



Civil Aviation Requirements

MCAR-Part 21

AIRWORTHINESS

Third Edition
2018

**Department of Civil Aviation
Ministry of Transport and Communications, Myanmar**

PREFACE

Myanmar is a Signatory to the Convention on International Civil Aviation (Chicago Convention on 7 December 1944). Under Article 12 of the Convention, Myanmar, as a Contracting State, is obligated to adopt measures to insure safety through conformity with International Standards in its safety oversight obligations. The fundamental elements of national safety oversight legislation are establishing and empowering Department of Civil Aviation in Myanmar.

All Myanmar Registered aircraft shall meet all the requirements related to airworthiness specified in Myanmar Aircraft Rules, Myanmar Civil Aviation Requirements and in addition to this Part.

This requirement has been issued under authority conferred by Section 5-A (c) of the Myanmar Aircraft Act (1934) by the Director General.

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RECORD OF REVISION

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Second Edition	8 th July 2010	Reflect the version 2.5 of COSCAP-SEA Draft Regulations Part 05.
Third Edition	1 st August 2018	Reflect the latest amendment of ICAO Annex 8, addition of definitions, deleting some procedures and recast the format.

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SUBPART A – GENERAL

21.1 Applicability and Definitions

Applicability

This Part lays down common technical requirements and administrative procedures for the airworthiness of products, parts and appliances and;

- a) shall apply to aircraft registered in a contracting state and operated pursuant to an agreement for the lease, charter or interchange of the aircraft or any similar arrangement by an operator who has his principal place of business, or, if he has no such place of business, his permanent resident in Myanmar, provided that an agreement has been reached between the government of the State of registry of the Aircraft and the Government of Myanmar in regard to transfer of functions and duties pursuant to Article 83 *bis* of the Convention. The extent of application of this part to such aircraft shall be as per the agreement between the two Governments.
- b) shall not apply to aircraft registered in Myanmar and operated pursuant to an agreement for the lease, charter or interchange of the aircraft or any similar arrangement by an operator who has his principal place of business, or, if he has no such place of business, his permanent resident in a contracting State, provided that an agreement has been reached between the Government of Myanmar and the Government of that contracting state in regard to transfer of functions and duties pursuant to Article 83 *bis* of the Convention. The extent of non-application of this part to such aircraft shall be as per the agreement between the two Governments.

All Myanmar Registered aircraft shall meet all the requirements related to airworthiness specified in Myanmar Aircraft Rules, Myanmar Civil Aviation Requirements and in addition to this Part.

Definitions

For the purpose of this Part, the following definitions shall apply:

1. **Aeroplane.** A power-driven heavier-than-air aircraft, deriving its lift in flight chiefly from aerodynamic reactions on surfaces which remain fixed under given conditions of flight.
2. **Aircraft.** Any machine which can derive support in the atmosphere from the reactions of the air, other than the reactions of the air against the earth's surface

and includes balloons, whether fixed or free, airships, kites, gliders and flying machines;

3. **Airworthy.** The status of an aircraft, engine, propeller or part when it conforms to its approved design and is in a condition for safe operation.
4. **Airworthiness Approval Tag.** A tag (Model CAA Form AAT) that may be attached to a part. The tag must include the part number, serial number, and current life status of the part. Each time the part is removed from a type certificated product, a new tag must be created or the existing tag must be updated with the current life status. The Model CAA Form AAT has two distinct purposes (1) is as a certification of release to service of a part, component or assembly after maintenance, preventive maintenance, overhaul or rebuilding, and (2) the other is as shipping of a newly manufactured part.
5. **Airworthiness Directive.** Continuing airworthiness information that applies to the following products: aircraft, aircraft engines, propellers, and appliances. An airworthiness directive is mandatory if issued by the Airworthiness Authority of State of Design.
6. **Anticipated Operating Conditions.** Those conditions which are known from experience or which can be reasonably envisaged to occur during the operational life of the aircraft taking into account the operations for which the aircraft is made eligible, the conditions so considered being relative to the meteorological state of the atmosphere, to the configuration of terrain, to the functioning of the aircraft, to the efficiency of personnel and to all the factors affecting safety in flight. Anticipated operating conditions do not include:
 - a) those extremes which can be effectively avoided by means of operating procedures; and
 - b) those extremes which occur so infrequently that to require the Standards to be met in such extremes would give a higher level of airworthiness than experience has shown to be necessary and practical.
7. **Appropriate Airworthiness Requirements.** The comprehensive and detailed airworthiness codes established, adopted or accepted by a Contracting State for the class of aircraft, engine or propeller under consideration.
8. **Approved.** Accepted by a Contracting State as suitable for a particular purpose.
9. **Auxiliary Power Unit (APU).** A self-contained power unit on an aircraft providing electrical/pneumatic power to aircraft systems during ground operations or in-flight separate from the propulsion engine(s).

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10. **Category A Helicopters.** With respect to helicopters, means a multi-engine helicopter designed with engine and system isolation features specified in Part IVB of Annex 8 and capable of operations using take-off and landing data scheduled under a critical engine failure concept which assures adequate designated surface area and adequate performance capability for continued safe flight or safe rejected take-off.
 11. **Category B Helicopters.** With respect to helicopters, means a single-engine or multi-engine helicopter which does not meet Category A standards. Category B helicopters have no guaranteed capability to continue safe flight in the event of an engine failure, and a forced landing is assumed.
 12. **Configuration (as applied to the aeroplane).** A particular combination of the positions of the moveable elements, such as wing flaps and landing gear, etc., that affects the aerodynamic characteristics of the aeroplane.
 13. **Control System.** Means a system by which the flight path, attitude, main landing gear position, or propulsive force of an aircraft is changed, including the flight engine and propeller controls, the related system controls and the associated operating mechanisms.
 14. **Continuing Airworthiness.** The set of processes by which an aircraft, engine, propeller or part complies with the applicable airworthiness requirements and remains in a condition for safe operation throughout its operating life.
 15. **Critical Engine(S).** Any engine whose failure gives the most adverse effect on the aircraft characteristics relative to the case under consideration.
Note. – On some aircraft there may be more than one equally critical engine. In this case, the expression “the critical engine” means one of those critical engines.
 16. **Design Landing Mass.** The maximum mass of the aircraft at which, for structural design purposes, it is assumed that it will be planned to land.
 17. **Design Take-Off Mass.** The maximum mass at which the aircraft, for structural design purposes, is assumed to be planned to be at the start of the take-off run.
 18. **Design Taxiing Mass.** The maximum mass of the aircraft at which structural provision is made for load liable to occur during use of the aircraft on the ground prior to the start of take-off.
 19. **Discrete Source Damage.** Structural damage of the aeroplane that is likely to result from: impact with a bird, uncontained fan blade failure, uncontained engine failure, uncontained high-energy rotating machinery failure or similar causes.

20. **Duplicate Inspection.** The independent inspection and certification of any part of an aircraft control system or component control system by two authorized persons.
21. **Engine.** A unit used or intended to be used for aircraft propulsion. It consists of at least those components and equipment necessary for functioning and control, but excludes the propeller/rotors (if applicable).
22. **Factor of Safety.** A design factor used to provide for the possibility of loads greater than those assumed, and for uncertainties in design and fabrication.
23. **Final Approach and Take-Off Area (FATO).** A defined area over which the final phase of the approach manoeuvre to hover or landing is completed and from which the take-off manoeuvre is commenced. Where the FATO is to be used by performance Class 1 helicopters, the defined area includes the rejected take-off area available.
24. **Fireproof.** The capability to withstand the application of heat by a flame for a period of 15 minutes.
25. **Fire Resistant.** The capability to withstand the application of heat by a flame for a period of 5 minutes.
26. **Helicopter.** A heavier-than-air aircraft supported in flight chiefly by the reactions of the air on one or more power-driven rotors on substantially vertical axes.
27. **Human Factors Principles.** Principles which apply to aeronautical design, certification, training, operations and maintenance and which seek safe interface between the human and other system components by proper consideration to human performance.
28. **Human Performance.** Human capabilities and limitations which have an impact on the safety and efficiency of aeronautical operations.
29. **Landing Surface.** That part of the surface of an aerodrome which the aerodrome authority has declared available for the normal ground or water run of aircraft landing in a particular direction.
30. **Life-Limited Part.** Any part for which a mandatory replacement limit is specified in the type design, the Instructions for Continued Airworthiness or the maintenance manual.
31. **Limit Loads.** The maximum loads assumed to occur in the anticipated operating conditions.
32. **Load Factor.** The ratio of a specified load to the weight of the aircraft, the former being expressed in terms of aerodynamic forces, inertia forces, or ground reactions.

33. **Maintenance.** The performance of tasks on an Aircraft, Engine, Propeller or associated part required to ensure the continuing airworthiness of an aircraft, engine, propeller or associated part including any one or combination of overhaul, inspection, replacement, defect rectification and the embodiment of a modification or repair.
34. **Maintenance Release.** A document which contains a certification confirming that the maintenance work to which it relates has been completed in a satisfactory manner in accordance with appropriate airworthiness requirements.
35. **Modification.** A change to the type design of an Aircraft, Engine or Propeller.
Note. – A modification may also include the embodiment of the modification which is a maintenance task subject to a maintenance release. Further guidance on aircraft maintenance modification and repair is contained in the Airworthiness Manual (Doc 9760).
36. **Major Modification.** Major Modification means an alteration not listed in the aircraft, aircraft engine, or propeller specifications (1) that might appreciably affect weight, balance, structural strength, performance, power-plant, operations, flight characteristics, or other qualities affecting airworthiness; or (2) that cannot be done by elementary operations.
37. **Major Repair.** Major repair means a repair: (1) that if improperly done might appreciably affect weight, balance, structural strength, performance, power-plant, operations, flight characteristics, or other qualities affecting airworthiness; or (2) that is not done according to accepted practices or cannot be done by elementary operations.
38. **Overhaul.** The restoration of an aircraft/aeronautical product using methods, techniques, and practices acceptable to the Authority, including disassembly, cleaning, and inspection as permitted, repair as necessary, and reassembly; and tested in accordance with approved standards and technical data, or in accordance with current standards and technical data acceptable to the Authority, which have been developed and documented by the State of Design, holder of the type certificate, supplemental type certificate, or a material, part, process, or appliance approval under a Technical Standard Order (TSO).
39. **Organization responsible for the Type Design.** The organization that holds the type certificate, or equivalent document, for an aircraft, engine or propeller type, issued by a Contracting State.

40. **Performance Class 1 Helicopter.** A helicopter with performance such that, in case of engine failure, it is able to land on the rejected take-off area or safely continue the flight to an appropriate landing area.
41. **Performance Class 2 Helicopter.** A helicopter with performance such that, in case of engine failure, it is able to safely continue the flight, except when the failure occurs prior to a defined point after take-off or after a defined point before landing, in which cases a forced landing may be required.
42. **Performance Class 3 Helicopter.** A helicopter with performance such that, in case of engine failure at any point in the flight profile, a forced landing must be performed.
43. **Powerplant.** The system consisting of all the engines, drive system components (if applicable), and propellers (if installed), their accessories, ancillary parts, and fuel and oil systems installed on an aircraft but excluding the rotors for a helicopter.
44. **Pressure-altitude.** An atmospheric pressure expressed in terms of altitude which corresponds to that pressure in the Standard Atmosphere.
45. **Preventive Maintenance.** Simple or minor preservation operations and the replacement of small standard parts not involving complex assembly operations.
46. **Principal Place of Business.** means the head office or registered office of the undertaking within which the principal financial functions and operational control of the activities referred to in this Part are exercised;
47. **Rebuild.** The restoration of an aircraft/aeronautical product by using methods, techniques and practices acceptable to the Authority, when 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.
48. **Required Inspection Items.** Maintenance items and/or alterations that must be inspected by a qualified and authorized person other than the one performing the work, and include at least those that could result in a failure, malfunction, or defect endangering the safe operation of the aircraft, if not properly performed or if improper parts or materials are used.
49. **Rendering (a Certificate of Airworthiness) Valid.** The action taken by a Contracting State, as an alternative to issuing its own Certificate of Airworthiness, in accepting a Certificate of Airworthiness issued by any other Contracting State as the equivalent of its own Certificate of Airworthiness.
50. **Repair.** The restoration of an aeronautical product Aircraft, Engine, Propeller or associated part to an airworthy condition as defined by in accordance with the

appropriate airworthiness requirements after it has been damaged or subjected to wear.

51. **Satisfactory Evidence.** A set of documents or activities that a Contracting State accepts as sufficient to show compliance with an airworthiness requirement.

52. **Standard Atmosphere.** An atmosphere defined as follows:

a) the air is a perfect dry gas;

b) the physical constants are:

— Sea level mean molar mass:

$$M_0 = 28.964420 \times 10^{-3} \text{ kg mol}^{-1}$$

— Sea level atmospheric pressure:

$$P_0 = 1013.250 \text{ hPa}$$

— Sea level temperature:

$$t_0 = 15^\circ\text{C};$$

$$T_0 = 288.15 \text{ K}$$

— Sea level atmospheric density:

$$\rho_0 = 1.2250 \text{ kg m}^{-3}$$

— Temperature of the ice point:

$$T_i = 273.15 \text{ K}$$

— Universal gas constant:

$$R^* = 8.31432 \text{ JK}^{-1}\text{mol}^{-1}$$

c) the temperature gradients are:

<i>Geopotential altitude</i>		<i>Temperature gradient</i> (Kelvin per standard geopotential kilometre)
<i>From</i>	<i>To</i>	
-5.0	11.0	-6.5
11.0	20.0	0.0
20.0	32.0	+1.0
32.0	47.0	+2.8
47.0	51.0	0.0
51.0	71.0	-2.8
71.0	80.0	-2.0

Note 1. – The standard geopotential metre has the value $9.80665 \text{ m}^2 \text{ s}^{-2}$.

Note 2. – See Doc 7488 for the relationship between the variables and for tables giving the corresponding values of temperature, pressure, density and geopotential.

Note 3. – Doc 7488 also gives the specific weight, dynamic viscosity, kinematic viscosity and speed of sound at various altitudes.

53. **State of Design.** The State having jurisdiction over the organization responsible for the type design.
54. **State of Manufacture.** The State having jurisdiction over the organization responsible for the final assembly of the aircraft, engine or propeller.
55. **State of Registry.** The State on whose register the aircraft is entered.
Note. – In the case of the registration of aircraft of an international operating agency on other than a national basis, the States constituting the agency are jointly and severally bound to assume the obligations which, under the Chicago Convention, attach to a State of Registry. See, in this regard, the Council Resolution of 14 December 1967 on Nationality and Registration of Aircraft Operated by International Operating Agencies which can be found in Policy and Guidance Material on the Economic Regulation of International Air Transport (Doc 9587).
56. **Take-off Surface.** That part of the surface of an aerodrome which the aerodrome authority has declared available for the normal ground or water run of aircraft taking off in a particular direction.
57. **Type Certificate.** A document issued by a Contracting State to define the design of an aircraft, engine or propeller type and to certify that this design meets the appropriate airworthiness requirements of that State.
Note. – In some Contracting States a document equivalent to a Type Certificate may be issued for an engine or propeller type.
58. **Type Design.** The set of data and information necessary to define an aircraft, engine or propeller type for the purpose of airworthiness determination.
59. **Ultimate Load.** The limit load multiplied by the appropriate factor of safety.
60. **Validation of a Certificate of Airworthiness.** The action taken by a Contracting State, as an alternative to issuing its own Certificate of Airworthiness, in accepting a Certificate of Airworthiness issued by any other Contracting State as the equivalent of its own Certificate of Airworthiness.

21.3 Failures, Malfunctions and Defects

Owners or Operators of Myanmar Registered aircraft shall have a system for collecting, investigating and analyzing reports of and information related to failures, malfunctions, defects or other occurrences which cause or might cause adverse effects on the continuing airworthiness of the aircraft, part or appliance at least the following –

-
- a) Fires during flight and whether the related fire-warning system properly operated;
 - b) Fires during flight not protected by a related fire-warning system;
 - c) False fire warning during flight;
 - d) An engine exhausts system that causes damage during flight to the engine, adjacent structure, equipment, or components;
 - e) 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;
 - f) Engine shutdown during flight because of flameout;
 - g) Engine shutdown during flight when external damage to the engine or aircraft structure occurs;
 - h) Engine shutdown during flight due to foreign object ingestion or icing;
 - i) Shutdown during flight of more than one engine;
 - j) A propeller feathering system or ability of the system to control over speed during flight;
 - k) A fuel or fuel-dumping system that affects fuel flow or causes hazardous leakage during flight;
 - l) An unintended landing gear extension or retraction, or opening or closing of landing gear doors during flight;
 - m) Brake system components that result in loss of brake actuating force when the aircraft is in motion on the ground;
 - n) Aircraft structure that requires major repair;
 - o) Cracks, permanent deformation, or corrosion of aircraft structure, if more than the maximum acceptable to the manufacturer or the DCA;
 - p) Aircraft components or systems malfunctions that result in taking emergency actions during flight (except action to shut down an engine);
 - q) 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;
 - r) Any abnormal vibration or buffeting caused by a structural or system malfunction, defect, or failure;
 - s) A failure or malfunction of more than one attitude, airspeed, or altitude instrument during a given operation of the aircraft.
 - t) 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;

- u) The number of propeller featherings in flight, listed by type of propeller and engine and aircraft on which it was installed.
- v) Defect of the aircraft or part(s) related to any bird-strike.

AMC 21.3(a) Reporting to the DCA

- 1) Owners or Operators of Myanmar Registered aircraft shall report to the Department of Civil Aviation any failures, malfunctions, defects or other occurrences which cause or might cause adverse effects on the continuing airworthiness of the aircraft, part or appliance within 72 hours.
- 2) Where an occurrence is judged by the person identifying the possible unsafe condition to have resulted in an immediate and particularly significant hazard the DCA expects to be advised immediately and by the fastest possible means (telephone, fax, email, telex, etc.) of whatever details are available at that time. This initial report must be followed up by a full written report within 72 hours. A typical example would be an uncontained engine failure resulting in damage to aircraft primary structure.

AMC21.3(b) Reporting to the Original Equipment Manufacturer and/or Organization responsible for the Type Design of aircraft

- 1) Owners or Operators of Myanmar Registered aircraft shall report to the Original Equipment Manufacturer and/or Organization responsible for the Type Design of aircraft any failure, malfunction, defect or other occurrence of which it is aware related to a aircraft, part, or appliance which has resulted in or may result in an unsafe condition.
- 2) These reports shall be made in a form and manner established by the relevant organization or the Original Equipment Manufacturer and/or Organization responsible for the Type Design of aircraft, as soon as practicable after the identification of the possible unsafe condition, unless exceptional circumstances prevent this.

21.5 Airworthiness Directives

- a) An Airworthiness Directive (ADs) means a document issued or adopted by the Airworthiness Authority of the State of Design or DCA which mandates actions to be performed on an aircraft to restore an acceptable level of safety, when evidence shows that the safety level of this aircraft may otherwise be

compromised.

- b) An Airworthiness Directive shall contain at least the following information:
 - 1) an identification of the unsafe condition;
 - 2) an identification of the affected aircraft type;
 - 3) the action(s) required;
 - 4) the compliance time for the required action(s);
 - 5) the date of entry into force.
- c) Upon registration of an aircraft in Myanmar, the DCA will notify the State of Design of the aircraft of the registration in Myanmar, and request that the DCA receives any and all Airworthiness Directives addressing that aircraft, airframe, aircraft engine, propeller, appliance, or component part.
- d) Unless otherwise directed by DCA, Owners or Operators of aircraft registered in Myanmar must comply with all ADs or similar mandatory instructions issued by the Airworthiness Authority of the State of Design.
- e) The DCA 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 Myanmar.
- f) No person may operate any Myanmar registered civil aircraft without compliance of the applicable Airworthiness Directives or similar mandatory instructions issued by the Airworthiness Authority of the State of Design.

SUBPART B – TYPE-CERTIFICATES ACCEPTANCE**21.11 Scope**

Presently, Myanmar does not have Aircraft Engineering Division (AED) in Department of Civil Aviation; Myanmar does not have the capabilities to issue its own original Type Certification and will therefore not be the State of Design or State of Manufacture. Myanmar will not validate Type Certificate issued by other states. Myanmar will accept only the Type Certificate issued by EASA or FAA after document reviewed.

21.13 Applicability

Unless otherwise stated the airworthiness standards prescribed in this Subpart apply to all aircraft with Certificates of Airworthiness issued by the DCA.

21.15 Type Acceptance Data Requirements

An applicant for the grant of a Type Acceptance Letter for an aircraft type shall provide the DCA with evidence that:

- a) the Type Design has been approved by the Federal Aviation Administration (FAA) of the United States, or the European Aviation Safety Agency (EASA) by the issue of a Type Certificate;
- b) for Remotely Piloted Aircraft Systems, the Type Design has been approved by the relevant Civil Aviation Authority; and
- c) the aircraft Noise standard that the aircraft is designed to comply with.

SUBPART C – RESERVED

SUBPART D – RESERVED

SUBPART E – SUPPLEMENTAL TYPE-CERTIFICATES

Any person who proposes to alter a product by introducing a major change in Type Design, not great enough to require a new application for a Type Certificate, shall apply for a Supplemental Type Certificate to the regulatory agency of the State of Design that approved the Type Certificate for that product, or to the State of Registry of the aircraft provided that the State of Registry has the technical expertise to evaluate the proposed change in accordance with the Type Design. The applicant shall apply in accordance with the procedures prescribed by that State. Upon receiving a request for a supplemental type certificate for an aircraft registered in any State shall forward the request to the State of Design. Myanmar does not have Aircraft Engineering Division (AED) in Department of Civil Aviation; Myanmar does not have the capabilities to issue a Supplemental Type Certificate, for the time being.

SUBPART F – RESERVED

SUBPART G – RESERVED

SUBPART H – CERTIFICATES OF AIRWORTHINESS**21.171 Scope**

This Sub-Part prescribes procedures required for the Issue, Validate and Renewal for Certificates of Airworthiness.

21.172 Certificate of Airworthiness - General

- a) Any civil aircraft shall not fly within Myanmar unless there is in force in respect thereof a certificate of airworthiness duly issued or rendered valid and any conditions subject to which the certificate was issued or rendered valid are complied with.
- b) Any registered Owner or Operator of a Myanmar registered aircraft may apply for an airworthiness certificate for that aircraft.

21.173 Classification

Certificates of airworthiness shall be issued upon satisfaction by DCA, to aircraft in specific operational category which conform to a Type Certificate that has been issued.

21.174 Certificate of Airworthiness Application

- a) Each aircraft imported, into Myanmar for which a Certificate of Airworthiness is to be issued or validated, shall conform to the design standards and be in a condition for safe operation. To be eligible for issuance of Certificate of Airworthiness, an aircraft must be Type Certificated acceptable by DCA. The Design Standards specified in regulations issued by the Federal Aviation Administration (FAA) of the United States of America, including Title 14 Code of Federal Regulations (CFR) Parts 23, 25, 27, 29, 31, 33, 34, 35 and 36 or issued by European Aviation Safety Agency (EASA) of the European Union, including EASA Certification Specifications (CS) 23, 25, 27, 29, 31, 34, 36, -E and -P, are accepted.
- b) An application for an airworthiness certificate shall be along with the necessary fees, requisite documents and the aircraft conforms to the stipulated design and airworthiness standard in accordance with applicable Airworthiness Notices.
- c) DCA requires an aircraft Airworthiness Recommendation to determine the serviceability of aircraft including build, modification and repair standard to be conducted by an appropriately approved organization on behalf of Owner /Operator.

- d) The aircraft shall be made available and the records presented for inspection at a location(s) acceptable to the DCA.

21.175 Amendment of Airworthiness Certificate

The DCA may amend or modify an Airworthiness Certificate _

- a) Upon application from an Owner/Operator.
- b) On its own initiative.

21.176 Transferability and re-issuance

The certificate of airworthiness shall be transferred together with the aircraft;

- a) where ownership of an aircraft has changed,
- b) if it remains on the same register,
- c) to the lessee upon lease of an aircraft within or outside Myanmar,
- d) to the buyer upon sale of the aircraft within Myanmar.

21.177 DCA Inspections

The holder of the Certificate of Airworthiness of the aircraft shall provide access to the aircraft for which that airworthiness certificate has been issued or renewed upon request by the DCA for inspection.

21.178 Duration and Continued Validity

- a) Myanmar Certificate of Airworthiness are effective for a period of *one year* from issued date subject to compliance with the applicable type-design and continuing airworthiness requirements; and unless sooner surrendered, suspended or revoked, or a special termination date is otherwise established by the DCA.
- b) When an aircraft imported for registration in Myanmar has a Certificate of Airworthiness issued by another Contracting State, Myanmar may, as an alternative to issuance of its own Certificate of Airworthiness, establish validity by suitable authorization to be carried with the former Certificate of Airworthiness accepting it as the equivalent of a Certificate of Airworthiness issued by Myanmar. The validity of the authorization shall not extend beyond the period of validity of the Certificate of Airworthiness or *one year*, whichever is less.
- c) The continuing airworthiness of the aircraft shall be determined by a periodical inspection at appropriate intervals having regard to lapse of time and type of service.

- d) Failure to maintain an aircraft in an airworthy condition as defined by the appropriate airworthiness requirements of the State of Registry shall render the aircraft ineligible for operations until the aircraft is restored to an airworthy condition.

21.179 Damage to Aircraft

- a) When an aircraft has sustained damage, the State of Registry shall judge whether the damage is of a nature such that the aircraft is no longer airworthy as defined by the appropriate airworthiness requirements.
- b) If the damage is sustained or ascertained when the aircraft is in the territory of another Contracting State, the authorities of the other Contracting States shall be entitled to prevent the aircraft from resuming its flight on the condition that they shall advise the Authority, as the State of Registry immediately, communicating to it all details necessary to formulate the judgment referred to in (a) above.
- c) DCA when as the State of Registry, considers that the damage sustained is of a nature such that the aircraft is no longer airworthy, it shall prohibit the aircraft from resuming flight until it is restored to an airworthy condition. The DCA, as the State of Registry may, however, in exceptional circumstances, prescribe particular limiting conditions to permit the aircraft to fly a non-commercial air transport operation to an aerodrome at which it will be restored to an airworthy condition. In prescribing particular limiting conditions the DCA, as the State of Registry, shall consider all limitations proposed by the Contracting State that had originally, in accordance with (b) above, prevented the aircraft from resuming its flight. That Contracting State shall permit such flight or flights within the prescribed limitations.
- d) DCA when as the State of Registry, considers that the damage sustained is of a nature such that the aircraft is still airworthy, the aircraft shall be allowed to resume its flight.

SUBPART I – AIRCRAFT NOISE CERTIFICATES**21.200 Purpose**

These subpart cover the requirements for granting of Noise certificates for aircraft registered in Myanmar.

21.205 Administration of ICAO Annex 16 Standards

- a) The provisions of this subpart shall apply to all aircraft included in the classifications defined for noise certification purposes in ICAO Annex 16, Volume I.
- b) Noise certificate shall be granted by the DCA, as the State of Registry of an aircraft, on the basis of satisfactory evidence that the aircraft complies with requirements that are at least equal to the applicable Standards specified in the current version of ICAO Annex 16, Volume I.
- c) The DCA shall suspend or revoke the noise certificate of an aircraft on its register if the aircraft ceases to comply with the applicable noise Standards. DCA, as the State of Registry, shall not remove the suspension of a noise certification or grant a new noise certification unless the aircraft is found, on reassessment, to comply with the applicable noise Standards.

21.210 Noise Certificate Applicability

- a) Aircraft registered in Myanmar to which the requirements of Volume 1 of Annex 16 are applicable shall not fly without a Noise Certificate issued by the DCA.
- b) Aircraft that are not registered in Myanmar to which the requirements of Volume 1 of Annex 16 are applicable shall not fly without a Noise Certificate issued by the State of Registry.

21.220 Application and grant of Noise Certificate

- a) An applicant for a noise certificate shall furnish the DCA in accordance with applicable Airworthiness Notices.
- b) The DCA shall grant a noise certificate on being satisfied by evidence that the particular aircraft complies with the appropriate Standards of ICAO Annex 16 Volume 1.

21.230 Validity of Noise Certificate

- a) The validity of a noise certificate issued by the DCA is subject to the aircraft continuing to comply with the noise certification standards against which the noise certificate was issued.
- b) Major modifications that appreciably affect the noise characteristics of the aircraft may invalidate the noise certificate issued unless:
 - 1) on application for the approval of the modification, evidence is provided that the appropriate standards have been met; or
 - 2) DCA is satisfied with approved operational limitations that are contained in the aircraft flight manual that are required to maintain compliance with the appropriate noise certification standards.
 - 3) A Noise Certificate is valid until it is suspended, revoked or the aircraft has been removed from Myanmar's Register.

21.250 Revocation and Suspension

- a) DCA may suspend or revoke the noise certificate if the holder of the certificate is unable to demonstrate compliance with the appropriate noise certification standards.
- b) The holder of a revoked or suspended noise certificate shall surrender it immediately to the DCA.

SUBPART J – RESERVED

SUBPART K – MATERIALS, PARTS, COMPONENTS AND APPLIANCES**21.301 Purpose**

This Subpart details requirements for the acceptance of materials, parts, components and appliances.

21.303 Replacement and Modification of Parts, Components and Appliances

A replacement of a part, component or appliance to be installed in an aircraft registered in Myanmar shall:

- a) be supported by the DCA accepted Release Certificates, certifying that the item was manufactured in conformity to approved design data; and
- b) conform to the certification standards of the applicable Type Certificate and any applicable Supplemental Type Certificate.

21.305 Materials

Materials to be utilized for the maintenance of an aircraft registered in Myanmar shall:

- a) be of a specification specified in approved data; and
- b) be in conformance with any Type Certificate Holders criteria; and
- c) Accompanied by DCA accepted form of release certification.

SUBPART L – EXPORT CERTIFICATE OF AIRWORTHINESS**21.321 APPLICABILITY**

This subpart prescribes the requirements for the issuance of Export Certificates of Airworthiness. For the transfer of Aircraft onto the Register of another State, Myanmar will issue an Export Certificate of Airworthiness when the Owner/Lessor or Operator (on behalf of Owner) applies for Export. Myanmar will only issue the Export Certificate of Airworthiness for a complete Aircraft, Aircraft Engine or Propeller (Class I products).

21.323 GENERAL

- a) An Export Certificate of Airworthiness will not be issued for a complete Aircraft, Aircraft Engine or Propeller (Class I products) unless the Director General is satisfied the followings;
 - (1) It conforms to the Type Design or Specification of the product identified thereon and any approved modifications.
 - (2) It complies with all pertinent Myanmar Aircraft Rules, Myanmar Civil Aviation Requirements and relevant Airworthiness Notices.
 - (3) It is in a condition for safe Operation.
- b) It is very important to understand that an export Certificate of Airworthiness is not a Certificate of Airworthiness as defined in the Myanmar Aircraft Rules and is not an authority for flight.
- c) To be eligible for issue of an Export Certificate of Airworthiness a used aircraft shall possess or meet the requirement for issue of a Myanmar Certificate of Airworthiness.
- d) An application for the issuance of an Export Certificate of Airworthiness shall be made to the Airworthiness Division of DCA. Application may be made *not later than 30 days* before the Export Certificate of Airworthiness is required.
- e) The applicant for an Export Certificate of Airworthiness shall provide a recommendation statement signed by the Head of Engineering and Head of Quality of an organization approved for the purpose of Maintenance or any other qualify person approved for that purpose, certifying that the conditions of Para (a), have been complied with.
- f) If require the following derogations from the requirements must be listed on the application-
 - 1) Significant Deviations from the approved Design Standard.

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- 2) Any Derogation from DCA Airworthiness requirements.
 - 3) Mandatory modifications and inspections which has not been complied with.
 - 4) Any equipment fitted which has not been approved or accepted by the DCA.
 - 5) Any Equipment appropriate to Certification Category is not fitted.
- g) The applicant for an Export Certificate of Airworthiness shall submit;
- (a) Up-to-date logbook for aircraft, engines, propeller and radio station licence as applicable are completed and appropriately certified to show the following:
 - (i) Flight test dates and hours flown, if applicable.
 - (ii) Engine and/or propeller make, mode, serial number and hours run and whether installed or removed for shipment.
 - (iii) Modifications embodied.
 - (iv) Airworthiness Directives complied with and any applicable Airworthiness Directives not complied with.
 - (v) The methods used, if any, for the preservation and packing of the aircraft and if components to protect them against corrosion and damage during transit and storage and the duration of the effectiveness of such method of preservation.
 - (vi) The extent of dismantling of the aircraft for shipment and the identification of the pertinent instructions to be used for reassembly and testing.
 - (vii) Any temporary installations incorporated on the aircraft for the purpose of export delivery and the identification of the pertinent instructions for their removal to restore the aircraft to the normal configuration.
 - (b) An Approved Flight Manual status for that aircraft.
 - (c) Any other data considered by DCA to be essential for safe Operation.

21.325. EXPORT CERTIFICATE OF AIRWORTHINESS

This certificate is intended to be a statement by Myanmar (as an Exporting State) confirming to the importing State, the acceptable airworthiness status of the complete aircraft, aircraft engine or propeller. In the case of a complete aircraft the Export Certificate of Airworthiness either confirms the aircraft's conformity with the approved Type Design data and its acceptable airworthiness status, stating in effect

that if the aircraft were to remain on the registry of the exporting State it would continue to qualify for the continuance of its Certificate of Airworthiness or that the aircraft standard complies with the requirements of the importing State and is in a condition for safe operation. Nevertheless, it should be noted that some States have no provision for export certification or have any requirement for such certificates from States from which they receive exported products.

21.331. Application for the Issue of an Export C of A

- a) For the issuance of an Export Certificate of Airworthiness, an applicant will be required to provide sufficient detail concerning the aircraft, aircraft engines or propellers in order to enable the DCA to make a determination that the product conforms with the approved Type Design data, is in a condition for safe operation, and complies with the requirements of the importing State.
- b) An aircraft is required to apply De-Registration for issuance of an Export Certificate of Airworthiness. For lease aircraft, Agreement or statement from Owner/Lessor for De-Registration and issuance of an Export Certificate of Airworthiness should be required.
- c) The application form of an Export Certificate of Airworthiness will be available at DCA, Airworthiness Division.

21.335 Validity of Export Certificate of Airworthiness

An Export Certificate of Airworthiness issued under this Subpart is valid at the date of issue but the importing State is responsible for determining the period for which it will accept it as valid.

SUBPART M – REPAIRS**21.431 General**

- a) This Subpart prescribed details requirements for the approval of Modifications and Repairs.
- b) All Modifications and Repairs shall comply with airworthiness requirements acceptable to the DCA.
- c) An application for approval of Modifications and Repairs shall furnish the DCA in accordance with applicable Airworthiness Notices.

21.437 Continued Airworthiness Compliance

- a) An accomplished Modifications and Repairs that by design requires continued inspection or further work shall be recorded in the aircraft records in a manner acceptable to the DCA.
- b) Any continued airworthiness requirements associated with an accomplished Modifications and Repairs shall be integrated into the approved Maintenance Programme for the aircraft.
- c) Details of accomplished Modifications and Repairs and continued airworthiness instructions shall be recorded as appropriate.

SUBPART N – AIRCRAFT MAINTENANCE AND INSPECTION**21.501 Applicability**

This subpart prescribes the maintenance and inspection of any aircraft having a Myanmar Airworthiness Certificate or associated aeronautical products.

21.503 General

- a) No person may operate an aircraft for which a Manufacturer's Flight/Maintenance Manual or instructions for continued airworthiness has been issued that contains an airworthiness limitation section unless the mandatory replacement times, inspection intervals, and related procedures specified in that section or alternative inspection intervals and related procedures set forth in the specific operating provisions approved.
- b) No person may operate an aeronautical product to which an Airworthiness Directive applies, issued either by the State of Design or State of Manufacture and adopted for Myanmar Registered aircraft by the DCA, or by the State of Registry for aircraft operated within Myanmar, except in accordance with the requirements of that Airworthiness Directive.
- c) When the DCA determines that an airframe or aeronautical product has exhibited an unsafe condition and that condition is likely to exist or to develop in other products of the same type design, the DCA may issue a related Airworthiness inspections, conditions and limitations, if any, under which those products may continue to be operated.

21.505 Persons Authorized to Perform Maintenance, Preventive Maintenance and Modifications

The persons authorized to perform maintenance subject to _

- (1) A Pilot-Owner with appropriately approved licensed pilot by the DCA to do specific maintenance;
- (2) Aviation personnel performing maintenance under the supervision of licensed aircraft maintenance engineer;
- (3) A licensed aircraft maintenance engineer;
- (4) A holder of an Inspection Authorization;
- (5) An aircraft repair specialist
- (6) An authorization holder by AMO;

- (7) An AOC holder, approved to perform maintenance; and
- (8) An AMO.

21.507 Duplicate Inspection

- a) Duplicate Inspection of flight controls/main controls, engine controls and associated control systems after rigging or alternation or adjustment must be done as per the procedure approved and suitable entry made in the appropriate records.
- b) A person shall not certify an aircraft or component for release to service after the initial assembly, subsequent disturbance, or adjustment of any part of an aircraft control system or component control system unless a duplicate inspection of the control system has been performed that includes –
 - (1) an inspection after maintenance by a person authorized to certify the release to service of the control systems; and
 - (2) a second inspection by another person who has adequate training, knowledge and experience to carry out the second inspection;
- c) Duplicate Inspection of all control systems shall be made;
 - (1) before the first flight of all aircraft after initial assembly.
 - (2) before the first flight after the overhaul, replacement, repair, adjustment or modification of the control systems.

21.509 Performance of Maintenance

- a) Each person performing maintenance, or modification on an aeronautical product shall use the methods, techniques, and practices prescribed in the current Manufacturer's Maintenance Manual or instructions for Continued Airworthiness prepared by its Manufacturer;
- 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 DCA.
- c) Each person performing maintenance or modification on an aeronautical product shall use materials of such a quality, that the condition of the aeronautical product 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.

21.511 Performance of Inspections

- a) Each person performing an inspection required shall perform the inspection so as to determine whether the aircraft, or portion(s) thereof under inspection, meets all applicable airworthiness requirements; and
- b) Each person performing an inspection required on a rotorcraft shall inspect the systems in accordance with the Maintenance Manual or Instructions for Continued Airworthiness of the Manufacturer concerned.
- c) Annual inspections.
 - (1) Each person performing an annual inspection shall provided by the manufacturer of the equipment being inspected and include the scope and detail of the items prescribed.
 - (2) Each person performing a reciprocating-engine-powered aircraft and a turbine-engine-powered aircraft for Return to Service after an annual inspection shall according to the current Manufacturer's recommendations.

21.513 Return to Service after Maintenance, Rebuilding or Modification

No person may return to service any aeronautical product that has undergone maintenance, rebuilding, or modification unless –

- (1) The appropriate maintenance record entry has been made;
- (2) 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.

21.515 Requirement for Certificate of Release to Service

- (1) Any aircraft registered in Myanmar shall not fly unless there is in force a certificate of release to service issued in respect of the aircraft in accordance with the provisions of applicable Airworthiness requirements, if the aircraft or any part of the aircraft or such of its equipment as is necessary for the airworthiness of the aircraft has been overhauled, repaired, replaced, modified, maintained, or has been inspected.
- (2) A certificate of release to service may be issued by _
 - a) a person approved by the DCA as being competent to issue such certification;

- b) a person whom the DCA has authorized to issue the certificate in a particular case, and in accordance with that authority;
- c) a person authorized in accordance with MCAR Part-145; and
- d) the holder of an aircraft maintenance licence granted by the DCA, in accordance with the privileges endorsed on the licence.

21.517 Requirements for Certificate of Maintenance Review

Any public transport or an aerial work aircraft registered in Myanmar shall not fly unless there is in force a certificate of maintenance review was issued in respect of the aircraft in accordance with the provisions of applicable Airworthiness requirements and the certificate, certifies the date on which the maintenance review was carried out and the date when the next review is due.

SUBPART O – RESERVED

SUBPART P – FERRY FLIGHT PERMIT**21.701 Purpose**

This Subpart details the requirements for the issue of a Ferry Flight Permit.

21.703 Applicability

A Ferry Flight Permit may be issued in the following circumstances:

- a) to the owner/operator of an aircraft whose Certificate of Airworthiness is invalid; or
- b) that is capable of safe flight, but unable to meet applicable airworthiness requirements.

21.705 Issue of Ferry Flight Permit

- a) A Ferry Flight permit shall be applied with the application form CA62 (F).
- b) a Ferry Flight Permit shall be issued to aircraft that do not meet, or have not been shown to meet, applicable airworthiness requirements but are capable of safe flight under defined conditions and for the following purposes:
 - 1) flying the aircraft for customer acceptance;
 - 2) delivering or exporting the aircraft;
 - 3) flying the aircraft to a location where maintenance, permanent repair, alterations or aircraft painting is to be performed;
 - 4) flying the aircraft to a place of storage;
 - 5) flying an aircraft at a weight in excess of its maximum certificated take-off weight for flight beyond the normal range over water, or over lands areas where adequate landing facilities or appropriate fuel is not available;
 - 6) flying the aircraft when the aircraft has sustained damage beyond the applicable limits;
 - 7) flying an aircraft where certain equipment outside of the minimum equipment list is unserviceable;
 - 8) conducting a flight associated with the approval of a modification; or
 - 9) Evacuating aircraft from areas of impending danger; and
- c) the operator shall provide the DCA with sufficient technical justification confirming that the aircraft is fit for the intended flight or journey; or

- d) The DCA may issue a ferry flight permit to an aircraft that may not meet applicable airworthiness requirements, but is capable of safe flight, for the purpose of flying aircraft to a base where maintenance or alterations are to be performed. The permit includes the conditions and limitations for flight.
- e) the DCA shall require a properly executed maintenance endorsement in the aircraft permanent record by an authorized person or approved organization, stating that the subject aircraft has been inspected and found to be safe for the intended flight.
- f) The operator shall obtain all required over flight authorizations from countries to be over flown on flights outside Myanmar.
- g) the ferry flight permit is valid for the period specified in the permit.

SUBPART Q – RESERVED