DEPARTMENT OF CIVIL AVIATION

AIRWORTHINESS NOTICES

Initial Issue

Dated: 10th May 2010

Issued by: Department of Civil Aviation, Myanmar

AIRWORTHINESS NOTICES

RECORD OF REVISIONS					
Issue No.	**Date**	**Inserted by**	**Issue No.**	**Date**	**Inserted by**
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PREFRACE

Notices to Licensed Aircraft Engineers and to Owners of Civil Aircraft was first published in 1950 containing airworthiness related procedures, information and has reviewed, revised and amended up to now.

Over the past year DCA has stipulated Myanmar Civil Aviation Requirements related to airworthiness such as MCAR Part 1, Part 7, Part 21, Part M, Part 145, Part 66 and Part 47 respectively. Since most of the procedures are updated and included in MCARs most of the Notices to Licensed Aircraft Engineers and to Owners of Civil Aircraft have to be cancelled.

After reviewing all the Notices to Licensed Aircraft Engineers and to Owners of Civil Aircraft this Airworthiness Notices has been prepared for the use and guidance as to apply all the requirements specified for the maintenance, preventive maintenance, modifications of aircraft and aeronautical products and the general operating rules for maintaining all the Myanmar Registered Aircraft.

All aircraft operators, owners and aircraft maintenance Engineers of Myanmar Registered aircraft shall meet all the requirements specified in Myanmar Aircraft Rules, Myanmar Civil Aviation Requirements and in addition those in this Airworthiness Notices and which shall replace all Notices to Licensed Aircraft Engineers and to Owners of Civil Aircraft previously issued by DCA.

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

Enquires on the contents of this Airworthiness Notices should be addressed to__

Director (Airworthiness)
Airworthiness Division
Department of Civil Aviation
Yangon International Airport, Yangon 11021

Tel: 95 – 1 – 533 003
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Director General
Department of Civil Aviation
Republic of the Union of Myanmar

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FOREWORD

1. **General**

Base on the Myanmar Aircraft Rules, Myanmar Civil Aviation Requirements and International Standard and Recommended Practices, this Airworthiness Notices are issued by the Department of Civil Aviation (DCA) to circulate information of an administrative or technical nature to all concerned with the airworthiness of civil aircraft. It also specifies the detailed conditions to be met by the persons or organizations involved in such continuing airworthiness management of Myanmar Registered aircraft.

2. **Contents List**

The contents pages contain a list of all the current Airworthiness Notices. When a Notice becomes redundant it will be withdrawn and shown as "Cancelled" in current content lists.

3. **Arrangement**

3.1 Each Notice is identified by an alphabet and a number, followed by an issue number and an issue date.

3.2 When a procedure which has already been the subject of a Notice is changed, the particular Notice is re-issued under the same number but bearing a new issue number and issue date.

3.3 Material difference between issues is marked by marginal lines. All Notices are concerned with matters affecting the airworthiness of civil aircraft. The type of information contained therein is categorized as follows_

(a) **A – General Administration**

(b) **T – Procedure and Technical Matters directly involving airworthiness.**

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AIRCRAFT RADIO STATIONS

A. APPROVAL OF AIRCRAFT RADIO STATIONS

1. Approval must now be obtained from the Department of Civil Aviation for all aircraft radio stations.
   1.1 Aircraft radio stations will in future be treated on the same basis as all other aircraft equipment which affects the safety of the aircraft.
   1.2 Any radio which is required for the safe operation of the aircraft must be of an approved type, and the installation thereof must be approved by the Department of Civil Aviation. It must be maintained serviceable by a suitably licensed Radio Maintenance Engineer at all times.
   1.3 Any other radio which may be installed must either comply with the provisions of paragraph 1.2 above or must be rendered inoperative and so isolated as not to cause a hazard to the aircraft.

2. The Certificate of Airworthiness for the aircraft will be endorsed where applicable to show the types of radio equipment fitted, and will also state that the radio station complies with the Myanmar Aircraft Rules and relevant Myanmar Civil Aviation Requirements.

3. 3.1 The inspection carried out for the issue of a Certificate of Airworthiness will include inspection of the aircraft radio station and the Certificate of Airworthiness will not be issued until the conditions of paragraph 1 above have been complied with.
   3.2 The air test for approval of the radio station may take place during the test flight of the aircraft which is made prior to the issue of the Certificate of Airworthiness. The Radio Inspector nominated by the Department of Civil Aviation will, by co-operation with the aircraft owner, make the necessary arrangements for the test with the local ground radio station.
   3.3 The Radio Inspector will make periodic checks of all aircraft radio stations to ensure that the conditions of paragraph 1 above are complied with.

4. If it is wished to install on any aircraft any radio equipment not yet approved, application for approval of such equipment must be made to the Department of Civil Aviation. Application forms are available on request.

B. TESTING AND CERTIFICATION OF RADIO APPARATUS FITTED TO AIRCRAFT

1. The renewal of approval of a radio station in an aircraft is so closely related to the renewal of the Certificate of Airworthiness of an aircraft in which the radio station is installed that the two must be regarded as inseparable. Recipients of this Notice are therefore advised that the following procedure for obtaining renewal of approval of a radio station in an aircraft will come into force immediately.

2. Radio stations in aircraft fall into the same category as other items of equipment installed in aircraft, that is, if they are installed they must be in good working order. No Certificate of Airworthiness will therefore be renewed until a Certificate of Inspection (Form C.A. 167), issued by a radio inspector approved by the Department of Civil Aviation, has been signed. This certificate will indicate that the radio station has been installed to the Inspector's satisfaction and that ground tests have proved satisfactory.

3. The radio station should be air tested at the same time as the aircraft is air tested. However, until ground radio facilities are more readily available this test must be completed during the first flight after renewal of the Certificate of Airworthiness; the minimum distance at which the test may be completed shall be 100 miles from air traffic control tower. Upon completion of the tests the pilot in charge must report, by radio, the result to the Duty Controller and, upon completion of the flight, must certify the result on the Certificate of Test of Radio Station (Form C.A. 168) in duplicate, one copy to be forwarded to the Owner for inclusion in the records appertaining to the aircraft overhaul.

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AIRCRAFT LOADING INSTRUCTIONS

1. It is essential that information should be readily available to the pilot of an aircraft, sufficient to enable him to ensure before take-off that the aircraft is loaded within the all up weight and centre of gravity limitations specified on the certificate of airworthiness and that it will remain within these limitations throughout the flight.
2. For this purpose, the owner or hirer of an aircraft registered in the Union of Myanmar and employed for public transport shall obtain from the Department of Civil Aviation written approval of loading instructions for that aircraft.
3. The owner or hirer of the aircraft shall prepare in duplicate and submit to the Department of Civil Aviation, loading instructions containing the following information: -
   3.1 An identity or reference number, issue number and date.
   3.2. Description of the type and registration letters of all aircraft to which applicable.
   3.3. Instructions, compliance with which will ensure that, when the aircraft is loaded for flight:
      3.3.1. The centre of gravity of the aircraft does not fall outside the range specified in its certificate of airworthiness.
      3.3.2. The maximum weight and density of floor loading permissible in each passenger and freight compartment is not exceeded.
4. The instructions shall take into account the effect on the aircraft centre of gravity of -
   4.1. The retraction and extension of the landing gear.
   4.2. The order in which the fuel tanks are emptied during flight.
   4.3. Any other relevant factors.
5. Loading instructions may consist of -
   5.1 Written instructions,
   5.2 Diagrammatic instructions,
   5.3 Mechanical calculators, or
   5.4 Any combination of the above provided that they comply with the requirements of paragraphs 3 and 4 above.
6. The Department of Civil Aviation should be consulted if any assistance is required in preparing these instructions.

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APPROVAL FOR MODIFICATIONS OR REPAIRS

1. Applicability

1.1 This notice specifies the information and procedures for all Myanmar Registered aircraft to obtain the written approval of Modification or Repair of an aircraft or aircraft component and ensuring that the aircraft can be returned to service in accordance with approved data.

1.2 This notice is also intended to apply all types and masses of aircraft for which a type certificate or equivalent document has been issued and includes all components of the aircraft (such as engines, propellers and equipment).

1.3 No person may spate the Myanmar Registered aircraft or installs equipment or part of aircraft etc, with modification and repair which has not been got approval from Myanmar DCA.

2. Terminology

2.1 *Modification*; A Modification to an aeronautical product means a change to the type design which is not a repair.

2.1.1 *Major Modifications*. A major modification means a type design change not list in the aircraft, aircraft engine or propeller specifications that might appreciable affect the mass, balance, structural strength, performance, power plant operation, flight characteristics, noise, fuel venting or other characteristics affecting the airworthiness of the product, or that will be embodied in the product using non-standard practices.

2.1.2 *Minor Modification*; A minor modification means a modification other than a major modification.

2.2 *Repair*; A repair to an aeronautical product means a design change intended to restore it to an airworthy condition after it has been damage or subject to wear.

2.2.1 *Major Repair*; A major repair means a design change which is intended to restore an aeronautical product to an airworthy condition where the damage being repaired might appreciably affect the structure strength, performance, power plant operation, flight characteristics, or other qualities affecting airworthiness or environmental characteristics, or that will be embodied in the product using non-standard practices.

2.2.2 *Minor Repair*; A minor repair means a repair other than a major repair. Classification of Major and Minor modification / repair are described in Appendix to this notice.

3. **Approved Data**

Data that can be used to substantiate major repairs/major modifications, derived from (but not limited to) the following:-

- Type Certificate Data
- Supplemental Type Certificate (STC) data, provided that it specifically applies to the item being repaired/altered
- Airworthiness Directives (AD)
- Airframe, engine, propeller manufacturer's "DCA-approved" maintenance manuals or instructions.
- Component manufacturer's manuals or instructions, unless specifically not approved by the Director or resulting in an alternation to the airframe, engine, and/or propeller.
- Major Repair or Modification/Alternation form, when the specified data has been previously approved.
- Structure Repair Manual (SRM), only as a source of approved data for a major repair, when it is a State of Design-approved document. Data that is minimum content, which includes the location on board the aircraft where the contact details, at which operational management can be contacted without undue delay, are listed, contained in an SRM that is not approved, can be used on a case-by-case basis if prior DCA approval is granted for that repair.
- Repair data, issued by a DCA delegated engineering authority holder.
- Service bulletin and letters or similar documents which are specifically approved by the state of Manufacturer.
- FAA Advisory Circular 43-13-1, Acceptable Methods, Techniques, and Practices, Aircraft Inspection and Repair, as amended.

4. **Modifications not previously investigated and approved by Department of Civil Aviation**

4.1 If the modification/repair does not conform to details already shown in the Manufacturer's Manual, the applicant may be requested to show evidence that the Design office of the Manufacturer has approved the proposed modification/ repair and the following activities are also required to be performed by, or on behalf, the applicant;

4.1.1 At an early stage of the design of a modification brief particulars shall be provided to the Department of Civil Aviation, so that the modification may be classified. The information should include (this list is not necessarily exhaustive):

(a) Title, modification number, issue number, aircraft type and serial number.
(b) Applicant's name, company name and signature.
(c) Concise description of modification.
(d) Certification basis.

(e) List of removed equipment.
(f) List of installed equipment including equipment approval details.
(g) Details of standard parts such as relays, annunciators and switches used, and details of cable specifications.
(h) Equipment cooling requirements.
(i) Lighting requirements.
(j) Power supplies details of circuit breakers/fuses including ratings and locations.
(k) Modification effects on other systems including non radio.
(l) Compliance with aircraft certification basis and possible effect of modification on certification basis.
(m) Interference considerations electro-magnetic compatibility and high intensity radiated field.
(n) Drawing listing.
(o) Details of ground tests including compass swing, interference checks, bonding checks.
(p) Details and methods of compliance with relevant mandatory modifications and inspections as notified in Department of Civil Aviation Notices.
(q) Aerial position details, substantiation of position and mounting details.
(r) Details of placards.
(s) Details of required air tests.
(t) Limitations or special conditions or exemptions.
(u) Electrical load analysis.
(v) Details of weight change calculation and statement.
(w) Proposed changes to maintenance schedule/programme and details of any continued airworthiness maintenance required.
(x) Flight manual changes.
(y) Master Minimum Equipment List if applicable.

4.1.2 A modification will be classified as minor or major according to the nature and extent of the investigation in connection with its approval. Appendix to this notices contain guidance to assist in determining whether a particular modification is major or minor. Where the investigation indicates that the particulars given in the Certificate of Airworthiness, or associated documents, will need amendment (even though no physical change to the aircraft is involved) the Department of Civil Aviation may require Major Modification procedure to be followed where the amendments are significant.

(a) Modifications shall be classified as major or minor by:
(i) the Department of Civil Aviation; or

(ii) Design Organization of Type Certificate Holder (or) Design Organization approved by State of Design.

(iii) an appropriately approved design organization under a procedure agreed with the Department of Civil Aviation.

(b) Modification shall be approved by:

(i) the Department of Civil Aviation if the modification is classified as major;

(ii) either the Department of Civil Aviation or an appropriately approved design organization, if the modification is classified as minor.

4.1.3 All modifications, excepting those which are agreed by the Department of Civil Aviation to be of such a nature that airworthiness is not affected, shall be approved through the modification procedures of an appropriately approved Design organization, or in some circumstances, by the Department of Civil Aviation. The design organization approval holder shall ensure the aircraft is specifically guarded against dangerous features by complying with the appropriate airworthiness requirements. If not, the design approval of the modification may be withheld by the Department of Civil Aviation.

4.1.4 The applicant shall have sound knowledge of the design principles embodied in the aircraft type being modified or repaired. If not, the applicant shall apply through the medium of an organization approved by Department of Civil Aviation for the purpose that the proposed modification is such that the design of the aircraft, when modified, complies with:

Note: Application for major modification shall be supported by type certificate holder.

(a) The Requirements in force at the time the aircraft type was originally certificated. To comply with the approval basis recorded in the Type Certificate Data Sheet or equivalent document issued or accepted by the Department of Civil Aviation for the aeronautical product being modified or repaired would normally be deemed appropriate for:

(i) a change that the DCA finds not to be in the significant classification;

(ii) those areas, systems, components, equipment and appliances that are not affected by the change; or

(iii) those areas, systems, components, equipment and appliances that are affected by the change, provided the DCA finds that compliance with the latest amendment to the standard would be impractical or would not contribute materially to the level of safety; and

Note: In areas not affected by the change, it is important that the effects of the change are properly assessed. General characteristics of the aircraft, such as performance, handling qualities, emergency provisions, fire protection, structural integrity and crashworthiness must be considered, as well as the

physical aspects of systems, components, equipment and appliances.

(b) The applicant may be required to comply with the applicable design standards in effect on the date of application for any design change that the Department of Civil Aviation classifies as being significant.

Note: Examples of aircraft modifications that would normally be considered significant include change in the length of the fuselage or the number of flight crew. The introduction of a cargo door on an existing aircraft or the installation of skis or floats would also be regarded as significant changes, as would the replacement of reciprocating engines with the same number of turbo-propeller engines. On the other hand, the installation in an aircraft of an alternative engine, using the same principle of propulsion with minimal change in thrust, would be an example of a modification that would not usually be considered significant. Examples of avionic changes which typically would be regarded as being in the significant classification include a major flight deck upgrade, or installation of avionic equipment where operational credit is to be taken for its presence in the aircraft. A general avionic equipment change would not usually be considered significant, nor would the installation of new equipment such as a global positioning system for information purposes, where no credit is taken for it as an aid.

(c) The requirement for a new type certificate when there is a substantial change i.e. a product level design change which is so extensive that a substantially complete investigation of compliance with applicable requirements is required. A new design derived from an existing aeronautical product design and proposed either by the original manufacturer, or as a modification to the product by someone other than the original manufacturer, may therefore require a new Type Certificate.

Where the applicant elects to show compliance to a later amendment of the applicable design standard than that required by the Department of Civil Aviation, compliance is required with the entire amendment to the extent that it relates to the modification for which approval is sought. In particular, partial compliance with later amendments, resulting in an alleviation of standards without compliance with related compensatory amendments, will not be approved.

The applicant shall, when making these statements, further ensure that the modification is compatible with all defined aircraft build standards for which the modification is to be incorporated, or that any incompatibilities are identified.

4.1.5 All relevant design information, drawings and test reports shall be held at the disposal of the Department of Civil Aviation. No such design records shall be destroyed without authorization from the Department of Civil Aviation.

4.1.6 Each design drawing shall bear a descriptive title, drawing number, issue number and date of issue. All alterations to drawings shall be made in accordance with a

drawing amendment system such as will ensure amendment to design records.

4.1.7 Immediately an alteration is made to a drawing, whether the alteration is permanent or temporary, the drawing shall be identified with a new issue number and date. Where an alteration affects the interchangeability of any item in any way, a new part number shall be issued such as to avoid confusion with the original item.

4.1.8 Modification documents shall bear a modification reference number, issue number and date, a description of the modification, together with a list of parts and assemblies affected by the modification and, where necessary, drawings giving particulars of the parts before and after modification.

4.1.9 Where modifications affect unit interchangeability, or are of such an extent as to require amendment of approval documents or any documents associated with the C of A, a separate type or designation reference shall be allocated to the modified unit.

4.1.10 Where modifications affect or impinge upon the content of the Approved Maintenance Planning Document (MPD), Flight Manual, Weight & Balance Manual and Master Minimum Equipment List (MMEL), applicants will be required to ensure that notification of these effects is provided to the Department of Civil Aviation so that the necessary action can be taken to revise the relevant Manuals.

4.1.11 Where a flight test is necessary; it shall comply with the procedures set out in approved flight test schedule

4.1.12 Minor Modifications; When the design of a modification, classified as Minor, is undertaken by other than an appropriately Approved Design Organization the DCA will signify approval by forwarding a copy of DCA Form CA159 to the applicant.

5. Civil Modification Record

5.1 When the design of a modification is undertaken by an appropriately Approved Design Organization, a record of the following particulars shall be prepared and kept in a book or folder bearing the title "Civil Modification Record":

(a) Aircraft type.
(b) Title and brief description of modification.
(c) Modification reference number.
(d) Modification class.
(e) Airworthiness Approval Note number (in the case of a Major Modification).
(f) Reference to the associated Flight Manual amendment number.
(g) Reference to the associated Maintenance, Overhaul and Repair Manuals, Crew Manual and Maintenance Schedule amendment numbers.
(h) Reference to the associated MMEL revision (if appropriate).

5.2 The Civil Modification Record shall be made available to Department of Civil Aviation for examination

6. Modification Already Approved

Information concerning the conditions of acceptance of modifications previously approved by the Department of Civil Aviation will not be confidential to the applicant and may be made available by the Department of Civil Aviation on request. This does not apply to design information, including drawings and test reports; these are held, by the Department of Civil Aviation, as confidential documents.

7. Repairs

7.1 Where a repair is not specified in an Overhaul or Repair Manual applicable to the aircraft type concerned, then such a repair will require the approval of the Department of Civil Aviation and will be classified Minor or Major in the same manner as a modification and will be subject to the procedures laid down in paragraph 4 above.

7.2 Where a Repair Scheme is prepared by the manufacturer of the aircraft, engine or component this will be acceptable to the Department of Civil Aviation.

7.3 Where a Repair Scheme is prepared by an organization not approved by the Department of Civil Aviation, other than the manufacturer, then the approval of the Department of Civil Aviation must be sought.

8. Application Procedures

8.1 Instructions for completing CA Form 158

- Items 1&2 (Owner/Operator& Address); Enter the aircraft owner's complete name and address as shown on Certificate of Registration.
- Item 3 (Aircraft Type); Information to complete the "Make," "Model," and "Serial Number" will be found on the aircraft manufacturer's identification plate.
- Item 4&5 (Nationality& Registration Mark and C of A No.); are the same as shown on Certificate of Registration and Certificate of Airworthiness.
- Item 6 (Nature of Modification/Repair) (Unit Identification); The information under item 6 is used to identify the airframe, power-plant, propeller, or appliance repaired or altered. It is only necessary to complete the blocks for the unit repaired or altered.
- Item 7 (Classification); Enter a mark in the related box to indicate in accordance with MCAR Part 21and appendix of this notice.
- Item 8; This space is used by the applicant to sign and enter the authorized person name, organization and date of application.
- Item 9; For DCA use only
- Item 10 (Conformity Statement);

"A" Organization Address; Enter name of the air operator, repair station or manufacturer accomplishing the repair or modification. The organization should enter the name and address under which they do business.

"B" Kind of Licence/ Organization; Check the appropriate box to indicate the type of

organization who performed the work.

"C" Certificate/Licence Number; The certificate number issued by DCA to the operator / Air Operator.

"D" This space is used by the applicant to certify that the major repair/modification data conform to the applicable design standards established or adopted by DCA and compatible with all previous repair/ modification performed on the aircraft.

- Item 11 (Approval for Release to Service); This portion of the form is used to indicate approval or rejection of the repair or modification of the unit involved and to identify the DCA Authorized representative making the airworthiness inspection. Check the "approved" or "rejected" box to indicate the finding. Enter the date the finding was made. The authorized person who made the finding should sign the form and enter the designation.
- Item 12 Description of Work Accomplished; A clear, concise, and legible statement describing the work accomplished should be entered in item 10 on the reverse side of CA Form 158. It is important that the location of the repair or modification, relative to the aircraft or component, be described in this area.

  If additional space is needed to describe the repair or modification, attach sheets bearing the aircraft nationality and registration mark and the date work was completed.

  Showing weight and balance computations under this item are not required; however, it may be done. In all cases where weight and balance of the aircraft are affected, the changes should be entered in the aircraft weight and balance records with the date, signature, and reference to the work performed on the CA Form 158 that required the changes.

8.2 The following procedures will apply the design of a modification or repair of an aircraft or aircraft component;

(a) Initial application shall be made either-

(i) to obtain in duplicate CA Form158 from the Department of Civil Aviation, shall be fulfilled the Part I of the CA Form 158(item 1 through item 7) and returned to the DCA.

(ii) to be enclosed in payment of deposit on the fee chargeable, as amended.

(iii) to an authorized person in the manner required by that authorized person.

(iv) copies of such drawings, specifications and other data as are necessary to define the design or modification;

(b) If the Department of Civil Aviation accepts, the applicant shall fulfill and submit the CA Form 158(the rest items of CA Form including the final report) to the DCA in respect of a design shall be accompanied by one copy of such engineering reports as are necessary to establish proof of compliance with the applicable design standards or such other data acceptable to the DCA.

Appendix A/4

Criteria for the Classification of Major and Minor Modifications and Repairs

1. General

The following criteria outline the decisions needed in assessing a modification or repair as major or minor. For each issue, it must be determined whether or not the proposed change will have other than a negligible effect. The questions require "yes" or "no" responses. An affirmative answer to any individual question indicates that the modification or repair should be classified as major. The examples and tests listed are for illustration only and not intended to be all encompassing.

2. Criteria

2.1 General

Is the change being accomplished as an alternative means of compliance with an airworthiness directive or equivalent?

2.2 Mass and balance

(a) Does the change involve a revision in the approved mass limitations or center of gravity range limits?

(b) Does the change require the installation of ballast or use of other methods to maintain the center of gravity within the approved limits?

2.3 Operational characteristics

Does the change involve alterations to the configuration of the aircraft which may:

(a) increase drag;

(b) alter the thrust or power;

(c) affect stability or controllability;

(d) induce flutter or vibration; or

(e) alter the stalling characteristics to an extent which necessitates analysis or test?

2.4 Structural strength

(a) Does the change involve a principal component of the aircraft structure such as a frame, stringer, rib, spar or stressed skin?

(b) Does the change involve a structural element which is addressed as part of a damage tolerance of fatigue/fail-safe evaluation?

(c) Is a pressure vessel penetration or change involved?

(d) Does the change involve the installation of an item of mass necessitating structural re-evaluation?

(e) Does the change involve the installation or alteration of a containment or restraint system intended for the stowage of items of significant mass?

(f) Does the change involve repairs or modifications to the load-bearing structure of seats, harnesses or their means of attachment or any other occupant restraint equipment?

(g) Does the change involve the substitution of materials?

2.5 Power-plant operation

Does the change significantly affect the power-plant or propeller or their accessories?

2.6 Other qualities affecting airworthiness

(a) Does the change involve equipment for which there is no performance standard which has been approved or accepted by the airworthiness authority?

(b) Does the change affect the probability of failure conditions that could impair or preclude continued safe flight or landing?

(c) Does the change affect the pilot's visibility or impair the pilot's capability to control the aircraft?

(d) Does the change involve alterations to the interior arrangement or cabin materials?

(e) Does the change involve systems for cabin pressurization or the provision of breathing oxygen?

(f) Does the change involve flight controls or an autopilot?

(g) Does the change involve critical or essential components of the electrical system such as generators, alternators, inverters, batteries, distribution buses, or bus protection and control devices?

(h) Does the change affect instruments or indicators or their subsystems that provide navigation information?

(i) Does the change affect instruments, indicators or their subsystems that provide essential or critical information concerning the aircraft status?

(j) Does the change affect a regulated placard?

(k) Does the change affect any approved information contained in the flight manual or equivalent document?

(l) Does the change affect reliability characteristics?

2.7 Other qualities affecting environmental characteristics,

Does the change alter the aircraft noise, fuel venting or exhaust emission characteristics?

2.8 Non-standard practices,

Does the change involve practices or techniques which are novel or unproven in the proposed application?

A/4

CA158

Major Modification/ Repair Application &Approval *(contains 2 pages)*	**Myanmar** **DCA use only** **Office Ref;**

Part I (Initial Application)

1.Owner/Operator;	**2.Address;**	
3.Aircraft Type; **(Mark, Model, Serial No.)**	**4. Nationality &** **Registration Mark;**	**5.C of A No;**

6.Nature of Modification/Repair (Unit identification)

7.Classification; Major ☐

8. I hereby declared that the above items are true and correct to the best of my knowledge.

Authorized person Signature …….. Organization …….
Name ……. Date …….
Designation …….

For DCA Use Only

9. The above proposed modification/ repair and attachments hereto were inspected in manner prescribed by Requirement of DCA and is ☐ Accepted or ☐ Unaccepted

by DCA Authorized person signature ……..
Name ……..
Designation ……..
Date ……

Part II (Approval for Final Report)

(If the proposed modification/repair is accepted by DCA, the applicant shall submit the final compliance report to DCA for approval)

10.Comformity Statement

A.Organisation Address	**B**. Kind of Licence/ organization	**C.** Certificate/Licence No;
	Licenced (AME) B_1 ☐ B_2 ☐ or Other ……	For an AMO include the appropriate rating for the major repair or mod[n];
	Approved Maint; Organisation (AMO) ☐	
	Manufacturer ☐	

D. I certify that the repair/ modification made to the unit(s) identified in the item 6 above and described in the attachments hereto have been made in accordance with Myanmar Aircraft Rules Schedule III, section E and that the information furnished herein is true and correct to the best of my knowledge.

Authorized person …….. Organization …….
Signature …….. Date …….

Part III For DCA Used Only

11. Approval for Released to Service

Pursuant to the authority given persons specified below the unit(s) identified in the item 6 was inspected in the manner prescribed by the DCA and is ☐ Approved ☐ Rejected

by DCA Authorized person ;Signature……. Designation……
Name …….. Date ……..

A/4

NOTICE

Weight and balance or operating limitation changes shall be entered in the appropriate aircraft record. A modification must be compatible with all previous modifications to assure continued conformity with the applicable airworthiness requirements.

12. Description of Work Accomplished

(If more space is required, attach additional sheets. Identify each page with aircraft nationality and registration mark and date work completed)

A/4

CA159

Minor Modification / Repair Application & Approval		**Myanmar** **DCA use only** **Office Ref;**
1.Owner/Operator;	**2.Address;**	
3.Aircraft Type; **(Mark, Model, Serial No.)**	**4. Nationality &** **Registration Mark;**	**5.C of A No;**
6.Nature of Modification/Repair (Unit identification)		
7.Classified as; ☐ Minor		

8.Comformity Statement

A. Organisation Address	**B**. Kind of Licence/ organisation	**C.** Certificate/Licence No;
	Licenced (AME) B_1 ☐ B_2 ☐ or Other ……	For an AMO include the appropriate rating for the major repair or mod[n];
	Approved Maint; Organization (AMO) ☐	
	Manufacturer ☐	

D. I certify that the repair/ modification made to the unit(s) identified in the item 6 above and described in the attachments hereto have been made in accordance with Myanmar Aircraft Rules Schedule III, section E and that the information furnished herein is true and correct to the best of my knowledge.

Authorized person …….. Organization …….

Signature …….. Date …….

For DCA Used Only

9. Approval for Released to Service

Pursuant to the authority given persons specified below the unit(s) identified in the item 6 was inspected in the manner prescribed by the DCA and is ☐ Approved ☐ Rejected

by DCA Authorized person ; Signature ……..
Name ……..
Designation ……
Date ……

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A/5

FIRE PRECAUTION REQUIREMENTS

1. EQUIPMENT

For the fire precaution, it is necessary for all the Myanmar Registered aircraft to comply with the followings_

1.1 Each engine, auxiliary power unit, fuel burning heater, or other item of combustion equipment that is intended for operation in flight must be isolated from the rest of the airplane by means of firewalls or shrouds or by other equivalent means. Each firewall and shroud must-

1.1.1 Be so made that no hazardous quantity of air, fluids or flame can pass from the engine compartment to the other parts of the airplane.

1.1.2 Have all openings in the firewall or shroud sealed with close-fitting fireproof grommets, bushings or firewall fittings.

1.1.3 Be made of fireproof material: and

1.1.4 Be protected against corrosion.

1.2 Designated fire zones must be protected from fire. Designated fire zones are-

1.2.1 Engine accessory sections.

1.2.2 Installations where no isolation is provided between the engine and accessory compartment, and

1.2.3 Areas that contain auxiliary power units, fuel-burning heaters and other combustion equipment.

1.3 No tanks or reservoirs that are a part of a system containing flammable fluids or gas may be located in designated fire zones, except where the fluid contained the design of the system, the materials used in the tank, the shutoff means and the connections, lines and controls provide equivalent safety.

1.4 At least one-half inch of clear airspace must be provided between any tank or reservoir and firewall or shroud isolating a designated fire zone.

1.5 each engine must have a means for shutting off or otherwise preventing hazardous amounts of fuel, oil deicer and other flammable fluid from flowing into any designated fire zones. Shut off means must be located outside of designated fire zones.

1.6 Each line and its fittings, that is located in a designated fire zone, if it carries flammable fluids or gases under pressure or is attached directly to the engine or is subject to relative motion between components must be flexible and fire resistance.

1.7 Fire-extinguishing systems must be provided to serve all designated fire zones.

1.8 Enough quick-acting fire detectors must be provided in each designated fire zone to assure the detection at any fire that may occur in that zone.

2. CABIN - INTERIORS

The following requirements shall be complied with for the Aerial Work and Transport category aircraft.

2.1 Materials used for the crew or passengers must be at least flash resistant.

2.2 The wall and ceiling linings and the covering of upholstering, floors and furnishings must be flame resistant.

2.3 Each compartment must be designed so that, when used for storing cargo or baggage, it meets the following requirements.

2.3.1 No compartment may include controls, wiring, lines equipment, or accessories that would upon damage or failure, affect the safe operation of the airplane unless the item is adequately shield, isolated or otherwise protected so that it cannot be damaged by movement of cargo in the compartment and so that damage to or failure of the item would not create a fire hazard in the compartment.

2.3.2 Cargo or baggage may not interfere with the functioning of the fire protective features of the compartment.

2.3.3 Materials used in the construction of the compartments, including tie-down equipment, must be at least flame resistant.

2.3.4 There must be a hand fire extinguisher available for each compartment.

3. TOILETS

The following requirements shall be complied with for the Transport category aircraft-

3.1 Inspection

3.1.1 The following inspection shall be carried out at appropriate interval and included in the maintenance schedule using the normal procedures;

(a) All receptacles shall be inspected to ascertain that all entry flaps or doors till operate, fit, seal and latch correctly.

(b) Any defects revealed by the inspection of (a) are corrected.

3.2 Smoking shall not be permitted in toilet compartments.

3.3 'No Smoking' bilingual placards and ashtrays are required both inside and outside these compartments.

A/6

ENGINE STARTING AND GROUND RUNNING PROCEDURE

As a result of investigation into accidents occurring during the starting and subsequent ground running of aero-engines, it is considered necessary that Operators of Civil Aircraft in the Union of Myanmar should promulgate detailed instructions on the starting and running of aero-engines installed in airframes. These instructions should include precautions to be taken both by personnel and to prevent damage to engines.

The following details are given as a guide to Operators for promulgating the correct procedure-

1. ***Persons Qualified to Start and/or Run Aero-Engines.***
   Licensed aircraft engineers with category "C" endorsed for the particular type of engine; pilots with licenses endorsed for the particular type of aircraft.
2. ***Positioning of Aircraft***
   Aircraft should be placed on hard ground and into wind, well clear of any buildings or other obstructions, including other aircraft.
3. ***Condition of Aircraft***
   A procedure should be introduced whereby a licensed engineer certifies that the aircraft, aero-engines, and their accessories are safe for engine starting or ground running; this has particular reference to loose cowlings and accessories normally fitted to an aero-engine. He will also ensure that adequate fuel and oil has been provided for the proposed run.
4. ***Safety Precautions***
   These should include the provision of sign boars and/or barriers positioned forward of the propellers warning ground staff of danger. Provision should also be made for two mechanics to be on duty with adequate fire extinguishing apparatus in the immediate vicinity of the aircraft. These mechanics should receive training in the proper use of fire extinguishers and should also be instructed in the best method of combating and engine fires. Where electrical starters are fitted, provision should be made for engine starting from an external electrical supply. Where it is necessary to ground run and aero-engine at night, adequate artificial lighting should be provided in the immediate vicinity of the aircraft. Where an engine installation incorporates a fire extinguisher system, this system should be serviceable. Operators should submit their proposed procedure to the Department of Civil Aviation, Myanmar.

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WEIGHING OF AIRCRAFT

1. DEFINITIONS

The following is a list of definitions of the terms used in this Notice:

a) Basic Equipment – is the un-consumable fluids (e.g. coolant and hydraulic fluid) and equipment which is common to all roles for which the operator intends to use the aircraft.

b) Basic Weight – is the weight of the aircraft and all its Basic Equipment, plus that of the declared quantity of unusable fuel and unusable oil. In the case of turbine-engined aircraft and aircraft, the Maximum Total Weight Authorized (MTWA) of which does not exceed 5700 kg (12500 lb), it may also include the weight of usable oil.

c) Variable Load – is the weight of the crew and of items such as crew baggage, removable units, and other equipment, the carriage of which depends upon the role for which the operator intends to use the aircraft for a particular flight.

d) Disposable Load – is the weight of all persons (e.g. passengers) and items of load, including fuel and other consumable fluids carried in the aircraft, other than the Basic Equipment and Variable Load.

e) Maximum Total Weight Authorized (MTWA) – is the Maximum Total Weight Authorized for the aircraft and its contents, at which the aircraft may take off anywhere in the world, in the most favourable circumstances in accordance with the Flight Manual.

2. WEIGHING INTERVALS

2.1. All aircraft on the Civil Register of the Union of Myanmar shall be weighed when they are initially issued with a Certificate of Airworthiness.

2.2. Aircraft, the Maximum Total Weight Authorized of 5700 kg and less, shall be reweighed at such time as the Department of Civil Aviation may require.

Note. Exceptions to this rule may only be made if special application is made to the Director General of Civil Aviation, if it can be shown that no substantial change has taken place to the aircraft since it was last weighed either in this country or abroad.

2.3. Aircraft, the Maximum Total Weight Authorized of which exceeds 5700 kg, shall be reweighed at intervals not exceeding five years, and at such times as the Department of Civil Aviation may require or at intervals specified in the Approved Maintenance Schedule or Approved Maintenance Program for that particular aircraft.

3. WEIGHING PROCEDURE

3.1. Aircraft weighing shall be carried out under the control of a person authorized by an Approved Maintenance Organization or approved firm approved by the Department of Civil Aviation, Myanmar.

Note. Authorized person should have been adequately trained for the weighing purpose and has had adequate recent practical experience of the duties to be performed.

3.2. Each weighing must be supervised by the Chief Inspector or Quality Manager of the Approved Maintenance Organization or an approved firm.

3.3. Aircraft shall be weighed on scales of a type approved for the purpose by officer of the Department of Civil Aviation, Myanmar.

3.4. Each weighing scale shall have been calibrated by the manufacturer or manufacturer's authorized firm within a period of one year prior to weighing any aircraft.

3.5. Sufficient personnel and equipment, including scales shall be provided to satisfactorily carry out the weighing.

3.6. The basic weight and basic weight centre-of-gravity position shall be determined from the results of two consecutive and independent weighing. The load shall be completely removed from the scales between each weighing.

3.7. If the difference between the first two weighing exceeds 0.2 percent of the mean weight or 10 kg whichever is the greater, further weighing shall be performed until the results of two consecutive and independent weighing agree within that tolerance.

3.8. The basic weight and basic weight centre-of-gravity position shall be certified as corrected by an authorized person of an Approved Maintenance Organization or an approved firm. Weighing details and the determination of the basic weight and basic weight centre-of-gravity position shall be entered in Aircraft Weighing Report.

3.9. When the aircraft is weighed, the condition of the aircraft (i.e. the equipment and other items of load such as fluids in tanks) shall be recorded and a list of equipment included in the basic weight shall be prepared for each aircraft. The equipment installed on the aircraft should not differ from that included in the declared list of Basic Equipment associated with the Weight and Centre-of-Gravity Schedule or the Loading and Distribution Schedule as appropriate.

4. WEIGHING REPORT AND WEIGHT AND CENTRE-OF-GRAVITY SCHEDULE

The person who prepare or check or approve the Weight and Centre-of-Gravity Schedule shall have thoroughly read and adequately understood the **Chapter 8 Leaflet 8-10, book 2** of Weight and Balance of Aircraft, of British Civil Aircraft Airworthiness Information and Procedures (CAAIP latest edition).

4.1. For each weighing of aircraft, Weighing Report (including weighing method, weighing data, calculation and certificate) and Weight and Centre-of-Gravity Schedule shall be submitted to Department of Civil Aviation, Myanmar for reviewing whether it is acceptable or not.

4.2. Each Weight and Centre-of-Gravity Schedule shall include the following information:-

(i) The nationality and registration of the aircraft.

(ii) The Basic Weight and corresponding Centre-of-Gravity position.

(iii) A list of the accessories, instrument, equipment and apparatus (including radio apparatus) and other parts regarded as basic equipment which have been included in the basic weight.

4.3. A copy of each issue of the Schedule shall be retained by the Operator, and where the Schedule is re-issued the previous issue shall be retained with the aircraft records.

4.4. For aircraft the Maximum Total Weight Authorized of 5700 kg and less, a copy of the Schedule shall be included in the Flight Manual, if a Flight Manual is applicable, and/or displayed in a prominent position inside the aircraft.

4.5. For aircraft the Maximum Total Weight Authorized of which exceeds 5700 kg, a copy of the Schedule shall be included in the Flight Manual, and in the Weight and Balance Manual of specific aircraft.

4.6. Operators shall issue a revised Weight and Centre-of-Gravity Schedule whenever the alteration is made affecting the weight of the aircraft empty or the corresponding centre-of-gravity position.

4.7. If the aircraft has not been re-weighed, the revised Weight and Centre-of-Gravity Schedule shall contain a statement that calculations have been based on the last Weight and Balance Report, or other information, and the known weight and Centre-of-Gravity changes.

4.8. Whenever an aircraft is re-weighed, the particulars entered in the weight and centre of gravity schedule shall be checked, and if any discrepancies are disclosed, the schedule shall be amended or replaced by a revised schedule.

4.9. The weight and Centre of Gravity Schedule shall be worded in the form as shown in Appendix of this notice.

Appendix A/7

WEIGHT AND CENTRE-OF-GRAVITY SCHEDULE

PRODUCE BY	:
AIRCRAFT DESIGNATION	:
NATIONALITY & REGISTRATION MARK	:
CONSTRUCTOR	:
CONSTRUCTOR'S SERIAL NO.	:
MAXIMUM TOTAL WEIGHT AUTHORIZED	:
CENTRE-OF-GRAVITY LIMITS	:

Refer to Flight Manual Reference Number ……..

PART-A BASIC WEIGHT

1.	The Basic Weight of the aircraft as Calculated from Weighing Report No……Dated……..is	:	(lbs) or (kg)
2.	The centre of gravity of the aircraft in the same condition at this weight and with the landing gear extended is (aft of the datum)	:	(in) or (m)
3.	The total moment about the datum in this condition	:	lb in / 1000 or (kg m)

Note: The datum is at ……
This is the datum defined in the Flight Manual.
All lever arms are distances in inches / meters aft of the datum.

4. The Basic Weight includes the weight of unusable fuel, the weight of unusable oil and the weight of the following items which comprise the List of Basic Equipment.

Item	Weight (lb or kg)	Lever Arm (in or m)	Moment (lb in/1000 or kg m)
……	……	……..	……
……	……	……..	……
……	……	……..	……
……	……	……..	……
……	……	……..	……
……	……	……..	……
……	……	……..	……

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PART-B VARIABLE LOAD

The weight, lever arm and moment of the Variable Loads are shown below. The Variable Loads depends upon the equipment carried for the particular role.

Item	Weight (lb or kg)	Lever Arm (in or m)	Moment (lb in/1000 or kg m)
Pilot	……	……..	…….
Row 1 passenger seats	……	……..	…….
Table	……	……..	…….
Life Jackets	……	……..	…….
	……	…… ……..	…….
	……	…… ……..	…….
	……	…… ……..	…….

This Schedule was prepared (date)……and supersedes all previous issues.

Signed ……**Chief Inspector**
or
Quality Manager

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PURCHASE OF AIRCRAFT STORES

1. Applicability

This Notice applies to components or parts intended to be installed on Civil Aircraft registered in Myanmar.

2. Definition

For the purpose of this Notice the following definitions apply_

a) **Aircraft Stores** means aircraft, aircraft engines, propellers, instruments, electrical & electronic components, safety or emergency equipments and accessories.

b) **Standard Parts** are currently defined as those parts identified as such by the Type Certificate (TC) holder or parts made to a national or international specification, unless the part / parts are the subject of specific product Approvals.

3. Authorized Release Document

3.1 This document is required for any aircraft component, which is to be installed on an aircraft, except that it is not required for standard parts.

3.2 Where the equipment being purchased was not manufactured in the country from which the purchase is made, then the DCA must be satisfied that the equipment was certified by the Inspection Authority of the country of origin and that it has been adequately maintained in a serviceable condition during transit through the country from which it is purchased.

3.3 DCA recognizes the Authorized Release Document when received from a company approved by National Airworthiness Authority of one of the following countries _

a) the Federal Aviation Administration of the USA;
b) the Civil Aviation Authority of the United Kingdom;
c) the Direction Generale de l'Aviation Civile of France;
d) the Civil Aviation Authority of the Kingdom of Netherlands;
e) the state of Original Equipment Manufacturer (OEM);

3.4 When received from a company Approved by the CAA (UK) or other National Aviation Authority (NAA) listed in the EASA Administrative and Guidance material, EASA Part-21, the Authorized Release Document will be EASA Form-1, regarding Material Manufacturer, Process Company, Test house, Material Distributor or Fastener Distributor, the Authorized Release Document will be an Approved Certificate issued under the terms of that Approval.

3.5 National Aviation Authority (NAA) Form-1 can only be issued by a part 148 certificated manufacturing organizations, in the case of newly manufactured parts, and by a part 145 certificated maintenance organization, in the case of used parts. If the export of used aircraft components was contemplated then the advice of a part 145 certificated maintenance organization should be sought. The conformity of the component to the approved type design and the fitness for return to service must be able to be determined. If the component is not newly overhauled full details of the aircraft it was last installed on, and the reason for removal, will be required. If the component has a finite fatigue life specified then the complete service history of the component will be required including the original delivery certification documentation.

4. Stores Purchased from Elsewhere

Where stores are purchase from the countries other than those mentioned above, the certification of the Airworthiness Standard of the item issued by the firm or organization approved by the National Airworthiness Authority and approved or recognized by the Original Equipment Manufacturer for manufacture, overhaul or stocking and distribution.

5. Problem of Unapproved Parts

5.1 For the purpose of this notice an unapproved part is a part or material intended for installation on a type certified product aircraft, which has been neither manufactured according to approved procedures, nor conforms to an approved type design or it fails to conform to declared specification or accepted standard parts.

5.2. Unapproved parts include, but are not limited_

a) Parts specified in the illustrated parts catalogues (IPC) of a type certificated aircraft, but which have been manufactured, reclaimed or reworked by an unauthorized source and provided with documents which indicate falsely that the part(s) are genuine and conform to the approved type design or meet a particular industry standard and are offered for use as conforming with an aircraft manufactures authorized IPC.

b) Parts shipped directly to users by manufactures, supplier, or distributors who do not themselves hold appropriate production approvals for the parts, and have not been authorized to make direct shipments to users or stockiest, by the type certificate holder, who alone has production approval.

c) Parts which have not been maintained, overhauled or repaired in accordance with requirement of approved airworthiness data and/or statutory requirement or that have been maintained overhauled or repaired by persons not authorized to perform and certify these functions.

6. Certifying Person and User Responsibility

6.1 The certifying person can be either a person authorized in accordance with the organization's Exposition Manual of the Approved organization, or an appropriately licensed Engineer, who issues the Certificate of Release to Service for the installation of an aircraft part onto an aircraft, its engine(s), propeller(s) or equipments.

6.2 The user of an aircraft part is responsible for ensuring that the part is serviceable and conforms to the standard determined by the appropriate type certificate holder as being suitable for the intended application. In order to discharge this responsibility to the satisfaction of the DCA, the user must, when obtaining an aeronautical part from a supplier_

a) Ensure that the purchase order contains accurate definition of the aircraft parts and full details of the quality control and certification requirements to be met by the supplier in satisfying the order.

b) Take all necessary steps to verify that the supplier is meeting the requirements of the purchase order.

7. Non-Compliance

Aircraft store or Equipment which does not comply with any of the above procedure shall not be installed on the Civil Aircraft registered in Myanmar. Should any such stores or equipment be installed on an aircraft, then the Certificate of Airworthiness of that aircraft will considered to be invalidated.

A/9

IMPORTATION OF AIRCRAFT INTO MYANMAR

1. **Purpose**

This notice provides information on the Department of Civil Aviation's Objectives, Regulations, and General Requirements for Myanmar Registration and Airworthiness certification or acceptance of civil aeronautical products imported to Myanmar.

2. Responsibilities of Importer

2.1 Owners or intending Owners/ Operator of aircraft are hereby notified that Technical Documents and Engineering and Performance Data submitted to the DCA in support of the importation, operation and maintenance of aircraft on, or intended to be on the Myanmar Register of Aircraft will be *acceptable only if the information contained therein is expressed in the English language and in English terms and units.* Unless translated by an agency or person fully competent on technical terminology, such documents when written in a foreign language are susceptible to errors in translation which may lead to undesirable consequences in the later operation or maintenance of the equipment.

2.2 In the case of legal documents such as Type Certificate associated with related reports, Certificates of Airworthiness, Licences and Authorization, correct translation into English must be authenticated by the appropriate authority of the country of origin.

2.3 The importer of any aircraft into Myanmar shall, before arrival of the said aircraft, submit one copy of all Manufacturer's updated Publications pertaining to the Operation, Maintenance, Overhaul and Repair of the aircraft including Engines, Propellers and Equipment to DCA Airworthiness Division. The importer shall make further arrangement for the supply of amendments to the above and modification and service bulletins as and when published.

2.4 In the case of Commercial Transport aircraft for hire and reward, before certification, the owner will be obliged to provide the Airworthiness Division with full operational details. The obligation contained in paragraph 2.3, shall cease only when the aircraft is transferred to another owner resident on the Myanmar in which case the new owner shall be responsible for the continuation of supply of the technical publications and bulletins detailed. The obligation shall cease only when the aircraft has been remove from the Register of Civil Aircraft.

2.5 Prior to issue of a C of R and C of A for certain foreign manufactured aeroplanes which is the first of its type and model in excess of MTOW 5700 kg or a multi engine Rotor craft or an Airship or Balloon, DCA may decide that a technical team will visit the manufacturer or the last owner to evaluate the aircraft for compliance with Myanmar Requirements. Additionally, such an evaluation may also be required of other aircraft which have unusual design features or which are manufactured in a country whose aircraft have not previously been exported to Myanmar. The applicant will be required to meet the costs of sending Departmental personnel to foreign countries for this

purpose.

3. **Airworthiness Directives (AD)** are issued by the State of Design and DCA. An AD is issued when an unsafe condition has been found to exist in a particular aircraft, aircraft engine, propeller, or appliance, and that condition is likely to exist or develop in other aircraft, aircraft engines, propellers, or appliances of the same type design. Once an AD is issued, no person may operate a product to which the AD applies except in accordance with the requirement of that AD**.**
4. DCA does not issue airworthiness certificates nor grant airworthiness approvals, for aeronautical products which do not have a FAA or a EASA Type Certificate or STC as described in Annex to this notice.
5. DCA General Requirements for Registration and Airworthiness Certifications of aircraft to be imported into Myanmar are stated in the Annex to this notice.
6. The owner or operator may not operate improved aircraft intends to be used under Myanmar AOC unless a qualified person, who shall have authorization to person maintenance on relevant specific aircraft type, determines that the aircraft complies with the Airworthiness Standards.
7. When the aircraft has performed maintenance outside of Myanmar and the aircraft is not readily available for inspection, a qualified authorized person of Myanmar DCA approved Maintenance Organization shall determine the airworthiness of the aircraft.

A/9

Annex to Notice A/9

DCA General Requirements for Registration and Airworthiness Certifications of aircraft to be imported into Myanmar

(A) Requirements for issue of Myanmar Certificate of Registration.

The following documents are to be furnished to DCA _

1. Completed CA Form 56, application for Certificate of registration of aircraft signed by authorized person of Owner /Operator of aircraft, *together with appropriate fees.*
2. Document relating to deregistration of the aircraft from previous state of Registry.
3. Legal document relating to previous ownership of the aircraft.
4. Document relating to change of ownership, purchase contract etc.
5. Certificate signed by a Customs Officer that the customs duty eligible in respect of that aircraft has been paid.

(B) Requirements for issue of Myanmar Certificate of Airworthiness.

1. **Aircraft Identification.** Prior to the issuance of Myanmar airworthiness certificate the aircraft must have an identification plate and marking of aircraft engines and propellers.
2. **Noise and Emissions Requirements.** An aircraft must meet the noise standards stated in current Airworthiness Notice A/21, and the emissions standards must also be met to be eligible for Myanmar airworthiness certificate.
3. **Export Certifications.** An export certificate of airworthiness which contains the certification statement noted on the corresponding type certificate data sheet or a certification that the aircraft meets approved Type Design and is in a condition for safe operation. DCA expects that the aircraft will have been fully assembled and flight-tested and the engines and propellers will be performance tested, before the exporting authority, export certificate is issued.
4. **Design Standard for the Myanmar Certificate of Airworthiness**. The applicant presents evidence to the DCA to satisfy that the Aircraft manufactured/ imported meet the approved Airworthiness Standards in respect of design, method of construction, equipment and performance etc. In this regard the Design Standards specified in JAR 23 and JAR 25 of Airworthiness Authorities (JAA/EASA) of Europe and FAR 23 and FAR 25 of Federal Aviation Administration (FAA) of USA, is generally acceptable for Light and Transport Category aircraft. For Helicopters, Design Standards followed by FAA as specified FAR 27 & FAR 29 are acceptable for Light and Transport Category helicopters, respectively.

5. **CA Forms.** The following completed CA Forms are to be furnished to DCA_
   (i) CA Form 62 - application for issue of Certificate of Airworthiness, *together with appropriate fees.* (or)
   CA Form 63 - application for validation of Certificate of Airworthiness for an aircraft of foreign construction, *together with appropriate fees. (If the previous C of A is valid)*
   (ii)CA Form 175 - Aircraft Inspection Record.
6. **Survey.** The aircraft shall be made available to DCA for survey at suitable time and for such period as necessary prior to certification and the aircraft shall be prepared to permit access to its structure control system, Equipments and installations and such checks and tests as required by DCA shall be preformed.
7. **DCA inspections of a used aircraft** may be conducted to determine that changes or modifications have not been made and that the condition of the aircraft has not deteriorated subsequent to export certification by the exporting CAA. If the aircraft has been disassembled and reassembled subsequent to export certification by the exporting authority, flight testing may be required prior to issuance of Myanmar airworthiness certificate.
8. **Logbooks and Maintenance Records.** Aircraft must be accompanied by the necessary logbooks, maintenance and alteration records to determine the status of required inspections, life limits, etc.
9. **Airworthiness Directives.** Maintenance records must show that the aircraft complies with all Mandatory Modification and ADs concern. The applicant should responsible to ensure that all applicable ADs are complied with and all major repairs and modifications carried out prior to importation are in accordance with approved data.
10. **Service History.**
    (i) Used aircraft shall have a service history and which should be checked in prior and found to be satisfactory by Inspection/ Quality Department of Operator.
    (ii) DCA may accept the history of used aircraft base on comments or recommendations by Inspection/ Quality Department of Operator.
    (iii)The following minimum information shall be supplied in respect of each used aircraft for which Certificate of Airworthiness applied.
       a) the total airframe hours since manufacture.
       b) the total number of landings.
       c) the total number of cabin pressurization cycles and the pressure differentials to which the cabin has been subjected during its life.
       d) a statement describing the past operational uses of the aircraft including any special mission role.
       e) a record of all major structural component changes such as those of wings, tail-plane etc. and the individual history of such components.
       f) a records of all time controlled items.
       g) a record of last overhaul or major check carried out.

h) a record of all major repairs, including the nature of the damage in each case, e.g. corrosion, cracking, accidental damage, etc.

i) accident clear statement by previous owner or a record of aircraft accident (*if any*)

11. **Aircraft Radio Station for the Public Transport Category**

(i) The aircraft radio station shall comply with specification acceptable to DCA.

(ii) Tests shall be performed to demonstrate the satisfactory function of all radio equipment.

(iii) Particulars of aircraft radio station and aircraft radio station approval certificate issued by the competent authority of State of Registry.

12. **Documents**

The following documents shall be produced thoroughly checked by Inspection / Quality Department of Operator and furnished to the DCA.

(i) Aircraft delivery document or equivalent.

(ii) Log books or equivalent records for the aircraft, engines and propellers.

(iii) One copy of approved Flight Manual for individual aircraft.

(iv) Weight and Balance record.

(v) Aircraft Acceptance Flight Test Report.

(vi) C of A, C of R and other related documents issued by the competent authority of State of Registry.

(vii) In the case of an aircraft which is the first of its type and model to be imported to Myanmar, a type record or stress analysis summary showing, for all of the primary structure, design loads, dimensions, materials, strength, margins of safety, or static strength test reports when type approval was granted on the basis of such tests.

13. **Manuals and Technical Data. U**pdated manuals and technical data related to imported aircraft shall be supplied to DCA, such as; Manufacturer's Approved Maintenance Planning Document (or) Schedule; Maintenance Manual; Maintenance Data; Overhaul Manual; Structural Repair Manual; Illustrated Parts Catalog; Wiring Diagram Manual; Engine Maintenance Manual; Engine Part Catalog; Engine Specification; Electronic Equipment Manuals; and any other technical manuals; … pertaining to this type of aircraft.

(c) Special Requirements

No person may operate an aircraft in commercial air transport operations unless it is equipped with a high frequency (HF) communication system.

A/10

RENEWAL OF CERTIFICATE OF AIRWORTHINESS

1. **APPLICATION** - From C.A.75, copies of which may be obtained from the Department of Civil Aviation shall be completed and returned to the Department *not later than one month prior to* the date of expiry of the Certificate of Airworthiness. The application shall be *accompanied by the appropriate fees,* particulars of which are given on the form.

2. **GENERAL**

2.1 The general condition of the aircraft shall be satisfactory to the Department of Civil Aviation. The aircraft shall be made available so that the Department may carry out such check inspection, as it considers necessary. When made ready for inspection, the aircraft shall be in a clean condition and shall be suitably prepared to allow access to the structure, control systems, equipment and installations. The Certificate of Airworthiness and associated documents should also be available.

2.2 All relevant inspection and maintenance records shall be made available to the Department for examination.

2.3 The applicant's Approved Inspection Organization or any appropriately licensed aircraft engineer shall inspect the aircraft and shall prepare an Inspection Report detailing all work required to be undertaken to maintain the airworthiness of the aircraft. When an inspection is carried out on transport or aerial work category aircraft, specifically for the purpose of the renewal recommendation of the Certificate of Airworthiness, the inspection shall be carried out at the premises Approved for the purpose and a report and renewal recommendation shall be prepared by an appropriately Approved Organization. A copy of report detailing the work required shall be sent to the Department of Civil Aviation. In preparing this report due regard shall be paid to: -

(i) Work already certified in the log books and maintenance record of the aircraft.

(ii) The periods between overhaul which are prescribed or approved by the Department with respect to the aircraft and its parts.

(iii) Such other requirements or instructions (relating to the maintenance of airworthiness) which are prescribed or approved by the Department with respect to the aircraft and its parts.

NOTE: In the case of the renewal being completed abroad at a place where an organization is not specifically approved for the purpose, the overseas organization shall be one that is acceptable to the Authority. The renewal process is to be predicated upon an inspection report prepared by an authorized person or an appropriately licensed aircraft maintenance engineer. A copy of the report detailing the work required shall be sent to the DCA. In such cases, the Authority may decide that surveyor involvement is necessary.

2.4 A copy of the Inspection Report referred to in paragraph (2.3) shall be furnished to the Director, Airworthiness Division for examination and such additional work shall be carried out as may be decided by the Department.

2.5 All work undertaken to maintain the airworthiness of the aircraft shall be carried out under the supervision of an Inspection Organization approved by the Department for the purpose or under the supervision of any appropriately licensed aircraft engineer. Before the work is finally certified, the Chief Inspector/Quality Manager of the Approved Organization or the licensed engineer shall satisfy himself that the work has been carried out, inspected and where necessary tested in conformity with the specifications, drawings and instructions relating to the approved design and with the requirements for the continuing airworthiness of the aircraft and its equipment.

2.6 A copy of an inspection report giving brief detail of the work done since the last renewal of the Certificate of Airworthiness. This report shall be submitted with C.A.175 to the Department of Civil Aviation and shall include the following Records:-

(i) A record of the work accomplished since the last renewal of Certificate.

(ii) A record of details of major checks carried out since the last renewal of Certificate.

(iii) A record of airframe, engine and propeller flying hours as follow;

- the total flying hours and cycles for the airframe since new and the flying hours since the last renewal.
- the total flying hours and cycles for the engine(s) since new and the flying hours since the last overhaul.
- the total flying hours for the propeller(s) since new and the flying hours since the last overhaul.

(iv) A record showing compliance with AD, SB, and modifications.

(v) A record of major component change.

2.7 Re-weighing of aircraft at the time of renewal of the Certificate of Airworthiness will be dependent on the date of the last weighing, and on the history of the aircraft.

(i) Aircraft of more than 5700 kg MTWA shall be re-weighed within two years after the date of manufacture, and subsequent check weighing shall be carried out at intervals not exceeding intervals mentioned in their Approved Maintenance Program/Schedule, and at such other times as the DCA may require.

(ii) Aircraft of 5700 kg MTWA or less shall be re-weighed at such times as the DCA may require.

(iii) The DCA shall be consulted if there is any doubt as to whether the aircraft ought to be re-weighed.

(iv) When re-weighing is necessary an amended Weight and Centre of Gravity Schedule, or its equivalent as prescribed Notice A/7 shall be prepared. During the course of any re-weighing procedures the accuracy of all data previously recorded, for example lever arms, shall be checked e.g. against the appropriate manufacturer's current data.

(v) At the time of a re-weighing or when a revised Weight and Centre of Gravity Schedule is raised following the addition, removal or relocation of equipment, a copy of the Weight and Centre of Gravity Schedule shall be submitted to the DCA for record purposes.

NOTE; In certain cases, the Department may decide that weighing the aircraft can be dispensed with.

2.8 The aircraft shall have been tested in flight in accordance with approved Certificate of Airworthiness flight test schedule. Where the Certificate of Airworthiness has expired, a certificate of Fitness for Flight shall have been issued. Results of such testing shall be provided to Department of Civil Aviation for record.

2.9 All relevant inspections records shall be made available to the DCA, if specifically requested by the DCA. Inspection records shall not be destroyed without authorization from the DCA.

2.10 Full particulars of the work done shall be entered in the appropriate log book and a certificate shall be signed by an aircraft engineer qualified under the terms and conditions of his licence to certify the work to which the certificate relates, or by an authorized representative of a firm or company approved for the purpose of giving such certificates, or by some other person so approved, This certificate shall be appended to the particulars of the work done, and shall be worded as follows_

"I hereby certify that in carrying out the work specified above, all the conditions and requirements of the Myanmar Aircraft Rules and Myanmar Civil Aviation Requirements, for the time being enforce, which are applicable thereto have been complied with."

Signed _____
Authority _____
Date _____

2.11 When the particulars of the work done are so voluminous as to render it inconvenient to enter them in the space provided in the log book, these particulars shall be entered in a separate maintenance record which shall be numbered for identification purposes certified in the same manner as that required for the relevant entry in the log book, and retained in safe custody in order that it may be produced for examination. The reference number of such record and particulars of the place where it may be examined shall be inserted in the logbook together with a brief description of the work to which the record relates.

2.12 (i)A check shall be made by the Approved Organization to ensure that the Flight Manual is up to date, and any necessary action to bring it up to date shall be taken, Confirmation of the correct Flight Manual Amendment status shall be provided to the DCA: the Flight Manual shall be made available to the DCA, if specifically requested by the DCA.

NOTE; The term Flight Manual includes any document accepted in place of a Flight Manual.

(ii)Maintenance, Overhaul and Repair Manuals used shall be up to date, and where necessary they shall be amended in accordance with the procedures set out by DCA in order to incorporate such amendments as may be necessary to cover the physical state of the aircraft.

2.13 Log book entries must contain the following information:

(a) Type and serial number of aircraft, engines and propellers.

(b) Total hours flown and total hours since last C of A issue or renewal.

(c) For engines and propellers total hours flown since complete overhaul or since new.

(d)Routine maintenance check details showing date and hours at each check and where carried out, since last C of A issue or renewal quoting approved maintenance schedule reference. Any concessions granted to check times must be shown.

(e) In the appropriate log book entry, list all airworthiness directives applicable to the equipment and instruments, the aircraft, engine and propeller type since last C of A issue or renewal, indicating positively whether complied with and date of compliance or not applicable (N/A). If N/A, the reason must be stated, e.g. N/A due to this aircraft serial number not affected.

(f) In the appropriate log book entry record all service bulletins and service letters complied with and details of modifications not covered by service bulletins or service letters incorporated since last C of A issue or renewal.

(g) Radio station maintenance details since last C of A issue or renewal including the type and serial number of equipment fitted.

2.14 If the aircraft commences a major maintenance check within one month prior to the C of A expiry date, notice of this should be forwarded to the Airworthiness Section. In this case all the documentation including the flight test report will be required before renewing the C of A. This will inevitably result in some delay to the aircraft resuming operations.

2.15 Owner (or) incase of leasing, operator shall maintain the aircraft in a airworthy condition when operating the aircraft. DCA will inspect during C of A renewal or anytime they may want whether the owner (or) operator maintains the aircraft in an airworthy condition, and DCA may require the owner to perform maintenance of aircraft, engine or its equipment to maintain the aircraft airworthiness.

A/10

C OF A RENEWAL RECOMMENDATION REPORT

Year _____ XY- _____ Aircraft Type_____
MSN_____

To ensure the airworthiness of an aircraft, prior to the renewal of the Certificate of Airworthiness, Airworthiness Review shall be carried out, by Quality Manager or Chief Inspector.

No	Description	Findings
1	A full documented review of the aircraft records shall be carried out; Airframe, flying hours and associated flight cycles have been properly recorded.	
2	The flight manual is applicable to the aircraft configuration and reflects the latest revision status State document number and revision:_____issue date: _____.	
3	All maintenance due on the aircraft according to the approved maintenance program has been carried out.	
4	All known defects have been corrected or, when applicable, carried forward in a controlled manner	
5	All applicable airworthiness directives have been applied and properly registered. Signed AD compliance list shall be submitted with this report:	
6	All modifications and repairs applied to the aircraft have been registered and are approved according to MCAR Part-21 and MCAR Part–M.	
7	All service life limited components installed on the aircraft are properly identified, registered and have not exceeded their approved service life limit.	
8	All maintenance has been released in accordance approved procedures.	
9	The current mass and balance statement reflects the configuration of the aircraft	
10	All onboard documentation valid and correct, Aircraft Flight Manual, Certificate of Registration and Certificate of Airworthiness.	
11	All required markings and placards are properly installed.	
12	The aircraft complies with its approved flight manual.	
13	No evident defect can be found that has not been addressed.	
14	No inconsistencies can be found between the aircraft and the above documented review of records.	
15	Life vests marked with inspection due date and positioned in a correct way at every occupant's seat and First aid kit contents list.	
16	Aircraft data plates installed and correct Stainless steel ID plate installed and correct aircraft registration marks in accordance with MCAR47.3.1.10.	

A/10

ENCLOSED WITH:

A. Current maintenance records (Airframe log books,)
B. Certified AD compliance list (if N/A state reason)
C. Current Weight & Balance Report
D. Maintenance document (list of all required maintenance with references to certificate of release date)
E. Status of hard time components (service life and overhaul schedule)
F. List of all modifications and repairs with reference to approved data.

Detail Review has been completed on this aircraft. This aircraft has been maintained in accordance with the DCA approved maintenance program _____ and meet with all the Myanmar Civil Aviation Requirements and recommend to renew the Certificate of Airworthiness.

(Signature)
Date_____
Quality Manager or Chief Inspector

A/11

AIRWORTHINESS FLIGHT TESTS

1. This Airworthiness notices require flight tests to be undertaken in the following circumstances:
   (a) Prior to the issue of a certificate of airworthiness.
   (b) Annually at certificate of airworthiness renewal or at such other intervals as may be agreed by the DCA to determine whether the handling characteristics, functioning and performance of an aircraft continue to comply with the requirements that were acceptable to the Director General, when the aircraft was issued a certificate of airworthiness.
   (c) On completion of a modification or other work likely to affect the handling characteristics, functioning or performance of an aircraft.
   (d) In lieu of an annual flight test, a programme for aircraft performance and engine condition monitoring must be approved.
2. Flight test schedules shall be prepared in conjunction with the DCA and must be acceptable. The flight test schedules shall be following to the Manufacturer instructions.
3. The qualifications and experience of flying staff and other persons engaged in flight tests, together with the facilities and equipment provided for the tests shall be acceptable to the DCA.
4. The aircraft should be flight tested in accordance with the relevant airworthiness flight test schedule and a flight test report completed in accordance with the requirements of the schedule submitted. This report should be checked by Quality Manager, including the climb performance against flight manual requirements and all defects investigated and corrected prior to submission. If a programmed for aircraft performance and engine condition monitoring has been approved by DCA, the relevant data should be submitted.
5. A copy of flight test reports in an acceptable format shall be submitted to the Airworthiness / Flight Operations Division of DCA on completion of all airworthiness flight tests.

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A/12

CATEGORIES OF AIRCRAFT

1. The categories of new aircraft on the Myanmar Civil Aircraft Register will be as shown in Paragraph 3.

2. Aircraft which entered on the Myanmar Civil Aircraft Register will have their Registration particulars and Certificates of Airworthiness.

3. The Categories to be used are as follows_
   3.1. Transport Category (Passenger).
   3.2. Transport Category (Cargo).
   3.3. Aerial Work Category.
   3.4. Private Category.
   3.5. Special Category.

4. The purpose for which the aircraft may fly are as follows_
   4.1 ***Transport Category (Passenger).*** Any purpose other than in the Aerial Work and Special Category. Permits the use of the aircraft for the transport by air of passengers and/or goods including public transport of passengers or goods for hire or reward. (Goods include mail.)
   4.2 ***Transport Category (Cargo).*** Any purpose other than public transport of passengers, Aerial Work or Special Category. Permits the use of the aircraft for the transport by air of goods (including mail), including public transport of goods for hire or reward.
   4.3 ***Aerial work*** aircraft means aircraft used for an industrial or commercial purpose or any lucrative purpose other than public transport ;
   4.4 ***Private Category.*** Permits the use of the aircraft for any purpose other than public transport or aerial work.
   4.5 ***Special Category.*** Permits the use of the aircraft only for the purposes specified in the certificate of airworthiness and does not include the carriage of passengers unless particularly permitted.

A/13

RESTRICTION OF SMOKING IN TRANSPORT CATEGORY (PASSENGER) AIRCRAFT

In order to comply with ICAO Assembly Resolution A29-15 and Action Item 33/4 of the 33rd Conference of Director General of Civil Aviation Asia and Pacific Regions, it will be necessary for all passenger transport aircraft on the Myanmar Register or flying internally in Myanmar under Myanmar Air Operator Certificate, to comply with the following _

1. It must be exhibited in prominent places in the aircraft notices stating smoking is prohibited.

2. "**NO SMOKING**" sign must be always "**ON**" when the aircraft in operation.

3. No person shall smoke in any passenger aircraft in the Republic of the Union of Myanmar. Certificate of Airworthiness will not be issued or renewed after 1st January 1999, if the above requirements have not been incorporated in the aircraft concerned.

A/14

REPORTING OF FAILURES, MALFUNCTIONS AND DEFECTS (SERVICE DIFFICULTY REPORT- SDR)

1. PURPOSE

This airworthiness notice provides backgound and guidance for the owner or operator to use in the reporting of Failures, Malfunctions and Defects. MCAR Part-145 para 145.60, MCAR Part-1 para 1.4.1.4 (a) (iii) and MCAR Part-M para M.202 refers.

2. REQUIREMENTS

Each Commercial Operators and Approved Maintenance Organizations must report any malfunction, failure or defect in an aircraft that occurs or is detected at any time, if under the opinion that the malfunction, failure or defect has endangered or may endanger the safe operation of an aircraft.

3. SYSTEM OUTCOMES

3.1 The current aircraft population is increased to achieve full knowledge of all potential safety problems solely through inspection. The SDR system assists in effective decision making, resource utilization and enhancement of safety. A properly implemented SDR system provides the intelligence needed to assess defects, institute early corrective action and thus assist in accident prevention.

3.2 The SDR is a feedback system, which provides a most effective database for effective decisions on matters of reliability and airworthiness.

3.3 Most failures in aircraft parts are random. In some cases service time between intervals can be increased if based on proper statistics obtainable from data including that of a working SDR system. Truly meaningful inspection periods should result from proper inspection rationalization based on statistical records resulting from full defect reporting. Conversely, SDR information may be used to convince operators that reliability of certain aeronautical products must be improved.

4. SYSTEM FEEDBACK

An effective SDR system will provide information, which will enable DCA to make sound regulatory decisions and to provide an improved advisory service to the operator. The DCA may use the following to promulgate this information, Airworthiness Directives, Advisory Circulars, or Airworthiness Notices.

5. DETAILS OF SYSTEMS FOR THE REPORTING OF INFORMATION ON FAULTS, DEFECTS AND MALFUNCTIONS

5.1 The Notice stipulate that Owners (or) Commercial (or) Non-commercial Operators of Myanmar Registered Aircraft must report, the existence of a malfunction, failure, or defect related to the aircraft, engine, system or components thereof. This includes any such failure that occurs subsequent to a similar failure previously reported. A Service

Difficulty Report (SDR) must be forwarded to the DCA within 3 working days of the discovery of the malfunction, failure, or defect.

5.2 In addition, AOC operators under MCAR Part 1.4.1.19 specifically direct that where an operator knows of major defects or damage in an aircraft that have caused, or that could cause:

(a) a primary structural failure;
(b) a control system failure;
(c) fire anywhere in the aircraft
(d) engine shutdown in flight for any cause, or
(e) Any other condition considered an imminent hazard to safety;

5.3 Technical Defects;

Technical defects having an influence or potential influence on airworthiness that cannot be corrected by normal maintenance practices shall be reported by the operator.

5.4 Type Design Deficiencies;

Any person or organization performing maintenance to aircraft shall report to the DCA any design deficiency that has a potential influence on airworthiness.

5.5 Inspection Difficulties;

Particular difficulties encountered during performance of maintenance inspections shall be reported by the Approved Maintenance Organization certificate holder.

5.6 The operator must advise the DCA, and also the State of Registry and the State of Design either by telephone, facsimile, E-mail, etc. of the occurrence immediately. The initial reporting then needs to be followed up with a defect report. This action may assist in the discovery of similar problems in other aircraft and help prevent a major accident.

5.7 The operator must also submit a defect report if, during the course of complying with an AD or a direction given by the DCA, the operator finds any defect where no limits are specified or where a defect is outside the specified limits.

5.8 A failure or defect that does not exceed the manufacturer's established allowable limits, and which is repaired in accordance with the manufacturer's Structural Repair Manual, does not have to be reported. However, major repairs made in accordance with DCA approved data, or approved by an approved person/organization, do require a report.

5.9 Defects covered under an approved Minimum Equipment List (MEL) for an aircraft do not require reporting.

6. Sample form of Service Difficulty Report is -

C.A 163(E)

REPUBLIC OF THE UNION OF MYANMAR
MINISTRY OF TRANSPORT
DEPARTMENT OF CIVIL AVIATION

SERVICE DIFFICULTY REPORT
(Un-Airworthy Condition Report)

Report to	From
Airworthiness Division Department of Civil Aviation Myanmar	Operator/Owner ---------- Report No. ---------- Page. ---------- Date. ----------

1) Aircraft Type ---------- Registration ---------- Flight No. ---------- From ---------- To ---------- Date ----------	2) Component ---------- Part No. ---------- Serial No. ---------- TSN---------- TSO----------	3) Occurrence took place; ☐ Parked ☐ Descent ☐ Taxiing ☐ Approach ☐ Takeoff ☐ Landing ☐ Climb ☐ Maintenance ☐ En-route ☐ Inspection
4) Time ----------	5) Previous Defects or Occurrences	☐ Yes ☐ No

6) Description of Un-airworthy Condition (to describe detail of Malfunction, Failure or Defect)[use reverse side if required]

7) Probable cause (to describe component or occurrence or handling which may cause malfunction, failure or defect)	8) Action taken to prevent recurrence (**detail of action such as AMP review or necessary action not to be happened the same defect, malfunction or failure again , …**) [use reverse side if required]
☐ **Design** ☐ **Unapproved parts** ☐ **Production** ☐ **Human factors** ☐ **Maintenance** ☐ **Operations** ☐ **Repair** ☐ **Fatigue corrosion**	

Prepared by ---------- Authorization No.---------- AME Licence No.----------	Approved by ---------- Quality Assurance Manager or Chief Inspector	Subject closed dated----------

Fill in by DCA Personal,

Received date ----------

Control No.----------

Action Taken ----------

Name/Sign----------

A/15

EXPORT CERTIFICATE OF AIRWORTHINESS

1. APPLICABILITY

This Notice prescribes the conditions for the issue of Export Certificates of Airworthiness. For facilitate the transfer of Aircraft onto the Register of another State, Myanmar will issue an Export certificate of Airworthiness if the owner apply for export. Myanmar will only issue Export certificate of Airworthiness for a complete aircraft, engine or propeller (Class I products).

2. GENERAL

2.1 An Export Certificate of Airworthiness will not be issued unless the Director General is satisfied the followings;

(a) Conforms to the type design or specification of the product identified thereon and any approved modifications.

(b) Complies with all pertinent of Myanmar Aircraft Rules, Myanmar Civil Aviation Requirements and Airworthiness Notices.

(c) Is in a condition for safe operation.

2.2 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.

2.3 To be eligible for issue of an Export Certificate of Airworthiness a used aircraft shall:

(a) Possess or satisfy the requirement for issue of a Myanmar Certificate of Airworthiness.

(b) Have been submitted for survey by an approved maintenance organization.

2.4 An application for issue of an Export Certificate of Airworthiness shall be made to the Department of Civil Aviation. Application may be made **not later than 60 days** before the Export Certificate of Airworthiness is required.

2.5 The applicant for an Export Certificate of Airworthiness shall provide a statement by the Chief Inspector/ Quality Manager of a firm approved for the purpose of maintenance or some other person approved for the purpose, certifying that the conditions of Para 2.1, have been complied with. If appropriate, a Certificate of release to service issued in accordance with Myanmar Civil Aviation Requirements may be accepted for this purpose.

2.6 The following derogations from the requirements must be listed on the application.

(a) Significant deviations from the approved build standard.

(b) Derogations from DCA requirements.

(c) Mandatory modifications and inspections with which compliance has not been shown.

(d) Such equipment which is fitted, but has not been approved by the DCA.

(e) Equipment appropriate to certification Category, where this is not fitted.

2.7 The applicant shall supply the following documents as applicable, to the purchaser of each product for which an Export Certificate of Airworthiness is issued.

(a) Up-to-date logbook for aircraft, engines, propeller and radio station as applicable are completed and appropriately certified to show the following:

(i) Flight test dates and hours flown, if applicable.

(ii) Engine 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 for each aircraft.

(c) Any other data considered by the DCA to be essential for safe operation.

3. EXPORT CERTIFICATE OF AIRWORTHINESS

This certificate is intended to be a statement by Myanmar (as a exporting State) intended to be a statement by Myanmar (as a exporting State) confirming to the importing State, the acceptable airworthiness status of the complete 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 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. 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.

4. APPLICATION FOR THE ISSUE OF AN EXPORT C OF A

7.1 An applicant for the issue of an Export Certificate of Airworthiness will be required to provide sufficient detail concerning the product (e.g. aircraft, engines, or propellers) in order to enable the DCA to make a determination that the product conforms with the

approved design data, is in a condition for safe operation, and complies with the requirements of the importing State.

7.2 The form to be completed in support of the application is intended to provide enough information to allow the DCA (Airworthiness Division) or its delegated representative to make the determination of conformity to the applicable airworthiness requirements.

7.3 The form should therefore typically require the following information:

I. Contact information for the exporter and foreign purchaser, as well as country of destination.

II. Basic information regarding the product, such as:

1. Type of product (e.g., aircraft, engine, or propeller).
2. Make and model.
3. Identification number.
4. Serial number(s).
5. Operating time in hours since overhaul and total operating time.
6. Is the product new, used (for aircraft), or newly overhauled.
7. If applicable, the status of the current Certificate of Airworthiness.

III. Information Regarding the Airworthiness Requirements, such as:

1. Does the product comply with all applicable DCA regulations and Airworthiness Directives?
2. Have the applicable special requirements of the importing country been complied with?
3. Additional remarks with regard to either the applicable DCA regulations or special requirements of the importing country (e.g. exceptions to the approved data or special requirements).

A/15

5. SAMPLE EXPORT CERTIFICATE OF AIRWORTHINESS (FOR CLASS I PRODUCTS)

Republic of the Union of Myanmar
Department of Civil Aviation
Airworthiness Division

EXPORT CERTIFICATE OF AIRWORTHINESS
(for Class I products)

No. ……

THIS CERTIFIES that the product identified below and detailed in [INSERT TYPE CERTIFICATE NO.] has been examined and as of the date of this certificate, is considered airworthy in accordance with the regulations of [INSERT EXPORTING STATE], and is in compliance with those special requirements of the importing State, except as stated below.

Note: This certificate in no way attests to compliance with any agreements or contracts between the vendor and purchaser, nor does it constitute authority to operate an aircraft.

Product: …….

Manufacturer: ……

Model: ……

Serial No.: ……..

New……Newly overhauled……Used aircraft……

State to which exported: …….

Exceptions: ……..

Signature of Inspector …… Date……

For complete aircraft, list applicable specification or Type Certificate Data Sheet numbers for the aircraft, engine and propeller.

CA Form No. A/W . . . . . .

A/16

DISPOSITION OF SCRAP AIRCRAFT PARTS & MATERIALS

1. Purpose

The purpose of this Airworthiness Notice is to provide information and guidance to persons involved in the maintenance or disposal of aircraft parts. It provides information and guidance to prevent scrap aircraft parts and materials from being acquired as serviceable parts and materials.

2. Introduction

It is common practice for owners of aircraft parts to dispose of scrap parts and, materials by discarding such items. Misrepresentation of the status of parts and materials and the practice of making such items appear serviceable could result in the use of non- conforming parts and materials.

3. Types of Parts and Materials that may be Misrepresented

Persons disposing of scrap aircraft parts and materials should consider the possibility of such parts and materials being misrepresented as - serviceable at a later date. Caution should be exercised to ensure that the following types of parts and materials are disposed of in a controlled manner that does not allow them to be returned to service.

3.1 Parts with non-repairable defects, whether visible or not to the naked eye.

3.2 Parts that are not within the specifications set forth by the approved design, and cannot be brought into conformance with applicable specifications.

3.3 Parts and materials for which further processing or rework cannot not make them eligible for certification under a recognized released system.

3.4 Parts subjected to unacceptable modification or rework that is irreversible.

3.5 Life-limited parts that have reached or exceeded their life limits, or have missing or incomplete records.

3.6 Parts that cannot be returned to an airworthy condition due to exposure to extreme forces or heat.

3.7 Principal Structural Elements (PSE) removed from a high-cycle aircraft for which conformity cannot be accomplished by complying with the mandatory requirements applicable to ageing aircraft.

4. Methods to Prevent Misrepresentation of Scrap Parts and Materials

4.1 Persons disposing of scrap aircraft parts and materials should, when appropriate, mutilate those parts and materials prior to release. Mutilation should be accomplished in such a manner that the parts become unusable for their original intended use, nor should they be able to be reworked or camouflaged to provide the appearance of being serviceable, such as by re-plating, shortening and re-threading long bolts, welding, straightening, machining, cleaning, polishing, or repainting.

4.1.1 Mutilation may be accomplished by one or a combination of the following procedures, but is not limited to_

(a) Grinding;
(b) Burning;
(c) Removal of a major lug or other integral feature;
(d) Permanent distortion of parts;
(e) Cutting a hole with cutting torch or saw;
(f) Melting;
(g) Sawing into many small pieces

4.1.2 The following procedures are examples of mutilation that are often less successful because they may not be consistently effective_

(a) Stamping (such as a stamped `R' on a part)
(b) Spraying with paint;
(c) Hammer marks;
(d) Identification by tag or markings;
(e) Drilling small holes;
(f) Sawing in two pieces.

Persons who rework scrap parts and materials may be skilled technicians and attempt to restore parts cut in two pieces in such a manner that the mutilation proves difficult to detect.

4.2 Persons disposing of scrap aircraft parts and materials for legitimate non-flight uses, such as training and education aids, research and development, or for non-aviation applications. In such instances, mutilation is not appropriate and the following methods should be used to prevent misrepresentation_

4.2.1 Permanently marking or stamping the parts, subparts, and material as `NOT SERVICEABLE'. (Ink stamping is not an acceptable method);

4.2.2 Removing original part number identification;

4.2.3 Removing data plate identification;

4.2.4 Maintaining a tracking or accountability system, by serial number or other individualized data , to record transferred scrap aircraft parts and materials; and

4.2.5 Including written instructions concerning disposition and disposal of such parts and materials in any agreement or contract transferring such parts and materials.

NOTE:Scrap or expired life-limited parts and materials should not be passed on to any person or organization who may end up placing the parts and materials batch in actual use, due to the criticality of parts and material failure and the potential safety threat.

4.3 Organizations handling scrap or expired life -limited aircraft parts and materials should establish a quarantine store area in which to segregate such items from active service able inventories and to prevent unauthorized access. Caution should be exercised to ensure that these parts and materials receive the disposition specified in this Notice.

4.4 Manufacturers producing approved aircraft parts should consider maintaining records of serial numbers for `retired' life limited or other critical parts. In such cases, the owner who mutilates applicable parts is encouraged to provide the original manufacturer with the data plate and /or serial number and final disposition of the part.

5. Method to identify misrepresented parts

All purchasers of aircraft parts and materials should ensure that misrepresented scrap parts and material should ensure that misrepresented scrap parts and materials are not received into active inventory. The following are examples of conditions to be alert for when receiving parts:

5.1 Parts showing signs of rework which were purchased as `new'.

5.2 Used parts showing signs of unapproved or inappropriate repair.

5.3 Parts with poor workmanship or signs of rework in the area of the part data plate, number or serial number inscription.

5.4 Used parts lacking verifiable documentation of history and approval.

5.5 Parts with prices `too good to be true'.

5.6 Questionable part numbers, fraudulent or suspicious Technical Standard Order or FAA-Parts Manufacturing Approval markings and/or re-identification, stamp-over or vibro-etching on the data plate.

5.7 Parts delivered with photocopied or missing JAA from-1 or other acceptable maintenance release documentation.

5.8 Parts with a finish that is inconsistent with industry standards (e.g., discoloration, inconsistencies, resurfacing),

5.9 Parts purchased as new but with release documentation reflecting a status other than new.

5.10 Parts with poor documentation exhibiting incomplete or inconsistent part identity information.

5.11 Intact ‘scrap’ unsalvageable parts offered in bulk weight for prices higher than for mutilated parts with identical weight and content.

6. An Approved Organization or LAME who receives suspect aircraft parts and materials should report to Type Certificate holders and Airworthiness Division of the Department of Civil Aviation.

A/17

BOGUS/ UNAPPROVED PARTS REPORTING

1. Introduction

1.1 The DCA has always been concerned about the possibility of unapproved parts being used on aircrafts.

1.2 In addition to manufacturing and marketing unapproved parts, falsification of release documentation is also a problem.

1.3 Installing unapproved parts onto aircraft has serious airworthiness implications.

2. Unapproved Parts

2.1 an unapproved part is a part or material intended for installation on a type certificated product/aircraft, which has been neither manufactured according to approved procedures, nor conforms to an approved type design or which fails to conform to declared specifications or accepted industry standards (i.e. standard parts).

2.2 Unapproved parts include, but are not limited to:

(a) Parts specified in the illustrated parts catalogues (IPC) of a type certificated aircraft, but which have been manufactured, reclaimed or reworked and then marked by an authorized source and provided with documents which indicated falsely that the parts are genuine and conform to the approved type design, or meet a particular industry standard and are offered for use as conforming with an aircraft manufacturer's authorized IPC.

(b) Parts shipped directly to users by manufacturers, suppliers, or distributors who do not themselves hold appropriate production approvals for the parts, and have not been authorized to make direct shipments to users or stockists, by the type certificate holder, who alone has production approval, e.g. production overruns.

(c) Parts which have not been maintained, overhauled or repaired in accordance with the requirements of approved airworthiness data and statutory requirements, or that have been maintained, overhauled or repaired by persons not authorized to perform and certify these functions.

3. Additional Information

3.1 The US FAA has issued an advisory circular AC No.21-29B providing information and guidance to the aviation community for detecting and reporting suspected unapproved aircraft parts and procedures for referral of such reports to the appropriate FAA office.

3.2 Because of the increased activity being undertaken in the United States against suspected unapproved parts, it is likely that the vendors of these parts will direct their activities towards other parts of the world, because of the reduced risk of detection.

4. Compliance

4.1 Aerospace industry users are reminded that it is possible to confuse a stockist's certification with an original manufacturer's certification. Therefore, great care is necessary when assessing incoming documentation in relation to the terms of the original order.

4.2 DCA stresses that the approved stockists must operate in a responsible manner, and supply satisfactory parts.

4.3 Any evidence of unapproved parts must be immediately reported to Airworthiness Division of the Department of Civil Aviation and Type Certificate holders. Operators and AMO are required set up a System in the Maintenance Control Manual to report to Type Certificate holders and State of Registry to provide widespread warning of the detection of unapproved parts. So that operators of similar equipment can be made aware as soon as possible. In view of the likely random appearance of unapproved parts, access to a reporting system should be easy and available at all reasonable times.

4.4 In order to obtain as much information as possible from a report of a suspected unapproved part, it is necessary to have a standardized reporting format. Information required will include part description and from where received; part and (if applicable) serial numbers; particular colors, markings, dimensions and features common to the unapproved part which distinguish it from the genuine item; and the nature of any accompanying documentation.

4.5 At any time a part is deemed to be suspect, it and any accompanying documentation should be quarantined immediately and held until the body responsible for processing the reports is satisfied that the evidence is no longer required or until the authenticity of the part has been established.

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

A/18

LICENSED AIRCRAFT MAINTENANCE ENGINEERS PERSONAL RESPONSIBILITY WHEN MEDICALLY UNFIT OR UNDER THE INFLUENCE OF DRINK OR DRUGS

1. INTRODUCTION

1.1 The International Civil Aviation Organization (ICAO) has introduced an amendment to Annex 1 to the convention on international civil aviation which will have the effect of extending certain standards and recommended practices to all licence holders. The changes resulting from the amendment are concerned with medical fitness and the use or abuse of intoxicating liquor, narcotics or drugs.

1.2 This Notice provides that guidance, regarding medical fitness in connection with the use or abuse of intoxicating liquor, narcotics or drugs. The necessary amendments to the Myanmar Aircraft Rules are now in process to implement this medical fitness situation.

1.3 It should be noted that JAR-66.50 also refers to mental fitness and specifically states that the holder must not exercise the privileges of their licence/authorization if a 'mental condition renders them unfit to exercise such privileges'. In this sense, mental condition means psychological integrity.

2 GENERAL

2.1 An aircraft maintenance engineer's licence authorizes the holder, subject to any conditions that may be specified on the licence, to issue various certificates relating to maintenance. The process of issuing the certificates (CRS, CRS-SMI and CMR) requires clear decisions to be made directly affecting the airworthiness of the aircraft to which they relate. It follows that the quality of these decisions is directly influenced by the physical or mental state of the certifier at the time of certification, and whether or not he/she is subject to the adverse effects of drink and/or drugs.

2.2 This Notice is equally applicable to all non-licensed personnel engaged in aircraft maintenance tasks and in principle should be adopted throughout the aviation industry as a code of practice. The management of all Approved Maintenance Organizations are therefore required to review this Notice and implement suitable policies and procedures to make all maintenance staff aware of them. Organizations shall also take note of items in paragraph 3 which requires their participation in the areas concerned.

2.3 All persons to whom this notice applies should be aware of the guidance material contained herein. It is the responsibility of the individual concerned to ensure that he does not report for duty or certify if he is genuinely unfit. Such persons should also be aware of an organization’s own internal policies and monitoring procedures to verify the above.

3. GUIDANCE

3.1 **Fitness** In most professions there is a duty of care by the individual to assess his or her own fitness to carry out professional duties. This has been a legal requirement for some time for doctors, flight crew members and air traffic controllers. Licensed aircraft maintenance engineers are also in future shall be required by law to take a similar professional attitude. Cases of subtle physical or mental illness may not always be apparent to the individual but as engineers often work as a member of a team any sub-standard performance or unusual behaviors should be quickly noticed by colleagues or supervisors who should notify management so that appropriate support and counselling action can be taken. In particular, a decrease in mental fitness in many cases may be related to stress from within the working environment or to the personal circumstances of the individual. Instances of aggressive behaviour, vagueness and slippage of personal standards (cleanliness, appearance etc.) may be indicative of more serious mental issues. Such issues may bring into question the ability of the individual to be trusted or to maintain the necessary levels of concentration to take appropriate decisions on airworthiness matters.

3.2 **Fatigue** Tiredness and fatigue can adversely affect performance. Excessive hours of duty and shift working, particularly with multiple shift periods or additional overtime, can lead to problems.

3.3 **Stress** Every-one is subject to various stresses in their life and work. Stress can often be stimulating and beneficial but prolonged exposure to chronic stress (high levels or differing stress factors) can produce strain and cause performance to suffer allowing mistakes to occur. Stress factors can be varied, physical, e.g. heat, cold, humidity, noise, vibration; they can be due to ill-health or worries about possible ill-health; from problems outside the workplace e.g. bereavements, domestic upsets, financial or legal difficulties. A stress problem can manifest itself by signs of irritability, forgetfulness, and sickness absence, mistakes, or alcohol or drug abuse. Management has a duty to identify individuals who may be suffering from stress and to minimize workplace stresses. Individual cases can be helped by sympathetic and skilful counseling which allows a return to effective work and licensed duties.

3.4 **Eyesight** A reasonable standard of eyesight is needed for any aircraft engineer to perform his duties to an acceptable degree. Many maintenance tasks require a combination of both distance and near vision. In particular, such consideration must be made where there is a need for the close visual inspection of structures or work related to small or miniature components. The use of glasses or contact lenses to correct any vision problems is perfectly acceptable and indeed they must be worn as prescribed. Frequent checks should be made to ensure the continued adequacy of any glasses or contact lenses. In addition, colour discrimination may be necessary for an individual to drive in areas where aircraft manoeuvre or where colour coding is used, e.g. in aircraft

wiring. Organizations should identify any specific eyesight requirement and put in place suitable procedures to address these issues.

3.5 **Hearing** The ability to hear an average conversational voice in a quiet room at a distance of 2 metres (6 feet) from the examiner is recommended as a routine test. Failure of this test would require an audiogram to be carried out to provide an objective assessment. If necessary, a hearing aid may be worn but consideration should be given to the practicalities of wearing the aid during routine tasks demanded of the individual. It is important to remind employers of individuals working in areas of high ambient noise, which require employers to carry out assessments of noise levels within their premises and take appropriate action where necessary.

3.6 **Drug and Alcohol Abuse** Drinking problems or the use of illicit or non-prescribed drugs are unacceptable where aircraft maintenance safety is concerned and once identified will lead to suspension of the licence and/or authorization and possibly further licensing action being considered.

3.7 **Medication** Any form of medication, whether prescribed by a doctor or purchased over the counter and particularly if being taken for the first time, may have serious consequences in the aviation maintenance environment unless three basic questions can be answered satisfactorily_

(a) Must I take medicines at all?

(b) Have I given this particular medication a personal trial for at least 24 hours before going on duty, to ensure that it will not have adverse effects on my ability to work and make sound decisions?

(c) Do I really feel fit for work? Confirming the absence of adverse effects may need expert to advice and General Practitioners and Company Medical Officers are all available to assist in this matter. Common types of medication in use and their effects are further described in Annex to this Notice.

3.8 **Alcohol** Alcohol has similar effects to tranquillisers and sleeping tablets and may remain circulating in the blood for a considerable time, especially if taken with food. It should be borne in mind that a person may not be fit to go on duty even eight hours after drinking large amounts of alcohol. Individuals should therefore anticipate such effects upon their next duty period. Special note should be taken of the fact that combinations of alcohol and sleeping tablets, or anti-histamines, can form a highly dangerous and even lethal combination.

3.9 **An aesthetics** It should be remembered that following local, general, dental and other an aesthetics, a period of time should elapse before returning to duty. This period will vary depending upon individual circumstances, but may even extend up to 24 or 48 hours. Any doubts should be resolved by seeking appropriate medical advice.

4. SUMMARY

The effects of illness, injury or medication on work performance are the direct concern of the individual. Where there is doubt about the ability of an individual for these reasons, it is imperative not to exercise the privileges of his or her licence or authorization whilst unfit. While this notice gives some guidance on the issues to be considered it cannot be comprehensive. If individual licence holders or their managers have any doubt they should consult the medical sources mentioned for advice.

Annex to Notice A/18

The following are some of the types of medicine in common use which may impair work performance. This list is not exhaustive and care should be taken in ensuring the likely effects of any prescribed drug are adequately known before taking it.

(a) **Sleeping Tablets** These dull the senses, cause mental confusion and slow reaction times. The duration of effect is variable from person to person and may be unduly prolonged. Individuals should have expert medical advice before using them;

(b) **Tranquillisers** Anti-depressants and sedatives depress the alerting system and have been a contributory cause of mistakes leading to fatal accidents. Therefore a person should not work when taking them;

(c) **Antibiotics** Antibiotics (penicillin and the various mycins and cyclines) and sulpha drugs may have short term or delayed effects which affect work performance. Their use indicates that a fairly severe infection may well be present and apart from the effects of these substances themselves, the side-effects of the infection will almost always render an individual unfit for work;

(d) **Anti-histamine** Such drugs are widely used in cold cures and in the treatment of hay fever, asthma and allergic skin conditions. Many easily obtainable nasal spray and drop preparations contain anti-histamines. Most of this group of medicines tends to make the taker feel drowsy. Their effect, combined with that of the condition, will often prevent the basic three questions (paragraph 3.7 of the Notice) from being answered satisfactorily. Admittedly very mild states of hay fever etc., may be adequately controlled by small doses of anti-allergic drugs, but a trial period to establish the absence of side effects is essential before going on duty. When individuals are affected by allergic conditions which require more than the absolute minimum of treatment and in all cases of asthma, one of the above mentioned sources of advice should be consulted;

(e) **'Pep' pills** (e.g. containing Caffeine, Dexedrine, and Benzedrine) used to maintain wakefulness are often habit forming. Susceptibility to each drug varies from one individual to another, but all of them can create dangerous over-confidence. Over-dosage may cause headaches, dizziness and mental disturbances. The use of 'pep' pills whilst working cannot be permitted. If coffee is insufficient, you are not fit for work;

(f) **Drugs** for the relief of high blood pressure are proving to be very effective in controlling this condition. However, anti hypertensive agents all have some side effects and should not be administered before adequate assessment of the need for treatment. The prescribing practitioner should be able to advice on any side effects to be considered;

(g) **Drugs** when prescribed for Anti-malaria in normally recommended doses do not usually have any adverse effects. However, the drug should be taken in good time so that the question in paragraph 3.7 (b) of the Notice can be answered;

(h) **Oral contraceptive tablets** in the standard dose do not usually have adverse effects, although regular supervision is required;

(i) '**Sudafed**' is the trade name of a preparation containing pseudo-ephedrine hydrochloride. This may be prescribed by GPs for relief of nasal congestion. Side-effects reported however anxiety, tremor, rapid pulse and headache. The preparation does not contain anti-histamines which could sedate and cause drowsiness but the effects can nevertheless affect skilled performance. Sudafed, therefore, is not a preparation to be taken when making engineering decisions or performing licenced duties.

Although these are common groups of drugs, which may have adverse effects on performance, it should be pointed out that many forms of medication, which although not usually expected to affect efficiency may do so if the person concerned is unduly sensitive to the particular drug. Therefore no drugs or medicines, or combinations, should be taken before or during duty unless the taker is completely familiar with the personal effects of the medication and the drugs or medicines have specifically been medically prescribed for the individual alone. Again the sources of advice mentioned earlier in this notice should be consulted in cases of doubt.

A/19

PERSONNEL CERTIFICATION FOR NON-DESTRUCTIVE TESTING OF AIRCRAFT, ENGINES, COMPONENTS AND MATERIALS

1. General

1.1 This Notice advises the DCA requirements for the qualification of Non-Destructive Testing (NDT) personnel, which shall be appropriately qualified for the particular non-destructive test in accordance with European Standards EN 473[1] or EN 4179[2], and the Approved Organization's written practice/procedures for the authorization of NDT personnel.

1.2 This Notice clarifies DCA policy relating to the acceptability of organization based schemes for the qualification of NDT personnel in accordance with European NDT personnel requirements, and is intended to recognize the competence of Level 3 qualified personnel.

1.3 The term NDT is used to include, but not be limited to, Liquid Penetrant, Magnetic Particle, Eddy Current, Ultrasonic, Radiographic and other recognized methods as identified in the above referenced standards and shall be applicable to all NDT methods used by Approved Organizations. Definitions of other key terms used throughout this Notice are contained in Section 7.

2. Procedures for the Qualification of NDT Personnel

2.1 All Approved Organization involved in any aspect of NDT shall develop and maintain procedures for the qualification and authorization of their NDT personnel in accordance with their EN473 for a central Personnel Certification scheme or EN4179 for an organization based Personnel Certification scheme. In either case, the organization's procedures and/or written practice as defined by EN4179 shall be approved by the Nominated level 3.

2.2 Qualification of NDT. Levels and their functions should be as follows.

2.2.1 LEVEL 1 Issued to NDT personnel who are capable to perform preparations for NDT inspections in accordance with the documented procedures. He is not allowed to sign off any relevant maintenance documents. Level 2 verifies and/or reads the inspection results.

2.2.2 LEVEL 2 Issued to NDT personnel who perform the inspections in accordance with documented procedures. He is allowed to sign off relevant maintenance related documents. He can evaluated and interpret imperfections and inspection results, convert manufacturer data into work instructions and train and supervise Level 1.

[1] EN 473 - General Principle for Qualification and Certification of NDT Personnel.
[2] EN 4179- Qualification and approval of personnel for non-destructive testing.
NOTE: All references to Standards within this Notice are to be taken as referring to the latest issue and are available from the British Standards Institute, 389 Chiswick High Road, London, W 44 AL.

2.2.3 LEVEL 3 Issued to personnel with college level knowledge regarding NDT methods and techniques and capable to train and supervise Level 1 and 2. Level 3 personnel are responsible for the training and examination of Level 1 and 2 personnel.

2.3 In an Approved Maintenance Organization an authorization for NDT shall be issued to personnel based on results of qualification examinations and certificate he has received. All levels of NDT personnel shall be re-certified periodically in accordance with evidence of continued satisfactory performance and re-examination in general written or specific written exam as determined by the AMO's Nominated Level 3 NDT.

2.4 Level 1 and 2 personnel shall be trained, qualified and re-qualified every 3 year by the Level 3 of AMO's employee or other DCA approved sources. Level 3 employees are re-qualified every 5 years by DCA approved American Society for Non Destructive Testing Sources. Yearly eye examination for all levels is required. Eye examinations should include, the ability to read the N.10 letters of a quarter reduced Times Roman Type Test Chart or equivalent for near vision represents a reasonable minimum standard of visual acuity. When personnel did not work on a certain technique for a joint period more than six month, they must re-quality on that technique, and the Quality Manager or Chief Inspector of AMO monitors the hands on performance.

3. Qualified Staff

3.1 DCA Approved Organizations undertaking NDT in accordance with BCAR or JAR must satisfy the DCA that they have adequate numbers of suitably qualified staff to discharge the responsibilities of the approval.

3.2 Organizations shall nominate in writing, supported with evidence of certification, an individual responsible to the Chief Executive/Accountable Manager, for the technical supervision of NDT. This individual will hold independent central certification at Level 3 in the appropriate Industry Sector and will be referred to as the 'Nominated Level 3'. This position shall be identified within the Organization Exposition, and any change in this position advised to the DCA.

3.3 DCA recognizes Level 3 certified personnel under EN 473 and independently centrally certified American Society for NDT Level 3 personnel (including ACCP) suitably experienced in aerospace under EN4179 as qualified for the position of Nominated Level 3.

3.4 Where the Nominated Level 3 is not qualified in all methods used by the Organization, then the additional level 3s necessary to provide coverage shall be independently centrally certified.

3.5 Additional Level 3 Certification holders shall be listed in the Organization Exposition or reference made in the Exposition to other documents containing the list of Level 3 holders. Any changes to this list are to be notified to the DCA through appropriate amendments.

3.6 The DCA may accept persons external to the Organization as the Nominated Level 3, provided written agreement exists between the individual and the Organization setting out the individual's responsibilities within the Organization.

4. Inspections and Certification of Inspections

4.1 Normally, certification of inspections will be made by persons who hold Level 2 or above authorizations. However, where an inspection task is determined by the Nominated Level 3 to have clearly defined acceptability and rejection criteria requiring no interpretation, then certification may be carried out by an authorized Level 1, as detailed within the written practice.

4.2 Where a level 3 is required to carry out and certify an NDT inspection then this person must either hold current Level 2 certification in those methods, or be able to provide evidence that they have successfully completed an appropriate Level 2 practical examination and maintained continuity in the application of practical testing as defined in the referenced standards and detailed in the written practice.

5. NDT Techniques and Instructions and their Approval

5.1 NDT techniques, procedures and instructions, published and specified by the Type Certificate holder in NDT Manuals, Service Bulletins, and Approved Drawings etc. constitute airworthiness data.

5.2 Where the airworthiness data published by the Type Certificate holder permits changes (e.g selection of equipment model, probe type etc.) then such changes must be authorized in writing by a Level 3 qualified in the appropriate method.

5.3 Any other change requires the written agreement of the Type Certificate holder responsible for the design of the product/structure before such a change is implemented.

5.4 NDT Instructions prepared by a Level 2 holder shall be approved by a Level 3 holder qualified in the applicable method.

5.5 The procedure for the control of all NDT techniques, procedures and instructions, including their preparation and authorization within any DCA Approved Organization, shall be detailed in the Organization’s approved Quality Procedures.

6. Suppliers and Sub-contractors to Approved Organizations

An Organization utilizing suppliers and sub-contractors where NDT processes are employed shall detail within their written practice how the Organization ensures that training and approval of NDT personnel in such suppliers or sub-contractors is controlled. Organizations are referred to update BCAR A (8-1) Appendix 2- 'Surveillance of Sub-Contractors', JAR 21.139(a), JAR145.75.

7. Definitions

Authorization (of NDT procedures): The act of signifying approval of NDT procedures by a Nominated Level 3.

Authorization (of NDT personnel): A written statement issued by a Nominated Level 3 based on the individual's competence as specified within the certificate.

Certificate: Document issued under the rules of either of the certification systems defined in this Notice (EN473 or EN4179) indicating that adequate confidence is provided, that the named person is competent to perform specified non-destructive testing.

Industry Sector: A particular section of industry or technology where specialized NDT practices are used requiring specific product related knowledge, skill, equipment or training. An industrial sector may be interpreted to mean a product (welds, castings ...) or an industry (aerospace, petrochemical....).

NDT Technique: A specific way of utilizing an NDT method (e.g. ultrasonic immersion technique).

NDT Procedure: A written description of all essential parameters and precautions to be observed when applying an NDT technique to a specific test, following an established standard, code or specification.

NDT Instruction: A written description of the precise steps to be followed in testing to an established standard, code, specification or NDT procedure.

NDT Method: Discipline applying a physical principle in Non-Destructive Testing (e.g. ultrasonic method).

Nominated Level 3: An independently certified Level 3 certificate holder responsible to the Chief Executive or Accountable Manager for the airworthiness aspects of NDT work undertaken by that Organization.

Qualification: The proven ability of NDT personnel to meet the requirements of a given specification in terms of physical requirements, training, knowledge and experience necessary to perform the applicable NDT method.

Qualification Examination: An examination administered by an independent certifying body (e.g. PCN), or by a body authorized within the employer's EN 4179 compliant written practice, which demonstrates the general, specific and practical knowledge of the candidate.

Type Certificate: For the purposes of this Airworthiness Notice, Type Certificate includes Type Certificates, Supplementary Type Certificates.

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PROHIBITION ON USE OF PORTABLE ELECTRONIC DEVICES IN AIRCRAFT

1. Portable electronic devices are now commonly used by aircraft crew and passengers for various purposes, including entertainment. Such devices are carried as personal luggage and will not have been designed to the stringent standards normally applied to aircraft equipment.
2. Radio interference of a level sufficient to interfere with sensitive aircraft equipment several feet away is known to be generated by much of the portable electronic devices. In large aircraft the separation of passengers from sensitive aircraft equipment is usually sufficient to avoid interference, but in small aircraft, on flight decks and where equipment is in use that produces exceptional levels of interference some aircraft equipment may be affected.
3. By using portable electronic devices in aircraft both in flight and on the ground, the radio signals transmitted from these devices can interfere with the navigational and communication equipment that may jeopardize aircraft safety.
4. The other major problem is the significant interference to the mobile telephone network itself from airborne mobile phone users. The mobile telephone network is a cellular concept designed specifically for land mobile use only. This cellular concept re-uses identical channel frequencies in the same geographic area for non-adjacent calls. The extended propagation path available from aircraft in flight results in significant interference to the mobile network because multiple channels can be simultaneously selected in different cells. This interference includes the disconnection of other established calls, crossed conversations and numerous other problems.
5. Therefore being Myanmar as the member of ICAO contracting states, Department of Civil Aviation has decided to follow the international convention and prohibit the use of portable electronic devices in public transport aircraft during the entire flight.
6. Portable electronic devices include the following equipments but not limited to_
   (i) Mobile telephone
   (ii) Cellular telephone
   (iii) Potable video equipment
   (iv) Laptop or portable PC without printer
   (v) Electronic games, electronic calculators and electronic shavers
   (vi) Cassette/ CD/ DVD minidisk players (used electronic headphones only), MP3 players (used electronic headphones only)
7. In accordance with the facts described above, operators should not permit the use of the portable electronic devices in their aircraft during the entire flight and the passengers on board should be informed of these prohibitions by expressing in the in flight Magazines and/or announcement.

A/21

AIRCRAFT NOISE CERTIFICATE

1. Introduction

1.1 In pursuance to ICAO Annex 16 Vol-1, Noise Certificate shall be issued/ validated for Myanmar Registered aircraft on the basis of satisfactory evidence that the aircraft complies with requirements, which are at least equal to the applicable Standards specified in the Annex.

1.2 The application shall be made by the aircraft owner before commencement of operation using application form attached to this notice.

1.3 The Noise Certificate shall be carried in Myanmar Registered aircraft during flight.

2. When the following meanings are used in this notice_

a) **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.

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

c) **Associated Aircraft Systems.** Those aircraft systems drawing electrical/pneumatic power from an auxiliary power unit during ground operations.

d) **Auxiliary Power Unit (APU).** A self-contained power-unit on an aircraft providing electrical/pneumatic power to aircraft systems during ground operations.

e) **Bypass Ratio.** The ratio of the air mass flow through the bypass ducts of a gas turbine engine to the air mass flow through the combustion chambers calculated at maximum thrust when the engine is stationary in an international standard atmosphere at sea level.

f) **Derived Version of a Helicopter.** A helicopter which, from the point of view of airworthiness, is similar to the noise certificated prototype but incorporates changes in type design which may affect its noise characteristics adversely.

g) **Derived Version of an Aeroplane.** An aeroplane which, from the point of view of airworthiness, is similar to the noise certificated prototype but incorporates changes in type design which may affect its noise characteristics adversely.

h) **External Equipment (Helicopter).** Any instrument, mechanism, part, apparatus, appurtenance, or accessory that is attached to or extends from the helicopter exterior but is not used nor is intended to be used for operating or controlling a helicopter in flight and is not part of an airframe or engine.

i) **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.

j) **Human Performance.** Human capabilities and limitations which have an impact on the safety and efficiency of aeronautical operations.

k) **Recertification.** Certification of an aircraft with or without a revision to its certification noise levels, to a Standard different to that to which it was originally certificated.

l) **Self-Sustaining Powered Sailplane.** A powered aeroplane with available engine power which allows it to maintain level flight but not to take off under its own power.

m) **Subsonic Aeroplane.** An aeroplane incapable of sustaining level flight at speeds exceeding flight Mach number of 1.

n) **Subsonic Jet Aircraft.** A jet aircraft incapable of sustaining level flight at speeds exceeding flight Mach number of 1.

3. Acceptance Noise Standard

Myanmar is not the State of Aircraft/ Engine designer and manufacturer, so Myanmar DCA accept and validate the Noise Certificate issued by the following authorities _

(i) the Federal Aviation Administration of USA.

(ii) Members of the European Aviation Safety Agency.

4. Records of Noise

An applicant shall submit test flights noise data that the aircraft noise meets the Standards as prescribed in the Annex 16.

Note: Records of test flights carried out by Manufacturer of the aircraft for measurement of noise according to test flight procedures prescribed in the Annex 16 may be accepted.

5. Suspension / Cancellation of Noise Certificate

Myanmar DCA shall suspend or revoke the noise certification of an aircraft on its Register if the aircraft ceases to comply with the applicable noise Standards. The Myanmar DCA shall not remove the suspension of a noise certificate or grant a new noise certification unless the aircraft is found, on reassessment, to comply with the applicable noise Standards.

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APPENDIX A/21

REPUBLIC OF THE UNION OF MYANMAR
DEPARTMENT OF CIVIL AVIATION

APPLICATION FOR AIRCRAFT NOISE CERTIFICATE

1. Nationality and Registration Marks of aircraft _____

2. Owner of the aircraft _____

3. Address of the Owner of the aircraft _____

4. Manufacturer _____

5. Manufacturer's Designation of Aircraft_____

6. Aircraft Serial Number_____

7. Engine Type _____

8. Maximum Weight of aircraft approved in (kg),

Take off: _____ Landing; _____

9. Any Additional Modifications incorporated related to noise level (If any) _____

_____

10. Noise Measurement/Noise standard,
Noise of this aircraft meets the standard given in Chapter _____, Attachment _____, of the requirements of ICAO Annex 16, Volume I.

11. Has the Noise Certificate issued by the previous state of register or the manufacturer been received?

Yes No

Signature _____

Name _____

Date _____

****

DCA use only,

Accept Not Accept

Noise Certificate No, _____ Issue Date _____

A/22

DOCUMENTS TO BE CARRIED IN MYANMAR REGISTERED AIRCRAFT FOR THE PURPOSE OF INTERNATIONAL FLIGHT

1. INTRODUCTION

Documents to be carried in Myanmar Registered Aircraft for the purpose of international flight have been specified in Sub-rule (2) of Myanmar Aircraft Rule No.7. This notice prescribes additional requirements for such documents to meet ICAO's requirements.

2. APPLICABILITY

This Notice is applicable to all Public Transport Aircraft, registered in Myanmar that will be engaged in international navigation.

3. REQUIREMETS

3.1 Sub-rule (2) of Myanmar Aircraft Rule No.7 stated that no person in charge of any aircraft engaged in international navigation shall allow such aircraft to be flown unless the following documents issued by the State in which the aircraft is registered are carried on board the aircraft, namely:-

(i) the Certificate of Registration,
(ii) the Certificate of Airworthiness,
(iii) Aircraft Noise Certificate,
(iv) updated Approved Airplane flight manual,
(v) the licences of the personnel,
(vi) the journey log book,
(vii) the Aircraft Technical Log,
(viii) where radio communications equipment is carried in the aircraft, the permit or licence for such equipment,
(ix) where the aircraft carries passengers, a list of their names showing their place of origin and destination,
(x) where the aircraft carries goods, air consignment notes and manifests in respect thereof.

3.2 In addition to the documents prescribed above, the following documents shall also be carried on board for Myanmar Registered Aircraft for the purpose of international flight:-

(i) a certified true copy of the operator's AOC and a copy of the associated operations specifications relevant to the aircraft type with a required minimum content, which includes the location on board the aircraft where the contact details, at which operational management can be contacted without undue delay, are listed,

(ii) other document containing performance data (if any),
(iii) current and suitable charts to cover the route of the flight,
(iv) an aircraft search procedure checklist,
(v) information and instructions relating to the interception of civil aircraft,
(vi) maintenance release,
(vii) fuel and oil records,
(viii) minimum equipment list (MEL),
(ix) aircraft operating manual,
(x) airfield performance data,
(xi) checklists for normal, abnormal and emergency procedures,
(xii) mass and balance forms and their completion,
(xiii) weather reports and forecasts,
(xiv) operational flight plan, and
(xv) Notices-to-airmen (NOTAMS).

3.3 An identification fire proof plate, inscribed with at least its Nationality and Registration marks, aircraft type, aircraft manufacturer serial number, Name and Address of Owner and/or Operator must be affixed in a prominent position near the main entrance.

A/23

REQUIREMENTS AND PROCEDURES OF AIRWORTHINESS APPROVAL FOR REQUIRED NAVIGATION PERFORMANCE (RNP)

1. APPLICABILITY

This notice is applicable to Myanmar civil aircraft, operating into areas designated for Required Navigation Performance (RNP).

2. DEFINITION

Required Navigation Performance (RNP) means a statement of the navigation performance necessary for operations with a defined airspace.

3. APPROVAL PROCESS

It is an ICAO requirement that the state of registry of the aircraft to maintain an approval process for grant of each operation approval prior to flights into the designated regions. The approval process consist of two steps i.e. airworthiness approval and operational approval. This notice specifically addresses the airworthiness approval process only, and is a prerequisite for operational approval. The operational approval is the responsibility of the Flight Standard Division and the Airworthiness Division will make a recommendation for operational approval after all the airworthiness requirements are satisfied.

4. REQUIREMENT

4.1. In consistent with the intent of MCAR part 7, Airworthiness approval will be granted base on the Minimum Navigation Performance Specifications (MNPS) from the authority of type design/manufacture of the aircraft.

4.2. Application for approval for aircraft originating from other than FAA and EASA will require further detailed investigation by the DCA ,and will be reviewed in case by case basis.

4.3. Aircraft that requires modification to qualify for RNP airworthiness approvals must be modified in accordance with manufacturer's approved data package. This data package will be subjected to review and acceptance by the DCA. Approval of modification shall be in accordance with Airworthiness Notice No. 6.

5. PRE-APPLICATION MEETING

Each individual operator should request a pre-application meeting with Airworthiness Division. The intent of this meeting is:

(a) To inform the operator of DCA expectations in regard to airworthiness approval of RNP,

(b) To discuss the contents of the operator's application, and

(c) For the DCA to review and evaluate the application.

6. APPLICATION

Application for airworthiness approval shall be made in writing to Airworthiness Director, DCA. The operator submits documentation of its proposed operation to Airworthiness Division. The contents of RNP application should include, as a minimum, the following:

(a) **Aircraft qualification documentation**.Documentation from the aircraft manufacturer showing that the proposed aircraft equipment meets the requirements of RNP approval. This documentation should contain any specific hardware or software equipment requirements, procedural requirements, and limitations.

(b) **Type of aircraft and description of aircraft equipment to be used**. Provide a configuration list that details pertinent components and equipment to be used for the operation. The list should include each make, model, and version of FMS software installed.

(c) **Maintenance procedures**. The operator should submit maintenance procedures that include instructions for airworthiness/maintenance of the equipment/systems to be used in the operation and required training for maintenance personnel.

(d) **MEL.** The operator should submit any revisions to the MEL necessary for the conduct of the operation.

7. CONTINUING AIRWORTHINESS

7.1. In order to maintain the integrity of the design features and to ensure that the aircraft system continue to meet the specified standards, operator are required to review its maintenance procedures and address all aspects of continuing airworthiness. As part of the application for airworthiness approval, the operator should submit an amendment to the aircraft Maintenance Schedule/ Maintenance Program. This amendment must be traceable to the Maintenance Planning Document (MPD),or any equivalent document issued by the aircraft manufacture .The basis for certification should be stated in the aircraft flight manual (AFM),together with any system limitation .The AFM shall also provide the appropriate system operating and emergency procedures applicable to the equipment installed.

7.2. Operator should ensure that all appropriately licensed engineers are adequately trained. Emphasis on the training shall be on the differences and additional maintenance requirements for airworthiness approval of RNP.

7.3. For operators who engage maintenance contractors for maintenance of their aircraft must ensure that the maintenance contractors are capable and their personnel appropriately trained.

7. EVALUATION OF APPLICATION

Once the application has been submitted, the Airworthiness Division will begin the process of review and evaluation. If the contents of application are insufficient, the Airworthiness Division will request additional information from the operator. When all the airworthiness requirements of the application are met, the Airworthiness Division will make a recommendation for operational approval.

A/24

REQUIREMENTS AND PROCEDURES FOR GRANT OF AIRWORTHINESS APPROVAL FOR REDUCED VERTICAL SEPARATION MINIMUM (RVSM)

1. Applicability

This Airworthiness Notice is applicable to all Myanmar registered aircraft, operating international flights in airspace or on routes designated for Reduced Vertical Separation Minimum (RVSM). (RVSM airspace is any airspace or route between FL 290 and FL 410 inclusive where aircraft are separated vertically by 1,000 ft (300 m).

2. Definitions

Airworthiness approval. The process of assuring the State authority that aircraft meet RVSM. Typically, this would involve an operator meeting the requirements of the aircraft manufacturer service bulletin for that aircraft and having the State authority verify the successful completion of that work.

RVSM approval. The term used to describe the successful completion of airworthiness approval and operational approval (if required).

3. Approval Process

According to the ICAO Annex 6 part I chapter 7.2.4, the state of registry of the aircraft to maintain an approval process for grant of each operational approval prior to flights into the designated regions. The approval process consists of 2 steps i.e. airworthiness approval and operational approval.

This notice specifically addresses the airworthiness approval process only, and is a prerequisite for operational approval. The Airworthiness Division will make a recommendation for operational approval to the Flight Standard Division after all the airworthiness requirements is satisfied.

Note: Airworthiness approval in itself does not qualify an aircraft to fully operational, and the Airworthiness Division does not issue a separate certificate for each qualified aircraft.

4. Requirements

In accordance with the procedures, restrictions and minimum equipment fitted specified in **updated (MCAR Part 7, Aircraft Instruments and Equipment)** approval will be granted base on the minimum aircraft system performance specification (MASPS) from the authority of type design of the aircraft. The following are the acceptable document references required for the approval and as applicable, compliance to the requirements specified in each referenced document must be satisfied.

Aircraft made to FAR requirements need to comply with the airworthiness requirements specified in FAA Doc. 91-RVSM, interim Guidance Material for RVSM. The equivalent guidance material from JAA (Temporary Guidance Leaflet No. 6) will need to be complied

with for aircraft made under JAA. (The aircraft made to EASA rules shall comply with the applicable airworthiness requirements of EASA for that particular type of aircraft.

Application for approvals for aircraft originating from other than FAA and JAA will require further detailed investigation by the DCA, and will be reviewed in case by case basis.

Aircraft that requires modification to qualify for any of the above approvals must be in accordance with manufacturer's approved data package. This data package will be subjected to review and acceptance by the DCA. Approval of modification shall be in accordance with Airworthiness Notice A/4.

Note: It is encouraged that operators request for a pre-application meeting with the DCA before applying for any of the above approvals.

The application for approvals shall submit the appropriate data package for aircraft approval. The package must consist of at least the following:

(1) An identification of the RVSM aircraft group or the non-group aircraft;
(2) A definition of the RVSM flight envelopes applicable to the subject aircraft;
(3) Documentation that establishes compliance with the applicable RVSM aircraft requirements of this notice; and
(4) The conformity tests used to ensure that aircraft approved with the data package meet the RVSM aircraft requirements.

5. Continuing Airworthiness

In order to maintain the integrity of the design features and to ensure that the aircraft systems continue to meet the specified standards, the operators are required to review its maintenance procedures (This program must outline procedures to maintain aircraft in accordance with the requirements of FAR 91, appendix G) and address all aspects of continuing airworthiness which are affected by RVSM requirements. As part of application for airworthiness approval, the operator should submit an amendment to the Approved Aircraft Maintenance Program (AMP). The AMP amendment must be traceable to the Maintenance Planning Document (MPD), or any equivalent document issued by the aircraft manufacturer.

Operator should ensure that each RVSM maintenance program must include the following:

(1) Identification of components considered to RVSM critical, and identification of structural areas noted as RVSM critical areas.
(2) The name or title of the responsible person who will ensure that the aircraft is maintained under the approved program.
(3) The method the operator will use to ensure that all personnel performing maintenance on the RVSM system are properly trained, qualified, and knowledgeable of that specific system.
(4) The method the operator will use to notify the crew if the aircraft has been restricted from RVSM but is airworthy for an intended flight.

(5) The method the operator will use to ensure conformance to the RVSM maintenance standards, including the use of calibrated and appropriate test equipment and a quality assurance program for ensuring continuing accuracy and reliability of test equipment, especially when outsourced.

(6) The method the operator will use to verify that components and parts are eligible for installation in the RVSM system, as well as to prevent ineligible components or parts from being installed.

(7) The method the operator will use to return an aircraft to service after maintenance has been performed on an RVSM component/system or after the aircraft was determined to be noncompliant.

(8) Periodic inspections, functional flight tests, and maintenance and inspection procedures with acceptable maintenance practices for ensuring continued compliance with the RVSM aircraft requirements.

(9) These elements may be listed in detail or described by reference to an acceptable program that is identified and controlled by revision or issue number.

(10) The need for functional flight tests may be limited to only after repairs or modifications that are deemed to warrant such testing and may be accomplished through monitoring height-keeping performance.

(11) The maintenance requirements to be done on the component or system associated with any RVSM component or associated modification.

(12) Any other maintenance requirement that needs to be incorporated to ensure continued compliance with RVSM requirements.

(13) Operators using the services of AMOs must include provisions to ensure that the requirements of their RVSM programs are being met. The basis for certification should be stated in the aircraft flight manual (AFM) together with any system limitations. The AFM also provide the appropriate system operating and emergency procedures applicable to the equipment installed. Operator should demonstrate that adequate maintenance facilities are available to ensure continued compliance with the RVSM maintenance requirements. Operator should ensure that all appropriately licensed engineers and/or approval holders are adequately trained. Emphasis on the training shall be on the differences and additional maintenance requirements for each approval. For operator who engages maintenance contractors for the maintenance of their aircraft must ensure that the maintenance contractors are capable and their personnel appropriately trained.

6. Documents

The following documents should be reviewed and updated as appropriate to include the effects of RVSM implementation:

(A)The Structural Repair Manual with special attention to the areas around the static source, angle of attack sensors and doors if their rigging can affect airflow around the previously

mentioned sensors.

(B) Each operator requesting RVSM operational approval should submit a maintenance and inspection program which includes any maintenance requirements as part of a continuous airworthiness maintenance program approval or an equivalent program approved by the DCA. An approved RVSM maintenance program outlining procedures to maintain RVSM aircraft in accordance with the requirements of this Notice. Each program must contain the following:

(i) Periodic inspections, functional flight tests, and maintenance and inspection procedures, with acceptable maintenance practices, for ensuring continued compliance with the RVSM aircraft requirements.

(ii) A quality assurance program for ensuring continuing accuracy and reliability of test equipment used for testing aircraft to determine compliance with the RVSM aircraft requirements.

(C) The MMEL/MEL. The MEL, adopted from the master minimum equipment list (MMEL), should include items pertinent to operating in RVSM airspace.

(D) Maintenance Manual.

(E) Standards Practices Manual.

(F) Illustrated Parts Catalog.

(G) Flight Manual/ Flight Manual Supplements.

7. Tools and Test Equipment

Operator shall have at their disposal the tools and test equipment required to maintain aircraft to the approval standards. Test equipment shall be calibrated utilizing reference standard whose calibration is certified as being traceable to the national standards, or standards acceptable by the DCA. Calibration shall be carried out at periodic intervals and up to required accuracy.

8. Application

Application for airworthiness approval shall be made in writing to Director of Airworthiness Division, DCA. An engineering declaration shall accompany the application for each approval sought (see Appendix). The declaration shall include, but not limited to, the following information.

1. Documentary evidence that indicate that the aircraft is equipped and has complied with the requirements specified.
2. Documentary evidence is shown that items specified in the Appendix 1 have been complied.
3. Continuing airworthiness requirements (maintenance procedures, tooling and training) have been met if not already shown in above paragraph.

APPENDIX A/24

ENGINEERING DECLARATION FOR RVSM AIRWORTHINESS APPROVAL

Organisation:

Organisation responsible for maintenance:

Maintenance Approval No.

Specified Applicable regulation:

Applicant's means of compliance document:

Description of Aircraft -

(a) Type
(b) Series
(c) Aircraft Serial Number
(d) Type of Engine
(e) Engine Serial Number

Place and year of Construction:
Has a RVSM approval in respect of the aircraft been issued by the Civil Aviation Authorities of the country of origin?
(If so the documents should be forwarded)

Engineers and Approval Holders Training:

Special tools requirement:

Declaration:
Under authority vested by the Director General and in accordance with the conditions and limitations appointment by the Department of Civil Aviation, I/We hereby certified that the information contained in this declaration have been examined in accordance with established procedures and found to comply with the applicable requirements of the Department of Civil Aviation. I/We therefore recommend for approval/ approve this applicatio0n.

(1)_____ _____ _____

(2)_____ _____ _____
(Names and signatures of approved person/s) (Approval No.) (Date)

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Documents which accompany for the RVSM approval:

1. Maintenance Manual.
2. Structural Repair Manual.
3. Standard Practice Manual.
4. Illustrated Parts Catalog.
5. Maintenance Schedule.
6. MMEL/MEL.
7. Flight Manual/ Flight Manual Supplement.
8. RVSM approval granted by Country of origin or other Manufacturer's Country Authority.
9. List of equipment fitted onboard to meet the requirements of RVSM operation.
10. Report of the conformity tests used to ensure that aircraft approved with the data package meet the RVSM aircraft requirements.

A/25

AIRCRAFT ENGINES, ENGINE MODULES, APUS AND PROPELLERS OBTAINED FROM SOURCES NOT UNDER THE AIRWORTHINESS CONTROL OF STATE OF DESIGN

1. **General**

Where aircraft engines, engine modules, APUs and propellers (hereafter called Power-plants) which have been overhauled, repaired or operated by organizations not under the airworthiness control of the State of Design are obtained for use in aircraft for which a Myanmar certificate of airworthiness is held or required, If the following facts (paragraph 1.1 to 1.3) can be established and the appropriate procedures of paragraphs 1.4 to 1.6 completed, the item may be regarded as having been operated, overhauled, repaired or modified in a manner, and with material of a type approved by the State of Design. Paragraphs 2.1 and 2.2 are appropriate to 'pool', 'lease', 'loan' or 'power-by-the-hour' power-plant in a similar way. The appropriate methods of signifying that items have been accepted under this Notice are prescribed in paragraph 3.

1.1 The power-plant shall be of a type approved by the State of Design, and the constructor shall, at the time of the original build, have been acceptable for the purpose to the DCA.

1.2 The build standard shall be acceptable to the DCA, i.e.

(a) A list of any modifications or repair schemes not approved by the original constructor shall be provided to the DCA, which will determine whether any further investigation is required.

(b) Where military types are similar to a civil equivalent and have been modified to comply with civil requirements, this shall have been done in conjunction with the constructor in each particular case, unless agreed otherwise with the DCA.

(c) All applicable Airworthiness Directives shall have been accomplished, including Airworthiness Directives of the State of Design.

(d) The last overhaul and any subsequent repairs shall have been undertaken to a specification and by an organization or person, acceptable to the DCA. Where an appropriate arrangement exists between the DCA and the responsible authority, overhaul and repair organizations appropriately authorized by that authority would be acceptable to the DCA.

1.3 In all cases, it shall be established, by the methods of (a) or (b) below, that the power plant has not become unserviceable as a result of operational abuse, inadequate maintenance or unsuitable storage. Log books alone must not be regarded as sufficient evidence of serviceability because they do not always provide a complete record of defects and work carried out.

(a) It may be possible to make this judgments from the knowledge of the previous users. Where an appropriate arrangement exists between the DCA and the responsible authority, a statement certifying serviceability issued by an

organization appropriately authorized by that authority will be acceptable. Failing this, reference shall be made to the DCA, which will make a decision taking into account, such information as may be available from the responsible authority, the constructor and the previous operator.

(b) Where adequate assurance cannot be obtained under the methods of (a), the item shall be dismantled sufficiently (taking into account any recommendations issued by the constructor) to enable a judgment to be reached based on the revealed condition. If necessary, rectification action shall be taken before the item is regarded as complying with this paragraph 1.3. If it cannot be established that the engine power-plant are accurate and complete, all life limited parts must be scrapped. In addition, reference must be made to the DCA for a decision on whether any other parts should be scrapped in the absence of satisfactory records.

1.4 Where an assembly is broken down for use as individual parts, a statement of acceptability, in which the source of supply is indicated, shall be included in the release documents. Such a certification can be given by any organization or person who can sign a statement in accordance with paragraph 3 of this Notice. In addition, the holder of an aircraft maintenance engineer's licence endorsed in Category "C" for the type of engine, may certify such spare parts as his licence permits him to dismantle, assemble and incorporate in engines.

1.5 Civil identification plates shall be fitted, where applicable, and log books or their equivalent, as appropriate, shall be issued. Original or certified true copies of any necessary documents (modification standard, test results) arising from construction or previous overhaul shall be provided with the release documents.

1.6 A statement of any limitations (overhaul periods, time used of any retirement or ultimate Scrap lives) shall be provided with the release documents.

2. Power-Plants

2.1 *Pool Power-plants:* engines interchanged between certain participating airlines on a temporary basis limited to a maximum of 200 hours. The use of pool power-plants, for the limited purpose and period covered by the definition, is permitted provided:

(a) The conditions relating to airworthiness, which must apply for a pooling agreement to be entered into, are laid down in advance by the operator, agreed by DCA and lodged permanently in some suitable record of procedures.

(b) The conditions require consideration not only of the local history of the engine but of the source of engine overhaul and repair where this is other than by the pool partner.

(c) Applicable mandatory directives, instructions and notices are met.

(d) Myanmar operator obtains from the overseas operator a signed statement certifying the power-plant is airworthy when released on loan, declaring any restrictions in cycles or hours, etc., relating to inspection, replacement, or overhaul as necessary

to maintain the airworthiness of the item during the period of loan.

2.2 Lease/Loan/power-by-the-hour engines: engines which are supplied to operators under various agreements for long-term periods, usually from the manufacturer or his agent, but which are not necessarily newly overhauled when supplied. Where a power-plant is obtained from the original manufacturer or a DCA approved overhaul organization for long term loan or 'power-by-the-hour' lease and has been operated by a non-Myanmar operator since the last time the engine was available to the manufacturer/overhauler for an assessment similar to that detailed in paragraph 1.3(b), it will be acceptable for the serviceability of the power-plant to be confirmed as the manufacturer/overhauler or his authorized representative must issue certification of serviceability, having been satisfied at least that:

(a) The previous operator has declared the power-plant to be serviceable at the time of removal, or has stated known defects.

(b) Any outstanding defected have been rectified.

(c) All defects which were recorded during the term of the previous lease appear to have been rectified satisfactorily.

(d) The power-plant's performance is satisfactory (This may be by reference to the previous operator's logged data where this is suitable).

(e)The power-plant has been stored satisfactorily and has not become deficient since removal from the aircraft due to the removal of any components.

(f) The status of all life-limited components in the engine is clearly defined.

(g) Inspection of the power-plant by the manufacturer or his authorized representative to a published schedule has been carried out to the extent necessary to confirm and certify that the power-plant is serviceable at the time of dispatch.

(h) All applicable Airworthiness Directives of the State of Design have been accomplished.

3. The Statement(s) for the actual stripping, rectification and rebuilding carried out shall be entered in the applicable engine or propeller log book, to enable Certificates of Release to Service to be issued and shall be signed either by an organization accepted by the DCA for the construction or overhaul, or by a licensed aircraft maintenance engineer accepted by DCA for the overhaul, of the item concerned.

The statement "Part ... S/N ... has been accepted under procedure complying with this Airworthiness Notice" shall be signed by the person issuing the Certificate of Release to Service for the installation of the item concerned.

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MANUFACTURE AND INSPECTION OF AIRCRAFT PARTS AND APPROVAL OF MATERIALS FOR THE REPAIR AND OVERHAUL OF AIRCRAFT

1. The attention of all concerned is drawn to the fact that cases have occurred where:
   (a) Defective parts have been replaced by parts manufactured without reference to drawings, the defective parts being used as a pattern; or
   (b) Components, for which no certificate of compliance could be produced, have been embodied in civil aircraft. In some cases parts had been obtained from stocks which were surplus to the requirements of the Services, or from various sources other than the manufacturer.
2. In circumstances such as those referred to in paragraph 1(a) there is considerable risk of the new part being made to incorrect dimensions and/or of incorrect materials?
3. In every case where it is necessary to manufacture any detail or component of an aircraft for which a certificate of airworthiness has been issued or is to be issued or renewed, such replacements must be manufactured, inspected and installed to approve drawings.
4. Certification of any repair or replacement under the requirements of the Myanmar Civil Aviation Requirements should not be made unless either:
   (a) the replacement parts have been approved by the manufacturers of the aircraft; or
   (b) the parts have been manufactured and inspected to standard approved drawings (approved repair schemes issued by certain manufacturers coming under this heading) or
   (c) the repair has been approved as a modification subsequent to the issue of a certificate of airworthiness.
5. The existence of an inspection stamp is not in itself sufficient evidence of approval of materials, details or components; approved certificates are also required, and these documents should be held available for examination when an aircraft is inspected for the issue or renewal of a certificate of airworthiness.

A/27

ACCEPTANCE STANDARDS FOR THE MAINTENANCE, OVERHAUL AND REPAIR OF SECOND-HAND IMPORTED AIRCRAFT FOR WHICH MYANMAR CERTIFICATE OF AIRWORTHINESS IS SOUGHT

1. It is noted that, in the past, difficulty has been experienced in establishing whether compliance is shown with the DCA requirements in respect of the maintenance, overhaul and repair of second-hand aircraft imported into Myanmar. Examples of difficulties are as follows_
   (a) Repairs having been embodied without adequate records to establish compliance with an approved scheme or manual acceptable to either the DCA or other airworthiness authority.
   (b) Modifications having been embodied without adequate records to indicate either the source of approval or the Organization responsible for embodiment of the modification.
   (c) Doubt as to the extent of compliance with the DCA maintenance programme /schedule requirements, particularly those relating to major inspections or overhaul work which are intended to ensure the structural integrity of the aircraft and those relating to overhaul periods of components and accessories when compared with the overhaul periods which have previously been applied.

2. Prospective purchasers of second-hand aircraft from sources outside Myanmar are advised that, in future, before a certificate of airworthiness is issued in respect of an imported second-hand aircraft, the DCA will require to be satisfied that:
   (a) both the approval and embodiment of repairs and modification comply with corresponding Myanmar Airworthiness Requirements, or that, if this cannot be established, satisfactory supporting evidence is available from an acceptable source such as the original manufacturer, other airworthiness authority, or a suitably approved design organization in Myanmar;
   (b) the aircraft has been inspected, its condition has been established and reports have been supplied to the DCA;
   (c) all airworthiness directives or mandatory modifications and inspections have been complied with; and
   (d) a check to the manufacturer's recommended maintenance programme, or to the standard of an approved maintenance schedule for the type has been certified.

AN-28

CARBON MONOXIDE CONTAMINATIONS IN AIRCRAFT

1. All concerned are warned of the possibility of dangerous carbon monoxide concentrations in aircraft. All aircraft types may be affected, but this Notice relates mainly to light aircraft.

   Note: Carbon Monoxide (CO), a poisonous gas, is a product of incomplete combustion and is found in varying degrees in all smoke and fumes from burning carbonaceous substances. It is colorless, odorless and tasteless.

2. There are two main sources of contamination:
   (a) Modifications, such as those involving the introduction of additional openings in the fuselage or the removal of windows and doors, e.g. for camera installations or parachutists: before approval can be given for such modifications, aircraft must be tested to ensure that the cockpit/cabin is free from unacceptable concentrations. Aircraft modified in accordance with an approved scheme must also be subjected to a similar test.
   (b) Defective heating systems of the type which utilize an exhaust heat exchange: physical inspections of such systems should be carried out according to manufacturer's instructions at the intervals specified and whenever carbon monoxide contamination is suspected.
3. The other possible sources of contamination:
   (a) Apertures in fire walls of single-engined aircraft, ineffective seals at fuselage strut attachments, defective exhaust manifold slip joints, exhaust system cracks or holes, discharge at engine breathers, defective gaskets in exhaust system joints and faulty silencers: aircraft should be carefully examined for defects of this nature during routine inspections which should occur at sufficiently regular intervals.
   (b) Exhaust from other aircraft during ground holding and taxying: the obvious precaution in this case is that ground holding and taxying should be carried out cleared of the exhaust area of preceding aircraft.
4. The DCA should be contacted in cases where the presence of carbon monoxide is suspected and a test for concentration is considered desirable.

A/29

GAS TURBINE ENGINE PARTS SUBJECT TO RETIREMENT OR ULTIMATE (SCRAP) LIVES

1. The design of gas turbine engines in service is such that certain critical parts, notably compressor and turbine discs, experience cyclic variations of stress due to mechanical and thermal effect which are of sufficient magnitude to result in fatigue damage. The failure of these parts, which under operating conditions may possess more energy than can be absorbed by the surrounding engine structure, can result in damage to the aircraft. It is therefore necessary to limit the life of all critical parts in order to prevent fatigue damage developing into complete failure. As fatigue damage is not detectable by current inspection techniques until cracking has begun, and because crack propagation to the point of failure can be unacceptably rapid, it is necessary to determine a safe life for each critical part by extensive testing.
2. These safe lives, also referred to as retirement lives, ultimate lives, scrap lives and low cycle fatigue (LCF) lives, are mandatory limits which must never be exceeded. For the benefit of operators and engine overhaul agencies, manufacturer also publishes this information variously in service bulletins, service memoranda, notices to operators, maintenance manuals, etc. The lives published are accepted by the DCA and are mandatory and all amendments thereto must first be approved. It may be possible to extend the published lives as a result of further testing and this is normally indicated in the publications as an aid to spares provisioning.
3. The Inspection and Test Certificate of an engine issued by a manufacturer or overhaul agency must include reference to a certified statement in which is recorded the life consumed by each of the life-limited parts fitted in the engine up to the time of release. It may be preferable to include this statement in the engine log book but this will be governed by the system adopted by the operator.
4. Operators are responsible for ensuring the parts fitted to the engines being operated do not exceed the published lives. Therefore it is necessary to maintain accurate up to date records of the life consumed by each engine and this may involve recording flying hours, number of landings, 'touch and go' landings and take-offs, air re-starts etc., dependent upon each constructor's definition of a unit of life. In order to preserve continuity of the records, an up to date statement of the life consumed since last release must accompany each engine when dispatched by an operator to an overhaul agency for repair, modification and partial or complete overhaul.
5. When a new type of turbine-engined aircraft is first introduced into service the operator is responsible for determining a 'typical flight cycle', described in engine terms, applicable to its operation. This should be done by sufficient monitoring of service flights, and as necessary training flights, to provide an adequate knowledge of actual engine flight profiles. If these appear to be in any way more severe than those assumed by the engine

constructor, the operator shall inform the engine manufacturer and the DCA amended approved lives will be published if necessary.

6. Additionally, operators shall monitor a sufficient number of flights at successive intervals of approximately six months (this period may be extended in agreement with the DCA as increased experience permits) during the subsequent life of the aircraft to determine that the current assumptions are not being invalidated by intended or unintended changes to operating techniques, changes of service routes or operational roles, etc. If there is any reason to believe that the flight cyclic fatigue usage may be more adverse than currently assumed, the operator shall inform the engine constructor and the DCA with a view to revision of the approved lives.

Note: (a) As differences between winter and summer operation and differences in the installed position of engines in the aircraft may make significant difference to the usage experienced, these factors should be taken into account in the monitoring programmes. Also because auto-throttle and auto-land systems can affect the envelope of engine speeds used, it is important that any changes to the characteristics of such systems are assessed.

(b) engine manufacturer is required to publish, in the engine manuals, information concerning the engine flight profile assumed for the establishment of safe lives.

7. Where an operator finds the programme described in paragraph 6 impractical, sufficiently pessimistic assumptions will need to be made in determining, for his particular operation, the safe lives of affected parts, in order to provide for any possible variations of operation likely to occur.

8. Operators must comply with any instructions given by the engine manufacturer's manual. The operator must inform the engine manufacturer of any conditions of their operation which may be at variance with his instructions.

A/30

FATIGUE LIVES

1. For fatigue reasons the major components (e.g. wings and centre-sections) of certain types of aircraft have lives restricted to a specific number of flying hours, flights or landings. These restrictions have, in the main, been confined to large transport type aircraft but more recently it has been found necessary to introduce similar restriction on certain smaller types of aircraft, some of which are operated in the private category.
2. The "Lifing" of components is intended to prevent structural failure under the action of repeated air and ground loads experienced in service, the lives being based on the results of test carried out by the manufacturer of the aircraft. If the specified fatigue life of a critical component is exceeded, the possibility arises of a catastrophic structural failure. Where fatigue lives have been imposed full details have been published by individual manufacturers in their service bulletins and compliance with such information is required by the DCA. Structural life limitations are determined for likely average utilization of a type of aircraft. Any operations which depart substantially from the typical require assessment of the structural life limitations for those specified operations and may require alterations in the safe fatigue lives. Examples of operations in this category are low level flights in a maritime surveillance, or geographical survey role (particularly using pressurized aircraft), or long endurance operations.
3. For the purpose of establishing structural life limitations a landing is defined as an occasion when the main undercarriage wheels make contact with the airfield surface and lift is significantly destroyed. A flight is associated with each landing and therefore the total number of flights pressurized and un-pressurized is equal to the total number of landings. A pressurized flight is one in which the aircraft's pressurization system is operated at a pressure differential of 14 KN/M^2 (2 psi) or above.
4. Because of the transfer of components from one aircraft to another, it has in some instances been impossible to establish the remaining safe life of individual components. For this reason it is necessary to ensure that when a component in this category is installed in an aircraft, a record is kept with the aircraft documents showing, as applicable, the hours flown and number of flights or landings already sustained by the component at the time of installation. In the case of pressurized flights the applicable pressure differential may be significant. Certificates of release to service may not be signed until the signatory is satisfied that the required history of the component has been established.
5. Failure to comply with the above procedure may, due to the absence of evidence showing that the components in question have any remaining safe life, result in owners or operators being required to replace such components prematurely.

   Note: In addition to recording operating hours of engines, APUs and propellers, the DCA requires on most engines, APUs and propellers that a record be kept of the cycles completed. Cycles are defined by the manufacturers of each engine, APU and propeller.

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A/31

MAINTENANCE REQUIREMENTS FOR VARIABLE PITCH PROPELLERS

1. Introduction

1.1 For most propeller types the propeller manufacturer will publish overhaul periods and any necessary maintenance inspection instructions which will be applied by the operator at the periods specified unless varied by the Approved Maintenance Schedule/Program.

1.2 It has been recognized though that there are a few proper types where the manufacturer has not published overhaul lives in terms of hours or calendar period. In order to ensure that these propellers are being maintained in a satisfactory condition, the inspections of this Notice are required to be applied at the periods stated.

1.3 A situation also exits where, for a low utilization operation, the calendar period can be reached when a propeller has run only a small percentage of its operating hours limit. Under these circumstances, wear would not be expected to be a problem while degradation of seals and corrosion are more likely to exist. This Notice introduces an alternative maintenance policy which, subject to intermediate inspections, as specified in the appendix, will monitor the condition of a propeller such that it can be operated beyond its calendar period to achieve its operating hourly limit.

1.4 Any overriding mandatory requirements in respect of particular propellers, issued either by the Airworthiness Authority of the country of manufacture of a propeller, or by the DCA will take precedence over this Notice. For the purpose of compliance with an AD which specifies requirements as a function of overhaul, the bare blade inspection required by paragraph 4.2.2 shall be deemed as an overhaul.

2. Applicability

The requirements of this Notice are applicable to variable pitch propellers, variable pitch propellers which have been locked and to ground adjustable propellers.

3. Compliance

3.1 The maintenance policy defined in either paragraph 3.1(a) or (b) or (c) must be applied to all variable pitch and ground adjustable propellers.

(a) Overhaul at the operating hours or calendar period recommended by the manufacturer, whichever occurs first, unless varied by the Approved Maintenance Schedule.

(b) The hub/blade and bare blade inspections specified in paragraphs 4.2.1 and 4.2.2 of this Notice must be applied when:

(i) No calendar or operating hour overhaul intervals are recommended by the manufacturer, or

(ii) Only operating hour overhaul intervals are recommended by the manufacturer with no associated calendar recommendation.

(c) For a propeller fitted to an aircraft which has a low utilization, and for which the manufacturer has specified overhaul periods in terms of operating hours and calendar periods, the calendar life limitation only may be exceeded subject to compliance with the hub/blade and bare blade inspections specified in paragraphs 4.2.1& 4.2.2 of this Notice.

3.2 The periods of operation or elapsed calendar time prescribed in the appendix to this Notice shall be calculated from the date of the initial installation of the propeller on an aircraft following manufacture or complete overhaul of the propeller and may be preceded by a period of storage of up to 2 years which has been carried out in accordance with the manufacturer's recommendations.

3.3 The applicability and compliance requirements of this Notice are summarized in the appendix to this Notice Tables 1 and 2.

4. **Propeller Inspections**

4.1 The inspection of propellers required by Tables 1, 2, 3 must be undertaken by an organization approved by the DCA for the purpose. However, with the exception of aircraft used for commercial air transport, the inspections required by Table 2 may, subject to prior approval of DCA, to be undertaken by an aircraft maintenance engineer licensed in Category C for the type of engine to which the propeller is fitted.

4.2 The inspections and re-work shall be carried out in accordance with the manufacturer's instructions and as a minimum shall include:

4.2.1 Hub/blade inspection

(a) Dismantling of the propeller sufficiently to gain access to the blade root bearing assemblies.

(b) Thorough cleaning of the blade root assemblies.

(c) Examination for pitting, fretting, corrosion, cracking and other damage of the hub, bearings, blade roots and housing, together with replacement if any disturbed seals. All of the blade surfaces shall be examined for damage, de-lamination, and the presence of corrosion, removing the paint finish as necessary. In cases where deicer boots or overshoes are installed on the blades, a detailed examination for corrosion around their edges shall be carried out, and if any evidence is found, the boots/overshoes shall be removed to permit a full inspection of the masked areas. Any corrosion shall be removed and the blades re-protected. In cases where deicer boots/overshoes are removed, replacement parts shall be installed using the facilities prescribed and under conditions and procedures specified, in the relevant manufacturer's Overhaul Manual.

(d) Checking the track of the propeller after refitting, then functioning throughout its operational range by means of an engine run to verify correct performance, and to establish that any vibration is within acceptance limits.

4.2.2 Bare blade inspection; In addition to the hub/blade inspection ref 4.2.1:

(a) Remove of all de-icing boots or overshoes and fairings

(b) Removal of all paint and erosion protection

(c) Removal of all blade root bushings and plugs

(d) Inspection of the complete blade surface for the pressure of corrosion. Any corrosion shall be removed and the blades re-protected and prepared for the reinstallation of the blade fittings

(e) Full dimensional inspection of all blades.

5. **Record of accomplishment**

A comprehensive record of the inspection and work done in accordance with paragraph 4 of this Notice shall be retained and an entry, making a cross reference to this document, shall be inserted in the Propeller Log Book.

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Propellers shall be maintained in accordance with either (a) or (b) of the appropriate following Table:

Table 1 - Propellers fitted to Commercial Air Transport, Public Transport, Aerial Work and Private Category Aircraft; MTWA above 5700kg

(a)	Overhaul Period	Whichever occurs first of operating hours or calendar period as published by the propeller manufacturer unless varied by the Approved Maintenance Schedule
(b)	Overhaul Period	Operating hours as published by the propeller manufacturer or on condition where no life has been published subject to (i) and (ii) below
	(i) Hub/blade inspection period	Inspect at 3 years since new or overhaul or period inspection (ii) below; repeat at 1 year intervals
	(ii) Bare blade inspection period	Not to exceed 6 years since new, overhaul or last bare blade inspection.

Table 2 - Propellers fitted to Commercial Air Transport, Public Transport, Aerial Work and Private Category Aircraft; MTWA below 5700kg

(a)	Overhaul Period	Whichever occurs first of operating hours or calendar period as published by the propeller manufacturer unless varied by the Approved Maintenance Schedule
(b)	Overhaul Period	Operating hours as published by the propeller manufacturer or on condition where no life has been published subject to (i) and (ii) below
	(i) Hub/blade inspection period	Inspect at 3 years since new or overhaul or inspection (ii) below (but may be phased to next annual check or Certificate of Airworthiness Renewal provided period does not exceed 4 years)
	(ii) Bare blade inspection period	Not to exceed 6 years since new, overhaul or last bare blade inspection.

Note: Hub/blade inspections and bare blade inspections are to be in accordance with the procedures of paragraph 4 of this Notice.

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EXAMINATIONS FOR THE ISSUE OR EXTENSION OF AIRCRAFT MAINTENANCE ENGINEER'S LICENCE

1. Examination as above will be held by the Department during the year 2013 on the days specified in paragraph 2.

2. During week commencing 29th April 2013
During week commencing 12 th August 2013
During week commencing 16 th December 2013

3. Application for examination must be made on C.A form 131 together with Personel maintenance experience Log Book and must be forwarded to the Airworthiness Division, Department of Civil Aviation at least (6) weeks prior to the commencement of the examination.

4. An applicant who whishes to withdraw from an examination should notify the Airworthiness Division, Department of Civil Aviation at least **seven** days prior to the commencement of the examination.

5. Applicant must ensure that they are eligible for examination under the conditions set out in the current issue of the MCAR 66.

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LIECENCE OF AIRCRAFT MAINTENANCE ENGINEERS

1. The government of the Union of Myanmar may grant licenses to person to act in the capacity of Aircraft Maintenance Engineers and to sign in connection with the maintenance of aircraft such certificates as may be prescribed or required under the Myanmar Aircraft Rules.

2. The Categories in respect of which licenses for Aircraft Maintenance Engineers may be granted, and the duties which may be performed by the holders of such licenses are as follows;
   - 2.1. Category "A"--- The duties which may be performed by the holder of a license, in respect of public aircraft, excluding engines, are---
     - 2.1.1. Certification, in the manner prescribed in the Myanmar Aircraft Rules, in respect of public transport aircraft.
     - 2.1.2. Certification in the log book of work done under approved maintenance schedules or maintenance program.
     - 2.1.3. Certification in the log book of repairs approved as minor repairs, of modifications, and of the replacement of approved components and parts.
   - 2.2. Category "C"--- The duties which may be performed by the holder of a license, in respect of engines, are---
     - 2.2.1. Certification, in the manner prescribed in the Myanmar Aircraft Rules, in respect of engines and propellers in public transport aircraft.
     - 2.2.2 Certification in the log book of work done under approved maintenance schedules or maintenance program.
     - 2.2.3 Certification in the log book of the embodiment of approved modifications, and of the replacement of approved components and parts, provided that this work has not involved dismantling of the engine other than to obtain access to the pistons.
   - 2.3. Category "X"--- The duties which may be performed by the holder of a license, according to the ratings in which he/she is licensed, are---
     - 2.3.1. Certification, in the log book of the installation and compensation of compasses.
     - 2.3.2. Certification of the overhaul, repair or modification of engine ignition apparatus and of replacements thereto.
     - 2.3.3. Certification in the log book of the overhaul, repair, modification and installation of variable pitch propellers and of replacements thereto.
     - 2.3.4. Certification of the overhaul, repair, modification and installation of aircraft and engine instruments and of replacements thereto.

2.3.5. Certification of the overhaul, repair, modification and installation of electrical equipment and of replacements thereto.

2.3.6. Certification of the overhaul, repair, modification and installation of automatic pilots and of replacements thereto.

2.4 Category "A" and "C" (Helicopters)---A license in Category "A" will not be issued except in conjunction with a license in Category "C" to cover the particular type of engine installed. The duties which may be performed by the holder of a license, in respect of helicopters are as detailed in paragraphs 2.1 and 2.2.

Note: A license in Category "C" to cover the certification of an engine in a helicopter will not be issued except in conjunction with a license in Category "A" to cover the particular type of helicopter in which the engine is installed.

3. The Myanmar Aircraft Rules require that the certification of an aircraft before flight shall be made in respect of the airframe by an aircraft engineer licensed in Category "A" and in respect of engine(s) by an aircraft engineer licensed in Category "C".

4. To remove any doubts regarding the division of duties when two individuals make the certification, the duties of engineers licensed in Categories "A" and "C" respectively are detailed in the attached appendix.

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Category "A"	Category "C"
1. The Aircraft Engineer licensed in Category "A" is required to certify all parts of the aircraft except the engine(s) and/or power plant(s) and their installations. (see **Note**)	1. The Aircraft Engineer licensed in Category "C" is required to certify the engine(s) and/or power plant(s) including all parts and systems essential to their installations. **Note:** When removal of an instrument or repair of an installation or system involves the detachment of wiring or pipe lines from the airframe, or the opening up of the airframe, the work of removal and replacement should be done in collaboration with an aircraft engineer licensed in Category "A".
2. All parts of the airframe structure for; Assembly condition and, where applicable, Function. All connections to the airframe structure of items classified in this column for security of attachment.	2. All parts of the power plant(s) including; Engine for condition installation and power output. Engine Bearers for Condition and security of attachment. Auxiliary gear boxes, engine driven cabin blowers, engine drive generators, engine starting systems, fuel, vacuum, pressure and de-icing pumps for security of attachment and condition and arranging for correction of reported faults.
3. All aircraft controls, including; All flying controls, all trimming devices, all controls connected to the airframe equipment for condition assembly and correct functioning.	3. All controls connected with the engine(s) or power plant(s) and their ancillary systems for security of attachment, condition assembly and correct functioning.
4. All flying instruments and instruments required for any particular installations for functioning, condition and arranging for correction of reported faults. Direct reading compass for condition. Remote reading compass system for condition and functioning checks.	4. All engine and/or power plant instruments for security of attachment, functioning and condition and arranging for correction of reported faults.

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5. Items of equipment including; Automatic pilots for functioning checks as specified in the respective makers instructions. Radio equipment for security attachment to the airframe structure only. Hand fire extinguishers, safety belts, safety harness, seats or bunks, towing and tethering, gear attachments for condition assembly and functioning. Tables, oxygen masks, life belts, dinghies, axes, all marine mooring gear for condition and security of stowage.	5. Propellers for installation, condition, smooth running and in the case of V.P, propellers assembly and functioning. Constant speed units feathering pumps for installation, condition and functioning.
6. All parts of installations required for operating any of the items show under 2 to 5 above of this column, including; Cockpit and cabin heating and air conditioning systems, de-icing systems except those parts listed under item 6 of Category "C" and pressurization systems for condition and functioning. Fire prevention, detection and extinguishing systems, venture and vacuum systems, pitot and static systems and all parts of the flap operating gear for condition and functioning. All parts of wheel brake operating gear, all parts of the retractable landing and float operating gear and all wiring and piping leading to any items or systems classified under this column for condition and functioning.	6. All parts of installations required for operating any of the above items shown under 2 to 5 above of this column, including; All fuel systems (including tanks), all oil systems (including tanks), all propellers, injector and/or carburetor systems, de-icing heaters (exhaust or coolant operated), all engine cowlings, fire prevention, detection and extinguishing systems, all wiring and piping except as defined in item 6 of Category "A" for installation, condition and functioning.

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CONCESSION CONTROL OF DEVIATION FROM THE ORGANIZATIONS PROCEDURES OR APPROVED MAINTENANCE SCHEDULE

1. This notice provides the information for the application of concessions request to air operator. Concessions are written approval for an air operator/ organization to accept an aircraft, systems, components or parts thereof for use on an aircraft which do not wholly comply with the relevant Myanmar Civil Aviation Requirements but nevertheless do meet an acceptable level of airworthiness in any particular case in the following categories:-
   1.1 Items which do not strictly meet the approved drawings, specifications, manuals or bulletins, but which in the opinion of an appropriately approved design organization will not reduce the level of airworthiness below the required design minimum in the particular case.
   1.2 Items which form part of agreed DCA concession procedures approved as part of MOE or an approved maintenance schedule or Approved Maintenance Program (AMP).
   1.3 Items outside categories (A) or (B) where agreement has been reached with the DCA for the particular item concerned.
2. Concession request must be submitted to DCA by using the request form which is specified in MOE.
3. Operator must demonstrate to DCA that they have knowledge and experience commensurate with the level and scope of the proposed concession request.
4. For each concession the Quality Manager of DCA approved organization is responsible for ensuring that:-
   4.1 Having regard to all the circumstances an acceptable level of airworthiness will be achieved and no person boarding or on board the subject aircraft will suffer hazard;
   4.2 Adequate consideration has been given to the possibility of an adverse effect on airworthiness as a result of defects or malfunctions existing or likely to exist in the aircraft to which the concession is to apply;
   4.3 Consultation has taken place within the Approved Organization and with such other organizations as may be necessary to ensure that the content of the concession satisfies paragraphs 4.1 and 4.2. Any required inspections, checks or tests shall be specified in the concession.

5. Procedures for concession control must be incorporated in the DCA approved MOE. These procedures should satisfy the following requirements unless otherwise agreed by the DCA_
   5.1 A reference numbering system must be in operation to provide for traceability to the affected aircraft, component, or system.
   5.2 The procedure should provide for retention and retrieval of all concessions.
   5.3 The procedure should provide for identification of the person responsible for authorizing the concession and provide evidence of his authority to do so.

5.4 The concession format should include at least the following information;

(a) Name and DCA Approval reference of issuing organization.

(b) Identification of each affected aircraft, component or system.

(c) Full details of the deviation from the approved standard.

(d) Technical justification (and approval references if applicable) to satisfy paragraph 4 of this Notice.

(e) Details of other directly associated current concessions.

(f) Details of any inspections or tests required as part of the concession.

(g) Details of the period of validity of the concession and the inspections or tests required by item (f) above.

(h) Signature and identification of the person authorizing the concession and the date of signing.

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AIRCRAFT ENGINE EMISSION

1. INTRODUCTION

Myanmar is not a state of manufacturer or design and has no capability to measure aircraft engine emission. In pursuance to ICAO Annex 16 Vol-II, engine emission certificate shall be recognized by Myanmar as valid granted by the certificating authority of another Contracting State provided that the requirements under which such certification was granted are not less stringent than the provisions of Annex 16 Volume II.

2. Where the following definition are used in this notice,

Afterburning A mode of engine operation wherein a combustion system fed (in whole or part) by vitiated air is used.

Approach phase The operating phase defined by the time during which the engine is operated in the approach operating mode.

Climb phase. The operating phase defined by the time during which the engine is operated in the climb operating mode.

Date of manufacture. The date of issue of the document attesting that the individual aircraft or engine as appropriate conforms to the requirements of the type or the date of an analogous document.

Derivative version. An aircraft gas turbine engine of the same generic family as an originally type-certificated engine and having features which retain the basic core engine and combustor design of the original model and for which other factors, as judged by the certificating authority, have not changed.

Oxides of nitrogen. The sum of the amounts of the nitric oxide and nitrogen dioxide contained in a gas sample calculated as if the nitric oxide were in the form of nitrogen dioxide.

Rated thrust. For engine emissions purposes, the maximum take-off thrust approved by the certificating authority for use under normal operating conditions at ISA sea level static conditions, and without the use of water injection. Thrust is expressed in kilonewtons.

Reference pressure ratio. The ratio of the mean total pressure at the last compressor discharge plane of the compressor to the mean total pressure at the compressor entry plane when the engine is developing take-off thrust rating in ISA sea level static conditions.

Smoke. The carbonaceous materials in exhaust emissions which obscure the transmission of light.

Smoke Number. The dimensionless term quantifying smoke emissions.

Take-off phase. The operating phase defined by the time during which the engine is operated at the rated thrust.

Taxi/ground idle. The operating phases involving taxi and idle between the initial starting of the propulsion engine(s) and the initiation of the take-off roll and between the time of runway turn-off and final shutdown of all propulsion engine(s).

Unburned hydrocarbons. The total of hydrocarbon compounds of all classes and molecular weights contained in a gas sample, calculated as if they were in the form of methane.

3. Where the following symbols are used in this notice, they have the meanings ascribed to them below:

CO	Carbon monoxide
Dp	The mass of any gaseous pollutant emitted during the reference emissions landing and take-off cycle
Fn	Thrust in International Standard Atmosphere (ISA), sea level conditions, for the given operating mode
Foo	Rated thrust
*F*oo*	Rated thrust with afterburning applied
HC	Unburned hydrocarbons (*see* definition)
NO	Nitric oxide
NO_2	Nitrogen dioxide
NO_x	Oxides of nitrogen (*see* definition)
SN	Smoke Number (*see* definition)
πoo	Reference pressure ratio (*see* definition)

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MINIMUM QUALIFICATION OF MAINTENANCE MANAGEMENT PERSONNEL

1. INTRODUCTION

In accordance with the MCAR Part 1 and/or Part 145, the prospective holder of an Air Operator Certificate (AOC) and/or the Approved Maintenance Organization (AMO) Certificate holder shall submit the Maintenance Control Manual (MCM) or Equivalent Document to the Department of Civil Aviation (DCA), Airworthiness Division. The MCM shall clearly specify the personnel qualification of Head of Maintenance/Engineering (Director of Maintenance, Chief Engineer, etc…) and Head of Quality Department in compliance with the minimum qualification of this notice.

2. MINIMUM QUALIFICATION

2.1 Head of Maintenance/Engineering (Director of Maintenance, Chief Engineer, etc…)

(a) Shall be Engineering graduate specialized in Aeronautical, Mechanical, Electrical, Electronic (or) former Transport Category Aircraft Maintenance Engineer Licence holder.
(b) Shall have at least 5 years experience in Manager Level or equivalent position including 2 years experience in Civil Aviation.
(c) Shall have Aircraft Maintenance experience not less than 10 years.
(d) Shall have broad knowledge on current MCAR, FAA, EASA regulations.

2.2 Head of Quality Department

(a) Shall be engineering graduate specialized in Aeronautical, Mechanical, Electrical, Electronic (or) former Transport Category Aircraft Maintenance Engineer Licence holder.
(b) Shall have at least 3 Years in Civil Aviation Maintenance Auditing and Quality control experience.
(c) Shall have Aviation Maintenance experience not less than 10 years and must include 3 years in Civil Aviation.
(d) Shall be capable of discharging his responsibilities, and are conversant with ICAO, MCAR, FAA and EASA regulations and requirements there under as relates to his responsibilities.

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FLIGHT MANUAL APPROVAL AND AMENDMENTS

1. INTRODUCTION

The Aircraft Flight Manual (AFM) is required to be approved by the Department of Civil Aviation (DCA), Airworthiness Division and also any amendment on the AFM shall be first approved by the Airworthiness Division. So, the Air Operator shall submit the AFM and the amendment leaflets to the Airworthiness Division as required. Further more, the operator must establish the amendment procedure and corporate in the company procedure manual.

2. AIRCRAFT FLIGHT MANUAL CONTROL

The approved AFM may be normally controlled by the flight operation section of the Air Operator and one copy of the approved AFM shall be distributed to the engineering or quality section. Any repair or modifications which effect the flight configuration must be informed to the flight operation section. The cooperation procedure for flight operation and engineering section will be produced and corporate in the company procedure manual.

3. AIRCRAFT FLIGHT MANUAL APPROVAL

Initial Aircraft Flight Manual shall be approved by the Airworthiness Division. The operator shall submit 3 copies of Aircraft Flight Manual to Airworthiness Division and one copy to Flight Standard Division. The Aircraft Flight Manual application form will be applied with the cover letter of Quality Assurance Manager. After the Airworthiness Division review the AFM and found to be satisfactory, Aircraft Flight Manual approval will be issued and sent the approving letter to the operator.

4. AIRCRAFT FLIGHT MANUAL STATUS

The Aircraft Flight Manual should accompany with the following status:

a. Aircraft Nationality and Registration Marks
b. Aircraft Manufacturer
c. Aircraft Manufacturer's Serial No.
d. Aircraft Type and Model
e. Engine Type and Model
f. Aircraft Maximum Weight of Approved
g. Aircraft Flight Manual Revision Status and Date
h. List of Modification/Repair related to AFM Amendments (**must be reviewed and recommended by QAM or CI)**
i. State of Design Approval

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EXTENDED RANGE TWIN ENGIN OPERATIONS (ETOPS)

1. INTRODUCTION

This notice provides guidance requirements on the application of continuing airworthiness approval for extended range operations (ETOPS). ETOPS operation defines operation conducted over a route containing a point further than one hour flying time at the normal one engine inoperative cruise speed (in still air) from an adequate airport by aeroplanes with a maximum certificated take off mass exceeding 5700 kg and powered by two turbine power-units. The intended operators who wish to get ETOPS approval from DCA is required to meet all requirements of this notice.

2. CONTINUING AIRWORTHINESS

2.1. Operator's propulsion system reliability for the type of aircraft shall be good enough to perform ETOPS. An assessment will be made of the operator's ability to achieve and maintain the level of propulsion system reliability achieved by the world fleet. This assessment should include trend comparisons of the operator's data with other operators as well as the world fleet average values and the application of a qualitative judgment that considers all of the relevant factors. The operator's past record of propulsion system reliability with related types of power-units should also be reviewed, as well as its record of achieved systems reliability with the airframe-engine combination for which authorization is sought to conduct ETOPS.

2.2. The following items, as part of the operator's programme, should be reviewed by the applicant to ensure that they are adequate for ETOPS_

(a) Engineering modifications. The operator should provide to the State of Registry and, where applicable, to the State of the Operator the titles and numbers of all modifications, additions and changes which were made in order to substantiate the incorporation of the configuration maintenance and procedures (CMP) standard in the aeroplanes used in ETOPS.

(b) Maintenance procedures. Following approval of the changes in the maintenance and training procedures, substantial changes to maintenance and training procedures, practices or limitations established to qualify for ETOPS should be submitted to the State of the Operator and, where applicable, to the State of Registry, before such changes may be adopted.

(c) Reliability reporting. The reliability reporting programme as supplemented and approved, should be implemented prior to and continued after approval of ETOPS. Data from this process should result in a suitable summary of problem events, reliability trends and corrective actions and should be provided regularly to the State of the Operator and to the concerned airframe and engine manufacturers.

(d) Modifications and inspections implementation. Approved modifications and inspections which would maintain the reliability objective for the propulsion system and airframe systems as a consequence of AD actions and revised CMP standards should be promptly implemented. Other recommendations made by the engine and airframe manufacturers should also be considered for prompt implementation. This would apply to both installed and spare parts.

(e) Aeroplane dispatch procedures. Procedures and centralized control processes should be established which would preclude an aeroplane's being dispatched for ETOPS after propulsion system shut-down or primary airframe system failure on a previous flight, or significant adverse trends in system performance, without appropriate corrective action having been taken. Confirmation of such action as being appropriate may, in some cases, require successful completion of one or more non-revenue or non-ETOPS revenue flights (as appropriate) prior to dispatch on an ETOPS.

(f) Maintenance programme. The operator's maintenance programme should ensure that the airframe and propulsion systems will continue to be maintained at the level of performance and reliability necessary for ETOPS, including such programmes as an engine condition monitoring programme and an engine oil consumption monitoring programme.

2.3. AIRWORTHINESS FLIGHT DISPATCH

Although many of the airworthiness flight dispatch considerations may already be incorporated into approved programmes for other aeroplanes or non-ETOPS, the nature of ETOPS necessitates a re-examination of these programmes to ensure that they are adequate for this purpose. Systems redundancy levels appropriate to ETOPS should be reflected in the Master Minimum Equipment List (MMEL). An operator's minimum equipment list (MEL) may be more restrictive than the MMEL considering the kind of ETOPS proposed and equipment and service problems unique to the operator. Systems considered to have a fundamental influence on flight safety may include, but are not limited to_

- electrical, including battery;
- hydraulic;
- pneumatic;
- flight instrumentation;
- fuel;
- flight control;
- ice protection;
- engine start and ignition;
- propulsion system instruments;
- navigation and communications;

- auxiliary power-units;
- air conditioning and pressurization;
- cargo fire suppression;
- engine fire protection;
- emergency equipment; and
- any other equipment required for ETOPS.

2.4. CONTINUING SURVEILLANCE

Maintenance requirements for ETOPS are described in Appendix of this notice. The fleet average in-flight shut-down (IFSD) rate for the specified airframe-engine combination will continue to be monitored by the certificating authority. As with all other operations, the State of the Operator should also monitor all aspects of the operation it has authorized to ensure that the level of reliability achieved in ETOPS remains at the necessary level and that the operation continues to be conducted safely. In the event that an acceptable level of reliability is not maintained, significant adverse trends exist, or if significant deficiencies are detected in the type design or the conduct of the operation, the State of the Operator should initiate a special evaluation, impose operational restrictions, if necessary, and stipulate corrective action for the operator to adopt to resolve the problems in a timely manner. The State of the Operator should alert the certificating authority when a special evaluation is initiated and provide for its participation.

3. EVALUATION PROCEDURES

Operator shall evaluate and submit recommendations of the followings to DCA_

A. Verify the Compliance of the Aircraft with the Configuration, Maintenance, and Procedures Document produced by the manufacturer for ETOPS operations.

B. Evaluate the Operator's Current Maintenance Program. Request and evaluate the following information for ETOPS suitability_

(1) The date of type design and the review of each engine/airframe combination

(2) The in service experience for each engine/airframe combination, to include the following_

(a) The number of months/years of operational experience with each specific engine/airframe combination

(b) The total number of ETOPS and/or domestic operations conducted with the specific engine/airframe

(c) The engine/airframe hours and cycles, to include both total and high time engines

(d) The in-flight shutdown rate (all causes), including the 12-month and 6-month rolling average for both the ETOPS and the world fleet

(e) The unscheduled engine removal rate for both the world fleet and the operator

(f) The mean time between failure (MTBF) for major components

(g) The record of APU starts and run reliability

(h) The records of delays and cancellations, with the causes, by the specific aircraft systems

(i) The records of significant operator events, including the phase of flight where the event occurred, such as:

* Un-commanded power changes (surge or rollback)
* Inability to control the engine or obtain desired power
* In-flight shutdown events

C. Review the Operator's Manual. The inspector must ensure that the following programs and procedures have been included as part of the operator's supplemental maintenance program_

(1) Verification program, to include:

* A list of primary systems
* Conditions that require verification flights
* Procedures for initiating verification actions
* Procedures that monitor and evaluate corrective actions
* Procedures that verify the implementation of corrective action
* Procedures that preclude repeat items from occurring
* Procedures that identify and reverse the adverse trends

(2) Engine condition-monitoring program, to include:

* Scope of program, e.g., data collection and analysis
* Notification procedures for deterioration
* Deterioration monitoring limits for internal engine parts

(3) Reliability program, to include:

* Reporting criteria
* Procedures to ensure reporting of significant individual events (engine shutdowns, flight diversions, etc.)

(4) Engine/APU oil consumption monitoring program, to include:

* Established limits of consumption
* Procedures for use and verification prior to the start of each extended range leg

(5) Extended range parts control, to include:

* Methods of verification of proper parts
* Control procedures during parts pooling and borrowing

(6) Maintenance training program, to ensure:

* Personnel are aware that an ETOPS authorization is in place
* Personnel, including contract personnel, are adequately trained on the special programs required by an ETOPS authorization

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(7) Continuing analysis and surveillance program, to include:

* Ensuring the continued integrity of the ETOPS maintenance programs
* Ensuring that adjustments are made, as required, to the ETOPS programs

(8) Procedures that accomplish the following:

* Preclude simultaneous actions from being applied to multiple similar elements in any ETOPS critical system
* Identify ETOPS related tasks on routine work forms and related instructions
* Develop an ETOPS overwater service check to verify the status of the aeroplane and ensures certain critical items are acceptable.

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PARTS REMOVED FROM AN AIRCRAFT NO LONGER IN SERVICE

1. In Myanmar, due to the various circumstances, some aircraft have been left for a long time without having proper maintenance and some aircraft are withdrawn from service. This airworthiness notice is to provide the guidance to persons involved in maintenance.
2. Aircraft withdrawn from service are often used as a source of spare parts, a process sometimes described as "parting out". These parts, although serviceable at the time the aircraft was placed in storage, may have been affected adversely by storage conditions, including especially environmental factors, or by the length of storage.
3. The records for the aircraft and its parts prior to the aircraft being placed into storage will need to be researched in order to ascertain the previous maintenance history, and airworthiness directive, modification and repair status of the parts being removed. Any unusual events immediately prior to storage, e.g. heavy landings or lightning strikes, will also have to be considered when deciding on the serviceability of the parts being removed.
4. It is important that the part removal process be planned and controlled in a manner as close as possible to that adopted for routine maintenance tasks on in-service aircraft. The following points in particular should be considered:
   a) the means by which the part is removed should be in accordance with the normal maintenance data (e.g. maintenance manuals), using the tooling specified;
   b) adequate access equipment should be provided;
   c) if conducted in the open, disassembly should cease during inclement weather;
   d) all work should be carried out by appropriately qualified maintenance personnel;
   e) all open connections should be blanked; and
   f) a protected and enclosed quarantine storage area for the parts being removed should be provided in the immediate vicinity of the work area and
   g) normal maintenance documentary controls should be used, e.g. the use of work sheets or cards to record component removals, and label identification to show serviceability status.
5. An assessment for condition and eventual return to service of each removed part will need to be conducted by a suitably approved organization. The extent of the work necessary before the part is returned to service is range from a simple external visual inspection to a complete overhaul.

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PARTS RECOVERED FROM AIRCRAFT INVOLVED IN ACCIDENTS

1. This notice give information and precautions to be taken regarding to aircraft parts and equipments have been installed on aircraft, at the time of accident.
2. When an aircraft has been involved in an accident, the title to the salvage may pass from the insured owner to other persons (e.g. aircraft insurers); this salvage may be offered for sale either complete or as separate aircraft items in an "as is, where is" condition. While some items may be totally unaffected by the accident or incident which caused the aircraft to be declared as salvage, it is essential to obtain clear evidence that this is the case. If such evidence cannot be obtained, the item may not be returned to service.
3. Before overhaul and reinstallation can be considered, all such items must therefore be subject to airworthiness assessment and inspection in the light of adequate knowledge of the circumstances of the accident, subsequent storage and transport conditions, and with evidence of previous operational history obtained from valid airworthiness records. Confirmation of this assessment in the form of an airworthiness release is essential.
4. In particular, if a crash load is sufficient to take any part above its proof strength, residual strains may remain which could reduce the effective strength of the item or otherwise impair its functions. Loads higher than this may of course crack the item, with an even more dangerous potential. Further, a reduction in strength may be caused by virtue of the change of a material's characteristics following overheat from a fire. It is therefore of the utmost importance to establish that the item is neither cracked, distorted or overheated. The degree of distortion may be difficult to assess if the precise original dimensions are not known, in which case there is no option but to reject the item. Any suggestion of overheating would be cause for a laboratory investigation into significant change of material properties.

A/41

TYPE ACCEPTANCE CERTIFICATES FOR IMPORTED AIRCRAFT

1. Introduction

This notice provides type certificate requirements for import aircraft into Myanmar. Up to now Myanmar DCA Airworthiness standard base on CAA (UK). Myanmar as a state of registry automatically accept aircraft type certificate or equivalent issued by the FAA or EASA. State such as the United Kingdom, France, USA would be recognized without investigation, however other states may require on in-depth analysis. The foreign State of Design that issued the original Type Certificate or equivalent document will be regarded as the nominated Civil Aviation Authority for airworthiness control of the aircraft listed on that certificate.

2. Application for a Type Acceptance Certificate

2.1. Either the holder of the original Type Certificate or any other person may apply for a Type Acceptance Certificate in respect of a type certificated aircraft, certificated by a recognized country. The Type Acceptance Certificate is issued in respect of the aircraft type itself. There is no certificate holder.

2.2. The application should state exactly which models are to be included on the Type Acceptance Certificate. These models must be included on the foreign Type Certificate. Each model included on the Type Acceptance Certificate must be covered by the data requirements of paragraph 2.3. The data, listed in Appendix of this notice, supporting the application should be supplied at the time of application, or, if it is not available at that time, a covering letter should be supplied giving the reasons and details of when the data will be available. If the application relates to a variant of an aircraft type for which there is already a Type Acceptance Certificate in force, then only data peculiar to the variant need be supplied. The Type Acceptance Certificate should be amended to include the new variant.

2.3 An inherent requirement of type acceptance is the continued airworthiness support of the aircraft and components in the form of service bulletins and other instructions, amendments to documents, and foreign airworthiness directives etc. The applicant must arrange and submit to the DCA an undertaking from the holder of the foreign Type Certificate to continue to supply to the DCA those items listed in Appendix of this notice. The DCA should arrange with the nominated CAA for the supply of airworthiness directives issued by that CAA for the type of aircraft concerned.

3. Conditions, Refusal, Suspension or Cancellation

3.1 The DCA may, under the relevant regulation, issue a Type Acceptance Certificate subject to a condition, if there are reasonable safety grounds, provided the condition is substantially the same as a condition imposed by the CAA of a recognized country on

the corresponding foreign Type Certificate. The DCA may also issue a Type Acceptance Certificate subject to other conditions, provided there are reasonable grounds for believing that issuing the certificate without imposing conditions or taking other measures would constitute a significant threat to aviation safety. Note that DCA may refuse to issue a Type Acceptance Certificate if there are reasonable safety grounds not to do so.

3.2 The DCA may suspend or cancel a Type Acceptance Certificate if it considers that it is necessary to do so in the interests of aviation safety. An inability on the part of the foreign Type Certificate holder to provide ongoing technical support for the aircraft type may constitute grounds for such suspension or cancellation. The DCA should consult with and consider the views of, the applicant, the CAA that issued the foreign Type Certificate, and the manufacturer.

3.3 Normally only the Director General has the power to:

(a) issue and refuse a Type Acceptance Certificate subject to a condition in accordance with paragraph 3.1.

(b) suspend or cancel a Type Acceptance Certificate in accordance with paragraph 3.2.

4. Aged Transport Category Aircraft

The applicant should be aware that before a standard C of A can be issued to such an aircraft, the DCA may require additional data related to the aircraft history, structural integrity programs, supplementary inspections etc.

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Examples of technical data, by product, which should normally be requested

1. Aircraft

a. A statement of the applicable design certification standards.
b. General interior arrangement configuration drawings.
c. Three-view drawing exterior configuration).
d. Master drawing list.
e. Master equipment list.
f. Aircraft Flight Manual including the Configuration Deviation List, if applicable.
g. Instructions for Continued Airworthiness.
h. Certification compliance (checklist).
i. Data and descriptive information needed by the Authority to approve the type certificate data sheet.
j. Listing of service life for critical parts subject to fatigue, if this information is not provided elsewhere in the above data.

2. Aircraft Engines

a. Cross-Section arrangement drawing.
b. Master drawing list.
c. Instructions for Continued Airworthiness.
d. Operating manual.
e. Installation manual.
f. Certification compliance (checklist).
g. Data and descriptive information needed by the 'Authority' to prepare the type certificate data sheet.
h. Listing of service life for critical parts subject to fatigue, if this information is not provided elsewhere in the above data.

3. Propellers

a. General arrangement drawings and model description.
b. Master drawing list.
c. Installation manual.
d. Instructions for Continued Airworthiness.
e. Operating manual.
f. Certification compliance (checklist).
g. Data and descriptive information needed by the 'Authority' to prepare the type certificate data sheet.
h. Listing of service life for critical parts subject to fatigue, if this information is not provided elsewhere in the above data.

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APPROVAL OF MAINTENANCE SCHEDULE OR PROGRAMME

1. OBJECTIVE

1.1 This notice provides requirements for developing and maintaining a maintenance program by an operator/applicant subject to Myanmar Aircraft Rules and Myanmar Civil Aviation Requirements.

1.2 A maintenance program combines the maintenance and inspection functions used to fulfill an operator/ applicant's total maintenance needs. The operators of Transport Category or Aerial Work Category shall maintain their aircraft in accordance with Maintenance Schedule or Programme approved by Airworthiness Division, DCA.

2. GENERAL

2.1 Maintenance programme includes the specific scheduled maintenance tasks and their frequencies of completion and related programs, such as a reliability programme, which are necessary for the safe operation of those aircraft to which it applies.

2.2 The aircraft should only be maintained to one approved maintenance programme at a given point in time. Where an owner or operator wishes to change from one approved programme to another, a bridging program or inspection may need to be performed in order to implement the change.

2.3 The maintenance programme details should be reviewed at least annually or interval as DCA may require. Any changes to the Maintenance Review Board Report/Maintenance Planning Document, or equivalent, should be reviewed by the operator and based on operators reliability data and operational experience, changes implemented as required. Applicable mandatory requirements for compliance with applicable regulations should be incorporated into the owner or operator's maintenance programme as soon as possible.

2.4 The aircraft maintenance programme should contain a preface which will define the maintenance programme contents, the inspection standards to be applied, permitted variations to task frequencies and where applicable, any procedure to manage the evolution of established check or inspection intervals.

2.5 The Inspection Rules in terms of GVI, DVI, L/HIRF, EMI, ZONAL and STRUCTURAL Inspections etc. generated from the MSG-3 definitions should be explained in the preface as well, if applicable.

2.6 The approved aircraft maintenance programme should reflect applicable mandatory regulatory requirements addressed in documents issued by the manufacturer to comply with DCA Regulations.

2.7 Repetitive maintenance tasks derived from modifications and repairs should be incorporated into the approved maintenance programme.

2.8 A maintenance program combines the maintenance and inspection functions used to fulfill an operator/applicant's total maintenance needs.

2.9 Two copies of the proposed Maintenance Schedule are prepared and submitted for approval to Airworthiness Division. This also defines the frequency and conditions for issue of Certificate of Maintenance Review and Release to Service for Schedule Maintenance Inspection.

3. DEFINITIONS

3.1 *Maintenance:* Means the overhaul, repair, required inspection or modification of an aeronautical product, or the removal of a component from or its installation on an aeronautical product, but does not include: elementary work, servicing; or any work performed on an aircraft by the manufacturer prior to the issuance of the first certificate of airworthiness or the export airworthiness certificate;

3.2 *General Visual Inspection (GVI):* A visual examination of an interior or exterior area, installation, or assembly to detect obvious damage, failure or irregularity. This level of inspection is made from within touching distance unless otherwise specified. A mirror may be necessary to enhance visual access to all exposed surfaces in the inspection area. This level of inspection is made under normally available lighting conditions such as daylight, hangar lighting, flashlight or droplight and may require removal or opening of access panels or doors. Stands, ladders or platforms may be required to gain proximity to the area being checked.

Detailed Inspection (DET): An intensive examination of a specific item, installation, or assembly to detect damage, failure or irregularity. Available lighting is normally supplemented with a direct source of good lighting at an intensity deemed appropriate. Inspection aids such as mirrors, magnifying lenses or other means may be necessary. Surface cleaning and elaborate access procedures may be required.

3.3 *EMI*: Electro Magnetic Interference.

3.4 *L/HIRF:* Lightning and High Intensity Radiated Fields.

Zonal Inspection: A collective term comprising selected General Visual Inspections and visual checks that are applied to each zone, defined by access and area, to check system and power plant installations and structure for security and general condition.

3.5 *Stand-alone GVI*: A General Visual Inspection which is not performed as part of a zonal inspection. Even in cases where the interval coincides with the zonal inspection, the Stand-alone GVI shall remain an independent step within the work card.

3.6 *Scheduled (routine) maintenance:* Performance of maintenance tasks at prescribed intervals to ensure the continuing airworthiness of an aircraft.

3.7 *Unscheduled (Non-routine) Maintenance:* Performance of maintenance tasks when mechanical irregularities occur.

3.8 *Structural program:* Structural inspection programs (SIP) are developed by the aircraft manufacturer to meet the inspection requirements for damage tolerance. The types of damage considered during program development are environmental deterioration (ED) (corrosion, stress corrosion), accidental, and fatigue.

4. PROGRAM REQUIREMENTS.

Basic requirements of a maintenance program will include the following:

a). Pre-flight Inspection
b). Scheduled Maintenance
c). Structural Integrity Program
d). Corrosion control and protection procedures (CPCP) (as required)
e). Independent Inspections
f). Reliability Program (*if appropriate*)

5. INSPECTIONS

5.1 Applicability. During the original certification process of an operator/applicant, the Airworthiness Inspector should ensure that the maintenance programs for each aircraft type are applicable to the operation in question.

5.2 Scheduled maintenance. Maintenance tasks performed at prescribed intervals are considered scheduled maintenance. Some of these tasks are performed concurrently with inspection tasks and may be included on the same work form. Work forms that include maintenance instructions must be provided for a record of the accomplishment of these tasks.

5.3 Scheduled tasks include general visual inspections, detailed inspections, special detailed inspections, functional checks, operational checks etc.

5.4 Prime factors considered for inspection intervals are aircraft utilization, environmental conditions, and the type of operation. Examples include changes in temperature, frequency of landings and takeoffs, operation in areas of high industrial pollutants, and passenger or cargo operations. However, new operator or an operator with new aircraft type should follow the intervals stated in the MRBR or MPD for his initial maintenance program. After gaining operational experience and reliability data, the operator may approach DCA for adjustment to the task intervals based on supporting evidence that the interval can be adjusted up or down without jeopardizing safety.

5.5 To ensure proper maintenance, each inspection interval must be stated in terms of calendar times, cycles, and/or hours, as required.

6. STRUCTURAL INSPECTION

Each level of inspection must be clearly defined in the operator/applicant's maintenance program. For example, a specific area of the aircraft may require only a general visual inspection during pre-flight or zonal inspection but will require a detailed or special detailed during higher level checks or structural inspection.

Some older aircraft are subject to a supplemental structural inspection document or separate CPCP, which requires additional age-related structural inspections to be incorporated into the maintenance program.

Requirements.

If a certificated operator proposes changes to the maintenance program, the Inspector must determine the impact of the revision on the program. Since maintenance programs vary, depending on the operator/applicant's complexity of operation, the Airworthiness Inspector must become familiar with all of the pertinent technical and regulatory aspects of the program. Also, if the program was developed from a MSG-3 based MRBR or MPD, the Airworthiness Inspector should be familiar with this type of program.

7. MAINTENANCE PROGRAM

7.1 An owner or operator's maintenance programme should normally be based upon MRBR, MPD or in the absence of MRBR the program should be based on manufacturer's recommendations, the relevant chapters of the maintenance manual or any other maintenance data developed by the manufacturer containing information on the tasks and frequencies. Furthermore, maintenance programme should also take into account any instructions for continued airworthiness containing information on maintenance of components.

7.2 Where an aircraft is maintained in accordance with an aircraft maintenance programme based upon the MRBR, a reliability monitoring program or equivalent shall be considered as part of the aircraft maintenance programme.

7.3 This does not mean that the approved aircraft maintenance programme has to be identical the MRBR or MPD. Initially the MRBR/MPD intervals should be respected, but after the program matures, the operator should use his reliability data to adjust the program to make it more effective. It is also the operator responsibility to continuously monitor the effectiveness of the maintenance program using the reliability data, and amend the program as required.

7.4 Some approved aircraft maintenance programmes, not developed from the MRB/MPD, may also utilize reliability programmes. Such reliability programmes should be also considered as a part of the approved maintenance programme.

8. DUPLICATE OR INDEPENDENT INSPECTIONS must be carried out in accordance with the approved program.

8.1 The maintenance program document should identify the tasks that require duplicate or independent inspections. These will include, at a minimum, those items that could result in failure, malfunction, or defect endangering the safe operation of the aircraft if maintenance is not performed properly or if improper parts or materials are used.

8.2 In determining the work items which require a duplicate inspection, the operator should consider the importance of the following:

a) Installation, rigging, and adjustments of flight control.
b) Installation and repair of major structural components.
c) Installation of aircraft engines, propellers and rotors.
d) Overhaul, calibration or rigging of components such as engines, propellers, transmissions, gear boxes, or navigation equipment

9. APPROVAL PROCESS

9.1 Evaluate the Maintenance Program.

a) Initial program intervals should comply with those shown on the MRBR, MPD or any other documents provided by manufacturer as the instruction for Continued Airworthiness.
b) The maintenance program must contain the tasks and intervals.
c) Authorization for short term escalations, if authorized by DCA
d) Duplicate or Independent inspection task identifications
e) Idenfication of tasks which are mandatory and cannot be escallated, such as CMR, AWL..
f) Work cards and detailed procedures for the tasks in the program

9.2 Evaluate the Structural Inspection Program (this may be as part of the normal Maintenance Program, especially if the maintenance program was based on a MRBR which had been developed using MSG-3 revision 2 or later). This part of the maintenance program must include the following:

a) CPCP, unless contained on a separate document.
b) A detailed inspection of areas where maintenance is being performed to detect cracks, distortion, and corrosion, to examine attachment of parts, and to determine the condition of the area.
c) MRB/MPD routine structural inspection requirements.

9.3 Two copies of the proposed Maintenance Schedule are prepared and submitted for approval to Airworthiness Division. This also defines the frequency and conditions for issue of Certificate of Maintenance Review and Release to Service for Schedule Maintenance Inspection.

10. ANALYZE THE FINDINGS

Evaluate all deficiencies to determine what, if any, corrective actions will be required. If there are deficiencies in the maintenance program, schedule a meeting with the operator/applicant to discuss needed program changes and deficiency resolutions.

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RELIABILITY PROGRAMMES

1. INTRODUCTION

1.1 Myanmar Air Operator Certificate holder or operator should have a system to analyse the effectiveness of the maintenance programme with regard to spares established defects, malfunctions, and damage, and to amend the maintenance programme. This amendment may involve the approval of DCA. Without reliability programme, DCA may not approve the amendment. This notice provides information and guidance material which should be used to design or develop maintenance control programme using reliability programme. Reliability programmes are designed to supplement the operator's overall programme for maintaining aircraft in a continuous state of airworthiness. There are a number of maintenance reliability programmes now in operation that use new and improved maintenance management techniques. Although the design and methods of application vary to some degree, the basic goals are the same — to recognize access and act upon meaningful symptoms of deterioration before malfunction or failure in order to establish and monitor the maintenance control requirements.

1.2 Performance standards (alert values, etc.) are established by actuarial study of service experience using statistical methods coupled with application of technical judgment. These standards are used to identify trends or patterns of malfunction or failures experienced during programme operation. Even though reliability programmes vary, they should provide means for measurement, evaluation, and improvement predictions. They should contain the following elements: an organizational structure, a data collection system, a method of data analysis and display, procedures for establishing performance standards or levels, procedures for programme revision, procedures for time control, and a section containing definitions of significant terms used in the programme.

1.3 It is intended that the specific needs of operators, in terms of operating philosophy, record-keeping practices, etc., be reflected in their reliability programmes. The extent of statistical and data processing required for programme operation is entirely dependent on the character of the particular programme. Programmes may be simple or complex, depending on the size of the operator and other factors. The smaller as well as the larger operators may develop maintenance reliability programmes to meet their own specific needs.

2. RELIABILITY PROGRAMME CRITERIA

2.1 The word “reliable” is a broad term meaning dependable or stable. The term, as used by the aviation industry, applies to the dependability or stability of an aircraft system or part thereof under evaluation. A system or component is considered “reliable” if it

follows an expected law of behavior and is regarded "unreliable" if it departs from this expectation. These expectations differ greatly, depending upon how the equipment is designed and operated.

2.2 Reliability programmes should describe the techniques used for measuring the performance and calculating the remaining service life of the component sufficiently in advance in order to take corrective maintenance action prior to failure. Essentially, reliability programmes are used for the control of maintenance by establishing performance levels for each type of unit and/or system individually or as a class. Generally, reliability programmes depend on the collection of data which can be analysed and compared to previously established programme goals.

2.3 A good reliability programme should contain means for ensuring that the reliability which is forecast is actually achieved; a programme which is very general may lack the details necessary to satisfy this requirement. It is not intended to imply that all of the following information should be contained in one programme, since the operating philosophy and programme management practices, etc., for each operator are different; however, the following information could be applied to the specific needs of either a simple or a complex programme.

3. ORGANIZATIONAL STRUCTURE

The programme should contain an organizational chart which includes:

a) a diagram of the relationship of key organizational blocks;

b) a listing of the organizational elements by title responsible for the administration of the programme;

c) a statement describing lines of authority and responsibility. The programme should identify the organization responsible to management for the overall reliability functions. It should define the authority delegated to these organizations to enforce policy and assure necessary follow-up and corrective actions; and

d) a procedure for the preparation, approval and implementation of revisions to the programme.

4. DATA COLLECTION SYSTEM

4.1 It is important that the data be as factual as possible in order that a high degree of confidence may be placed in any derived conclusion. Data accuracy is particularly important when it is used for predicting reliability because the prediction technique gives at best a broad estimate of the expected reliability. Therefore, the more dependable the data, the higher the degree of confidence that can be placed in the reliability estimate. Data should be obtained from units functioning under different operational conditions.

4.2 Typical sources of information are: unscheduled removals, confirmed failures, pilot reports, sampling inspections, functional checks, shop findings, bench checks and service difficulty reports.

5. DATA ANALYSIS AND DISPLAY

5.1 Data display and reporting provide a timely and systematic source of information, and even though after-the fact, this material is a necessary prerequisite for correcting existing deficiencies. Reporting is not an end objective, but rather a necessary link in the chain of events leading to system improvement. The principal reason for gathering reliability data is to use it for making various determinations and predictions. Among these are such items as failure rate of parts and components, serviceability, and maintainability.

5.2 In general, almost any desired information can be extracted from these data if they are obtained in a planned and organized manner and carefully recorded and collated. However, the methods of analysis must be clearly understood in order to interpret properly the results obtained. Reliability data collected and analyzed with no particular end in view usually result in conclusions that are defective for one reason or another. The programme should provide the information necessary to properly evaluate the graphic presentations submitted in support of the programme. These are used to reveal briefly and simply via graphics those aspects which would normally require a cumbersome analysis of a text or tabular material.

6. PERFORMANCE STANDARD

6.1 Each reliability programme should include a performance standard expressed in mathematical terms. This standard becomes the point of measure of maximum tolerable unreliability. Thus, satisfactory reliability trend measurements are those which fall at or preferably below the performance standard. Conversely, a reliability trend measurement exceeding the performance standard is unsatisfactory and calls for some type of follow-up and corrective action.

6.2 A performance standard may be expressed in terms of system or component failures per thousand hours of aircraft operation, number of landings, operating cycles, departure delays, or of other findings obtained under operational conditions. In some instances, an upper and lower figure may be used. This is known as a reliability band or range and provides the standard by which equipment behavior may be interpreted or explained.

6.3 When the performance standard is exceeded, the programme should provide for an active investigation which leads to suitable corrective action.

6.4 A description of the types of action appropriate to the circumstances revealed by the trend and the level of reliability experience should be included in the programme. This is the central core of maintenance control by reliability measurement. It is the element

that relates operating experience to maintenance control requirements. Statistical techniques used in arriving at reliability measurements presented in support of maintenance control actions should be described. Appropriate action might be:

a) actuarial or engineering studies employed to determine need for maintenance programme changes;
b) actual maintenance programme changes involving inspection frequency and content, functional checks, or overhaul limits and times;
c) aircraft system or component modification, or repair;
d) other actions peculiar to the condition that prevails.

6.5 The results of corrective action programmes should become evident within a reasonable time from the date of implementation of corrective action. An assessment of the time permitted should be commensurate with the severity or safety impact of the problem. Each corrective action programme should have an identified completion date.

6.6 Due to the constantly changing state-of-the-art, no performance standard should be considered fixed — it is subject to change as reliability changes. The standard should be responsive and sensitive to the level of reliability experienced. It should be "stable" without being "fixed". If, over a period of time, the performance of a system or component improves to a point where even abnormal variations would not produce an alert, then the performance standard has lost its value and should be adjusted downward. Conversely, should it become evident that the standard is consistently exceeded in spite of taking the best known corrective measures to produce the desired reliability, then the performance standard should be re-evaluated and a more realistic standard established. Each programme should contain procedures to effect, when required, such changes to the prescribed performance standards.

7. ESTABLISHING INITIAL STANDARDS

7.1 In order to establish the initial standards for structural components, powerplants and systems, the past operating experience with the same (or, in the case of new aircraft, similar) equipment should be reviewed in sufficient depth to obtain a cross-section of the subject system's performance. Normally, a period of six months to one year should be sufficient. For a system common to a large fleet of aircraft, a representative sample may be used, while small fleet systems may require 100 per cent review. Operators introducing a new aircraft into service may establish their alert by using this available data. After the operator completes about one year's operating experience, however, the alert value should be adjusted based upon his experience.

7.2 Due to different operating conditions and system design, it is necessary to use different measuring devices (either singly or combined) to obtain satisfactory performance criteria. As stated before, there are various methods used to evaluate and control performance aircraft diversions, mechanical interruptions in flight, delays and flight

cancellations, component unscheduled removal rates, etc.

7.3 The following are typical examples of methods that can be used to establish and maintain alert values. It should be understood that the methods of evaluation given below are only illustrative and that other suitable methods of evaluation could be used:

a) Pilot reports per 1000 aircraft departures:

1) Several operators have selected pilot reports as related to the number of departures as the primary measure of aircraft systems performance reliability. The reference base for the computation of alert values is a cumulative rate of the previous calendar year's experience. This provides a large statistical base and takes into consideration the extremes in seasonal effects. The baseline for each system is initially calculated by compiling the number of pilot reports logged for the previous twelve-month period times 1000 divided by the number of aircraft departures for the same twelve-month period. The purpose of multiplying the pilot reports by 1000 is to arrive at a figure that expresses the rate per 1000 departures.

2) In order for this to be a cumulative or rolling rate for the immediately previous twelve month period, it must be recalculated each month. The data for the first month of the existing twelve month data set is dropped, and the data compiled for the last month is added; i.e. if the initial calculation was from March 1998 to February 1999, the next month's calculation would cover the period from April 1998 to March 1999.

3) When the base line is computed for a particular system, an alert value is established at a point above the base line equal to, say, five pilot reports per 1000 aircraft departures. The alert values assigned to each system represent the maximum rate of pilot-reported malfunctions considered to deviate sufficiently from the base line to require investigation.

b) Pilot reports per 1000 aircraft hours:

1) For the purpose of measuring reliability, pilot reports per 1000 aircraft flight hours may be selected as the indicator of aircraft systems performance. Performance standards in terms of pilot reports per 1000 hours are established for each of the aircraft systems. Several programmes in current use utilize two performance numbers, an "alert" number and a "target" number. A review and evaluation of a minimum of six to twelve months' history of pilot reports are done to establish the initial alert and target numbers. Established alert and target numbers are valid for a six-month period, at the end of which all alert and target numbers are reviewed and adjusted as necessary.

2) The alert number is defined as the three-month moving (running) average which is considered to indicate unsatisfactory performance.

3) Historically, alert numbers show seasonal variations. To provide a more realistic alert number, the year is divided into six-month periods. One period

encompasses the winter months, the other, the summer months. When reviewing a particular six month period to ascertain if the alert number is still practical, it is important that the comparison is made between similar periods.

4) The target number is defined as the operator's goal and predicted level of performance at the end of a six-month period. Target numbers are set to specify the operator's desires and expectations for future system performance. The target number is established in the same manner as the alert number, the difference being that the alert number is the upper limit of the range and, when exceeded, indicates unsatisfactory performance. The target or the lower limit is set as a goal which represents a level that the operator believes is attainable.
5) Each month a three-month running average for each system is calculated. First, a three-month average is obtained by compiling and analysing data for three consecutive months the total pilot reports for three months are divided by the number of aircraft hours flown during the same three month period. To maintain a running average, each month the first month's data is deleted and the data for the current month added. Any system which either exceeds the alert or which has a trend indicating the target will not be met is considered to be in need of special attention.

8. ESTABLISHING ALERT VALUES STATISTICALLY

8.1 Many programmes establish alert values by reviewing past performance and then, by using "good judgement", establish the numerical value for the alert. Although this generally works well, the value can become controversial since the "good judgement" of one person may well be different from that of another person. In an effort to avoid controversy, some operators prefer the statistical or mathematical approach. This is a broad term that covers a number of methods of gathering numbers of instances and evaluating the result; all methods, however, require a sufficient quantity of accurate data to be available for analysis.

8.2 In order to establish system alert values, an evaluation is made of the operational performance of each system to be controlled by the programme. The yard sticks covering failure performance are clearly defined in the programme. Using these definitions, the failure data for each system are extracted from pilot-reported malfunctions for at least a 12-month period. The "mean" and the "standard deviation" are then computed from those data and each system's alert value is established equal to the mean plus three standard deviations.

8.3 The current performance level of each system is computed on a monthly basis as a three-month cumulative performance rate. This rate is computed by multiplying the number of in-flight malfunctions for a three-month period by 1000 and dividing by the total aircraft flight hours for the same period. Maintaining a cumulative rate requires that the first month's data be deleted and the data for the current month be added to the

sum of the previous two months. When a trend of deteriorating system performance is detected, or if a system is over the alert value, an active investigation is conducted to assess the causes of the change in system performance and to develop an active corrective programme, if required, to bring the system performance under control.

9. CONDITION-MONITORED MAINTENANCE PROGRAMMES

9.1 Other techniques are used which monitor the functional condition of systems or components without disturbing them in their installed environment. These programmes are based on the establishment of acceptable performance as base line data. Internal and external leakage, functional testing, and unit teardown analysis are the factors used to determine the base line. The results of this test become a part of the aircraft's permanent record. The point to be established is that the tests accurately and conservatively identify discrepancies before operational reliability is degraded.

9.2 This type of programme lends itself readily to components. It has also proven very successful in monitoring the functional condition of aircraft systems such as hydraulics, air conditioning and pneumatics (the system primarily utilizing this type of programme is hydraulics). The various tests perform the function of system or subsystem interrogation to determine the presence or absence of component degradation. Internal leakage rates serve as the criteria to evaluate wear and rigging effect on component performance while pressures are used to determine certain component functional responses.

9.3 During the test, individual parts, components and subsystems are evaluated by selective positioning of the various system controls and isolation points. From the comparison of the response produced by sequential steps to the established tolerance, the general location or the specific location of the faulty unit can be determined.

9.4 Additional advantages are:

a) analysis of the data is not required before departure unless functional tests indicate a need for immediate corrective action;

b) results of the test do not require immediate replacements of units showing deterioration provided the functional tests of the subsystem or component are satisfactory; and

c) evaluation of these test data can be used to schedule component replacement at a subsequent inspection or check.

10. MONITORING BY AGE/RELIABILITY RELATIONSHIP

10.1 Several operators use an actuarial analysis technique as a basic requirement for making technical decisions concerning component reliability in their "on-condition" overhaul and monitored maintenance reliability programmes. Components selected for these programmes are those on which a determination of continued airworthiness may be made by visual inspection, measurements, tests or other means without a

teardown inspection or periodic overhaul. Under these programmes, components are allowed to operate in service subject to meeting the established performance standard or the established "on-condition" base line data.

10.2 Initially, an actuarial analysis of each component is prepared to determine its reliability versus age characteristics. A component is considered acceptable for inclusion in the programme when the analysis shows that reliability does not deteriorate with increased time in service up to a predetermined point established by the operator. Normally, this cutoff point is considered to be the practical limit based on the amount of data collection and analysis required to qualify the component.

10.3 When the reliability of a component deteriorates to a value above the established performance standard, another actuarial analysis is made to determine the component's reliability versus age characteristics. Normally, this analysis will also include a determination of the reasons for the deterioration and the corrective action required to bring the condition under control. This reliability analysis is a continuing process and reveals whether a component requires a different maintenance programme or is in need of a design change to improve reliability.

10.4 An actuarial analysis is also made when the observed performance of a component improves to the point where more components are reaching higher operating times without experiencing premature removal failures. With such an improvement in survival characteristics possible, it is desirable to make a reliability analysis to determine its age to- reliability characteristics.

10.5 In the past, component performance has been evaluated largely on the basis of gross premature removal rate and the subsequent analysis of the teardown findings in the shop. The introduction of the "on-condition" overhaul concept has made it increasingly important to gain more information about the operating performance of the components and to examine the relationship of this performance to the time in service. This need has fostered the development of actuarial analysis techniques.

10.6 This method of analysis requires, for a specified calendar period, that the following information be available for each component under study:

a) the time on each operating component at the beginning of the study;
b) the time on each component removed and installed during this period;
c) the reason for removal and disposition of each component; and
d) the time on each operating component at the end of the study period.

10.7 An analysis is made of the performance of each component as its life progresses from one overhaul to another as follows:

a) A time and failure distribution chart is prepared showing the amount of operating time for each component and the failures experienced in each 100- hour time bracket for the specified study period. In conjunction with this chart, a digest of the causes of failure for each 100-hour time bracket is also prepared.
b) The next step is to develop failure rate and survival curves versus time since

overhaul (TSO). A failure rate curve shows the failure rate per 1000 hours for each component in each 100-hour time bracket. A survival curve shows the number of units remaining at any given TSO. The shape of the survival and failure rate curves are valuable when determining the deterioration of reliability. The operating time which can be realized between consecutive overhauls is determined by the area which is under the survival curve and is bounded by the horizontal and vertical axes.

c) Additional information is available from these data by developing a probability curve. This curve will show the probability of a component reaching a given TSO and the number of components expected to fail in a given time bracket. The number of components that would probably fail in a given time bracket is obtained by taking the difference of the ordinates at the beginning and end of a given time bracket. This would also be a reflection of the slope of the survival curve at that point. The percentage of components which survive to a given TSO is also the probability of a single component operating to that time without failing.

d) A still better evaluation is possible by developing a conditional probability curve. This curve will show the probability of failure of a component within a given time interval. Data for a conditional probability is obtained by dividing the number (or percentage) of components entering an interval by the number (or percentage) of components removed during an interval. It is considered that this curve best depicts the relationship between reliability and overhaul time.

10.8 Some advantages of this type of analysis are as follows:

a) a determination can be made as to whether failures are being prevented by the TSO specification;

b) an indication is given statistically concerning the current TSO limit and whether or not it has reached an optimum point;

c) an indication is provided as to what might occur to the overall premature removal rate if the TSO limit were changed;

d) an indication will be provided of any unusual high rate of premature removals/failures that have occurred immediately after a check and repair or overhaul;

e) in some cases, an indication may be given that scheduled interim maintenance would result in an improvement of the overall premature rate;

f) other useful conclusions can be made concerning the relationship of the failure to the time in service, time intervals, engineering change accomplishment, etc; and

g) this technique of in-service component reliability analysis readily lends itself to computer programming. These advantages emphasize the value of such an analysis in determining a maintenance programme that is best for the component involved.

11. CONTROL FOR ADJUSTING TIME LIMITATIONS

11.1 When considering the merits of a time extension, there are many different methods which may be used. The programme should identify these methods and the group responsible for the preparation of a substantiation report to justify the requested time extension. The programme should show that such action is approved by at least two separate organizational segments of the operator, one of which exercises inspection or quality control responsibility for the operator. The programme should also identify the other organizational segment responsible for the performance of the function. When evaluating a particular programme, consideration should be given to the following:

a) Are the specific parameters used to determine time extensions spelled out (i.e., sampling, functional checks, unscheduled removal, etc.)?

b) If sampling is used, does it explain the method, number of samples required, when they will be taken, and at what time interval? Time on units or exhibits used as samples should be specified.

c) Does the programme provide for time increase in overhaul times, periodic services, routine and service checks, phase checks and block overhauls?

d) Are provisions made for changing items having specified fixed time between overhaul to "on condition"?

e) What substantiating data are provided to justify a time increase for emergency equipment which is not normally operated during routine flight?

f) Who establishes the increments of time increases, the sampling requirements, and other substantiation for each proposed action?

g) Are instructions available relative to manual revision concerning time increases and what will have to be accomplished prior to pursuing a subsequent time increase?

h) Does the programme provide for revision of the Operations Specifications (Maintenance Portion) whenever a change is made to the current document?

11.2 It should be ensured that the proposed time between overhauls (TBO) adjustment does not conflict with a corrective action programme established by a previous reliability analysis. A provision should be made for the AID to be advised when increases to time limitations of system/components controlled by the programme occur. Furthermore, operators should be encouraged where possible to include a graphic display of major system/component (engine/airframe) TBO escalation.

12. APPROVAL OF PROGRAMMES

12.1 Maintenance reliability programme approvals are a means of complying with the DCA requirements and, therefore, become part of the AOC holder's operations specifications. The programmes are to be administered and controlled by the AOC holders and monitored by the Airworthiness Inspector. An operator's application for

approval should be accompanied by a document describing programme operation; this document should contain the essentials of systems operation and any other instructions required because of the particular programme or character of maintenance organization involved.

12.2 The AOC holder should submit the maintenance reliability programme and standard for determining time limitations to be included in the operations specifications. Maintenance Portion (it is not necessary to enter the entire document). Due to the differences encountered in the programmes submitted for approval, the operations specifications will vary somewhat from operator to operator.

12.3 An attempt should be made to list all the important elements that should be considered regardless of the programme being evaluated. It is recognized that all of the elements may not apply to a particular programme; however, the Airworthiness Inspector should use those that are appropriate to the programme being evaluated. Emphasis should be given to the elements entered in the operations specifications.

12.4 The procedures for implementing revisions to the programme should be described in sufficient detail to identify the isolated areas which require DCA approval. The AOC holder should also identify the segment of the organization having overall responsibility for the approval of amendments to the programme. The areas involving programme revision which require DCA approvals include:

a) reliability measurement;
b) changes involving performance standards, including instructions relating to the development of these standards;
c) data collection analysis;
d) data analysis methods and application to the maintenance programme;
e) procedures for adding or deleting systems or components; and
f) procedures for transferring systems or components to other programmes.

12.5 When evaluating programme revision procedures, consideration should also be given to the following:

a) Does the programme provide for periodic review to determine if the established performance standard is still realistic or in need of recalculation?
b) What distribution is given to approved revisions?
c) Are the overhaul and inspection periods, work content and rescheduled maintenance activities controlled by reliability methods reflected in the appropriate maintenance manuals?

12.6 The Airworthiness Inspector member of the operator certification team faces a complex and demanding task in reaching a decision as to the adequacy of the applicant's proposed maintenance reliability programme. In the case of applicants proposing to operate large aircraft, the inspector may require assistance from other Airworthiness technical experts. In many States where adequate inspector resources are not available for this important function, the Director will need to obtain

technical assistance from the CAA of the State of Manufacture or another State possessing substantial experience in such matters.

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MAINTENANCE REQUIREMENTS FOR ALL WEATHER OPERATIONS

1. Introduction

1.1 The instruments and equipment requirements and maintenance requirements for Category II and Category III Operations have been specified in MCAR Part 7 (Aircraft Instruments and Equipment). In addition to the above requirements, this notice specify the airworthiness requirements and application procedures for Myanmar Air Operator Certificate Holder to get Airworthiness Approval to conduct all weather operations.

1.2 In order for an operator to gain Airworthiness Approval from Department of Civil Aviation Myanmar, to conduct All Weather operations, certain maintenance related issues require assessment and formal acceptance prior to full approval being granted.

1.3 These issues are identified within six sections: Required Equipment, Control of Required Equipment, Identification of Required Equipment, Current Operational Status of System, System Reliability and Maintenance Personnel Qualification.

2. Required Equipment

2.1 An operator, in liaison with the aeroplane manufacturer, must include in the Operations Manual a complete list of equipment/systems that must be installed and serviceable at the commencement of a Low Visibility Take Off or a Category II or III approach.

2.2 If this requirement is to be satisfied by the Minimum Equipment List (MEL), then such equipment/system must be clearly identified within that document, so that both the flight crew and maintenance personnel are under no uncertainty as to the capability of the aeroplane prior to dispatch.

3. Control of Required Equipment

3.1 The operator's maintenance organization must publish procedures that clearly set out the control of "critical equipment" in terms of all weather operations.

3.2 Such controls should take account of the modification or repair of the above equipment.

3.3 Any modification embodied in critical equipment must be done in agreement with the manufacturer and therefore would be covered by a Service Bulletin (S.B).

3.4 Any repair accomplished on critical equipment must be undertaken by maintenance organizations accepted in accordance with DCA Airworthiness Notices A/4 in the appropriate category and carried out to approved maintenance instructions.

4. Identification of Required Equipment

4.1 The equipment classified as critical in paragraph 2 must be clearly identified to maintenance personnel.

4.2 Whilst it is accepted that modern jet transports have a fully integrated autoflight/ autoland system installed at build and included in type certification, older aeroplanes have varying capabilities of autoland and greater attention should be paid to these aeroplanes.

4.3 Identification is especially important when operating a mixed fleet (with regard to autoland capability) or when an operator contracts out its maintenance to a third party maintenance organization.

4.4 Third party maintenance organizations, by their very nature, undertake work for several operators often simultaneously thus increasing the possibility of inappropriate equipment finding its way onto an aeroplane.

4.5 Operators should individually identify all applicable pieces of equipment or put in place a procedure/system that ensures maintenance personnel only install appropriate equipment onto their aeroplane.

5. Current Operational Status of System

5.1 There will be occasions when the autoland system will have to be downgraded from Category III to Category II or I.

5.2 Such occasions would be poor performance of the aeroplane, integrity or serviceability of the aeroplane systems and the non availability of appropriately trained and qualified maintenance personnel.

5.3 The regrading of the autoland system can be looked at as two distinct activities, the "downgrading" as mentioned above and the subsequent "upgrading" after corrective actions have been accomplished.

5.4 It is very important that provisions should be made to inform the flight crew of the Category II or III status of the aeroplane before dispatch. There will be occasions when the system has been downgraded but the automatic flight deck display systems indicate a Category III capability so this, in isolation, cannot be accepted as meeting the requirement.

5.5 The operator must publish procedures, in liaison with the manufacturer, that fully details when and how regrading should take place.

6. System Reliability

6.1 Aeroplanes certificated in accordance with British Civil Airworthiness Requirements (BCAR) Section D and Joint Aviation Requirements (JAR) 25 cross reference JARAWO is an acceptable basis for showing compliance with the particular aspect of All Weather Operations.

6.2 As part of the In Service Proving, the system has to demonstrate a reliability equal to or better than that detailed in JAR-AWO.

6.3 This reliability monitoring, in actual fact, is required to be a continuous process even after initial approval.

6.4 The data to be collected and utilized is:

(a) the total number of approaches, by aeroplane type where a Category II or III approach/landing was made satisfactorily whether or not it was an actual or practice approach.

(b)reports of unsatisfactory approaches/landings by aerodrome and aeroplane registration and categorized into (i) airborne equipment fault, (ii) ground facility problem (iii) missed approach due to ATC instruction and (iv) other reasons.

6.5 The operator must establish a procedure to monitor the performance of the autoland system components of each aeroplane that detects any undesirable trend before it becomes hazardous. When setting alert levels in system reliability monitoring, consideration must be given to the levels or reliability assumed in qualifying the aeroplane for Category II or III operations.

6.6 Maintenance instructions for the Category II or III autoland equipment must be incorporated by the operator, in liaison with the manufacturer, and included in the Approved Maintenance Schedule (AMS) or Approved Maintenance Programme (AMP) for the aeroplane.

7. Maintenance Personnel Qualification

7.1 MCAR Part 21 and Part M require that for any aeroplane operated for Commercial Air Transport, a Certificate of Release to Service (CRS) must be issued by personnel approved by DCA or authorized in accordance with MCAR 145.

7.2 Operators must ensure that when their maintenance organization undertakes any work on the autoland system their personnel are appropriately qualified and authorized.

7.3 Many maintenance organizations have approved procedures that allow licenced/ authorized personnel to undertake limited tasks normally associated with other trades. It is acceptable for the downgrading of the autoland system to be classified as a limited task.

7.4 The upgrading of an autoland system, however, must be performed and certified by an engineer specifically authorized and qualified as detailed above.

8. Application

8.1 The operator shall need to get Airworthiness Approval and Operational Approval for All Weather Operations before such operations is conducted. The operator to get Airworthiness Approval for all weather operations, the application form attached to this notice shall be filled and submitted to Airworthiness Division, DCA Myanmar with the necessary documents.

Attachment to Notice A/44

REPUBLIC OF THE THE UNION OF MYANMAR
DEPARTMENT OF CIVIL AVIATION

Application for All Weather Operations Approval (Airworthiness Only)

Applicability: AWO in accordance with MCAR Part 7 and Airworthiness Notice A/44.

Completion of form: Each relevant box should be completed with a tick (√) or a (**X**). Items marked with an asterisk (*) to be completed only for first aeroplane of each aeroplane type / model in operator's fleet. Where form must be completed by referring to a document of applicant's documentation system, add manual reference, chapter and sub-chapter. Please ensure all applicable areas are completed.

1. GENERAL

General Information		
1. Applicant:		
2. Aeroplane Registration:		
3. Aeroplane Manufacturer:		
4. Aeroplane Type Designation / Model Designation:		
5. Serial No.:		
Scope of Application	Yes	No
6. Application for Category II AWO?	☐	☐
7. Application for Category IIIA AWO?	☐	☐
8. Application for Category IIIB AWO?	☐	☐
9. Application for low visibility take-off below 150 m RVR?	☐	☐
10. other	☐	☐
11. Initial request for AWO approval for aeroplane type referenced in 1.4?	☐	☐

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2. AIRWORTHINESS

Type Design Approval for referenced Aeroplane Type Designation			
1.	The AWO type design approval is reflected in:		
	☐ AFM	☐ AFM Supplements	☐ Type Certificate Data Sheet
	☐ Supplemental Type Certificate	☐ other	
2.	Aeroplane Flight Manual (Supplement) shows following airworthiness approval for AWO systems installation:		
	☐ Category II	☐ Category IIIA	☐ Category IIIB
System Eligibility for referenced Aeroplane Serial Number			
3.	System manufacturer / model installed (e.g. Flight Guidance System (FGS)):		
	Make:	Make:	TSO-
	Make:	Make:	TSO-
	Make:	Make:	TSO-
4.	The AWO type design approval is reflected in:		
	☐ Type design	☐ FAA STC	☐ CAA STC ☐ Service Bulletin
	☐ JAA STC	☐ CAA Major Modification	☐ other

Maintenance Program (*)		Yes	No
5.	The applicant should have an established Maintenance Program that contains all AWO related maintenance requirements prescribed by manufacturer or design organisation? Awo Maintenance Program established?	☐	☐
Minimum Equipment List (MEL) (*)		Yes	No
6.	The applicant should revise the relevant parts of MEL to reflect system requirements (e.g. redundancy levels) appropriate to the intended AWO operations? Minimum Equipment List revised?	☐	☐

Maintenance Practices and Procedures (*)		
The applicant must institute procedures in respect of continuing airworthiness practices for AWO. These procedures should cover the following subjects:		*To be completed by applicant* AWO Maintenance Practices and Procedures are described in (add manual reference, chapter and subchapter):
7.	Maintenance of AWO equipment (adherence to manufacturer's maintenance instructions, modification procedures, repair procedures, system calibration policy, AWO maintenance practices, handling of on-board systems, etc.).	
8.	Action for non-compliant aeroplane (downgrading, technical log entries, corrective actions, placarding, upgrading, release to service procedures, monitoring and reporting of repetitive defects, reliability reporting, reporting to the FOCA, etc.).	
9.	Maintenance training (initial training and recurrent training of applicant's maintenance management staff and contractor's maintenance personnel, training syllabi qualification of maintenance personnel, etc.).	
10.	Test equipment (use of test equipment, handling, calibration, etc.).	

3. APPLICATION PACKAGE

Documentation to be submitted to the DCA	Submitted	
	Yes	No
1. Compliance Statement which shows how the criteria of MCAR Part 7 & Notice A/44 has been complied (*)	☐	☐
2. Sections of the AFM or AFM Supplements that document AWO airworthiness approval	☐	☐
3. AWO maintenance practices & procedures (MME, Maintenance Program, Stand-alone equipment) (*)	☐	☐
4. Service Bulletin, Supplemental Type Certificate (STC) or Major Modification Approval Documentation, if approval based on documents as detailed in 2.4 above (except if based on approved type design).	☐	☐
5. Minimum Equipment List (MEL) that include items pertinent to AWO operations (*)	☐	☐
6. Maintenance Program or revision thereof that include item pertinent to AWO equipment (*)	☐	☐

4. APPLICANT'S STATEMENT

The undersigned certifies the above information to be correct and true and that aeroplane system installation, continuing airworthiness of systems, minimum equipment for dispatch comply with the requirements of CAT II/ CATIII in MCAR Part 7 and Airworthiness Notice A/44.

Name of Post Holder Maintenance:	**Signature:**	**Date:**
Name of Post Holder Quality Assurance:	**Signature:**	**Date:**

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REQUIREMENTS FOR HANDLING OF AIRWORTHINESS DIRECTIVE

1. Introduction

1.1 State of design considers that an action is required to maintain airworthiness at the level of safety specified during certification, the mandatory nature of such action is confirmed by the publication of an Airworthiness Directive.

1.2 This notice sets out requirements and procedures related to Airworthiness Directive issued by State of Design.

2. Requirements

2.1 The Airworthiness Directive issued by the State of Design are automatic mandatory for Myanmar registered aircraft and in accordance with the provision relating to the issue and validity of the Certificate of Airworthiness the product concerned (aircraft, engine, propeller etc) is not airworthy until the Airworthiness Directive have been followed within the time limits specified.

2.2 Unless Myanmar Department of Civil Aviation decides otherwise, the Airworthiness Directive issued by State of Manufacturer (for example the Airworthiness Directive of DGCA France) are made applicable to the product concerned that are entered or Myanmar Register.

2.3 Operator/ Owner are responsible for getting airworthiness information in time from the manufacturer of the aircraft for which they are using. They are also need to establish a system, to get all the airworthiness information including Airworthiness Directive from State of Design in respect of aircraft they used, through the internet and necessary arrangement with type certificate holder. The Airworthiness Directive, and Mandatory airworthiness information handling procedure shall be established and monitored by Quality Manager of Operator. It is the responsibility of the user of the product to secure from the manufacturer the technical information required for compliance with the Airworthiness Directive.

2.4 Department of Civil Aviation will inform relevant operator/ owner of urgent Airworthiness Directive (or information) received from State of Design by e-mail, fax or telephone. Operator should have arrangement to get such argent airworthiness technical information through the Manufacturer, Service provider (or) internet.

2.5 Operators and owner should be aware that some State of Design do not issue their airworthiness information in the form of Airworthiness Directives, and may instead give mandatory status to Service Bulletins etc by requiring the type design organization to include a statement in the Service Bulletin. That service Bulletin must be complied with if applicable to Myanmar registered aircraft and/ complied with component installed on it.

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GUIDANCE ON TRANSFER OF AIRCRAFT

1. General

This notice sets out minimum requirements and procedures for aircraft owners and airlines who are planning or preparing to transfer an aircraft between operators. The notice contains recommended methods and practices which could be used during preparation and organization of an aircraft transfer. The proposed requirements are intended to be used as minima; additional requirements may be demanded by the purchaser.

2. Maintenance Aspects of Aircraft Transfer

2.1 Records and documentation

2.1.1 General

2.1.1.1 Before a used aircraft is introduced into an operator's fleet, the receiving operator should review the records to ensure they provide the current maintenance information necessary to phase the aircraft into the operator's maintenance programme. This includes records such as the documentation of the current status of ADs, the current status of the last scheduled inspections required by the approved maintenance programme (including the requirements contained in the ALS, e.g., the life-limited parts, the supplemental structural inspection documents, the damage-tolerance inspection, certification maintenance requirements), the major repairs and major modifications.

2.1.1.2 If the aircraft is being transferred to another operator but remains on the registry of the same State, the records from the transferring operator should be acceptable as valid unless obvious discrepancies are apparent. This does not eliminate the need to check records, but may reduce the depth of the review. The transferring operator should provide a written statement that the records are correct.

2.1.1.3 If the aircraft is being transferred from another State, it may be necessary to evaluate the previous operator's maintenance scheduling and record-keeping system to ensure the validity of the records. This may require communication between the two regulatory authorities concerned.

2.1.1.4 The general quality of the current status presented by the transferring operator should be evaluated. The following are recommendations for such an evaluation, and more particularly for the validity of the current status of life-limited parts and AD compliance:

a) If the State of the operator is an ICAO signatory, the operator's records should meet ICAO requirements and a record of current status would be acceptable;

b) A spot check of visible ADs and of the in-service history would be indicative of the accuracy of those records;

c) A spot check of source records for the record-keeping system of the transferring operator would indicate the quality of those records;

d) The state of the transferring operator's shop records would be indicative of the integrity of the operator's record-keeping system;

e) Significant errors or omissions in a records status report would indicate inadequate records and record-keeping system.

2.1.1.5 *Part numbers.* Records should accurately reflect the manufacturer's part number as applicable. In the event that the operator utilizes a part numbering system other than the manufacturer's system, a complete cross-reference should be provided with the records. If alternative part numbers are recorded, technical substantiation should be available to support the part substitution.

2.1.1.6 *Serial numbers.* All components and assemblies controlled by serial numbers should have their serial numbers recorded in the maintenance records. In the event that the operator utilizes a serial numbering system other than the manufacturer's system, a complete cross-reference should be provided with the records.

2.1.1.7 *Dates.* All records should be properly dated with reference to an installation or maintenance function accomplishment. If the date format is numeric, the system should use a day/month/year format to date the records.

2.1.3 Record-keeping requirements for airworthiness directives

Each operator should maintain the current status of applicable ADs for a particular airframe, engine, propeller, rotor or appliance. This record should:

a) identify the particular airframe, engine, propeller, rotor or appliance;

b) identify the applicable AD (including amendment number, if required) of the State of the transferring operator, including a cross reference to the AD of the State of Design and any deviations thereof if applicable;

c) indicate the date, the flight hours, the flight cycles, the landings, etc. (as appropriate) when the AD was accomplished and when the next recurring inspection or action is due (if applicable);

d) describe the method of compliance (if more than one method is specified in the AD); and

e) show the appropriate measuring parameters (flight hours, flight cycles, landings, calendar times, etc.).

2.1.3 Record-keeping requirements for life-limited parts

2.1.3.1 Each operator should maintain the current status of life-limited parts. If the operator obtained such parts new from the manufacturer, the current status will be based upon the operator's in-service history of the part. If the part has been obtained from a previous operator, the current status will be based on the status from the previous operator(s) plus the present operator's in-service history. The current status of life-limited parts is required upon each transfer throughout the operating life of the part. When such parts are transferred, the previous operator should produce an in-service history for life-limited parts, irrespective of the operator's governing regulations. When life-limited parts are transferred between operators, a written statement by the previous operator, attesting to the current status of life-limited parts should also be provided.

2.1.3.2 When the in-service history required for the establishment of the of current status for life-limited parts are lost or destroyed, an equivalent level of safety may be determined by consideration of other records available, such as technical records, utilization reports, manufacturer's information or presentation of other evidence. If review of other available documentation reveals significant errors or omissions that prevent the development of a current status for the life-limited part(s), the part(s) in question should be retired from service until the time the history can be rebuilt. It is the operator's responsibility to notify the DCA when such records are lost or destroyed and to initiate an immediate search for records from which the current status of the life-limited part(s) can be determined.

2.1.3.3 Not all life-limited parts will necessarily be marked with part and serial numbers. For aircraft manufactured in the United States, for instance, specific requirements for life-limited parts to be marked with part and serial numbers have only existed since the early 1980s. Operators should be able to track life-limited parts manufactured prior to the early 1980s, although such parts may not be serialized items. Special attention should be paid to parts that can be transferred from one aircraft to another.

2.1.3.4 Operators may receive life-limited parts from a repair station that has a system to determine the current status of such life-limited parts. This system should be recognized as a factor in the substantiation of the current status of life-limited parts.

2.1.4 Maintenance programme

2.1.4.1 The maintenance programme should include the following:

a) *Approval*. The approval or acceptance of the maintenance programme by the associated CAA should be identified.

b) *Traceability*. The maintenance programme should be identified and be traceable to its approved minimum requirements standard, e.g. maintenance review board (MRB) report, the manufacturer's recommended maintenance programme or recommended tasks. In the event that the programme fails to meet the minimum requirement standard, all areas of such differences should be identified and corrective action taken on the aircraft or to the programme as necessary. The minimum standard is understood to mean only minimum required tasks and not the intervals.

c) *Documentation*. A printed copy of the maintenance schedule should be provided, identifying all tasks and functions in such a manner as to permit traceability to the corresponding work cards. This includes sampling programme tasks.

2.1.4.2 The maintenance/inspection programme may change for aircraft transferred from one operator to another. The integration or bridging plan for the two programmes should be presented to the (receiving, if applicable) airworthiness authority.

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2.1.5 Service bulletins

All service bulletins that have been incorporated should be listed, together with accomplishment dates (date, flight hours, flight cycles, landings, etc. as appropriate). If options are available, the option complied with should also be indicated. When a service bulletin involves recurring action, the times or dates, as applicable, of the last action and the next action due should be provided.

2.1.6 Modifications

2.1.6.1 All modifications performed since the original aircraft delivery that are still existent on the aircraft should have been carried out in accordance with the requirements of the airworthiness authority of the State of Registry at the time of their incorporation.

2.1.6.2 A list of such modifications should be provided indicating their classification and supported by appropriate documentation. In the case of a major modification, this documentation should include as a minimum:

a) the document defining the modification;
b) the certification basis; and
c) the approval of the relevant authority.

2.1.7 Repairs

All major repairs performed since original aircraft delivery and which are still existent upon the aircraft should be listed and demonstrated to be in compliance with the requirements of the airworthiness authority of the State of Registry at the time of their incorporation. If additional action is required, e.g. recurring inspection, this should also be indicated.

2.1.8 Extended diversion time operations

The maintenance programme may need to be supplemented and some modifications or service bulletins may need to be embodied in consideration of the special requirements of extended diversion time operations. The following items should be reviewed to ensure that they are adequate for extended diversion time operations:

a) *Maintenance programme*. A status of the changes which were made in order to substantiate the incorporation of the configuration maintenance and procedures (CMP) standard in the aeroplanes used in extended diversion time operations should be provided. This can be an extract of the maintenance programme status.
b) *Modifications and service bulletins*. A list of the titles and identification numbers of all modifications, additions and changes which were made in order to substantiate the incorporation of the configuration maintenance and procedures (CMP) standard in the aeroplanes used in extended diversion time operations should be provided. This can be an extract of the status of modifications and service bulletins.

2.1.9 Deferred Items

All deferred items which are still existent should be listed and demonstrated to be acceptable to the airworthiness authority of the State of Registry at the time of the aircraft transfer.

2.1.10 Storage

These considerations are not normally part of the operator's continuing airworthiness programme. Nevertheless, a specific maintenance programme may need to be implemented in consideration of the special requirements of aircraft storage.

2.1.11 Transfer of Records

When an aircraft, airframe, engine, propeller, rotor or appliance is transferred to a new operator, the original records of these products should accompany the transfer. Such records should include the current status of AD's, life-limited parts, scheduled maintenance tasks, modifications, repairs, service bulletins, deferred items, specific extended diversion time operations and storage tasks. They should clearly identify the person responsible for the data in the report and the date associated with the records.

2.1.12 Lost Records

In the event that required maintenance records have been lost or destroyed, alternative proof should be provided that the tasks in question have been performed. This may require the inspection of the aircraft, power-plant, components or appliances.

2.2 Document Presentation

A standard method of presenting the records is encouraged. It is recommended that the summary of records and other pertinent information be compiled into a book or other concise document in order to simplify, as much as possible, the record review process. An outline of the recommended format can be found in Appendix A to this notice.

Appendix A to Notice A/46

OUTLINE FOR DOCUMENTATION

Section 1.— Status summary and data certification

This section should begin with a statement of certification from the transferring operator or owner that the information presented is true and correct, and a general presentation of the aircraft (aircraft type and model, manufacturer serial number, registration mark, accumulated times, installed engines, auxiliary power unit, etc.) including:

a) the certification basis;

b) a general statement of the current status of non-repetitive ADs, such as:

"All applicable airworthiness directives through (specify date, issue, etc.) have been incorporated as listed on the (specify name of operator) airworthiness directive summary (specify date) with the exception of those directives requiring initial or repetitive action.";

c) a general statement of the current status of repetitive ADs, such as:

"All airworthiness directives listed on the (specify operator) airworthiness directive control summary dated (specify date) require initial or repetitive action at the date, time or cycles listed.";

d) a statement of the extent of the operator's direct operational and maintenance control of the aircraft and a list of major repairs accomplished during that time, such as:

"This aircraft has been under the direct operational and maintenance control of (specify operator) since (specify date). During this time the aircraft underwent the following major repairs/modifications in accordance with approved technical data documented in the aircraft records. (List all major repairs/modifications)";

In addition to the above statement, a listing of all the major repairs/ modifications incorporated by previous operators including the approved technical data documented in the aircraft records should be supplied if applicable;

e) a statement regarding the accomplishment of the last major inspection, such as:

''The last (specify type of major inspection) was accomplished by (specify operator/maintenance organization) between (specify date) and (specify date) at (specify operator/maintenance organization) maintenance facility in (specify city, State). Airframe total hours and total cycles were __'';

f) a statement regarding the current status of the installed engines and any spare engines, such as:

''The following engines are currently installed on the aircraft with the total accumulated and remaining hours and cycles listed for each (list engines.) The (specify operator) life-limited parts report has been prepared using the (list manufacturer's controlling document), and reflect accurate accumulated lives of the life-limited parts as of the engine time/cycles noted above''; and

g) a statement regarding the current component status, such as:

''The components/inspection times listed on the (specify operator) component control summary represent the latest component installation information as of (specify date)''.

Section 1 should be signed by the senior airline official responsible for aircraft maintenance record-keeping.

Section 2.— The aircraft sale agreement

This section should contain a copy of the sale agreement. Economic or monetary information may be deleted for the purposes of this presentation.

Section 3.— Operating authority

This page should contain a copy of the operating authority issued by the responsible regulatory authority of the last operator, if different from the new operator. This is used to establish the rules under which the aeroplane was operated and maintained.

Section 4.— Aircraft certificates

This section should contain a copy of the aircraft certificates, including the export certificate of airworthiness (if any), the current certificate of airworthiness, the current certificate of aircraft registration, the certificate of noise limitation, the radio license, the maintenance release certificate, etc.

Section 5.— Current inspection status summary

This page should give a summary of the current inspection status of the aircraft at the time of transfer. It should list:

a) the aircraft total time in flight hours, flight cycles, landings, calendar time, etc.;

b) the time (in flight hours, flight cycles, landings, calendar time, etc. as appropriate) since the last major scheduled maintenance or inspection;

c) the scheduled major inspection intervals and the time remaining to the next inspection; and

d) the engines by position and serial number. The listing should show the time since new, cycles since new and the time and/or cycles remaining to the next life-limited part removal for each engine.

Section 6.— Summary of current status of life-limited parts

This section should contain a listing of all the airframe and powerplant life-limited components/parts installed on the aircraft at the time of transfer. The listing should contain the name of the component/part, the installed location or position of the component/part, the component/part number, the component/part serial number, the required retirement time of the component/part, the current accumulated lives (in flight hours, flight cycles, landings, calendar times, etc. as appropriate) and remaining lives before the required retirement times of the component/part is reached.

Section 7.— Current status of airworthiness directives

This section should contain a listing of each AD applicable to the aeroplane, powerplants, components and appliances. Recurring ADs should be listed separately. The listing should contain:

a) the AD number and revision date of the State of the transferring operator, including a cross reference to the AD of the State of Design, if applicable;

b) a concise description of the required action;

c) the method of compliance;

d) the time in service and the date of AD accomplishment; and

e) for ADs having requirements for recurring actions the date of AD accomplishment and when the next recurring action is due (date, flight hours, flight cycles, etc.).

Section 8.— Aircraft maintenance programme integration

This section should contain the maintenance programme and a listing of each maintenance task included in this maintenance programme, the scheduled inspection interval, together with the last accomplishment applicable to the aircraft, powerplant, components and appliances. The listing should contain:

a) the maintenance task number, including a cross reference to the TC holder's maintenance task number in case of a different maintenance programme developed by the operator or one of its subcontracted maintenance organizations, if applicable;

b) a cross reference to the applicable work cards;

c) a description of the action performed; and

d) the date of last accomplishment and the times in service if applicable.

If the maintenance/inspection programme is to be changed for the aircraft, the integration or bridging plan for the two programmes should be presented here. For an integration plan, a listing of each scheduled maintenance/inspection item under both the old and new programmes should be shown along with the method of transfer or bridging from one to the other.

Section 9.— Modifications, repairs, service bulletins

This section should contain a listing of each modification, repair or Service Bulletin embodied on the aircraft. If additional action is required, e.g. recurring inspection, this should also be indicated. The listing should contain:

a) the modification, repair, or service bulletin number and revision date, including a cross reference to the TC holder's modification, engineering repair approvals or service bulletin number in case of engineering orders developed by the operator or one of its subcontracted maintenance organizations, if applicable;

b) a description of the action performed;

c) the date of accomplishment; and

d) for service bulletins/engineering orders having requirements for recurring actions, the times in service.

Section 10.— Extended diversion time operations status (when applicable)

This section should contain a listing of each extended diversion time operations configuration and maintenance requirement embodied on the aircraft, powerplant, components and appliances. The listing should contain:

a) the modification, service bulletin number and revision date, including a cross reference to the TC holder's modification/service bulletin number in case of engineering orders developed by the operator or one of its subcontracted maintenance organizations, if applicable;

b) a description of the action performed;

c) the date of accomplishment;

d) for service bulletins/engineering orders having requirements for recurring actions, the times in service;

e) the maintenance task number, including a cross reference to the TC holder's maintenance task number in case of a different maintenance programme developed by the operator or one of its subcontracted maintenance organizations, if applicable;

f) a cross reference to the applicable work cards;

g) a concise description of the action performed; and

h) the date of last accomplishment and the times in service if applicable.

Section 11.— Deferred items.

This section should reference the maintenance log book pages listing the deferred items and should contain a listing of each deferred item to be embodied on the aircraft, powerplant, components and appliances. The listing should contain:

a) the deferred item identification number (and revision number/date, if any);

b) a description of the action to be performed; and

c) the times in service and the date when the accomplishment was initially scheduled.

Section 12.— Storage (when applicable)

This section should contain a listing of each maintenance requirement to be performed on the aircraft, powerplant, components and appliances at the time, during and at the end of the storage. If recurring inspection is required, this should also be indicated. The listing should contain:

a) the maintenance task number, including a cross reference to the TC holder's maintenance task number in case of a different storage programme developed by the operator or one of its subcontracted maintenance organizations, if applicable.;

b) a cross reference to the applicable work cards;

c) a description of the action performed; and

d) the date of last accomplishment.

GUIDANCE ON INTERNATIONAL LEASE ARRANGEMENTS

1. General

1.1 This notice is intended to define the minimum requirements for aircraft owners and airlines who are planning or preparing to lease an aircraft across international boundaries. The material contains recommended methods and practices which could be used during the preparation and organization of an aircraft lease or an international aircraft transfer on top of those mentioned in Airworthiness Notice A/46. The proposed requirements are intended to be used as minima; additional requirements may be demanded by the lessor or purchaser.

1.2 Historically, there have been a number of difficulties associated with the international leasing of aircraft, usually caused by differing national airworthiness standards, differing national operational standards, differing build standards; and non-standard application of the above.

1.3 Irrespective of the various types of arrangements and categories of lease, charter and interchange, this Chapter will discuss the following issues in relation to the transfer of aircraft between the State of Registry and the State of the Operator:

a) acceptance of the type design;
b) maintenance;
c) approval for extended diversion time operations (if applicable);
d) information on faults, malfunctions and defects and other occurrences;
e) mandatory continuing airworthiness information; and
f) distribution of mandatory continuing airworthiness information.

2. Records and documentation

2.1 General

2.1.1 In addition to Notice A/46 of this Part, regarding aircraft records and documentation consideration should be given as indicated in the following paragraphs.

2.1.2 *Governing requirement.* Prior to initiation of the lease, representatives of both parties should coordinate the scope and content requirements of the technical logs and the aircraft journey log book that will eventually be required upon aircraft return or further transfer. The governing record-keeping regulation under which the aircraft records should be maintained should be determined prior to initiation of the lease or transfer.

2.1.3 *Language.* All aircraft records should be maintained in a language which is acceptable to the authority of the State of the Operator. For practical purposes another language may be used; however, a translation to a language acceptable to the authority of the State of the Operation may be required at

the time of transfer. The translation of past records need only be accomplished when required by the authority of the State of the Operator.

2.1.4 *Documentation requirements.* Documentation requirements for incoming components and parts should be identified in the operator's manual to support its purchasing and receiving inspection functions. This includes, but is not limited to, documentation of AD compliance, time on life-limits, descriptions of work performed and certification of new and repaired parts. Once these requirements are satisfied and the essential information is entered into the operator's records system, the only source documentation required to be retained is that necessary to:

a) satisfy the requirements of the responsible authority;
b) support the operator's continuing analysis and surveillance system; and
c) support future maintenance on the affected parts.

However, operators are advised to retain or archive documentation of AD compliance, life-limited part service times and other information which may be useful in the future.

2.2 Additional record-keeping requirements for airworthiness directives

In addition to Notice A/46, the requirements of the authority will determine the specific data required as part of a maintenance record. An operator is normally not required to retain actual work documents to show accomplishment of the work on a given airframe, engine, propeller, rotor or appliance in order to document AD compliance unless such records are otherwise called for by the requirements of the authority of the State of Registry.

2.3 Addition to the transfer of records

In addition to Notice A/46, when an aircraft, airframe, engine, propeller, rotor or appliance is leased, the associated records should be transferred as if the transaction were a sale. By agreement between the lessee and the lessor, some records, such as work cards and inspection records, may be retained by the owner; however, the lessee has a responsibility to review the records retained by the owner and to ensure that the summary information used to support the airworthiness of the item is complete and accurate.

2.4 Addition to the recommended format of the documentation

As an amendment to Appendix A of Notice A/46 *Section 2.— The aircraft sale agreement,* this section should refer to the lease agreement and contain a copy of this agreement. Economic or monetary information may be deleted for the purposes of this presentation.

3. Minimum airworthiness provisions for leasing agreements

In the area of airworthiness provisions, the lease agreement should ensure at least that:

a) the lessor and lessee are properly identified;
b) the aircraft subject to the lease agreement is identified by aircraft make and model, registration number and manufacturer's serial number;
c) the effective dates of the lease are properly identified;
d) the person having operational control is specifically identified;
e) the State of Registry, the applicable airworthiness code and the regulations under which the aircraft will be maintained are identified;
f) the responsibilities for the accomplishment of maintenance in accordance with the designated regulations are specifically identified;
g) the responsibilities for keeping the aircraft maintenance records in accordance with the designated regulations are specifically identified;
h) the maintenance/inspection programme that will be utilized is specifically identified; and
i) the lessor and lessee clearly identify a coordination mechanism, periodic meetings may be arranged to ensure that the continuing airworthiness of the aircraft is maintained.

4. Acceptance of the type design

4.1 The laws of the State of Registry generally prescribe the airworthiness and the design-related operational requirements for aircraft registered in that State and operated by an operator under its jurisdiction. However, the laws of the State of the Operator may also require that foreign-registered aircraft utilized by operators under its jurisdiction comply with the same airworthiness and design-related operational requirements, as if they were registered in that State.

4.2 The States of Registry and of the operator should, when prescribing the airworthiness and design-related operational requirements, consider the following when an aircraft is transferred from the State of Registry to the State of the Operator:

a) the period of time for which the aircraft is to be transferred;
b) the differences between the type certification basis of the State of Registry and that of the State of the Operator;
c) the differences between the design-related operational requirements of the State of Registry and those of the State of the Operator; and
d) the responsibilities of the State of Registry and the State of the Operator with respect to the approval of:
    1) changes to the type design, including those required to take into consideration the differences stated in b) and c); and
    2) repairs which require a design approval before implementation.

4.3 In accordance with Annex 8, the State of Registry, unless otherwise transferred under Article 83*bis*, is responsible for ensuring that the aircraft, and any modification to it, complies with an approved design. To preserve this responsibility, the State of the Operator should not endorse the implementation of any change without prior approval by the State of Registry.

4.4 To carry out their respective functions, States could enter into bilateral airworthiness and transfer of aircraft agreement which describes procedures for:

a) the approval of the modifications to the type design;
b) the embodiment of the modifications and repairs; and
c) the record-keeping of the modifications and repairs.

5. Maintenance

5.1 Although the maintenance programme is usually approved by the State of Registry, the legislation of a State may require it to approve the maintenance programme for all aircraft operated by the operators of that State. Other factors may, by necessity or for convenience, lead to the use of a third State's maintenance programme, in the case of transferred aircraft.

5.2 Some of the factors influencing the selection of the maintenance programme to be applied when aircraft are transferred are:

a) the period of time for which the aircraft is transferred;
b) the differences between the maintenance requirements of the State of Registry and those of the State of the Operator and the compatibility of their approved maintenance programmes;
c) the different requirements regarding the approval or acceptance of the maintenance programme by the State of the Operator or of the State of Registry;
d) the distance between the place where the aircraft is operated and the State of the Operator, i.e. the aircraft may be operated in a third State for the duration of the transfer; and
e) any changes in the aircraft utilization or environmental conditions.

5.3 Arrangements and procedures regarding the maintenance, the performance and certification of maintenance, including the signing of maintenance releases and the record-keeping should be acceptable to both the State of Registry and the State of the Operator. These arrangements and procedures could be developed on a case-by-case basis or be the subject of a bilateral airworthiness or transfer agreement.

6. Approval for extended diversion time operations

6.1 The approval for conducting extended diversion time operations applies to an individual operator and to a specific airframe-engine combination of that operator's fleet. The approval is not transferable with the aeroplane.

6.2 The original operator that has authority for extended diversion time operations, in transferring an aeroplane under a wet lease arrangement with an acquiring operator, retains this authority.

6.3 In the case of an original operator that has authority for extended diversion time operations, transferring an aeroplane under a dry lease arrangement, the acquiring operator should obtain the authority to conduct extended diversion time operations from the State of the acquiring operator.

6.4 Arrangements and procedures regarding the approval of extended diversion time operations with a transferred aircraft should primarily be acceptable to the State of the Operator. Where applicable, the experience of the original operator being used to approve the new operator's extended diversion time operations should be clearly identified in the transfer arrangements.

7. Information on faults, malfunctions and defects and other occurrences

7.1 Annex 8, Part II, 4.2.3 requires the State of Registry, in respect of aeroplanes over 5700 kg and helicopters over 3175 kg maximum certificated take-off mass, to ensure that there exists a system whereby information on faults, malfunctions, defects and other occurrences is transferred to the organization responsible for the type design. Furthermore, 4.2.4 of the same document requires Contracting States to establish which type of service information is to be reported by operators, organizations responsible for type design and maintenance organizations.

7.2 It is clear from the above that the State of Registry is responsible for ensuring the transfer of information on defects to the organization responsible for the type design. For an operator of an aircraft subject to a transfer, it may not be appropriate, convenient or enforceable to report defects according to the system of the State of Registry. Specific arrangements between the State of Registry and the State of the Operator should therefore be developed to ensure that the information on defects for the aircraft is transferred to the organization responsible for the type design.

7.3 At the time an aircraft is transferred, the two authorities and the operators involved should decide which reporting systems and procedures apply, to ensure that the information is transmitted to the organization responsible for the type design and, as required, to the State of Registry.

7.4 When aircraft are transferred, some of the factors influencing the selection of the system to be used for reporting information on defects are:

a) the period of time for which the aircraft is transferred;

b) the compatibility/differences between the reporting system of the State of Registry and that of the State of the Operator;

c) the possible absence of a reporting system in the State of the Operator or the State of Registry; and

d) the regulatory requirements of the States involved.

8. Mandatory continuing airworthiness information

8.1 Under Article 31 to the Convention, the State of Registry has prime regulatory responsibility for the airworthiness of the aircraft on its Registry. If the State of Registry is also the State of Design, it will normally be the originator of mandatory continuing airworthiness information, such as Airworthiness Directives.

8.2 If the State of Registry is not the State of Design, it should have procedures in place to respond to mandatory continuing airworthiness information received from the State of Design and should decide whether the information will be made mandatory for aircraft on its registry. When made mandatory, the State of Registry will either issue its own mandatory information or require compliance with that issued by the State of Design.

8.3 Notwithstanding 8.1 and 8.2, the State of Registry, without being the State of Design, may issue mandatory continuing airworthiness information applicable to aircraft registered in its State.

8.4 Similarly, the State of the Operator may, by virtue of an agreement with the State of Registry, require mandatory continuing airworthiness information it has issued to be applicable to aircraft operated in its State. In such cases, the content of 4.3 of this Notice should also be considered before the implementation of the information.

9. Distribution of mandatory continuing airworthiness information

9.1 The mandatory continuing airworthiness information issued by the State of Registry in the form of an Airworthiness Directive or equivalent, or issued by the State of Design and made mandatory by the State of Registry, should be made available to affected operators by the State of Registry. Some States disseminate this mandatory information directly to each registered owner of an affected aircraft on their registries and rely on the registered owner to transmit the information to the operator. Other States make the information available through the offices of their airworthiness authorities or also publish the information and make it available by subscription.

9.2 As described in Section 8 above, the mandatory continuing airworthiness information issued, in certain circumstances, by the State of the Operator, and made mandatory on aircraft registered in another State and operated in the State of the Operator, should be made available to affected operators by the State of the Operator.

9.3 When an aircraft is leased to an operator in another State, distribution of mandatory continuing airworthiness information by the State of Registry may be accomplished by making the mandatory documents available to the registered aircraft owner, who should be responsible for transmitting them to the aircraft operator.

10. Continuing validity of the certificate of airworthiness

When an aircraft is leased to an operator in another State, the regulation for continuing validity of the Certificate of Airworthiness of the State of Registry should be complied with by the operator.

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MAINTENANCE-RELATED OPERATIONS SPECIFICATIONS

1. General

1.1 Myanmar DCA will require that the operations specifications and limitations applicable to an AOC be issued in conjunction with the issuance of the certificate. These operating specifications and limitations, hereinafter referred to as operations specifications, are utilized to supplement the general provisions of the basic certificate, list authorizations and limitations not specifically covered by State regulations and facilitate administrative procedures. The combined issuance of the AOC and the operations specifications constitutes State approval of the operation.

1.2 Myanmar DCA operations specifications may be divided into separate parts. The exact content of the various parts of the operations specifications will vary depending upon the nature and scope of the operation. In general terms, however, the parts may cover the following:

a) *Part A — General provisions.* Specify the make and model of aircraft authorized for use, the maximum passenger seating capacity authorized by the State, the regulation under which the AOC was issued, and any other general authorizations or limitations not covered by the other parts.

b) *Part B — En-route authorizations and limitations.* Specify the routes or route segments which may be used by the operator, the conditions under which deviations from such routes are authorized, minimum en-route altitudes, conditions under which operations are authorized under VFR and operations within minimum navigation performance specifications (MNPS) airspace.

c) *Part C — Aerodrome (or heliport) authorizations and limitations.* Specify destination and alternate aerodromes authorized for use, instrument approach procedures, aerodrome (or heliport) operating minima authorized including take-off minima and any special operating limitations in respect of minima.

d) *Part D — Maintenance.* Specify all special maintenance authorizations on inspections, overhauls and reworking of components.

e) *Part E — Mass and balance.* Specify all authorizations of standard mass quantities and mass and balance control.

f) *Part F — Interchange of equipment operations.* Specify the authorized interchange of aircraft between the operator and other operators, the type of equipment to be used, the crews to be utilized, the routes and aerodromes to be used, the operations manual and aircraft operating manual to be utilized (i.e. which operator's manual) and applicable aerodrome (or heliport) operating minima.

g) *Part G — Aircraft leasing operations.* Specify the parties to the agreement and the duration thereof; the type of lease (i.e. wet or dry); in the case where two

operators are involved, the operator responsible for operational control; the routes, area of operation and aerodromes (or heliports) involved; the type and registration numbers of the aircraft involved; the party responsible for maintenance; and reference to States' approval letter or order of the lease.

1.3 In most cases, considerable time and effort will be saved if the CAA inspector and assistants work closely with the applicant and staff in preparing the various parts of the operations specifications prior to the time the recommendation is made to the DCA. The details of the operations specifications should initially be drafted by the applicant and that the final version should be acceptable to the operator and the DCA.

2. Operations specifications — Maintenance

2.1 It is necessary to provide any detailed maintenance-related authorizations and limitations for a particular operator that are not specifically prescribed by MCARs. For example, time limitations for overhaul, inspections and checks may vary with aircraft type and the type of maintenance programme followed; some aircraft have parts that are life-limited by the manufacturer. Consequently, such authorization and limitations need to be specified and, when so specified, should be as binding on the operator.

2.2 It is generally convenient to divide (Operations specifications) - Maintenance into two categories of material. One category specifies the inspection, check and overhaul time limits for airframes, power-plants, propellers, rotors and other equipment. The pages of (Operations specifications) - Maintenance listing the foregoing are frequently referred to as "maintenance pages". The other category of material consists of a number of maintenance-related authorizations which are required by the particular characteristics of the proposed operations. These specified authorizations are generally divided into sub-categories, depending on the individual operation.

2.3 Operations specifications are prepared by the applicant (operator) in the form prescribed by the DCA. The assistance of the AID Inspector member of the certification team may be requested. In many instances, considerable time and effort will be saved if the assigned Inspector works closely with the applicant in the formulation of the specifications.

2.4 Authorization pages

Authorizations pages are divided into the categories described below and are completed as required by the individual applicant's proposed operation.

a) *General*. These pages contain the conditions which should be met in order for the operator to operate his aircraft under the terms of the Operations Specifications.

b) *Check, inspection and overhaul time limits*. These pages specify the time limits and conditions for the aircraft services, checks and inspections approved for the

applicant. Limits expressed in terms other than time (in-service, clock, or calendar time) need to be defined. The symbols used on the maintenance pages are defined on this page. These pages may also be used to authorize the use of an identifiable programme, such as a manufacturer's maintenance programme.

c) *Reliability programme authorization*. These pages are used to authorize and control reliability programmes which generally fall into one of two categories:
   1) those which control the inspection, check and overhaul times for the entire airframe or powerplant; or
   2) those which control the inspection, check and overhaul time for complete systems or for individually specified items within the system.

   In the case listed in 1) above, the authorization listed on the page may serve as the sole control as far as the operations specifications are concerned. When the entire airframe or power-plant is governed by a reliability programme, there is no need to list individual items on the aircraft maintenance pages; however, the airframe or power-plant controlled by an approved programme should be adequately identified on the authorization page. In the case listed in 2) above, where complete systems or selected individual items are controlled by a reliability programme, reference to the control programme should be made on the authorization page, specifically identifying the controlling document. Individual items should be further identified on the aircraft maintenance page on which they appear by an asterisk, control programme name or acronym, or other symbol. The identification marks and symbols used should be identified on an authorization page.

d) *Short-term escalation authorization*. Applicants who wish to establish authorization for short-term increases in maintenance intervals (escalation) other than those which are part of their approved reliability programmes need to have those procedures authorized by an operations specification page. This page should reference the applicant's maintenance programme or other approved publication defining those procedures, in a manner that requires the operations specification page to be amended whenever the procedure is revised.

e) *Maintenance contractual authorization*. DCA may permit an operator to make arrangements with other persons for the performance of any maintenance, preventive maintenance or alterations. However, the DCA may require that this arrangement be approved by the DCA, and that an operations specification authorization page be issued containing such pertinent information as the names of contracting operators, contract identification and date, place where maintenance will be performed, reference documents approved for the control of maintenance and a clause referring to termination or alteration of the contract.

f) *Leased aircraft maintenance authorization*. This page is prepared to authorize an operator to use two different maintenance programmes for the same type aircraft. This authorization is intended to apply only in cases involving short term leases of aircraft that are intended to be returned to the lessor. This authorization permits the lessor to retain maintenance programme compatibility with other aircraft in his fleet.

g) *Parts pool authorization.* DCA may contain provisions which permit, subject to approval by the DCA, an operator to enter into parts pool agreements with other persons or operators. In those cases where an operator wishes to enter into such an agreement, an authorization page should be prepared containing at least the elements.

h) *Prorated time authorization.* Whenever prorating is used to establish initial maintenance starting times, an authorization page needs to be included in Operations specifications - Maintenance. This authorization is essential, not only for proper time accountability, but also for the transfer of the correct times should the aircraft be sold to another operator. This page should indicate to all concerned that the aircraft is being operated under adjusted times since overhaul, calculated by prorating.

i) *Parts borrowing authorization.* DCA may provide for operators of large aircraft to obtain reasonable relief from approved overhaul time limits when borrowing parts from another operator. The preparation of an authorization page is necessary because an operator may need to borrow a part and the only available part may have a higher time since overhaul (TSO) than the operator's approved overhaul time limit. In some States, the operator is authorized to use the borrowed part for up to 100 hours (or 50 landings if part life is controlled by number of landings). In the case where the borrowed part has a lower TSO than the operator's approved overhaul time limit, the part in question is generally permitted to be used up to the operator's approved overhaul time limit providing:

   1) the part has at least 200 hours (or 100 landings if the overhaul time limit is controlled by the number of landings) remaining to overhaul in respect of the lender's approved overhaul time limit; and
   2) the part is not operated beyond its approved life if it is specifically "life limited".

j) *Ferry flight authorization.* DCA legislation may contain provisions which permit continuing authorization for an operator to conduct ferry flights providing certain criteria are met.

2.5 Maintenance pages

Maintenance pages provide an orderly itemized listing of the inspection, check and overhaul time limits for airframes, power-plants, propellers, rotors and appliances.

The symbology used on the maintenance pages is defined in the authorization page entitled "Check, Inspection and Overhaul Time Limits".

3. Operations specifications — Mass and Balance Page

3.1 It is necessary to specify the procedures the operator is to follow for control of the mass and balance of the aircraft to be used. The method of compliance given in this item should not make reference to any general guidance material. All references should be limited to the operator's mass and balance control manual or operations manual.

3.2 The material contained in Mass and Balance Page needs to provide a clear and accurate description of the methods and procedures the operator is to follow for:

a) determination of mass of passengers and crew;
b) determination of mass of cargo and baggage;
c) periodic determination of aircraft mass (weighing);
d) loading schedules for each type and series of aircraft; and
e) loading instructions.

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OPERATIONS MANUAL, MINIMUM EQUIPMENT LIST (MEL) AND CONFIGURATION DEVIATION LIST (CDL) RELATED TO AIRWORTHINESS

1. General

1.1 The operator is responsible for exercising the necessary operational control to ensure that his aircraft is not dispatched outside of the limitations of approved AFM or if its configuration is contrary to the provisions of the configuration deviation list (CDL) or its instruments and equipment are not in an operable condition except as provided in the MEL which must be approved by Flight Standard Division of DCA. According to Annex 6, the DCA should specify that the operator is responsible for exercising the necessary operational control to ensure that his aircraft are not dispatched with multiple MEL items inoperative without first determining that any interface or interrelationship between the inoperative systems or components will not result in degradation in the level of safety or an undue increase in crew workload.

1.2 Annex 6, Part I, 4.2.2 and 4.2.5 and Part III, Section II, 2.2.2 and 2.2.5 require that the operator include aircraft operating instructions and checklists in the operations manual. This part of the operations manual has to be acceptable to the State of the Operator, and contain all AFM information and additional data including normal, abnormal and emergency procedures, checklists, limitations, performance information, details of the aircraft systems and other material relevant to the operation of the aircraft. Sometimes the aircraft manufacturer provides the aircraft operator with operating instructions in order to help it to develop its own operations manual.

1.3 Annex 6, Part I, 6.1.3 and Part III, Section II, 4.1.3 requires that the operator include in the operations manual a MEL, which specifies for a given model of aircraft the minimum operable equipment required, taking into account operating rules for the existing operational conditions, for the commencement and continuance of flight.

1.4 Annex 6, Part I, Attachment G and Part III, Section, II, Attachment E contain guidance on the MEL which should be developed from the master minimum equipment list (MMEL) which should have been developed by the organization responsible for the type design in cooperation with the operators of the aircraft and the DCA at the time the aircraft first enters service.

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2. Operator Minimum Equipment List

2.1 Operators engaged in commercial air transportation must be required to produce their own MELs which are then approved by the Flight Standard Division of DCA for incorporation in their operating manuals for the use and guidance of flight and ground operations personnel. The MEL should be tailored to the individual operator's routes and procedures, within the constraints imposed by the MMEL, meaning that the operator's approved MEL should be based upon, but not less restrictive than the relevant MMEL. The current MMEL for a given aircraft may normally be obtained from the organization responsible for the type design of the aircraft or from the CAA of the State of Design. The MMEL is not normally part of the required aircraft documentation and it is frequently necessary for an operator utilizing aircraft manufactured in another State to request a copy of the current MMEL and amendments as they occur, in order to develop and maintain an MEL for approval by his State CAA.

2.2 In developing an MEL, the philosophy should be to authorize flights with inoperative equipment only when the inoperative equipment does not render the aircraft unairworthy for the particular flight. Limitations, procedures and substitutions may be used to provide conditions under which the inoperative equipment will not make the operation unsafe or the aircraft unairworthy. It should be emphasized that the operator will need to exercise close operational control over the use of the MEL by all concerned. The MEL is intended to establish limits for the continued operation of the aircraft with MEL items inoperative. In the case of inoperative MEL items, the operator must make repairs and/or replacement within the timeframe prescribed in the MEL.

2.3 The MEL be carried on board as part of the operations manual (it may be a separate volume). The manual must contain en-route flight, navigation and communications procedures for the continuance of flight if any item of equipment required for the operation becomes unserviceable en route. If dispatch with unserviceable equipment is allowed, the manual must also cover these requirements and procedures.

2.4 For an inoperative item in the MEL, which would require an operational and/or maintenance procedure to ensure the required level of safety, the operator should develop the necessary operational/maintenance procedures based upon, but not less restrictive than those contained in the MEL. Those procedures should provide clear direction to the crewmembers and maintenance personnel of the action to be taken, including procedures necessary for securing those inoperative items. Alternatively, if the necessary procedure is contained in another document, e.g., other part of the operations manual (for operational procedures) or the maintenance control manual (for maintenance procedures), the MEL may refer to a section of this appropriate document.

3. Configuration deviation list (CDL)

3.1 Operators generally use the CDL which is associated to the AFM. In any case, they should use an approved CDL not less restrictive than the one in the AFM.

3.2 Operators should produce procedures for the use of the CDL, such as:

a) The pilot in command should be notified and aware of each missing part(s) before the flight. These missing part(s) should be listed in the aircraft logbook in an appropriate notation.

b) If an additional part is lost in flight, the aircraft may not depart the airport at which it landed following this event, until it again complies with the limitations of the CDL.

4. Recommendations assessment on Operation Manual, MEL, CDL

Following the satisfactory completion of the inspections on Operation Manual, MEL and CDL and the required correction of any deficiencies by the applicant, operator's Maintenance Organization must submit to Airworthiness Division their recommendations as to the operator's ability in respect of maintenance, to carry out safely the proposed operation. These recommendations should of course be accompanied by inspection reports and other documentation to substantiate the recommendation.

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MAINTENANCE CONTRACT REQUIREMENTS

1. This notice stipulates the requirements to be met and responsibilities of AOC holder in respect of contracted Maintenance. At such time AOC holder may make an arrangement with another organization for the performance of any maintenance, but shall remain responsible of all work performed under such arrangement.

2. Although Maintenance is contracted to DCA approved Maintenance Organization, AOC holder shall ensure that the maintenance of its aircraft/ aeronautical products are performed in accordance with its maintenance control manual and/or current instructions for continued airworthiness, as published by the manufacturer and approved by the state of design and applicable aviation regulations.

3. Each AOC holder shall have its aircraft maintained and released to service by either an AMO certificated under MCAR Part 145 or by an equivalent system. If an equivalent system to an AMO is used, the AOC holder shall ensure that the person signing the maintenance release is licensed or Authorized in accordance relevant licensing or authorization.

4. When an AOC holder makes an arrangement with another AMO for the performance of any maintenance-
   (a) the AOC holder shall not make a maintenance contract between the AOC holder and the AMO until the AMO is audited and certificated by DCA under MCAR Part 145,
   (b) the AOC holder shall not send the aircraft to any AMO for the performance of any maintenance until the AMO is audited and certificated by DCA under MCAR Part 145,
   (c) the AOC holder shall supply the updated technical documentations to the AMO for the contracted maintenance,
   (d) the AOC holder shall supply Myanmar Airworthiness Requirements and Airworthiness Notices which are related to the contracted maintenance,
   (e) the AOC holder shall have the responsibility to take the original of all detailed maintenance records and any associated airworthiness data from the AMO and retain that records for the period specified in relevant Myanmar Civil Aviation requirements, and
   (f) the AOC holder shall ensure that the contracted maintenance is performed and released by the AMO in accordance with MCAR Part 145.

5. AOC holder shall meet the following responsibilities under an arrangement with an AMO accepted by DCA If the AOC holder is not an AMO the AOC holder shall meet its responsibilities under -
   (a)Assuring the correction of any defect and/or damage affecting safe operation of an aircraft to an approved standard, taking into account the MEL and CDL for the aircraft type;
   (b) Assuring the accomplishment of all maintenance in accordance with the AOC holder's approved aircraft maintenance programme;
   (c) Assuring the accomplishment of any operational directive, airworthiness directive and any other continued airworthiness requirement made mandatory by the state of design and/or the DCA; and
   (d) Assuring the accomplishment of modifications in accordance with an approved standard and, for non-mandatory modifications, the establishment of an embodiment policy. An arrangement with an AMO with a written maintenance contract agreement between the AOC holder and the contracting AMO detailing the required maintenance functions and defining the support of the quality functions approved or accepted by the DCA.

6. The responsibilities of item 5 cannot be delegated to AMO unless the AMO is an integral part of the AOC holder and such arrangements are described in the AOC holder's Maintenance Control Manual.

7. The content of Maintenance contract should include an operations specifications page issued continuing such pertinent information as follows-
   (a) The names of the contracting parties
   (b) Contract identification and date
   (c) Place where maintenance will be performed
   (d) Reference documents approved for the control of Maintenance (such as approved repair schemes)
   (e) Release Certification standard
   (f) Time frame of the contract.
   (g) Insurance during contracted period.
   (h) A clause referring to termination or alteration of contract.

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Annex to A/50

REPUBLIC OF THE UNION OF MYANMAR
DEPARTMENT OF CIVIL AVIATION

CHECK LIST FOR MAINTENANCE CONTRACT

File Reference---------- **Date of Inspection** ----------

Organization ---------- **Place of Inspection**----------

For the Aircraft Type ----------

ITEM	DESCRIPTION	FINDING
1.	The names of the contracting parties	**N/A**☐ **OK**☐ **Finding**☐ **Not Check** ☐
2.	Contract identification and date	**N/A**☐ **OK**☐ **Finding**☐ **Not Check** ☐
3.	place where maintenance will be performed	**N/A**☐ **OK**☐ **Finding**☐ **Not Check** ☐
4.	Has the document that reference documents approved for the control of Maintenance (such as approved repair schemes)	**N/A**☐ **OK**☐ **Finding**☐ **Not Check** ☐
5.	Release Certification standard	**N/A**☐ **OK**☐ **Finding**☐ **Not Check** ☐
6.	Time frame of the contract.	**N/A**☐ **OK**☐ **Finding**☐ **Not Check** ☐
7.	Insurance during contracted period.	**N/A**☐ **OK**☐ **Finding**☐ **Not Check** ☐
8.	a clause referring to termination or alteration of contract.	**N/A**☐ **OK**☐ **Finding**☐ **Not Check** ☐

Inspector's signature ----------

Name ----------

Date ----------

Revision No: 0
Initial Issue Date: 28 July 2010 **Revision Date:**

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REQUIREMENTS AND PROCEDURES RELATED TO AIRCRAFT MAINTENANCE IN ADDITION TO MYANMAR AIRCRAFT ACT AND RULES

1. Myanmar Civil Aviation Requirements and Notices will be issued and amended pursuant to Act 5A of Myanmar Aircraft Act and Ministerial Order 118/2009 dated 9 October 2009.Persons and Organizations responsible for the Airworthiness shall comply with these requirements and procedures in addition rules related to aircraft maintenance.

2. These requirements issued and amended are effective from the date printed on them and supersede any applicable requirements in force prior to that date. Certificates approvals, licenses or authorization issued or granted previously by the DCA will continue to be in force.

3. Where the applicable requirements have been changed and unless otherwise approved, compliance with the current requirements will be necessary to retain the existing approval or to quality for the renewal of any certificates. Failure to comply with any of these requirements may result in suspension or revocation of the License or Approval and may be subject to the penalties provided under the schedule of Myanmar Aircraft Rules.

4. Prior to Issuing/ Renewing of any C of A, or Approved Maintenance Organization Certificates, Department of Civil Aviation will conduct an investigation to determine if the aircraft or Maintenance Organization meets relevant MCARs. The applicant will have to furnish to Department of Civil Aviation, the information, data, reports etc prescribed in relevant requirements and to meet additional requirements decided by the Department of Civil Aviation during the investigation.

A/52

GRANT OF VALIDATION CERTIFICATE OR CONVERSION LICENCE TO FOREIGN AIRCRAFT MAINTENANCE ENGINEERS (AMEs)

1. General

Nowadays Myanmar operator imported a number of new types of aircraft into Myanmar, for which adequate-manpower in terms of licensed aircraft maintenance engineers on the type of aircraft are not available in the country. To tide over this shortage of the personnel and till such time that the qualified personnel are available with the operators, some operators employ foreign engineers. These foreign engineers require validation certificates or Myanmar conversion license issued by Department of Civil Aviation (DCA) to certify Myanmar registered aircraft and perform duties assigned to him. These documents are granted by DCA after satisfying that the foreign engineers meet the necessary qualifications, skill, experience requirements. This Notice describes the procedure for grant of validation certificates or conversion license to foreign aircraft maintenance engineers.

2. Grant of Validation Certificate or Conversion License to Foreign Aircraft Maintenance Engineers worked under Myanmar AMO or AOC holder

Operators, who wish to use the services of foreign aircraft maintenance engineers, are required to fulfill the following minimum requirements.

2.1 Foreign engineers should be sponsored by the Myanmar operator for grant of validation certificate or conversion license for the license issued by ICAO contracting state.

2.2 The foreign engineer should possess a valid AME license with aircraft type rating conforming to ICAO standards or a basic license and company approval or authorization certificate (under FAR/EASA 145) or equivalent on the type of aircraft issued by the relevant competent Approved Organization.

Note - The operator shall ensure that their foreign engineer meets type Authorization requirements described in MCAR 145 before issuance of company approval or authorization. Myanmar DCA only validates or converts license issued by the relevant Aviation Authority.

2.3 The foreign engineer should have at least six year maintenance experience on the class of aircraft including at least one year working experience on maintenance of relevant aircraft type after the endorsement of aircraft type on his AME license / Company Approval or Authorization Certificate out of which at least three months should be recent experience on the relevant type in the preceding twelve months.

2.4 The foreign engineer should be well conversant with the approved maintenance system of the Myanmar operator as given in the operator's Maintenance Control Manual. In this regard the Quality Manager should provide necessary briefing and training to the foreign engineer and give a certificate stating that the foreign engineer has been trained and is well conversant with the approved maintenance system. The foreign engineer should also be made familiar with the operator's organization structure, engineering management and the duties and responsibilities assigned to him.

2.5 The foreign engineer should be fully aware of the contents of the schedules, which are required to be certified by him. The foreign engineer should be able to read, write and communicate with the English language. If the foreign engineer is required to certify major maintenance of aircraft, he should produce documentary evidence of his experience covering the major maintenance of the type of aircraft.

2.6 The operators should ensure the validity of visa and passport of the foreign engineer at all times during the period specified in validation certificate.

2.7 The foreign engineer shall be examined by the Operator. The regulation matters shall be examined by DCA.

2.8 When the foreign engineers have well understanding on Myanmar Civil Aviation Regulation, the operator should approach Airworthiness office for examination of Regulation for grant of validation certificate or conversion license. The examination will be conducted at Airworthiness office of DCA Head Quarter.

2.9 On successful examination, DCA may issue the validation certificate or conversion license to the foreign engineer, for a maximum period of one year. The validation certificate or conversion license is granted subject to the condition that he continues to be in the employment of the sponsoring Organization, his license remains current and he is fit to exercise the privileges of the license. A sample of the validation certificate format is specified in Annex to A/52.

2.10 Certificate of validation or conversion license holder shall be subjected to relevant sub-parts of MCAR part 66 including, but not limited to 66.50, 66.65.

2.11 During the period of validation the Quality Assurance Manager (QAM) shall monitor the work performed by the foreign engineer and ensure that inspection and certification is carried out by the foreign engineer properly.

3. Grant of Validation Certificate or Conversion License to Foreign Aircraft Maintenance Engineers worked on Myanmar Register Private Category Aircraft

The owner of private category aircraft who wish to use the services of foreign aircraft maintenance engineers are required to fulfill the following minimum requirements.

3.1 Foreign Engineers should be sponsored by the Myanmar register aircraft owner.

3.2 The foreign engineer should possess a valid type rated AME license conforming to ICAO standards.

3.3 The foreign engineer should have at least four years maintenance experience on the class of aircraft including at least one year working experience on maintenance of relevant aircraft type after the endorsement of aircraft type on his AME license.

3.4 The foreign engineer should be able to read, write and communicate with the English language.

3.5 The sponsor owner should ensure the validity of visa and passport of the foreign engineer at all times during the period specified in validation certificate or conversion license.

3.6 The foreign engineer shall be examined on Air Legislation by DCA.

3.7 When the foreign engineer passed the Air Legislation, the DCA may issue the validation certificate or conversion license to the foreign engineer for a maximum period of one year.

4. Renewal of Validation Certificate or Conversion License.

4.1 For renewal of validation certificate or conversion license the foreign engineer shall submit that certificate or license to DCA 15 days prior to the end of validity.

4.2 The recent experience of three months in the preceding twelve months shall be ensured.

4.3 The foreign engineer should continue to hold valid visa and passport.

5. Although conversion license procedure has been developed, up to now Myanmar didn't issue the conversion license to foreign AMEs.

Annex to A/52

CA 151

REPUBLIC OF THE UNION OF MYANMAR

DEPARTMENT OF CIVIL AVIATION

CERTIFICATE OF VALIDATION OF

AN AIRCRAFT MAINTENANCE ENGINEER'S LICENSE

1. ***STATUS OF THIS CERTIFICATE.***

This Certificate forms part of .... License No. ..... of ..... and must always be carried with the license.

2. ***VALIDITY.***

This Certificate validates for the period stated in Para 5, the privileges of category..... of that license in respect of .... registered in the Republic of the Union of Myanmar.

3. This Certificate of validation is issued under the provisions of Rule 45 of the Union of Myanmar Aircraft Rules.

4. ***CERTIFICATE:-***

I, the undersigned, a person duly authorized for this purpose by the President of Republic of the Union of Myanmar, hereby certify the facts stated in paragraph 1, 2 & 3 of this certificate.

Signature.....
(for Director General of Civil Aviation Myanmar)
Date and Stamp.....

A/52

PHOTO

5. PERIOD OF VALIDITY.

1 FROM	2 TO	3 SIGNATURE, DATE AND STAMP

MAINTENANCE TRAINING PROGRAM/RECORD

1. OBJECTIVE

Inspections recently carried out by Department of Civil Aviation revealed that Air Operator Certificate's holders are not seriously following requirements with regard to training of their employee performed maintenance on their aircraft. DCA has clearly laid down the training requirements in the MCARs. Any clarifications sought on the applicability of these requirements should be referred to Airworthiness Division. This Notice provides guidance for establishing and performing an operator's maintenance training program.

2. GENERAL

2.1 Effective training is the basis for a successful maintenance program. Although many procedures for maintaining and inspecting aircraft may be similar, the equipment, procedures, and task documentation used may all be unique to the operator's specific programs.

2.2 DCA requirements normally require that maintenance be performed in accordance with the operator's manual.

2.3 Maintenance training programs are the most efficient manner to inform personnel of the requirements of the operator's program.

3. COORDINATION REQUIREMENTS AND SCHEDULING

Airworthiness Inspectors (AWIs) may encourage applicants to discuss pending maintenance training program development with the Air Operator or Maintenance Organization certification team before the program is submitted for final acceptance. It is especially important that programs be reviewed for conformity with appropriate MCAR requirements. This review can reduce the number of major changes an operator will have to make after a program has been printed and distributed.

4. SCHEDULING MAINTENANCE TRAINING PROGRAMS

Delays in training program acceptance may result delays in the Air Operator or Maintenance Organization certification process. To facilitate the evaluation of the training programs, the applicant should be encouraged to schedule a classroom training session in a timely manner.

5. CONTENT OF MAINTENANCE TRAINING PROGRAMS

The operator's training program should include company indoctrination and technical training (formal and on the job training). The program should contain a list of tasks to be taught and a method for recording the training. Completion of the training must be entered in the individual's training record. Without company indoctrination and technical training, the employee cannot perform maintenance on aircraft. Each maintenance employee should receive above mentioned training within one year of appointment.

5.1 Company Indoctrination. Each maintenance employee should receive instruction in the use of the operator's manuals, policies, procedures, and forms.

5.2 Maintenance Technical Training

5.2.1 Training may consist of a combination of formal (classroom) instruction and on the job training. The operator may give training credit to individuals for experience gained while employed by other operators, after getting relevant sound documented evidence.

5.2.2 Procedures unique to the operator should be taught. Training records should indicate the amount of formal training, on the job training, and experience each individual receives.

5.2.3 Technical training may be contracted to another operator, manufacturer, or in the case of a specialized process, to a person knowledgeable in that specialized process. The operator is responsible for the content and quality of such training.

5.2.4 The DCA does not establish a fixed amount of time for indoctrination or technical training courses, but should use a minimum time not less than 6 months which must be proportional to the operator's complexity.

5.3 Responsibilities for persons other than an Operator's employees.

DCA normally require each certificate holder to be primarily responsible for having a training program and ensuring that the training received throughout the operator's system is of equal quality and effectiveness. This covers all persons such as the certificate holder's employees, contract personnel for emergency maintenance and servicing, etc.

5.3.1 Each certificate holder or person who performs maintenance shall have a training program to ensure that each person, including inspection personnel, is fully informed about procedures, techniques, and new equipment in use and is competent to perform the applicable duties.

5.3.2 No person may use any person to perform duplicate inspections unless the person performing the inspections is appropriately certificated, properly trained, qualified, and authorized to do so.

NOTE: a person can be defined as an individual, firm, partnership, corporation, company, association, joint stock association, or governmental unit.

5.4 Category II/III Airborne systems and equipment Maintenance Personnel Training. Each operator for Category II/III must establish an initial and recurrent training program. This program must be acceptable to the DCA and cover all personnel performing quality control inspection and maintenance work on Category II/III airborne systems and equipment. Training records for such personnel are to be kept current and made available to the DCA for inspection.

5.5 Recurrent Training. The operator's training program should ensure that deficiencies discovered through continuous analysis and surveillance and/or reliability programs are corrected during recurrent training. Additionally, recurrent training should include at least the following:

a) Review, reinforcement, and upgrading of all training given in both indoctrination and technical subjects

b) Input from maintenance bulletins and/or maintenance newsletters

c) Critical tasks, such as run-up/taxi, Duplicate Inspections, and Nondestructive Inspection (NDI)

5.6 Training Records. Training records must be retained by the operator to document that personnel are adequately trained. Training records should be maintained at a central location, but may be maintained at other locations provided these locations are listed in the operator's manual.

5.7 Special Emphasis Training. Special maintenance training programs are required when new or different types of aircraft and/or equipment are introduced.

6. ACCEPTING THE MAINTENANCE TRAINING PROGRAM

The task of acceptance differs from approval in that no specific procedure or vehicle is used to accept a training program. The program is approved by the general manager upon acceptance by the DCA. A list of effective pages will show acceptance date of the maintenance training program.

7. PROCEDURES WHICH WILL BE USED BY AIRWORTHINESS INSPECTORS DURING AUDITING OPERATOR'S TRAINING PROGRAMS

7.1 Review Operator File.

7.2 Review Schedule of Events. If this task is performed as a part of an original certification, review the Schedule of Events to ensure that this task can be accomplished in accordance with the schedule.

7.3 Review Maintenance/ Training Programs. The program should include the following elements in the Maintenance Training Program:

a) The name of the person responsible for the overall administration of the maintenance program.

b) The name(s) of the person(s) responsible for other processes within the maintenance training program (e.g., recordkeeping, revisions to training programs, and security of the program)
c) Designated maintenance training instructors
d) A description of how instructors are determined to be qualified
e) Procedures used to authorize instructors
f) A file on the instructors consisting of qualifications, authorizations, and other documents pertaining to instructor assignments
g) A list describing what type of training is required for new employees (Indoctrination, on the job training, etc.)
h) Procedures for evaluating, crediting, and documenting a new employee's previous training
i) Procedures for determining what additional training is required for a new employee
j) A schedule for recurrent training, a description of recurrent training, and procedures for determining requirements for other training
k) Recordkeeping procedures, including records of the following:
   1) Training dates
   2) Who performed the training (instructor should indicate by signing)
   3) The number of hours of training performed
   4) The content of the training performed
l) Criteria for determining the quality of the training program (training standards)
m) Evaluation of the need to revise training programs
n) A training syllabus that describes the following:
   1) Content of each training course
   2) Format of training (classroom, on the job training)
   3) Duration of training courses
   4) Standards for grading students
   5) Training aids
o) Criteria to determine acceptability of contract training, to include:
   1) Qualifications of instructors
   2) Criteria to establish appropriateness of reference material being taught
   3) Reporting procedures to inform operator of student progress
   4) Criteria to determine adequacy of facilities Criteria to evaluate contractor's training syllabus.

7.4 Observe Operator Performing Training. This observation is performed regardless of whether the operator performs the training or contracts with another company.

a) Ensure that facilities are adequate, including classrooms, training aids, and reference materials.

b) Evaluate the instructor's presentation and knowledge.

c) Ensure that course content and instruction is in accordance with the training syllabus.

d) Ensure that training recordkeeping is performed in accordance with maintenance /RII inspection program.

7.5 Analyze Findings. Evaluate all deficiencies to determine what changes will be required.

7.6 Debrief the Operator

a) If deficiencies are discovered during the review, return the program to the operator with a letter describing the problem areas, if necessary. If this review is being performed as a part of a certification, inform the operator that issuance of the certificate will be withheld until deficiencies are corrected.

b) Schedule a meeting with the operator to discuss the problem areas if it may be helpful in resolving deficiencies. Discuss how to resolve deficiencies.

A/54

FEES TO BE SETTLED ON DEPARTMENT OF CIVIL AVIATION FOR THE MATTERS HANDLED BY AIRWORTHINESS DIVISION

1. This notice is issued to give the information regarding the fees to be settled on Department of Civil Aviation for the matters handled by Airworthiness Division such as Issuance of Certificate of Registration for the aircraft, Aircraft Maintenance Licence Examination, etc.

2. Pursuant to the decisions made by Executive Committee Meeting No. (10/2011) of Ministry of Transport held on 23 November 2011 and Executive Committee Meeting No. (09/2013) of Ministry of Transport held on 07 July 2013, the fees to be settled on Department of Civil Aviation for the matters handled by Airworthiness Division shall be settled as per the amount specified in the Appendix to this notice.

3. This notice shall be effective from the date of 1 August 2013.

DIRECTOR GENERAL

Appendix to Notice A/54

No	Concerned Myanmar Aircraft Rule	Description	Fees	
			Government Organizations and Government Employees (Kyat)	Other Than Government Organizations and Government Employees (Kyat)
1	**Part IV Rule 35** (a)Registration Fees	Issuance of Certificate of Registration	15,000	150,000
		Issue of Certificate of Registration (in duplicate)	15,000	150,000
	(b) De- registration fees	Deregistration of Aircraft	7,500	75,000
2	**Part VI Airworthiness** (a) Issued and renewal of Certificate of Airworthiness	Issued and renewal of Certificate of Airworthiness **Cat: I Maximum Total Weight Authorized is Under 15000 kg** In respect of the first, 2500 kg	3,000	800,000
		In respect of each additional 200 kg or part thereof	200	50,000
		Cat: II Maximum Total Weight Authorized is from 15000 kg to 50000 kg In respect of the first, 15000 kg	18,000	4,000,000
		In respect of each additional 300 kg or part thereof	200	50,000
		Cat: III Maximum Total Weight Authorized is over 50000 kg In respect of the first, 50000 kg	60,000	13,000,000
		In respect of each additional 400 kg or part thereof	200	100,000

Appendix to Notice A/54

No	Concerned Myanmar Aircraft Rule	Description	Fees	
			Government Organizations and Government Employees (Kyat)	Other Than Government Organizations and Government Employees (Kyat)
	(b) Issue of Certificate against foreign Certificate	Issue of Certificate of Validation on the foreign C of A	(Period in Months to be used) x (C of A Fees) / 12	
	(c) Issue of Duplicate Certificate	Issue of Duplicate Certificate of Airworthiness	15,000	150,000
	(d)Approval of Modification and Repair	Approval of Modification and Repair (Minor)	20,000	200,000
		Approval of Modification and Repair (Major)	50,000	550,000
	(e) For issue or renewal of Certificate requiring special inspection	For issue or renewal of Certificate requiring special inspection (i) Up to 5000 kg Maximum Take-off Weight Authorized	375,000	2,700,000
		(ii) Up to 10000 kg Maximum Take-off Weight Authorized	487,500	3,500,000
		(iii) Up to 15000 kg Maximum Take-off Weight Authorized	600,000	4,300,000
		(iv) Up to 20000 kg Maximum Take-off Weight Authorized	712,500	5,000,000
		(v) Over 20000 kg Maximum Take-off Weight Authorized	825,000	6,000,000
	(f) Issue of Ferry Flight Permit	Issue of Ferry Flight Permit	25,000	250,000
3	(a)Engineer Licence Issue	Issue of Engineer Licence	10,000	100,000
	(b)Renewal or issue of duplicate Licence	Renewal or issue of duplicate Licence	5,000	50,000
	(c) Exam any Module	Exam Fees (Each Module)	1,000	10,000

Appendix to Notice A/54

No	Concerned Myanmar Aircraft Rule	Description	Fees	
			Government Organizations and Government Employees (Kyat)	Other Than Government Organizations and Government Employees (Kyat)
	(d) Addition of Types endorsement for each Category	Types endorsement on each Licence Category	5,000	50,000
	(e) Addition of Category	Addition of Licence Category	10,000	100,000
	(f) Engineer License Validation Issue	Issue of Validation Certificate for Foreign Aircraft Maintenance Licence	5,000	50,000
	(g)Technical Authorization Fees (One Person)	Technical Authorization Fees (One Person)	5,000	50,000
4	(a)Grant of Licence/ Aircraft Operating Permit / Air Operator Certificate/ Aircraft Maintenance Organization	Grant of Licence/ Aircraft Operating Permit / Air Operator Certificate/ Aircraft Maintenance Organization	300,000	3,000,000
	(b) Renewal of Licence/ Aircraft Operating Permit / Air Operator Certificate/ Aircraft Maintenance Organization	Renewal of Licence/ Aircraft Operating Permit / Air Operator Certificate/ Aircraft Maintenance Organization	150,000	1,500,000
	(c) Amendment of Licence/ Aircraft Operating Permit/ Air Operator Certificate/Aircraft Maintenance Organization	Amendment of Licence/ Aircraft Operating Permit/ Air Operator Certificate/ Aircraft Maintenance Organization	10,000	100,000
	(d) Issue of Temporary Aircraft Operating Permit	Issue of Temporary Aircraft Operating Permit	10,000	100,000

Appendix to Notice A/54

No	Concerned Myanmar Aircraft Rule	Description	Fees	
			Government Organizations and Government Employees (Kyat)	Other Than Government Organizations and Government Employees (Kyat)
	(e) Temporary Aircraft Maintenance Organization Certificate (for Each Month)	Temporary Aircraft Maintenance Organization Certificate (for Each Month)	25,000	250,000
5	(a) Issue of Certificate of Approved Training Organization	Issue of Certificate of Approved Training Organization	-	3,000,000
	(b) Renewal of Certificate of Approved Training Organization	Renewal of Certificate of Approved Training Organization	-	1,500,000
	(c) Amendment of Certificate of Approved Training Organization	Amendment of Certificate of Approved Training Organization	-	100,000

A/55

GUIDANCE FOR AUTHORIZATION OF B1 AND B2 CERTIFYING STAFFS

1. The privileges and limitations of B1 and B2 Certifying Staff are mentioned in MCAR Part 66. This notice is issued to specify the detail duties and responsibilities of B1 and B2 Certifying Staff so that it can be used as guidance for the issuance of authorization by MCAR 145 Maintenance Organization and for B1 and B2 certifying staff for the aircraft other than public transport category.

2. The Quality Assurance Manager or equivalent personnel of 145 Maintenance Organization shall issue authorization for all certifying staffs employed in their respective 145 Maintenance Organization after assessment or testing for competency has been completed on individual certifying staff in accordance with the requirements and procedures specified in approved Maintenance Organization Exposition or equivalent manual.

3. The scopes of authorization mentioned above will depend on the result of assessment for competency by Quality Assurance Manager and terms of approval by Department of Civil Aviation for that maintenance organization. For those cases, the detail scopes of authorization for B1 and B2 certifying staff shall not be exceeded the scope of work for B1 and B2 certifying staff specified in the appendix to this notice.

4. The scope of work for B1 and B2 certifying staff for the aircraft other than public transport category shall not be exceeded the scope of work for B1 and B2 certifying staff specified in the appendix to this notice.

5. For the scope of work for ATA Chapters those are not mentioned in the appendix to this notice, consent of Department of Civil Aviation shall be needed case by case basis.

6. This notice shall be effective on the date of issue.

Annex to Notice A/55

Duties & Responsibilities of B1 and B2 Certifying Staffs

Definitions

B1 All : Mechanical, hydraulic, pneumatics, electrical system, indicators, transmitters, pressure switches, thermal switches, (plugs and connectors for servicing, cleaning and connections) excluding wiring and relays.

R : Replacement and rectification only requiring built-in operational test and go no go decision.

B2 All : Electrical, Instruments, Radio & Radar including switches, wiring & relays.

E &A : Electrical, Instruments, Radio & Radar, excluding the mechanical, hydraulic and pneumatics.

Duties & Responsibilities

No.	Description	ATA Chapter	B1 (A included)	B1 Excluded	B2	B2 Excluded
1.	Time Limits/ Maintenance Checks	05	All		E & A	
2.	Dimensions and Areas	06	All		N/A	
3.	Lifting and Shoring	07	All		N/A	
4.	Leveling and Weighing	08	All		N/A	
5.	Towing and Taxiing	09	All		N/A	
6.	Parking and Mooring	10	All		N/A	
7.	Placards and Markings	11	All		E & A	
8.	Servicing	12	All		E & A	
9.	Standard Practices- Airframe	20	All		E & A	
10.	Air Conditioning	21	All		E & A	
11.	Auto Flight	22	R		All	
12.	Communications	23	R		All	
13.	Electrical Power	24	R		All	
14.	Equipment/Furnishings	25	All		E & A	
15.	Fire Protection	26	R		All	
16.	Flight Controls	27	All		E & A	

No.	Description	ATA Chapter	B1 (A included)	B1 Excluded	B2	B2 Excluded
17.	Fuel	28	All		E & A	
18.	Hydraulic Power	29	All		E & A	
19.	Ice and Rain Protection	30	All		E & A	
20.	Indicating/ Recording System	31	R		All	
21.	Landing Gear	32	All		E & A	
22.	Lights	33	R		All	
23.	Navigation	34	R		All	
24.	Oxygen	35	R		All	
25.	Pneumatic	36	All		E & A	
26.	Water/ Waste	38	All		E & A	
27.	Cabin Communications	44	R		All	
28.	Onboard Maintenance System	45	R		All	
29.	Information Systems	46	R		All	
30.	Fuel Tank Inerting	47	All		E & A	
31	Auxiliary Power Unit	49	All		E & A	
32.	Structures	51	All		E & A	
33.	Doors	52	All		E & A	
34.	Fuselage	53	All		E & A	
35.	Nacelles/ Pylons	54	All		E & A	
36.	Stabilizers	55	All		E & A	
37.	Windows	56	All		E & A	
38.	Wings	57	All		E & A	
39.	Propellers	61	All		E & A	
40.	Standard Practices-Engine	70	All		E & A	
41.	Power Plant	71	All		E & A	
42.	Engine	72	All		E & A	

No.	Description	ATA Chapter	B1 (A included)	B1 Excluded	B2	B2 Excluded
43.	Engine Fuel and Controls	73	All		E & A	
44.	Ignition	74	All		E & A	
45.	Engine Air (Bleed Air)	75	All		E & A	
46.	Engine Controls	76	All		E & A	
47.	Engine Indicating	77	All		E & A	
48.	Exhaust	78	All		E & A	
49.	Engine Oil	79	All		E & A	
50.	Starting	80	All		E & A	

A/56

QUALIFYING OF COMPONENT CERTIFYING STAFF FOR MCAR PART 145 ORGANISATIONS

1. Purpose

This airworthiness notice is to assist the Quality system in the process of Authorisation of Component certifying staff. Component Certifying Staff (CC/S) means staff authorised by MCAR Part 145 organisation to release Engines, APU and components under the MCAR Part 145 approval on Category B and/or C class rating.

For a standardisation purpose, when an MCAR Part 145 organisation is nominating component certifying staff, such organisation shall at least detail within its Maintenance Organisation exposition (MOE) the relevant CC/S authorisation procedures (initial and renewal) together with the adequate qualification criteria depending on the complexity of the component.

The requirements of this notice may be exempted for the Foreign MCAR Part 145 Organisation, if such organisation holds the approval from Federal Aviation Administration (FAA) or European Aviation Safety Agency (EASA) for the Category B and/or C class rating intended to be applied. If not so, such organisation shall follow the requirements specified in this notice.

The current criteria applicable to CC/S are summarized within a table at the appendix to this airworthiness notice.

2. CC/S authorization procedure

2.1. Initial authorization process

2.1.1 The MCAR Part 145 organisation shall detail in its Maintenance Organisation exposition the established prerequisites to be eligible as MCAR Part 145 Component Certifying Staff such as but not limited to:

(a) Education requirements;
(b) Basic Training requirements;
(c) Technical training requirements (for each component);
(d) Training on Bench test;
(e) Training on specific equipment;
(f) Aeronautical experience requirements;
(g) Language knowledge;
(h) Human Factor and aviation legislation training as per MCAR Part 66 modules 9 and 10 respectively;
(i) Training on the AMO procedures;
(j) Training on the Fuel tank Safety as required;

2.1.2 The MCAR Part 145 organisation shall also detail in Maintenance Organisation Exposition:

(a) The Quality system assessment process for granting CC/S authorisation (the CC/S should also be assessed for competencies / training for the proposed scope of work and level of maintenance*);

(b) The CC/S records (responsibility, content of the CC/S files, etc,..);

(c) The management of the CC/S List;

(d) Management of the authorisation including:
- The validity of the authorisation (maximum of one year).
- Limitation(s) of the Part 145 authorisation vs the National License limitation(s) where necessary.

* level of maintenance means Overhaul, test, repair, Level 1, 2 and 3 for electronic / electric components as addressed in the CMM.

2.2. Authorization renewal process

The MCAR Part 145 organisation shall detail in its MOE the CC/S authorization renewal prerequisites such as but not limited to:

(a) The continuation training requirements (Organisation procedures, new technology, human factor issues);

(b) The maintenance experience (twelve months of relevant experience in the last 2 year period);

(c) Records of the experience

(d) The renewal assessment process;

(e) The CC/S records (responsibility, record of experience, content of the CC/S files);

(f) Management of the CC/S List;

(g) Validity of the authorization (maximum of one year).

3. The Education requirements;

The minimum educational level should be a diploma and/or an academic degree in a technical discipline, from University and/or Institution recognized by Union of Myanmar or equivalent justified by the appropriate certificates.

4. Basic Training requirements;

The CC/S should be able to demonstrate he/she received a basic training on the appropriate field:

(a) an aeronautical school diploma or certificate or,

(b) a technical school diploma / certificate, if the intended scope of work concerns non complex electrical components or instruments and cabin and safety equipments or,

(c) an aeronautical military school diploma or certificate.

Depending on the complexity of the intended scope of authorization, a higher level of the basic training should be considered.

5. Technical / component training requirements:

The CC/S should be able to demonstrate he/she received appropriate theoretical and practical component training from:

(a) the OEM or
(b) the OEM recognized training organization

Bench test training

Where there is a need to use Bench test (e.g. engine or ATEC bench test), the CC/S should be able to demonstrate he/she received an appropriate training. This training for the use of specific tools required by the OEM maintenance data should be received from:

(a) The OEM or
(b) The bench test manufacturer

Specific equipment or tools training

Where there is a need to use specific equipment or tools, the CC/S should be able to demonstrate he/she received an appropriate training. This training for the use of specific equipment or tools required by the OEM maintenance data should be received from:

(a) The OEM or
(b) The specific equipment or tool manufacturer

Aeronautical experience requirements;

The CC/S should be able to demonstrate at least 2 years of Aeronautical experience in the field of aviation maintenance.

Language Knowledge;

The CC/S should be able to demonstrate a working knowledge of English and the language in which the maintenance data is published.

Human Factor and aviation legislation Training as per MCAR Part 66 Module 9 and 10 respectively;

The CC/S should be able to demonstrate he/she received a Human Factor and aviation Legislation training as detailed in MCAR Part 66 modules 9 and 10 respectively.

Training to the MOE procedures;

The CC/S should be able to demonstrate he/she received an appropriate training to the MOE and internal procedures applicable to CC/S (including issuance of authorize release certificate - ARC)

Training on the Fuel Tank Safety

Where needed, the CC/S should demonstrate he/she received an appropriate training on the Fuel Tank Safety items, CDCCL level 1, or level 2.

Training on Electrical Wiring Interconnection System (EWIS)

Where needed, the CC/S should demonstrate he/she received an appropriate training on EWIS.

6. Approval of Component Certifying Staff List and MOE

The list of Certifying Staff including Component Certifying Staff approval process together with the Component Certifying Staff qualification criteria shall be detailed within the exposition and approved by DCA.

7. Effectivity

This notice shall be effective from the date of issue. If the organisation has been approved for the Category C class rating prior to the effective date of this notice, such organisation may continue to exercise that rating until one year from the effective date of this notice or until such approval is renewed.

DIRECTOR GENERAL

Appendix to Notice A/56

Summary Table for MCAR PART 145 Component Certifying Staff Qualification

	Engine/APU/ Propeller	**Hydraulic components** (L/G assy, actuator, etc ..)	**Electrical components** (Motors, actuators, chargers, power supplies, batteries, etc..)	**Electronic components** (card assy, mike, head set, etc...)	**Mechanical components** (wheel, Brake unit, structure,..)	**Electronic Units** (computers, com/nav receiver, indicators, power supplies,)	**Instruments**	**Cabin Equipment** (BFE, PSU, Pax Entertainment)	**Safety equipment** (life raft, life jacket, O^2 bottle, O^2 masks,..)
Educational level	a diploma and/or an academic degree in a technical discipline	a diploma and/or an academic degree in a technical discipline	a diploma and/or an academic degree in a technical discipline	a diploma and/or an academic degree in a technical discipline	a diploma and/or an academic degree in a technical discipline	a diploma and/or an academic degree in a technical discipline	a diploma and/or an academic degree in a technical discipline	a diploma and/or an academic degree in a technical discipline	a diploma and/or an academic degree in a technical discipline
Basic training level	- Aeronautical & technical school - Aeronautical military school - QA assessment	- Aeronautical & technical school - Aeronautical military school - QA assessment.	-Technical school - Aeronautical military school - QA assessment.	- Aeronautical & technical school - Aeronautical military school - QA assessment	- Aeronautical & technical school - Aeronautical military school - QA assessment	- Aeronautical & technical school - Aeronautical military school - QA assessment.	-Technical school - Aeronautical military school - QA assessment	-Technical school - Aeronautical military school - QA assessment.	-Technical school - Aeronautical military school - QA assessment.
Component training	- OEM - OEM recognised Training Org.	- OEM - OEM recognised Training Org.	- OEM - OEM recognised Training Org.	- OEM - OEM recognised Training Org.	- OEM - OEM recognised Training Org.	- OEM - OEM recognised Training Org.	- OEM - OEM recognised Training Org.	- OEM - OEM recognised Training Org.	- OEM - OEM recognised Training Org.
Tool training	- OEM	- OEM	- OEM	- OEM	- OEM	- OEM	- OEM	- OEM	- OEM
Bench test qualification	- OEM of the bench test	- OEM	- OEM	- OEM	- OEM	- OEM	- OEM	- OEM	- OEM
Practical experience	2 YEARS	2 YEARS	2 YEARS	2 YEARS	2 YEARS	2 YEARS	2 YEARS	2 YEARS	2 YEARS
Continuing training	- OEM - OEM recognized Training Org.	- OEM - OEM recognized Training Org.	- OEM OEM recognized Training Org.	- OEM - OEM recognized Training Org.	- OEM - OEM recognized training Org.	- OEM - OEM recognized Training Org.	- OEM - OEM recognized Training Org.	- OEM - OEM recognized Training Org.	- OEM - OEM recognized training Org.

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CERTIFICATE OF MAINTENANCE REVIEW FOR CIVIL AIRCRAFT

A. CERTIFICATE OF MAINTENANCE REVIEW (CMR)

1. General

1.1 Pursuant to Myanmar Aircraft Rules, an aircraft registered in Myanmar in respect of which a Certificate of Airworthiness in the Transport Category (Passenger), Transport Category (Cargo) or Aerial Work Category is in force or any aircraft used in commercial operations, shall be issued a Certificate of Maintenance Review.

1.2 The issue of a CMR provides evidence that, at the date of issue, the aircraft was in compliance with the requirements of the maintenance Program/Schedule approved by the DCA, that all modifications and inspections classified as mandatory had been satisfied, that defects entered in the technical log had been rectified or deferred in accordance with approved procedures and that all CRS had been issued in accordance with the Myanmar Civil Aviation Requirements. A copy of the current CMR must be carried on board the aircraft to which it relates.

1.3 CMR signatories work on behalf of approved Maintenance organizations and as such, approved Maintenance organizations must have procedures established as to how the signatory will comply with the requirement. For instance it may be acceptable for the signatory to accept authorized reports from various sections and rely on “no adverse comments” from quality audits, but he must have the right of access, questions and query to any relevant information, including quality audits, in order to carry out his task. It would be untenable if the signatory accepted reports without question from a reliability group if there were critical quality audits on that group of which he was not aware. In the absence of specific procedures, full access to all records will be required.

1.4 The CMR signatory shall be given access to such information as is necessary in order that he may carry out his obligations. It is therefore incumbent on the CMR signatory that he does research the records to the extent necessary to confidently issue the CMR. Thus the following records must be at his disposal; the maintenance Program/Schedule, the technical log, technical records and mandatory information like Airworthiness Directives.

2. Aircraft above 2730 MTWA

In the case of aircraft above 2730 kg MTWA, the CMR shall be issued for a period of four calendar months. Nothing prevents the CMR from being reissued as many times as necessary during each year, but its validity must never exceed four months. The certificate shall certify the date on which the maintenance review was carried out and the date thereafter when the next review is due.

3. Aircraft below 2730 MTWA

In the case of aircraft below 2730 kg MTWA, the CMR shall be issued for a period of one year. Unless otherwise agreed or directed by the DCA, the CMR must be aligned with the renewal of the Certificate of Airworthiness.

4. Maintenance Programme/Schedule Endorsement

The approved maintenance Programme/Schedule approved by the DCA contains an endorsement specifying the occasions on which a review must be carried out for the purpose of issuing a certificate of maintenance review. The Certificate may be reissued at any time prior to the expiry of the last certificate. The review need not be completed co-incident with a Scheduled Maintenance Inspection.

5. Conditions for Issue of CMR

The nominated Signatory shall only issue a Certificate of Maintenance Review when satisfied at the time of the review that the following aspects of maintenance have been carried out:

(a) A completion of all inspections and other maintenance requirements of the Approved Maintenance Programme/Schedule.
(b) Accomplishment of all applicable terminating or recurring Airworthiness Directives and mandatory Service Bulletins, modifications or inspections.
(c) No parts, components or assemblies exceed their life/service limits.
(d) No outstanding defects or inoperative items exist, or if any, have been deferred in accordance with procedures acceptable or approved by the DCA.
(e) No known condition(s) exists that would adversely affect the aircraft airworthiness, safe operation, or endanger passengers or crew members.
(f) Certificates of Release to Service (CRS) have been issued;
(g) All entries in the technical log have been rectified or deferred in accordance with procedures approved by the DCA.

6. Issuing Authority

The signatory for the CMR shall be authorized by the approved Maintenance organization. The issuing authority, authorization procedures and authorization privileges must be entered in the Exposition.

7. Requirements for Issuing Authority

7.1 Persons seeking authorizations/approvals to issue Certificates of Maintenance Review shall:

(a) hold DCA Aircraft Maintenance Engineer Licence in Airframe & Engine categories appropriate to the aircraft type for which authorization/ approval is sought.; or

(b) hold a full MCAR Part-66 Category B1 or B2 licence appropriate to the aircraft type for which authorization/approval is sought.

(c) hold a foreign approved licence(s) with equivalent privilege(s) as the MCAR approved licence(s).

7.2 Such person shall also:

(a) have at least **'eight years'** in aircraft maintenance certification experience, which includes at least **'two years'** recent experience involving the certification of maintenance; and

(b) Have successfully completed at least familiarization training on the aircraft type for which the authorization is to be granted, have been trained in the procedures of the organization, and have achieved the agreed standard in an examination set by the organization in conformity based upon the followings;

(i) The concept of approval in accordance with MCAR Part-145 and other requirements prescribed by the DCA.

(ii) The status of the Certificate of Maintenance Review and the responsibilities of a signatory of the Certificate of Maintenance Review.

(iii) The form and implementation of the Approved Maintenance Programme/ Schedule for the type of aircraft concerned.

(iv) The details of the systems and procedures contained in the organization exposition and the associated documents, together with the requirements of the organization for their implementation.

(v) The maintenance support systems which are related to continuing airworthiness, e.g. reliability programmes, defect control, production control, development engineering, training, certification authority and modification control.

(vi) The form and use of the aircraft Technical Log, Deferred Defect Log and the Minimum Equipment List.

(vii) The form and implementation of mandatory inspections/modifications as required for the type of aircraft reviewed.

8. Validity of Authorizations/Approvals

Authorizations/approvals granted shall only be used, subject to their conditions of validity, whilst the holder remains in the employ of the Approved Maintenance Organization and his licence remains valid.

9. Administration

A certificate of maintenance review shall be issued in duplicate. One copy of the most recently issued certificate shall be carried in the aircraft and the other shall be kept by the operator under the control of the Quality Assurance Manager. Each certificate of maintenance review shall be preserved by the operator of the aircraft for a period of one year after it has been issued.

10. Format

The Certificate of Maintenance Review shall be in the following format:

CERTIFICATE OF MAINTENANCE REVIEW

Aircraft Type -……Registration Marks -..... MSN -……

This maintenance review carried out on - ……/ ……. /…….

Certified that a maintenance review of this aircraft and such of its equipment as is necessary for its airworthiness has been carried out in accordance with Myanmar Civil Aviation Requirements for the time being in force.

The next Maintenance Review is due on or before - ……/……../……

Licence No.: ……
(approval reference where applicable)

Signature and Stamp

Date:……..

Organization : ……

B. CERTIFICATE OF RELEASE TO SERVICE (CRS)

1. A Certificate of Release to Service shall be issued in accordance with MCAR 145.50 (Certification of Maintenance), after any overhauls, repairs, replacements, modifications, maintenance, mandatory inspections or scheduled maintenance inspections to the aircraft or any part of the aircraft or such of its equipment as is necessary for the airworthiness of the aircraft. The Certificate of Release to Service shall contain particulars of work done or the inspection completed and place at which the work was carried out. Depending upon the application of the certificate, details of the aircraft type, registration, component type, part number and serial number shall be recorded as applicable.

2. Except for aircraft released to service by a maintenance organisation approved in accordance with MCAR Part-145, the certificate of release to service shall be issued according to MCAR M.801;

   Note: Refer to MCAR 145.50, MCAR M.801 and their associated AMCs for requirements and additional guidance.

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CERTIFICATE OF FITNESS FOR FLIGHT

1. INTRODUCTION

Base on Myanmar Aircraft Rules, this Notice prescribe detail requirement to be issued for Certificate of Fitness for Flight.

2. REQUIREMENTS

Before an aircraft flies under the conditions of sub-paragraph 2.1, the aircraft and its engine(s) shall be certified as fit for flight. A certificate of fitness for flight shall be issued before flight in accordance with paragraph 3 of this Notice.

2.1 an aircraft which does not have a Certificate of Airworthiness duly issued or rendered valid shall fly only;

a) qualify for the issue or renewal of a Certificate of Airworthiness or the validation thereof after an application has been made for such issue, renewal or validation as the case may be, or to carry out a functional check of modification;

b) proceed to or from a place at which any inspection, repair, modification, maintenance, approval, test or weighing of, or the installation of equipment in, the aircraft is to take place or has taken place for a purpose referred to in paragraph (a), after any relevant application has been made, or at which the installation of furnishings in, or the painting of, the aircraft is to be undertaken; or

c) Proceed to or from a place at which the aircraft is to be or has been stored.

3. CERTIFICATE OF FITNESS FOR FLIGHT

3.1 The Certificate shall be as follows;

Nationality and Registration Marks:……Aircraft MSN:.....

Type of Engine: .....

Engine S/N(s):……../……../……../……..

It is hereby certified that the aircraft defined hereon has been inspected and is fit for flight provided it is properly loaded.

This Certificate is valid until .....**or until the airworthiness condition of the aircraft is altered, whichever is earlier.**

Signed ..... AML Licence No .....

Signed..... Approval No . .....

3.2 The period of validity shall be stated but shall not exceed 7 days.

3.3 The Certificate shall be issued in duplicate and one copy kept elsewhere than in the aircraft.

3.4 A Certificate of Fitness for Flight shall be issued only by;

(a) the holder of an appropriately type rated Part-66 Aircraft Maintenance Licence in Category B1 at least one year experienced on that type of aircraft issued, or

(b) the holder(s) of an appropriate aircraft maintenance Licence with privileges in Airframe and Engine both, or

(c) the approved Maintenance Organization where the Terms of Approval refer to particular types of aircraft. The issuing authority, authorization procedures and authorization privileges must be entered in the appropriate Exposition.

3.5 If the original airworthiness condition of the aircraft is affected during the period of validity, the Certificate shall be re-issued.

REFERENCE DOCUMENTS FOR AIRCRAFT MAINTENANCE ENGINEER LICENCE EXAMINATION

1. General

Myanmar aircraft maintenance engineer licencing system has been changed to the EASA 66 based licencing system. This notice prescribes the reference documents required for the examination to be MCAR 66 aircraft maintenance engineer.

2. APPLICABILITY

This Notice is applicable to all persons who qualify to sit examination as specified in current MCAR 66. The reference documents are as per following table:-

Reference Documents for Aircraft Maintenance Engineer Licence Examination

Module No.	Title	Author
5	Aviation Electronics	Keith Bose(Jeppesen)
	Aircraft Instruments and Integrated Systems(1998 Edition)	Pallett
	Avionic Fundamentals	Jeppesen
	Aircraft Instruments and Avionics for A&P Technicians	Jeppesen
	Digital Electronic Technology	Green
	Digital Techniques and Systems	Green
6	A&P Technician General Text Book	Jeppesen
	Aviation Maintenance Technician Series- General	Dale Crane
	Aviation Mechanic Handbook	Dale Crane
	Airframe & Powerplant Mechanics General Handbook	Jeppesen,FAA AC65-9A
	CAP 562 (http://www.caa.co.uk/docs/33/CAP 562.PDF)	UK CAA
7	A&P Technician General Text Book	Jeppesen
	Aviation Maintenance Technician Series- General	Dale Crane
	Aviation Mechanic Handbook	Dale Crane
	Airframe & Powerplant Mechanics General Handbook	Jeppesen,FAA AC65-9A
	CAP 562 (http://www.caa.co.uk/docs/33/CAP 562.PDF)	UK CAA
8	A&P Technician General Text Book	Jeppesen
	Aviation Maintenance Technician Series- Airframe Vol 1 Structures	Dale Crane
	Aviation Mechanic Handbook	Dale Crane
	Airframe & Powerplant Mechanics Airframe Handbook	Jeppesen,FAA AC65-15A
	Mechanics of Flight by Kermode	Pitman
9	UK CAA CAP 715 An Introduction to Aircraft Maintenance Engineering Human Factors for EASA 66 (http://www.caa.co.uk/docs/33/CAP 715.PDF)	UK CAA
	CAP 716 Aviation Maintenance Human Factors (EASA 145) (http://www.caa.co.uk/docs/33/CAP 716.PDF)	UK CAA
	CAP 719Fundamental Human Factors Concepts (ICAO HF Digest No.1) (http://www.caa.co.uk/docs/33/CAP 719.PDF)	UK CAA
	CAP 718 Human Factors in Aircraft Maintenance and Inspection (http://www.caa.co.uk/docs/33/CAP 718.PDF) ICAO HF Digest No.12	UK CAA
	FAA Human Factors Guide fir Aviation Maintenance	FAA

	(http://www.hfskyway.faa.gov/document.htm)	
10	Applicable Myanmar DCA legislations	DCA
11	CAP 562 (http://www.caa.co.uk/docs/33/CAP 562.PDF)	UK CAA
	Transport Category Aircraft Systems	Jeppesen
	A&P Technician Airframe Text Book	Jeppesen
	Airframe & Powerplant Mechanics Airframe Handbook	Jeppesen
	Aviation Maintenance Technician Series- Airframe Vol 1 Structures	Dale Crane
	Aviation Maintenance Technician Series- Airframe Vol 2 Systems	Dale Crane
	Aircraft Instruments and Avionics for A&P Technicians	Jeppesen
	Aircraft Instruments and Integrated Systems(1998 Edition)	Pallett
	Electrical Systems for A&Ps	Jeppesen
12	Helicopter Maintenance by Jeppesen	Jeppesen
	Principles of Helicopter Flight	WJ Wangtendonk
	A&P Technician Airframe Textbook	Jeppesen
13	A&P Technician General Textbook	Jeppesen
	Aviation Maintenance Technician Series- Airframe Vol 1 Structures	Dale Crane
	Airframe & Powerplant Mechanics Airframe Handbook	Jeppesen,FAA AC65-15A
	Mechanics of Flight by Kermode	Pitman
	Automatic Flight Control	Pallett
	Aircraft Radio Sytems	Powell
	Aircraft Instruments and Integrated Systems(1998 Edition)	Pallett
	Aircraft Instruments and Avionics for A&P Technicians	Jeppesen
	Electrical Systems for A&Ps	Jeppesen
14	Aircraft Gas Turbine Powerplants	Jeppesen
	A&P Technician Powerplant Textbook	Jeppesen
	Airframe & Powerplant Mechanics Powerplant Handbook	FAA AC65-12
	Aircraft Instruments and Integrated Systems(1998 Edition)	Pallett
15	Aircraft Gas Turbine Powerplants	Jeppesen
	A&P Technician Powerplant Textbook	Jeppesen
	Airframe & Powerplant Mechanics Powerplant Handbook	FAA AC65-12
	The Jet Engine	Roll Royce
	Aviation Maintenance Technician Series- Powerplant	Dale Crane
16	A&P Technician Powerplant Textbook	Jeppesen
	Airframe & Powerplant Mechanics Powerplant Handbook	FAA AC65-12
	Aviation Maintenance Technician Series- Powerplant	Dale Crane
	Aircraft Ignition and Electrical Power Systems	Jeppesen
	Aircraft Fuel metering Systems	Jeppesen
	Aircraft Reciprocating Engines	Jeppesen
17	Aviation Maintenance Technician Series- Powerplant	Dale Crane
	Aircraft Gas Turbine Powerplants	Jeppesen
	Airframe & Powerplant Mechanics Powerplant Handbook	FAA AC65-12
	Aircraft Propellers and Controls	Jeppesen
	Aircraft Governors	Jeppesen

Note:
The text referenced for each module provide most of the information required for examination study. In some cases other books will be required where the reference material does not fully cover the topic.