufficient evidence of actual experience on the aircraft type, unless CAAV determines that the aircraft is too complex and request to participate the training as in following point 3. For the rating C aircraft is not a large aircraft of a person who who holds an aircraft engineer degree, the first aircraft in test must be equivalent to level B1 or B2.

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ATTACHMENTS

ATTACHMENT 1 TO PART 3: SUMMARY OF AMENDMENTS

This attachment contains a summary of all amendments that have been made to the original version of this Part.

Location	Revision	Description of Amendment
4.001(c)	[1]2014	Inserted new paragraph to clarify that the word “aircraft” includes all components that make up an aircraft.
4.003	[1]2014	Deleted definitions and revised to indicate to reader that the definitions applicable to VARs are now consolidated in Part 1, Appendix 1 to 1.007.
4.005	[1]2014	Deleted acronyms and revised to indicate to reader acronyms applicable to the VARS are now consolidated in Part 1, Appendix 1 to 1.008.
4.010(a)	[1]2014	Revised the applicability to clarify the content of the Subpart.
4.013 Title	[1]2014	Replaced original title to clarify the content of the requirement.
4.015(b)	[1]2014	Reformatted to add a numbered listing and include the experimental certificate.
4.030(d)	[1]2014	Replaced the word “subsection” with the word “Section” to standardize usage.
4.033(a)(b)(c)	[1]2014	Deleted original text and replaced with text that more closely aligns with ICAO-SARPs.
4.035(c)	[1]2014	Revised and reformatted original lead in to the list of special flight permit purposes.
4.035(c)(1)	[1]2014	Inserted missing requirement regarding use of Special Flight Permit to fly an aircraft to a maintenance base.
4.035(e)(f)	[1]2014	Inserted new (e)(f) paragraph to further provide additional considerations for special flight permits.
4.037	[1]2014	Inserted new Section regarding ICAO SARPs relating to Aircraft Flight Manual
4.040(a)	[1]2014	Revised the original text for clarity.
4.040(a)(2)	[1]2014	Deleted this confusing discussion from the applicability.
4.043(a)(1)	[1]2014	Revised to indicate the type of related airworthiness activities..
4.045(b)	[1]2014	Reformatted and revised the original text for better clarity.
4.047	[1]2014	Replaced the original text to better align with ICAO SARPs.
4.050(c)	[1]2014	Replaced the word “subsections” with the word “Sections” to standardize usage.
4.053	[1]2014	Relocated original text to 4.067 and inserted new Section for aircraft owner’s maintenance responsibilities.
4.055(a)	[1]2014	Revised the original text to clarify the requirement.
4.055(a)(1)	[1]2014	Inserted additional words to clarify the translation.
4.055(a)(3)	[1]2014	Inserted additional words to clarify the translation.
4.055(a)(4)	[1]2014	Inserted additional words to clarify the translation.
4.057(a)	[1]2014	Inserted clarifying text break: Annual Inspections.

4.057(a) Note 1	[1]2014	Replaced the word “subsection” with the word “Section” to standardize usage.
4.057(b)	[1]2014	Inserted clarifying text break: 100-Hour Inspections.
4.057(c)	[1]2014	Inserted clarifying text break: Special Inspections.
4.057(d)	[1]2014	Inserted clarifying text break: Other Inspections.
4.067	[1]2014	Inserted new Section using the relocated original text of 4.053.
4.073	[1]2014	Inserted new Section to summarize the persons with maintenance responsibilities.
4.077(a)(2)	[1]2014	Inserted additional words to clarify that the AMT must be licensed under Part 7.
4.083(a)	[1]2014	Inserted clarifying text break: General
4.083(b)	[1]2014	Inserted clarifying text break: Tools & Equipment.
4.083(c)	[1]2014	Inserted clarifying text break: Equal to Original Condition
4.083(d)	[1]2014	Inserted clarifying text break: Maintenance Control Manual and replaced the word “subsection” with the word “Section.”
4.083(e	[1]2014	Inserted clarifying text break: Major Modification or Repair: Substantiating Data.
4.100	[1]2014	Replaced the entire original text to align with ICAO SARPS.
4.103(a)	[1]2014	Replaced some original text to relate the time to the signing of the associated maintenance release.
4.103(b)(1)(vii)	[1]2014	Inserted new requirement regarding substantiating data.
4.105	[1]2014	Replaced the entire original text to align with ICAO SARPs.
4.107(a)(b)	[1]2014	Revised original text of (a) to align with ICAO by separating into (a) and (b).
4.107(c)(d)	[1]2014	Reformatted original (b-c) to be paragraphs (c-d).
4.113 Note	[1]2014	Revised the note to indicate that additional modification and repair requirements are in an appendix.
4.115(a)	[1]2014	Inserted clarifying text break: Maintenance Record Entries
4.115(b)	[1]2014	Inserted clarifying text break: Required Listing of Defects
4.115(b)	[1]2014	Replaced the word “discrepancies” with the word “defects” to standardize usage.
4.123(a)(b)	[1]2014	Inserted new (a) and (b) to align with ICAO
4.123(c)	[1]2014	Reformatted paragraph (a) to paragraph (c) and replaced the word “subsection” with the word “Section.”
4.123(d)	[1]2014	Reformatted paragraph (b) to paragraph (d) and replaced the word “subsection” with the word “Section.”
4.123(e)	[1]2014	Reformatted paragraph (c) to paragraph (e) and replaced the word “subsection” with the word “Section.”
4.123(e)	[1]2014	Reformatted paragraph (d) to paragraph (f).
4.127(a)	[1]2014	Replaced the word “subsection” with the word “Section.”
Appendix 1 to 4.123	[1]2014	Inserted new appendix to provide additional AMT ratings related to the AMOs.

Attachment 1 to Part 4	[1]2014	Inserted new attachment to summarize the revisions to the regulation text since the original publication of this regulation.

End of Part 4