

MOZAMBIQUE CIVIL AVIATION TECHNICAL STANDARDS



PART 21

AIRWORTHINESS OF AIRCRAFT

REGISTER OF REVISIONS

#	DATE RECEIVED	DATE INSERTED	INSERTED BY	SIGNATURE
1				
2				
3				
4				
5				
6				
7				
8				
9				
10				
11				
12				
13				
14				
15				
16				
17				
18				
19				
20				
21				
22				
23				
24				
25				

LIST OF EFFECTIVE PAGES

The list of effective pages below will be used to assist in keeping track of revisions and updates to the **Mozambique Civil Aviation Technical Standards – Part 21 – Airworthiness of Aircraft**. The list shows the number of the last revision for each page of the Mozambique Civil Aviation Technical Standards. Accordingly, with each revision to the Mozambique Civil Aviation Technical Standards a new list of effective pages will be published and distributed to all Mozambique Civil Aviation Technical Standards holders.

LIST OF EFFECTIVE PAGES									
NUMBER				0		DATE		1 MARCH 2007	
COVER PAGE		REGISTER OF REVISIONS		LIST OF EFFECTIVE PAGES		INTRODUCTION		LIST OF TECHNICAL STANDARDS	
PAGE	REVISION	PAGE	REVISION	PAGE	REVISION	PAGE	REVISION	PAGE	REVISION
21-1	0	21-2	0	21-3	0	21-4	0	21-5	0
PART 21 – AIRWORTHINESS OF AICRAFT									
PAGE	REVISION	PAGE	REVISION	PAGE	REVISION	PAGE	REVISION	PAGE	REVISION
21-6	0	21-13	0	21-20	0	21-27	0	21-34	0
21-7	0	21-14	0	21-21	0	21-28	0	21-35	0
21-8	0	21-15	0	21-22	0	21-29	0		
21-9	0	21-16	0	21-23	0	21-30	0		
21-10	0	21-17	0	21-24	0	21-31	0		
21-11	0	21-18	0	21-25	0	21-32	0		
21-12	0	21-19	0	21-26	0	21-33	0		

TABLE OF CONTENTS

LIST OF TECHNICAL STANDARDS

MOZ-CATS-AR 21.01.2 (1)(3): MAJOR MODIFICATIONS (DEFINITION).....05

MOZ-CATS-AR 21.01.2 (1)(4): MAJOR REPAIRS (DEFINITION).....06

MOZ-CATS-AR 21.01.2 (1)(6): PREVENTIVE MAINTENANCE (DEFINITION.....08

MOZ-CATS-AR 21.02.3 (2)(c): APPLICATION FORM FOR TYPE ACCEPTANCE CERTIFICATE.....10

MOZ-CATS-AR 21.02.3 (4)(b): REQUIREMENTS FOR AIRCRAFT FLIGHT MANUAL.....11

MOZ-CATS-AR 21.02.3: TYPE ACCEPTANCE CERTIFICATE.....20

MOZ-CATS-AR 21.04.4: APPLICATION FOR CERTIFICATE OF AIRWORTHINESS
OR AMMENDMENT.....21

MOZ-CATS-AR 21.04.4: ADDITIONAL REQUIREMENTS FOR ISSUING OF THE COFA.....22

MOZ-CATS-AR 21.04.6: REQUIREMENTS FOR SPECIAL FLIGHT PERMIT.....25

MOZ-CATS-AR 21.04.7: FORM OF CERTIFICATE OF AIRWORTHINESS.....26

MOZ-CATS-AR 21.04.10: RENEWAL OF CERTIFICATE OF AIRWORTHINESS.....27

MOZ-CATS-AR 21.04.15: REQUIREMENTS FOR RENEWAL OF CERTIFICATE
OF AIRWORTHINESS.....28

MOZ-CATS-AR 21.06.2: APPLICATION FOR EXPORT AIRWORTHINESS APPROVAL.....31

MOZ-CATS-AR 21.06.4: FORM OF EXPORT AIRWORTHINESS APPROVAL.....32

MOZ-CATS-AR 21.07.2: ISSUE, SUSPENSION, REVOCATION OF NOISE CERTIFICATE.....33

MOZ-CATS-AR 21.01.2 (1)(3) MAJOR MODIFICATIONS (DEFINITION)

- (a) **Airframe Major Modifications.** Major modifications include modifications to the listed aircraft parts, or the listed types of modifications (when not included in the applicable aircraft specifications):
- (1) Wings.
 - (2) Tail surfaces.
 - (3) Fuselage.
 - (4) Engine mounts.
 - (5) Control system.
 - (6) Landing gear.
 - (7) Hull or floats
 - (8) Elements of an airframe including spars, ribs, fittings, shock absorbers, bracing, cowlings, fairings, and balance weights.
 - (9) Hydraulic and electrical actuating system of components.
 - (10) Rotor blades.
 - (11) Changes to the empty weight or empty balance which result in an increase in the maximum Certified mass or centre of gravity limits of the aircraft.
 - (12) Changes to the basic design of the fuel, oil, cooling, heating, cabin pressurisation, electrical, hydraulic, de-icing, or exhaust systems.
 - (13) Changes to the wing or to fixed or movable control surfaces which affect flutter and vibration characteristics.
- (b) **Powerplant Major Modifications.** Major powerplant modifications, even when not listed in the applicable engine specifications, include:
- (1) Conversion of an aircraft engine from one approved model to another, involving any changes in compression ratio, propeller reduction gear, impeller gear ratios or the substitution of major engine parts which requires extensive rework and testing of the engine.
 - (2) Changes to the engine by replacing aircraft engine structural parts with parts not supplied by the original manufacturer or parts not specifically approved by the Authority.
 - (3) Installation of an accessory which is not approved for the engine.
 - (4) Removal of accessories that are listed as required equipment on the aircraft or engine specification.
 - (5) Installation of structural parts other than the type of parts approved for the installation.
 - (6) Conversions of any sort for the purpose of using fuel of a rating or grade other than that listed in the engine specifications.
- (c) **Propeller Major Modifications.** Major propeller modifications, when not authorised in the applicable propeller specifications, include:

- (1) Changes in blade design.
 - (2) Changes in hub design.
 - (3) Changes in the governor or control design.
 - (4) Installation of a propeller governor or feathering system.
 - (5) Installation of propeller de-icing system.
 - (6) Installation of parts not approved for the propeller.
- (d) **Appliance Major Modifications.** Modifications of the basic design not made in accordance with recommendations of the appliance manufacturer or in accordance with applicable Airworthiness Directive are appliance major modifications. In addition, changes in the basic design of radio communication and navigation equipment approved under type certification or other authorisation that have an effect on frequency stability, noise level, sensitivity, selectivity, distortion, spurious radiation, AVC characteristics, or ability to meet environmental test conditions and other changes that have an effect on the performance of the equipment are also major modifications.

MOZ-CATS-AR 21.01.2 (1)(4) MAJOR REPAIRS (DEFINITION)

- (e) **Airframe Major Repairs.** Repairs to the following parts of an airframe and repairs of the following types, involving the strengthening, reinforcing, splicing, and manufacturing of primary structural members or their replacement, when replacement is by fabrication such as riveting or welding, are airframe major repairs.
- (1) Box beams.
 - (2) Monocoque or semimonocoque wings or control surfaces
 - (3) Wing stringers or chord members
 - (4) Spars.
 - (5) Spar flanges.
 - (6) Members of truss-type beams.
 - (7) Thin sheet webs of beams.
 - (8) Keel and chine members of boat hulls or floats.
 - (9) Corrugated sheet compression members which act as flange material of wings or tail surfaces.
 - (10) Wing main ribs and compression members.
 - (11) Wing or tail surface brace struts.
 - (12) Engine mounts.
 - (13) Fuselage longerons.
 - (14) Members of the side truss, horizontal truss, or bulkheads.
 - (15) Main seat support braces and brackets.
 - (16) Landing gear brace struts.
 - (17) Axles.

- (18) Wheels.
- (19) Parts of the control system such as control columns, pedals, shafts, brackets, or horns.
- (20) Repairs involving the substitution of material.
- (21) The repair of damaged areas in metal or plywood stressed covering exceeding six inches in any direction.
- (22) The repair of portions of skin sheets by making additional seams.
- (23) The splicing of skin sheets
- (24) The repair of three or more adjacent wing or control surface ribs or the leading edge of wings and control surfaces, between such adjacent ribs.
- (25) Repair of fabric covering involving an area greater than that required to repair two adjacent ribs.
- (26) Replacement of fabric on fabric covered parts such as wings, fuselages, stabilisers, and control surfaces.
- (27) Repairing, including rebottoning, of removable or integral fuel tanks and oil tanks.
- (f) **Powerplant Major Repairs.** Repairs of the following parts of an engine and repairs of the following types, are powerplant major repairs:
 - (1) Separation or disassembly of a crankcase or crankshaft of a reciprocating engine equipped with an integral supercharger.
 - (2) Separation or disassembly of a crankcase or crankshaft of a reciprocating engine equipped with other than spur-type propeller reduction gearing.
 - (3) Special repairs to structural engine parts by welding, plating, metalising, or other methods.
- (g) **Propeller Major Repairs.** Repairs of the following types to a propeller are propeller major repairs:
 - (1) Any repairs to or straightening of steel blades.
 - (2) Repairing or machining of steel hubs.
 - (3) Shortening of blades.
 - (4) Retipping of wood propellers.
 - (5) Replacement of outer laminations on fixed pitch wood propellers.
 - (6) Repairing elongated bolt holes in the hub of fixed pitch wood propellers.
 - (7) Inlay work on wood blades.
 - (8) Repairs to composition blades.
 - (9) Replacement of tip fabric.
 - (10) Replacement of plastic covering.
 - (11) Repair of propeller governors.
 - (12) Overhaul of controllable pitch propellers.
 - (13) Repairs to deep dents, cuts, scars, nicks, etc., and straightening of aluminium blades.
 - (14) The repair or replacement of internal elements of blades.
- (h) **Appliance Major Repairs.** Repairs of the following types to appliances are appliance major repairs:
 - (1) Calibration and repair of instruments.

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

MOZ-CATS-AR 21.01.2 (1)(6) PREVENTIVE MAINTENANCE (DEFINITION)

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

- (18) Replacing wheels and skis where no mass and balance computation is involved;
- (19) Replacing any cowling not requiring removal of the propeller or disconnection of flight controls;
- (20) Replacing or cleaning spark plugs and setting of spark plug gap clearance;
- (21) Replacing any hose connection except hydraulic connections;
- (22) Replacing prefabricated fuel lines;
- (23) Cleaning fuel and oil strainers;
- (24) Replacing and servicing batteries;
- (25) Replacement or adjustment of non-structural fasteners incidental to operations; and
- (26) The installation of anti-misfueling devices to reduce the diameter of fuel tank filler openings provided the specific device has been made a part of the aircraft type certificate data by the aircraft manufacturer, the manufacturer has provided appropriately approved instructions acceptable to the Authority for the installation of the specific device, and installation does not involve the disassembly of the existing filler opening.

MOZ-CATS-AR 21.02.3 (2)(C) APPLICATION FORM FOR TYPE ACCEPTANCE CERTIFICATE

The form referred to in 21.02.3 (2)(C), in which application must be made for the issuing of a type acceptance certificate for a Class I product, is contained in Form Moz-21-01. and must be as follow:

MOZ-CATS-AR 21.02.3 (4)(B) REQUIREMENTS FOR AIRCRAFT FLIGHT MANUAL

The minimum contents of an Aircraft Flight Manual must be as shown bellow:

GENERAL

Applications who want to submit an Aircraft Flight Manual Supplement or an Owner's Operation Handbook Supplement to IACM should follow these conditions and guidelines:

1. Regulation requires an applicant for modification approval to submit the necessary data and information to this Institute.
2. The information in the approved Aircraft Flight Manual (AFM) or Owner's Operating Handbook (OH) are superseded or added to, due to the incorporation of the modification.

NOTE

The new information should be submitted in an AFM Supplement format and NOT by submitting an edited version of the standard AFM or OH.

3. This Document provides guidelines detailing the basic format and information which the supplement should contain.
4. The Supplement for type approval must be a controlled document. A Supplement for one aircraft (not for a series) is suggested to be a controlled document but this is not mandatory.
5. For type approval it will not be necessary to submit the Supplement with the Certificate Relating to Maintenance of an Aircraft (C.R.M.A.) for each individual aircraft modified once the master copy has been approved.
6. It is recommended that an applicant submit a draft copy of the supplement to this Institute in order to that any shortcoming which may exist be resolved before the supplements finally submitted in duplicate for approval.

ABBREVIATION AND DEFINITIONS

1. Abbreviation

AFM	Aircraft Flight Manual
OH	Owner's Operating Handbook
DG	Director General of IACM
AMO	Aircraft Maintenance Organization approved by IACM

2. Definitions

Approved document	A document containing information for one aircraft which is approved in writing by the IACM or by persons/organizations that the IACM has delegated such approval authority.
Type Approved Document	A document containing information for one aircraft series as detailed in the type certificate document which is approved in writing by IACM or by persons/ organizations that the IACM has delegated such approval authority.
Supplement (or AFM Supplement)	A Supplement is a document with extra information which is added or superseded to the AFN / OH relating to the new modification. The Supplement must be an addition to the AFM / OH.
Index	May be called “Index” or “Table of Contents”
Index or Table of Contents	AFM / OH “Index” or “Table of Contents” usually found in front of the AFM/ OH
Index of Supplements	An Index of the IACM approved Supplements due to the different modification incorporated.
Supplement’s Index	The index of a relevant Supplement
Controlled Document	A document with the following: <ul style="list-style-type: none"> a) A record of revisions b) A list of effective pages c) Table of contents d) Each page with Page number, Issue date, and Page revision

SUPPLEMENT FORMAT

The format of the supplement is described below. An example of the Supplement is shown in Appendix A to this Annexure.

1. Introduction

The Supplement must be an addition to the AFM / OH. The Supplement should include the following:

- A revised AFM / OH "Index"
- A new or revised "Index of Supplements"
- The front page of the applicable supplement
- The relevant "Supplement Index"
- Record of revisions (a must for type approval)
- List of effective pages (a must for type approval)
- The contents of the supplement

NOTE

The contents of the supplement should be laid down in the format of the Supplement Index as discussed below OR in the format of the aircraft's AFM / OH. Last mentioned format may only be used if permission is granted by IACM.

2. AFM / OH Index

The index page of the AFM / OH (usually in front of the AFM / OH) must be revised to include the IACM approved Supplements, usually added as the last entering of the AFM/OH Index e.g.

Index / Table of Contents

Section 1: General

Section 2: Limitation

Section 3: Emergency

Section 4: IACM approved Supplements

3. Index of IACM approved Supplements

The first page of the section with the IACM approved Supplement (usually inserted as the last section of the AFM/OH) will consist of an "Index of IACM Approved Supplements" due to the different modifications that requires supplements incorporated e.g.

Index of IACM approved Supplements

Supplement 1: Installation of Lycoming IO-360 engine in accordance ...

Supplement 2: Installation of Raisbeck High Lift Devices in ...

Supplement 3: Increase of take-off mass on ...

The number of the applicable Supplement should be decided by the AMO or the owner of the aircraft by checking the number of the last supplement as stated by the "Index of IACM approved supplements" on the-AFM / OH and then adding one number to these.

NOTE

Be sure that the applicable supplement number must incorporate all type approved numbers in the decision of the Supplement's number. Each Supplement number must be unique.

4. Supplement front page

The front page of the applicable Supplement should be in the following format:

<p style="text-align: center;">FLIGHT MANUAL SUPPLEMENT NO. IACM APPROVED</p> <p style="text-align: center;"><i>Aircraft Designation, e.g</i> MS RALLEY 235E</p> <p style="text-align: center;"><i>Name of Modification, eg</i> INSTALLATION OF LYCOMING IO-360 ENGINE</p> <p style="text-align: center;"><i>Modification Number as given by the IACM, e.g.</i> M/90/000</p> <p>Aircraft Registration No.</p> <p>Aircraft Serial No.</p> <p>Approved by: _____ Date: _____</p>
--

The aircraft registration number and the aircraft serial number as shown above should be completed if the modification is applicable for one aircraft only. For type approval the aircraft registration number and the aircraft serial number must be left open, to be completed after an aircraft as part of the aircraft series is modified. Please note that a type approved modification can only be installed by the relevant modification holder.

5. Record of Revisions

The next page should contain the Record of Revisions. Any revision must be noted in this table by listing the revision page(s) affected, the issued date(s) and recorded status

6. List of Effective Pages

The second page of the Supplement should contain the list of all pages of the Supplement together with each page revision.

7. Supplement Index

The format as laid down below should be used OR if the index of the AFM / OH differs from this supplement's format and permission to use the different index is granted by the IACM, then the different index may be used.

The default format of the Supplement index is the following:

Index of Supplement no. X

Subject	Page
Section 1: General	1
Section 2: Limitation	?
Section 3: Emergency	?
Section 4: Normal Procedures	?
Section 5: Performance	?
Section 6: Weight and Balance	?
Section 7: System Description	?
Section 8: Handling, Servicing and Maintenance	?

8. Supplement Information

The supplement's section (or the applicable sections if the wording has been called different) should be complete as shown below.

If the original data of the AFM / OH is still in effect, the wording in those sections must be used: **“No Change”**. Note that all sections must be addressed.

Section 1: GENERAL

Note: The following wording should be used as is:

"The information in this supplement is IACM approved material and must be attached to the approved AFM or OH when the aircraft has been modified by _____ (insert the modification wording here) _____ in accordance with Modification Approval Number: _____ (insert modification number here) _____."

"The information in this supplement supersedes or adds to the basic Approved AFM or OH only as set forth within this document. Users of the handbook are advised always to refer to the supplement for possibly superseding information and placarding applicable to the operation of the aircraft"

Note: A general description should now be given of the new applicable equipment, engine, structure, etc.

Section 2: LIMITATION

Note: All revisions to the limitations and new information have to be listed here.

Section 3: EMERGENCY PROCEDURES

Note: All revisions to the procedures and new information have to be listed here.

Section 4 to 8: ...

Sections would be presented with revisions and new information.

APPENDIX A

An example of as AFM Supplement is shown below:

(REVISED) TABLE OF CONTENTS:

Subject	Page
Section 1: General	1
Section 2: Limitations	2
Section 3: Emergency Procedures	3
Section 4: Normal Procedure	4
Section 5: Performance	5
Section 6: Weight & Balance	6
Section 7: System Description	7
Section 8: Handling, Servicing and Maintenance	8
Section 9: IACM approved Supplements	

SECTION 9: INDEX FOR IACM APPROVED SUPPLEMENTS

TABLE OF CONTENTS

Supplement No. 1: Lycoming O-320-H2AD Engine Installation.

**FLIGHT MANUAL SUPPLEMENT No. 1
IACM APPROVED**

CESSNA 172L

LYCOMING 0.320-H2AD ENGINE INSTALLATION

M /95/ 999E

Aircraft Registration No.

Aircraft Serial No.

APPROVED BY: _____ DATE: _____
For IACM

MOZ-CATS-AR 21.02.3 TYPE ACCEPTANCE CERTIFICATE

The form referred to in 21.02.3 (5)(d), on which a type acceptance certificate is issued, is contained in Form Moz-21-02, Or the form Moz-21-02a for a Supplemental Type acceptance Certificate.

MOZ-CATS-AR 21.04.4 APPLICATION FOR CERTIFICATE OF AIRWORTHINESS OR AMMENDMENT

1. Application for issuing of standard or restricted certificate of airworthiness

The form referred to in 21.04.4 (2)(a), in which application must be made for the issuing of a standard or restricted certificate of airworthiness, or an amendment thereof, is contained in Form Moz-21-03.

2. Application for issuing of experimental certificate of airworthiness

The form referred to in 21.04.4 (3), in which application must be made for the issuing of a experimental certificate of airworthiness, or an amendment thereof, is contained in Form Moz-21-04.

3. Application for issuing of special flight permit

The form referred to in 21.04.4 (4)(a), in which application must be made for the issuing of a special flight permit, or an amendment thereof, is contained in Form Moz-21-05.

MOZ-CATS-AR 21.04.4 ADDITIONAL REQUIREMENTS FOR ISSUING OF THE COFA**1. SUPPLY OF DATA**

- A. All aircraft:
- (1) the Certificate of Registration
 - (2) evidence that there is a Type Acceptance Certificate in force for the aircraft type and model;
 - (3) evidence that the particular aircraft complies with the type design;
 - (4) the logbooks or equivalent maintenance records for the aircraft;
 - (5) the current weight and balance report;
 - (6) a copy of the noise certificate, if applicable, from the previous state of registry.
 - (7) a copy of the Aircraft Maintenance Programme for approval.
 - (8) a copy of the Aircraft Flight Manual (AFM) for approval.
 - (9) a copy of the Master Minimum Equipment List (MMEL).
 - (10) a copy of the Minimum Equipment List (MEL) for approval
 - (11) Electrical load analysis
- B. Used aircraft
- (1) data listed in A. and
 - (2) the following data from the aircraft's service history:
 - (a) total hours and flights of the aircraft and all life limited components;
 - (b) number of landings made, or if not available, a reliable estimate thereof;
 - (c) statement describing the past operational uses of the aircraft, including any special mission roles and the approximate times in each role;
 - (d) statement of any accidents occurred with the aircraft;
 - (e) record of total hours and/or operating cycles, as appropriate, of all designated life-limited components of engines;
 - (f) record of all major structural and life-limited component changes such as those of wings, rotor blades, tailplanes etc., and the individual histories of such components unless new when fitted;
 - (g) record of all major structural repairs, and details of all salvage schemes, including the nature and cause of the damage in each case e.g. corrosion, cracking, lightning strike and accidental damage;
- C. Aged aircraft:
- (1) Special requirements may be imposed on used aircraft with MTOWs in excess of 5700 kilograms where the aircraft are older than 14 years from the date of manufacture. For such aircraft, data requirements are:
 - a) data listed in B. above;
 - b) details regarding previous operators of the aircraft, previous countries in which the aircraft has operated, and details of all structural repairs to the aircraft not carried out in accordance with the manufacturer's approved data; and
 - c) a copy of the relevant Structural Inspection Document
- D. Imported aircraft:
- (1) data listed in A., B. or C. as appropriate; and
 - (2) one of the following documents:

- (a) A current export CofA for export to Mozambique, or equivalent document, or current CofA. An Export CofA should have been issued within 90 days and 50 hours flight time at the date of application for the CofA; or
 - (b) if neither of the above is available, nor can be reasonably obtained, then a written statement from the aircraft manufacturer, or from a maintenance organisation with an appropriate approval for aircraft maintenance for the type, that all applicable Airworthiness Directives (ADs) issued by the authority of the recognised country that issued the type certificate have been complied with, and that the aircraft conforms to Type Certificate requirements.;
- E. Modified aircraft:
A major modification is a change in the type design which has an appreciable effect on the weight, balance, structural strength, reliability, operational characteristics, or other characteristics affecting the airworthiness of an aircraft, aircraft engine or propeller, but not so appreciable as to necessitate a change to the Type Certificate. The major modification may be incorporated as a Supplemental Type Certificate (STC). For aircraft incorporating major modifications, the data requirements are:
- (1) data as listed in the applicable paragraph A. to D. above; and
 - (2) written evidence that the modifications were incorporated in accordance with approved data:
 - (a) manufacturer's data approved by a recognised authority; or
 - (b) data approved by a recognised authority in the country of manufacture; or
 - (c) data approved by an appropriate locally authorised person;
- F. Revision of Manuals and Technical Literature
- (1) The applicant is required to make the necessary arrangements with aircraft, engine and propeller manufacturers for the provision of amendments to all the manuals including those submitted to the Authority, and all service bulletins that may be issued from time to time.

2. FLIGHT MANUAL APPROVAL

- A. Flight Manuals must be specific to individual aircraft, ie they should not contain information that is not applicable to the aircraft they are approved for. This is especially applicable to flight manual supplements. Aircraft for which supplements are applicable will require submission of a "Flight Manual Supplements" Table of Contents (TOC) as well as a "List of Effective Pages" (LEP). Usually the LEP forms part of the supplement. In cases where the STC holder does not include an LEP with the supplement, the applicant should prepare and include one with his submission. Upon approval of the Flight Manual, the IACM will stamp "Approved" on the LEP and TOC.
- B. The supplement shall be placed in the respective section of the Flight Manual. Supplements derived from an STC shall bear the number of the supplement in the table of contents, so that they may be readily distinguished from supplements issued by the manufacturer.
- C. Supplements which are not applicable to a particular aircraft or operator, should be removed from the flight manual.

3. TEST FLIGHT

- A. The MOZ-CARs does not require a test flight for the annual renewal of the Certificate of Airworthiness. However, the IACM will require a test flight under the following conditions:
- (1) The aircraft has not been flown in the sixty (60) day period immediately preceding the date of application for renewal; or
 - (2) The aircraft has been maintained, rebuilt, or altered in a manner that may have appreciably changed its flight characteristics or substantially affected its operation in flight.
- B. General airworthiness flight tests are normally required for:
- (1) Performance verification before the issue of a C of A to an aircraft which had previously been issued with a Certificate of Airworthiness by a Contracting State;
 - (2) Aircraft being flown for performance verification before the renewal of a C of A.
 - (3) Aircraft under performance investigation after major maintenance activity that could have affected the aircraft flight characteristics or for the approval of modifications incorporated on an aircraft that has a current Certificate of Airworthiness.
- C. The airworthiness flight tests are carried out by pilots and crew approved for the purpose by the Authority.

MOZ-CATS-AR 21.04.6 REQUIREMENTS FOR SPECIAL FLIGHT PERMIT

1. “Fitness for Flight” Certificate

The form referred to in 21.04.6 (1)(f), which must be signed and included in the application process for the issuing of a special flight permit, or an amendment thereof, is contained in Form Moz-21-06.

MOZ-CATS-AR 21.04.10 RENEWAL OF CERTIFICATE OF AIRWORTHINESS

1. Application for renewal of standard or restricted certificate of airworthiness

The form referred to in 21.04.10 (1) (a), in which application must be made for renewal of a standard or restricted certificate of airworthiness, or an amendment thereof, is contained in Form Moz-21-03.

MOZ-CATS-AR 21.04.15 REQUIREMENTS FOR RENEWAL OF CERTIFICATE OF AIRWORTHINESS

A. The continuing airworthiness of an aircraft at any point in time is based on compliance with the requirements that follow referred to in MOZ CAR 21.04.15 (1)(b) (iii). References to "aircraft" should be interpreted to include the structure, systems, components, instruments, equipment and power-units. It is required that:

- (1) The aircraft remains in conformity with the type design approved by the State of Design; any modifications or repairs have been completed in accordance with procedures and methods approved by the Authority any replacement components, parts, equipment or material are in accordance with the design requirements, having been obtained from sources acceptable to the Authority and installed in accordance with any procedures which have been prescribed by the State,

Note - Annex 6, Part I, 8.4 and MOZ-CAR Part 21, 43,21 requires operators of aeroplanes to ensure that a system of inspection is provided to ensure that all maintenance, overhaul, modifications and repairs which affect airworthiness are effected as prescribed in the maintenance manual or otherwise as made mandatory by the State of Registry.

- (2) The aircraft has been serviced and maintained to a programme approved by the Authority in accordance with any methods and procedures which the Authority may have prescribed or approved.

Note 1- Refer to the Note following (1) above.

Note 2- Annex 6, Part I, 11.3 and MOZ-CAR Part 121/127/135 requires operators of aeroplanes to provide an aeroplane maintenance programme, approved by the State of Registry, containing maintenance tasks and intervals at which these tasks are to be performed

- (3) If the aircraft is the subject of a reliability programme including in particular engine trend monitoring corrective action has been instituted to rectify any adverse trends;
- (4) Any certification maintenance requirements have been complied with at the prescribed intervals;

Note - As part of the type certification process of a modern transport aircraft, system safety maintenance tasks, known as Certification Maintenance Requirements (CMR), may have been identified. Such tasks, and their associated intervals, limit the exposure time to significant latent failures that would, in combination with one or more events identified in a numerically based safety analysis, result in catastrophic failure conditions. No change to the content or frequency of these tasks should be approved without the agreement of the State of Design.

- (5) All modifications or inspections declared mandatory (commonly referred to as airworthiness directives) have been complied with. With regard to inspections, this includes both inspections which require a one time action and those with repetitive content;

Note - The responsibilities of States of Registry in relation to continuing airworthiness requirements of this nature are contained in ICAO Annex 8, Part I Section 4 and MOZ-CAR Part 21, 91, 121/127/135.

- (6) Any parts of the aircraft that have an ultimate service life limit declared by the organization responsible for the type design or the State of Registry have not exceeded their approved lives;

Note - Aircraft maintenance manuals prepared in the format required by the Air Transport Association of America Specification Number 100 (ATA 100), contain this information in Chapter 5. For some older aircraft types, this information may sometimes be published in the Flight Manual or Type Certificate Data Sheet.

- (7) If the aircraft has been released to service with any airworthiness significant systems, components or equipment unserviceable, this is in compliance with a minimum equipment list or similar document approved by the State of Registry;
- (8) If the aircraft has been released into service with any structural parts missing, this is in compliance with procedures approved by the State of Registry;

Note - Information of this nature is sometimes included as a Configuration Deviation List in the flight manual.

- (9) All minor unrepaired damage is within limits acceptable to the Authority. Reference should be made to the structural repair manual for the aircraft type concerned to determine acceptable limits;
- (10) All markings and placards included in the approval of the type design by the State of Registry are present;
- (11) The aircraft mass and balance data is in conformity with the requirements of the State of Registry, including reweighing if appropriate and/or compliance with a system for recording progressive mass and balance change;
- (12) MOZ-CAR Part 21, 43, 91 includes operational equipment (e.g. flight recorders) requirements for the continuing validity of Certificates of Airworthiness. Any operational equipment installed for a particular type of operation should have an approval status acceptable to the Authority, be installed in a manner acceptable to the Authority and be in a serviceable condition;
- (13) The aircraft records are in conformity with the requirements of the State of Registry (MOZ-CAR 21; MOZ-CAR 43, MOZ-CAR 21, MOZ-CAR 121/127/135, which must as a minimum meet the requirements of Annex 6, Part 1.8.8;
- (14) In addition to the information specified in Annex 8, the flight manual includes any changes made mandatory by the State of Registry as required by Annex 6. Part I (MOZ-CAR 21, 91)

- B. The applicant for renewal of a certificate of airworthiness should be required to provide the following documents for examination:

- (1) A copy of a status report giving brief in details of the work done since last renewal of the certificate of airworthiness. This report should be in a form of a schedule and should include the following documents:
 - (1) A record of work accomplished since the last renewal of the certificate;
 - (2) A record showing details of major checks carried out since the last renewal of the certificate;
 - (3) A record of airframe, engine and propeller flying hours as follows:
 - i) Total flying hours for the airframe since new and the flying hours since last renewal
 - ii) Total flying hours for the engine(s) since new and the flying hours since last overhaul
 - iii) Total flying hours for the propeller(s) since new and the flying hours since last overhaul
 - (4) A record showing compliance with the service bulletins, modifications and airworthiness directives or their equivalent; and
 - (5) A record of major component change
- (2) A mass and balance report, which should include a copy of the mass determination record, the mass and centre of gravity schedule and a list of the basic equipment;
- (3) A flight test report for the avionics systems, as required and;
- (4) A flight test report for the aircraft, as required

MOZ-CATS-AR 21.06.2: APPLICATION FOR EXPORT AIRWORTHINESS APPROVAL

1. Form of application

The form referred to in 21.06.2 (2) (a), in which application must be made for the issuing of an export airworthiness approval, is contained in Form Moz-21-08.

2. Mass and balance report

- (1) The mass and balance report referred to in 21.06.2 (2) (b) (ii) (bb), must include at least the following information:
 - (a) Aircraft nationality and registration letters, make, model and serial number;
 - (b) the date on which the mass was determined and centre of gravity computed;
 - (c) the datum point used; and
 - (d) the necessary calculations.
- (2) A specimen mass and balance report is contained in FAA Advisory Circular AC 43.13-1A.

MOZ-CATS-AR 21.06.4: FORM OF EXPORT AIRWORTHINESS APPROVAL

1. Export certificate of airworthiness

The form referred to in 21.06.4 (1), on which an export certificate of airworthiness is issued, is contained in Form Moz-21-09.

2. Export airworthiness approval tag

The form referred to in 21.06.4 (2), on which an export airworthiness approval tag is issued, is contained in Form Moz-21-10.

MOZ-CATS-AR 21.07.2 ISSUE, SUSPENSION, REVOCATION OF NOISE CERTIFICATE

- (j) The following information shall be included on the document attesting noise certification of an aircraft, see Form MOZ 21-13:
- (1) State of Registry; nationality and registration marks
 - (2) Manufacturer's serial number
 - (3) Manufacturer's type and model designation; engine type and model; propeller type and model (if applicable)
 - (4) Statement of any additional modifications incorporated for the purposes of compliance with the applicable noise certification standards;
 - (5) The maximum mass at which compliance with the applicable noise certification standards has been demonstrated (only one maximum take-off and landing pair shall be certificated for each individual aircraft);
 - (6) For aeroplanes for which application for certification of the prototype was submitted on or after 6th October 1977, and for helicopters for which application for certification of the prototype was submitted on or after 1st January 1985 the average noise level at the reference point for which compliance with the applicable standards has been demonstrated to the satisfaction of the certifying authority;
 - (7) The Chapter of Annex 16 Volume 1, according to which the aircraft was certificated.
 - (8) The height above the runway at which thrust/ power is reduced following full thrust /power take-off.
- (k) The following table includes the noise certification classifications as per ICAO Annex 16 Volume 1 to the Chicago Convention-

Annex 16 Chapter	Details
2	Subsonic Jet Aeroplanes – Application for Standard Certificate of Airworthiness for the prototype accepted before 6th October 1977
3	<p>(a) Subsonic Jet Aeroplanes – Application for Standard Certificate of Airworthiness for the prototype accepted on or after 6th October 1977 and before 1st January 2006.</p> <p>(b) -Propeller-Driven Aeroplanes Over 5,700kg – Application for Standard Certificate of Airworthiness for the Prototype accepted on or after 1st January 1985 and before 17th November 1988.</p> <p>(c) -Propeller-Driven Aeroplanes over 8,618kg – Application for Standard Certificate of Airworthiness for the Prototype accepted on or after 17th November 1988 and before 1st January 2006.</p>
4	<p>1. Supersonic Aeroplanes - Application for Standard Certificate of Airworthiness for the prototype accepted on or after 1st January 2006.</p> <p>2. Propeller driven aeroplanes over 8,618 kg –Application for Standard Certificate of Airworthiness for the prototype accepted on or after 1st January 2006.</p>
5	Propeller-Driven Aeroplanes over 5,700kg – Application for Standard Certificate of Airworthiness for the Prototype accepted before 1st January 1985
6	Propeller-Driven Aeroplanes Not Exceeding 8,618kg – Application for Standard Certificate of Airworthiness for the Prototype accepted before 17 th November 1988
7	Propeller driven STOL Aeroplane.
8	Helicopters
9	Installed Auxilliary power unit (APU) and associated power systems during ground operations.
10	Propeller-Driven Aeroplanes Not Exceeding 8,618kg – Application for Standard Certificate of Airworthiness for the Prototype or derived version accepted on or after 17th November 1988
11	Helicopters Not Exceeding 3,175kg Maximum Certificated Take-off Mass
12	Supersonic aeroplanes
13	Tilt-rotor aircraft