

GUIDANCE MATERIAL FOR AIRWORTHINESS  
INSPECTORS

***SOUTH AFRICAN***



***CIVIL AVIATION  
AUTHORITY***

ISSUANCE OF A CERTIFICATE OF  
AIRWORTHINESS

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Department

Airworthiness

Document Owner:

Executive: Aviation Safety Operations

Name of Document:

**TECHNICAL GUIDANCE MATERIAL FOR THE ISSUANCE OF A  
CERTIFICATE OF AIRWORTHINESS**

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**1. RECORD OF AMENDMENTS**

Amendment Number	Pages Affected	Date Amended	Approved Name	By:	Signature
All	All	31 January 2023	E Mataba		



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**2. LIST OF EFFECTIVE PAGES**

Revision No: Original

Column 1				Column 2			
*	PAGE	REVISION	DATED	*	PAGE	REVISION	DATED
	1	Original	31/01/2023				
	2	Original	31/01/2023				
	3	Original	31/01/2023				
	4	Original	31/01/2023				
	5	Original	31/01/2023				
	6	Original	31/01/2023				
	7	Original	31/01/2023				
	8	Original	31/01/2023				
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	11	Original	31/01/2023				
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	16	Original	31/01/2023				

**3. GENERAL**

**3.1. TERMS AND ABBREVIATIONS**

TERM	DEFINITION
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Authorised Officer                      Inspector, engineer or any employee of the SACAA authorized by the Director of Civil Aviation in terms of the Act No. 13 of the Civil Aviation Act 2009



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Director,

ABBREVIATION	DESCRIPTION
AD	Airworthiness Directive
DCA	Director for Civil Aviation
DoA	Delegation of Authority
CE	Certification Engineer
E: ASO	Executive: Aviation Safety Operations
ICAO	International Civil Aviation Organisation
M: AE	Manager: Airworthiness Engineering
MM	Maintenance Manual
OEM	Original Equipment Manufacturer
SACAA	South African Civil Aviation Authority
TGM	Technical Guidance Material
M: ARI	Manager Aircraft Registration & Inspection
SM: AW	Senior Manager Airworthiness
E: ASO	Executive Aviation Safety Organization
SB	Service bulletin
COA	Certificate of Airworthiness
RVSM	Reduce Vertical Separation Minima
MCM	Maintenance Control Manual
AOC	Air Operating Certificate
AIC	Advisory Information Circular
MEL	Minimum Equipment List
ELA	Electrical Load Analysis

**3.2. BACKGROUND**

- 3.2.1. A variety of airworthiness functions are performed by the South African Civil Aviation Authority (SACAA). Many of these functions must be accomplished by the Airworthiness section coordinated with Registration, Flight operations and Airworthiness Engineering sections that have expertise in the specialty.
- 3.2.2. These include the Initial, re-issue and amendment of Certificate of Airworthiness approvals.
- 3.2.3. Several airworthiness functions are accomplished by cross- utilization of the SACAA Sections. Cross-

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utilization by the SACAA must be employed whenever possible in accordance with the guidance contained in this section.

### 3.3. RESPONSIBILITIES OF THE ASSIGNED INSPECTOR:

- 3.3.1. Serve as the primary person to coordinate the process.
- 3.3.2. Act in a professional and responsive manner.
- 3.3.3. Invite and ensure participation of the required speciality inspectorate (Mechanic/Avionic/etc) to form a team.
- 3.3.4. Ensure that all job functions are completed.
- 3.3.5. Coordinate correspondence to and from the applicant.
- 3.3.6. Ensure that all parties involved are kept fully informed of the status of the process.

### 3.4. DEVIATIONS

- 3.4.1. Adherence to the procedures in this TGM is necessary for uniform administration of this the C of A process. Any deviations from this guidance material must be coordinated and accepted by the Manager.
- 3.4.2. If a deviation becomes necessary, the inspector involved should ensure the deviations are substantiated, documented, and concurred with by the appropriate Manager.

### 3.5. PROCEDURE

#### A. The Preapplication Phase

##### 3.5.1. Initial Enquiry

The sourcing of an aircraft involved in the issuance of a Standard/Restricted C of A application process has a direct bearing on the expense, effort, time, and data provision requirements of the applicant.

##### 3.5.2. The relevant variables are:

- a. Whether the aircraft is based in South Africa prior to application, or whether it is being imported from another country.
- b. Whether the aircraft is a first-of-type for the purpose of C of A application.
- c. Whether the aircraft is bought or leased and the type of lease.
- d. The modification status of the aircraft
- e. Nature and complexity of the intended use of the aircraft (Operating Category).
- f. Therefore, SACAA should be aware/critical when setting up time limits and resources for the process; however, the applicant should also be made aware that the SACAA will not jeopardize safety.

##### 3.5.3. Issuance of a standard C of A to an individual aircraft involves:

- a. Ensuring that the aircraft conforms with the definition of the design and its method of construction i.e., the aircraft conforms to the type design; this in turn ensures that the aircraft meets:
- b. a design standard; and the specified airworthiness requirements.

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- c. Ensuring compliance with all applicable airworthiness directives (ADs). For imported aircraft, applicable ADs will include all applicable ADs from the state of design of the aircraft type.
- d. Ensuring that all required modifications, as dictated by design changes and applicable ADs, have been embodied.
- e. Ensuring that the required operational equipment has been fitted; and
- f. Ensuring that the aircraft's airworthiness state is properly reflected in the required documentation including that alterations have been carried out in accordance with approved data.

#### 3.5.4. Pre-Application

The SACAA meet with the applicant to discuss the proposed application. Discuss with the applicant during the pre-application phase the following subjects, to include but not limited to:

- a. Aircraft Import requirements.
- b. The process and criteria that will be followed.
- c. SACAA inspection team
- d. Anticipated completion period for the process.
- e. The regulatory requirements applicable to the application.
- f. Registration requirements.
- g. Aircraft type acceptance, if it is a first of a type in the State.
- h. Equipment's to be installed in the aircraft, for the kind of operation required.
- i. Documents and forms to be submitted for approval.
- j. Maintenance program to be followed for the maintenance of the aircraft.
- k. If required specific maintenance to be performed on the aircraft prior to the issuance of the C of A
- l. The requirement of preparing and keeping current status reports (life limited parts, ADs etc.).
- m. Data relevant to the history of the aircraft that will be required.
- n. fees involved as per SACAR Part 187
- o. Travel logistics for aircraft inspection to be conducted outside the RSA.
- p. The aircraft intended Lease arrangements and maintenance agreement (if applicable)
- q. Maintenance or Test flight requirements (if applicable)
- r. The requirement for opening South African Aircraft logbooks
- s. Noise certificate and radio licence requirements
- t. The applicant should be prepared to discuss in general terms various aspects of its proposed application.
- u. Answer any questions the applicant may have about the Aircraft C of A process.

**Note: This process can either be done during the pre-application meeting (physical or on-line) or over the email.**

#### 3.5.5. SACAA Standard Information Package.

Ensure that the applicant understands what is expected and all applicable regulations. Provide the applicant with an Application Information Package to inform the applicant of what the formal application package must contain. Furnish the following documents or direct the applicant with instructions to complete and submit it to the SACAA Office

- a. Technical guidance material
  - i. RVSM, BRNAV, RNAV
  - ii. MCM (for aircraft to be operated under an AOC)
  - iii. AMS
  - iv. MEL (for aircraft to be operated under an AOC)
  - v. Electrical load analysis

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- vi. Flight data recorder
- b. Application forms
  - i. C of A application; CA 21-08
  - ii. Noise certificate; CA 36-02
  - iii. Weighing report; CA 91-28
  - iv. ELT registration; CA 91-02
  - a. Checklist as a guide on some of the questions they have to address during the demonstration inspection.
  - b. Applicable regulations
    - i. Part 21 (C of A requirements)
    - ii. Part 43 read together with its technical standard (SACATS 43)
    - iii. Part 91 for equipment to be installed
  - a. Aeronautical Information Circulars (AIC) (While valid, as applicable)
    - i. AIC 13.2 Display of registration markings.
    - ii. AIC 18-55 Electrical load analysis.
    - iii. Category 60's
    - iv. Category 61 AIC's
    - v. Category 62 AIC's
    - vi. Category 63 AIC's
    - vii. Category 64 AIC's
    - viii. Category 65 AIC's

**Note:** The SACAA is to evaluate the complexity and size of the aircraft. This allows the establishment of the inspection team to be based on the complexity of the certification. The assigned Inspector will be designated as the principal spokesperson for the SACAA during the process.

### 3.5.6. **Additional Relevant Supporting Information**

- a. When applying for the certificate of airworthiness, the applicant must submit any additional relevant supporting information requested by the SACAA team. This additional information is necessary to substantiate the approval of the client's application. The type and amount of supporting information will vary depending on the type of aircraft applied for and the intended operational category. The Inspector must determine the appropriate types of supporting information to be required. This should be limited to information used for determining the acceptability of the documentation.
- b. An applicant should be directed to conduct a thorough review of the appropriate regulations and advisory material to provide guidance aircraft and documentation requirements. Because of this review, the applicant must address, all the requirements as per the intended operation.

### 3.5.7. **Terminating the Pre-Application Phase.**

The Pre-application phase ends when the team is satisfied that the applicant is prepared to proceed with formal application. If the applicant is not ready, the Inspector should advise the applicant of the problems and work with the applicant to arrive at solutions or terminate the process.

## **B. The Formal Application Phase**



### 3.5.8. Conduct a Formal Application meeting.

The applicant may schedule a meeting with the SACAA team to submit their formal application. The purpose of this meeting is to formally submit the application package and to resolve any questions on the part of either party and to establish a common understanding and resolve all issues prior to proceedings with the application process. The meeting should reinforce open communication and working relationships.

- a. Any open questions concerning the package (such as omissions or deficiencies) must be answered before proceeding to the next phase. Any date conflicts must be resolved. This should be done in the most effective way possible, e.g., meetings and correspondence. Except for unanticipated circumstances, all inspectorate team members and applicants' key personnel must be present, to avoid any unnecessary delays.
- b. If mutual agreements cannot be reached on any discrepancies, the team should terminate the meeting and inform the applicant that the application package is not acceptable. The application package must then be returned to the applicant with a letter explaining the reasons for the rejection.
- c. When agreement has been reached on corrective action for deficiencies, the team should then encourage the applicant to present any questions concerning the upcoming phase and the SACAA team members should answer these questions fully.
- d. Before the conclusion of the formal application meeting, the SACAA team must make certain that the applicant clearly understands the following:
  - i. The applicant will receive notification in writing in the event the application is rejected. This notification should be made within five working days after the formal application meeting. A telephone call concerning the application rejection shall be made to the applicant as soon as the determination is made, indicating that the written notification will follow and will include the reasons for the rejection.
  - ii. If the application is acceptable, the C of A process continues with an in-depth examination of the application and associated documents during the "document compliance phase". In some cases, telephone confirmation is sufficient/ however, written confirmation is encouraged. The C of A processing limit begins upon acceptance of the application form.
  - iii. Acceptance of the formal application does not constitute acceptance or approval of any attached documents (AMS, MEL, etc.). They will be reviewed further, and the applicant will be expected to take corrective action as required. Acceptance or approval of each attachment will be indicated separately later during the process.
  - iv. If the applicant is unable to meet the targets as proposed during the formal meeting, the SACAA will need equivalent amounts of time, as agreed upon during the meeting, to make the necessary reviews and inspections. Consequently, the proposed inspection date could be delayed.
  - v. Rejection of an application is a sensitive issue, since the applicant will most likely have already expended funds and resources to this point. Therefore, it is important for the certification team to document thoroughly the reasons for the rejection. The reasons should clearly indicate that to proceed with the certification process would not be productive unless the applicant is willing to accept the certification team's corrective suggestions. Reasons for rejection might include lack of agreement on appropriate courses of action or evidence that the rejection, the application, and documents submitted are returned to the applicant with a letter of rejection.

### 3.5.9. Receipt of the Formal Application Package.

- a. Ensure that all documents have been submitted and are completed.
- b. The formal application package may be received using any method or system deemed acceptable by CAA

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at the time. This could be electronically; by mail, or it may be hand delivered by the applicant through the formal application meeting. If it is hand delivered, the applicant should ensure that SACAA sign acknowledge of receipt of the package.

- c. The applicant will be informed that the SACAA will need a brief time to perform a cursory review the package. Discussions of its acceptability should be avoided at this time. Persistent applicants should be informed that further discussions would not be productive until the SACAA team has reviewed the formal application.

### 3.5.10. Contents of the Formal Application Package

- a. The formal application package should contain the following attachments (as applicable).

- i. C of A application form;
- ii. C of R;
- iii. De-registration
- iv. TCDS (approved configuration of the aircraft);
- v. TAC certificate/list (only for first of a type aircraft);
- vi. Prescribed fee/invoice;
- vii. Completed aircraft inspection report CA43-02 for aeroplane; CA43-03 for helicopters or CA43-05
- viii. Maintenance release (CRS);
- ix. Mass and Balance Data and certified Equipment List;
- x. Approved Flight and/or Owner's Manual or Pilot Operator's Handbook, as applicable;
- xi. Approved Maintenance Programme;
- xii. MEL;
- xiii. A flight performance record;
- xiv. Flight Folios;
- xv. Aircraft logbooks;
- xvi. Radio station license;
- xvii. Aircraft Status report (Airworthiness Limitations, Certification Maintenance Requirements (CMR's); scheduled checks; CPCP compliance; etc)
- xviii. Equipment/Component record history;
- xix. Operations based installation records (Firefighting; Agricultural; Medical evacuations; etc);
- xx. Modification status (aircraft interior configuration; major repairs, major equipment changes; etc; including relevant Mandatory Continued Airworthiness Instructions);
- xxi. Repair mapping & Dent & Buckle report;
- xxii. AD status and service bulletins;
- xxiii. CPCP compliance Regulatory requirements (Airspeed indicator; Transponder, Compass Swing; ELT; FDR; etc)
- xxiv. Traceability records of repaired/replaced components;
- xxv. Electrical load analysis;
- xxvi. Noise certificate;

- a. Upon receipt of a completed and signed Application forms and package, the SACAA Office must accomplish the following:
  - i. Administrative Officer to verify that the appropriate fee payment is made, verified by Finance department and invoice issued.
  - ii. Assign the team for the C of A task and nominate an Inspector to lead and coordinate the process.
  - iii. The designated SACAA team will process the application package as follows:
  - iv. Obtain the aircraft registration from the SACAA registration division, in case of an aircraft to be registered abroad he / she shall liaise with registration department on registration requirements and request the reserved registration number together with undated and unsigned copies of the certificates of registration.
  - v. Check the C of A application form for the following,

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- vi. Verify that the appropriate and current form is submitted.
- vii. Verify that the application form is appropriately completed in full.
- viii. Check if the Information submitted on the form is correct.
- ix. Accept the application form.
- x. Advise the applicant if the application form is not accepted and the reasons for the rejection.
- xi. Evaluate the Formal Application Package, advise the applicant of the outcome and provide direction and guidance on the next step of the process.

**3.5.11. Package Acceptance.**

- a. If any of the items required for the formal application are missing or are incomplete, the application can be put on hold until required documentation is provided
- b. The decision to proceed is predicated on receipt of all required documents in the formal application and an initial approval of the contents.
- c. Normally, if an applicant has been thoroughly briefed and has acquired a good understanding of the requirements during the pre-application phase, the formal application should be of sufficient quality that any discrepancies, omissions, and/or "open" questions could be resolved during the formal application meeting.

**Note:** This process can either be done during the formal-application meeting (physical or on-line) or correspondence via email.

**3.5.12. Terminating the Formal Application Phase.**

If the SACAA team accepts the application package, the Formal Application Phase of the process is terminated, and the Document Compliance Phase begins.

**C. The Document Evaluation Phase**

**3.5.13. General.**

- a. The document evaluation phase is that part of the process where the applicant's manuals and other documents are carefully reviewed and either approved or rejected.
- b. It is important for the team to promptly review the applicant's submittals and other documents. The previously agreed upon schedule of events will determine the priority of items to be reviewed and any additional inspector support or other SACAA resources that will be needed beyond the composition of the basic Airworthiness team. The document compliance phase is an intensive process and will most likely require additional resources to accomplish necessary tasks in a timely manner.
- c. During this phase, members of the SACAA team evaluate and approve or accept the applicant's manuals and any other required documents submitted as part of the formal application package. Review of the applicant's submissions should be accomplished by simultaneous references to the South African Civil Aviation Regulations (SACARs), the maintenance program, guidance materials, AICs, manufactures or vendor source documents and the appropriate manual or document. The formal application package and attachments is performed in-depth to ensure compliance with applicable regulations and conformity to safe operating practices.

**3.5.14. Documents to be Reviewed for Approval or Acceptance**

- a. Aircraft Registration. The procedures for aircraft registration and issuance of registration numbers are contained in Part 47, Aircraft Registration. The registration of aircraft is not a function of airworthiness certification; however, RSA registration is a prerequisite for issuance of an airworthiness certificate. The Inspector must ensure that an aircraft presented for C of A is properly registered.

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b. Application for the Certificate of Airworthiness. The form should provide the following information:

- i. The applicant should mark the appropriate block to indicate the kind of certification applying for.
- ii. Aircraft registration- the South African Registration nationality designator letters "ZS or ZT-" followed by the registration marks as shown on the aircraft registration certificate or as per the reserved registration.
- iii. Date when aircraft will be ready and available for the inspection
- iv. Place where the Aircraft will be located during the inspection.
- v. Aircraft Manufacture Name (Make) - the name of the manufacturer or builder as it appears on the aircraft identification (ID) plate.
- vi. Aircraft Model Designation • the model designation as shown on the aircraft ID plate. Note Trade names should not be used.
- vii. Aircraft Serial Number· the serial number as shown on the aircraft ID plate.
- viii. Type cert Number· type certificate number as shown on the aircraft ID plate.
- ix. Year of Manufacture • the year of manufacture if shown on the aircraft ID plate or as reflected in the aircraft's records.
- x. State of manufacture - the name of the country that has jurisdiction over the organization responsible for the final assembly of the aircraft.
- xi. Maximum Certificated Mass / Maximum Take-off Mass · enter the maximum permissible mass shown in the aircraft flight manual or type cert or other document associated with the certificate of airworthiness at which an aircraft may commence its take-off under standard atmospheric conditions at sea level;
- xii. Engine Manufacture Name (Make) - The engine make is the name of the manufacturer as it appears on the Aircraft TCDS or STC and engine ID plate. When engines are not installed, as in the case of a glider or balloon, enter "not applicable" or "N/A."
- xiii. Engine Model Designation. When engine(s) are installed, enter the complete designation as shown on the Aircraft TCDS or STC and engine (for example, "0-320-A1B," "PT6A-20A," "CFM-56-3C-1," etc.).
- xiv. The applicant should indicate or specify whether engines are new, used, or remanufactured.
- xv. Engine Serial Number- the serial number as shown on the engine ID plate.
- xvi. Date - date when engines were certified as new or remanufactured or overhauled.
- xvii. Propeller manufacture Name (Make) - the name of the manufacturer as shown on the Aircraft TCDS or STC and propeller identification marking. "not applicable" or "N/A" if propellers are not installed.
- xviii. Propeller Model Designation - When applicable, enter the model designation as shown on the Aircraft TCDS or STC propeller identification marking.
- xix. The applicant should mark the appropriate block to specify whether Propellers are new, used, or remanufactured.
- xx. Propellers Serial Numbers - the serial number as shown on the Propellers ID plate.
- xxi. Date - date when propellers were certified as new or remanufactured or overhauled.
- xxii. Rotorcraft transmission gearboxes - the serial number as shown on the transmission gearboxes ID plate.
- xxiii. Date - date when transmission gearboxes were certified as new or remanufactured or overhauled.
- xxiv. Supporting documentation • documents that are to be submitted during the formal application phase. The applicant should mark the applicable section and specify where not applicable. SACAA will notify the client if there are any other additional documents that the client may need to submit for the formal application phase.

3.5.15. Application for the Noise certificate:

- a. An application for the issuing of a noise certificate shall be made to the Director in the appropriate form CA36-02 and be accompanied by: -
  - i. the appropriate fee as prescribed in Part 187; and
  - ii. Proof that the aircraft concerned complies with the noise standards referred to in regulation 36.00.2
  - iii. The DCA may recognise a Noise certificate, or an equivalent document issued by an appropriate Authority, if the standards under which the noise certificate or equivalent document was issued by the appropriate Authority, are not less stringent than the standards as prescribed in Document SACATS.

**Note:** The approval process of Noise Certificates is done at Engineering department.

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3.5.16. Minimum equipment list (MEL)

- a. The applicant of a commercial C of A shall submit a copy of the aircraft MEL as part of the C of A certification packaged. The requirements for MEL are contained in SACAR Part 121. and SACAR Part 135. MEL technical guidance material has guidance on information required to develop a MEL.
- b. RVSM Application (where applicable)
- c. For aircraft, that are to be operated within airspace where Reduced Vertical Separation Minima (RVSM) applies, an airworthiness approval certificate is required.
- d. The requirements for such RVSM airworthiness approval certificate are contained in SACATS-91
- e. RVSM technical guidance material contains additional requirements for obtaining RVSM approval. The applicant shall submit as part of the certification package the following information:
  - i. A completed form;
  - ii. The appropriate fee as prescribed in Part 187 and;
  - iii. The substantiation data to prove that the aircraft does comply with the RVSM requirements.

3.5.17. Aircraft flight manual

The applicant shall submit a copy of the aircraft current flight manual with all the AFM supplements applicable to the aircraft for acceptance by the Director of Civil Aviation (DCA) as part of the package.

3.5.18. Mass, and balance report

- a. The applicant shall establish the mass and the centre of gravity of the aircraft by actual weighing prior to initial entry into operation.
- b. The accumulated effects of modifications and repairs on the mass and balance of the aircraft shall be accounted for and properly documented by the owner or operator.
- c. The mass and centre of gravity data, as supplied by the manufacturer in respect of a new aircraft, shall be acceptable for the issuance of a C of A.
- d. The procedure to establish mass and the form on which the results of balance computations must be recorded in the form/format prescribed in the Document SACATS.
- e. Mass and balance technical guidance material read together with AIC 60.5 provides additional guidance on establishing the Mass and Balance of an aircraft.
- f. The applicant shall submit a copy of the mass and balance report for acceptance by the SACAA.
- g. The acceptance fee of such mass and balance report shall be included in the C of A application fee.

3.5.19. Equipment list

The OEM certified equipment list copy of the aircraft concerned and pertinent updates as a result of embodied modifications; minor changes; alterations; etc.

3.5.20. Supplementary Type Certificate or modification list

- a. The applicant shall submit a copy of all the modifications including STCs that are embodied on the aircraft. All modifications embodied in the aircraft shall meet the requirements of CAR- Part 43 read together with AIC61.6. In an instance where there are modifications that were previously embodied in the aircraft, the applicant shall submit the approvals of such modifications.

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- b. Should there be modifications including changes to equipment or the installation thereof, which affect, or are likely to affect, the serviceability of the aircraft, or the safety of its occupants or of any other persons or property, that the applicant wishes to embody in the aircraft; an application of such embodiment shall be made to the DCA in the appropriate SACAA form.
- c. The application form shall be accompanied by the appropriate fee as prescribed in Part 187.
- d. The applicant shall also furnish the DCA with information, data, calculations, reports on tests, drawings or wiring diagrams relating to the design, and proof of effectiveness or airworthiness of such modification, as the DCA may require.
- e. The requirements listed above do not include the modifications as may from time to time be recommended by the manufacturer of the type of aircraft or equipment concerned in a form of Airworthiness directives or service bulletins.

#### 3.5.21. Electrical Load Analysis (ELA)

- a. The applicant shall submit the current copy of the aircraft ELA, as part of the aircraft application package. The applicant shall ensure that the ELA contains the record of all changes that were made to the connected loads, which may be added or removed by modification or changes in operational procedures.
- b. The ELA that is produced for Aircraft Type Certification is the baseline document for any subsequent changes. If possible, the basic format for the ELA should be maintained to ensure consistency in the methodology and approach.
- c. In some cases, the original ELA may be lacking in certain information, for instance, 'Time available on emergency battery', and as such, it may be necessary to update the ELA using the guidance material contained in the ELA technical guidance material. The acceptance fee of such ELA shall be included in the C of A application fee.

#### 3.5.22. Mode S

The applicant shall apply for MODE S transponder code SACAA Form, together with the appropriate fees as prescribed in the regulation.

### 3.6. Document Any Deficiencies (Unacceptable Documents).

- 3.6.1. If deficiencies are found in any manual or document, return it to the applicant with a letter outlining the deficient areas. Inform the applicant that the certification process will not continue until all deficiencies are resolved. If appropriate, meet with the applicant to review deficiencies in detail. The SACAA Team should be ready to offer suggestions on how to improve the product **but avoid "writing" the applicant's manual**. It is the applicant's responsibility to develop manuals and procedures that ensure safe operating practices and compliance with the regulations.

**Note:** *The applicant and the SACAA team should address the appropriate means of identifying the corrective actions (revisions) to manuals and documents. If manuals and documents have been revised without a means to identify what changes have been accomplished then the inspector should review the entire manual or document as this will increase the time spent reviewing, which in turn would be costly to the applicant.*

- 3.6.2. Corrective action must be taken, and the Certification Team notified in writing by the application order for the certification process to continue. Each deficiency and corrective action must be fully documented, recorded

and filed.

### 3.7. Terminating the Document Evaluation Phase.

Once all required documents are approved or accepted, the Document Compliance Phase ends. The process continues in the Demonstration and Inspection Phase. Although the Document Compliance Phase and the Demonstration and Inspection Phase are dealt with as distinct, separate phases, the two may overlap or occasionally coincide.

### 3.8. Demonstration And Inspection Phase

#### General

- 3.8.1. In this phase the SACAA team determines the applicant's compliance with the regulations, proposed aircraft manual procedures and safe operating practices. The SACAA team inspects the aircraft history documentation, components traceability documentation, aircraft installed equipment, aircraft compliance to the category applied for, aircraft compliance to the maintenance program, maintenance history, aircraft condition and airworthiness. As previously mentioned, certain segments of the document evaluation phase often occur simultaneously with certain events in the demonstration and inspection phase.
- 3.8.2. An applicant for the issuing of any certificate, approval or authorisation in terms of Part 21 of the regulations, shall permit an airworthiness inspector to carry out such safety inspections and flight and ground tests which may be necessary to verify the validity of any application made in terms of the regulations.
- 3.8.3. The SACAA team shall use the following information as a guide on evaluating compliance checklists, technical information produced by the manufacturers of the airframe, engine, propeller, and installed equipment, and any other additional information issued by the DCA.
- 3.8.4. Through observation, monitoring, and other forms of on-site evaluation, the SACAA team will be exposed to many types of activities.
  - a. Regulatory Compliance. During the evaluation, the team shall determine the applicant's ability to comply with all applicable sections of the regulations and the approved maintenance manuals.
  - b. Determination of Approval or Disapproval. Throughout the demonstration and inspection phase, the team will ensure that all aspects of the applicant's required demonstrations are observed and that a determination of approval or disapproval for each is made.
  - c. Handling Deficiencies. If, at the time, certain items or the applicant's conduct of activities prove to be deficient, appropriate corrective action must be taken. If necessary, the certification team shall advise the applicant of the impracticality of continuing the certification process due to the extent of the deficiencies.

### 3.9. Prerequisites and Co-Ordination Requirements

- 3.9.1. Co-ordinate and schedule an inspection and demonstrations. Co-ordination is required between the, SACAA team members, and the applicant.
- 3.9.2. Request Demonstrations. The SACAA team should develop the type of demonstration required prior to arriving at the applicant's facility but this is not mandatory. It is acceptable to request demonstrations during the inspection as long as the inspector understands the objective(s) and final outcome of the demonstration. The demonstration must be properly documented by the inspector(s) and filed.

### 3.10. Associated Documents

- 3.10.1. During C of A process, the applicant shall ensure that due regard is given to –

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- a. The contents, recommendations or requirements of the relevant manuals, TC, STCs, IPCs, ADs, SBs or other similar technical information produced by the manufacturers of the airframe, engine, propeller and installed equipment; and
- b. Additional requirements issued by the Director, including those contained in Aeronautical Information Circulars and in any publications, issued by the State of manufacture or State of type design of the aircraft, which may prescribe or amplify techniques to be followed in the maintenance of aircraft.
- c. In the event of any conflict between the requirements or instructions issued by a manufacturer and those by the Director, the provisions of the latter shall prevail.
  - i. The applicant shall ensure that all applicable maintenance records, including preservation maintenance (if applicable) and documents are available and up to date.
  - ii. The SACAA may require Maintenance or Test Flight report to determine that the aircraft is in a condition for safe operation.

**Note:** Aircraft must be certified safe for intended flight in the airframe logbook and registered owner written permission obtained prior to undertaking such flights as required by the regulation.

### **3.11. Perform Aircraft Inspection.**

- 3.11.1. During the demonstration and inspection phase, the SACAA team shall inspect the aircraft using guidelines provided on the appropriate aircraft inspection checklist/job-aid. The team ensure that the aircraft meets the requirements of the aircraft type certificate data sheet, STCs or repairs have been carried out in accordance to approved data and any other relevant information. Verify that the aircraft is in a condition safe for the intended operation.
- 3.11.2. It is therefore incumbent on the applicant to make the aircraft available at a time and place mutually agreed to between the SACAA team and the applicant.
- 3.11.3. The physical inspection involves the completion of detailed checklists and encompasses but not limited to the following.
  - a. Inspection of structure (airframe), systems and engines, to the extent considered necessary to verify the aircraft is in a safe condition for flight, and to correlate physical aspects with the aircraft's documentation. The inspector will arrange provision of inspecting aids and checklists, but the applicant will be responsible for providing internal access to structure and systems if this is beyond the inspector's scope using his or her limited resources.
  - b. Ensuring the correct registration markings and call sign.
  - c. Inspect the aircraft interior configuration to determine if modifications had been made
  - d. to the original configuration. Such aircraft interior modifications should be found in a modification approval document.
  - e. Ensuring the correct manufacturer's aircraft data plate and fireproof data plate are displayed.
  - f. Correlation of manufacturer's aircraft data plate details with documentation (Including the engine(s); Propeller(s), Rotorcraft Transmission Gearboxes and APU, as applicable.
  - g. Ensuring all markings and placards as called up by the AFM, Maintenance Manual and/or ADs are correctly positioned, formatted and legible.
  - h. Ensuring the all-emergency equipment is correctly installed.
  - i. Determining if operational equipment as required by the aircraft's intended role e.g., instrumentation, communication and navigation equipment, oxygen provisions, survival equipment etc. is correctly installed.
  - j. Verify/check that there are no evident corrosion, cracks and dents that haven't been accounted for.





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- k. All lights including emergency exit lights are operational.

**3.12. SACAA Inspection Package**

The applicant shall prepare and present to the SACAA team any additional records and documentation required or deemed necessary to support the application, SACAA team shall inform the applicant on the copies they require as this will differ from aircraft to aircraft.

**3.13. Debrief the Applicant**

- 3.13.1. Debrief the applicant as part of the inspection.
- 3.13.2. Include both acceptable and unacceptable areas.
- 3.13.3. Be clear when indicating any area that must be corrected.
- 3.13.4. Advise the applicant that a formal letter containing a list of discrepancies will be sent within 5 days.
- 3.13.5. Inform the applicant of the SACAA internal approval process to be followed and what is expected from their part should there be findings identified.

**3.14. Notification of Discrepancies**

- 3.14.1. Inform the applicant in writing of the discrepancies.
- 3.14.2. unacceptable procedure, policy, instruction, or method and explain how it is inconsistent with the appropriate regulation.
- 3.14.3. Inform the applicant that the C of A approval cannot be granted until the discrepancies are resolved.
- 3.14.4. File Documentation.

**3.15. If no Discrepancies Are Found:**

- 3.15.1. Inform the applicant of the satisfactory results both during the debrief and in writing confirming the satisfactorily results of the demonstration phase and issue the certificate of airworthiness.
- 3.15.2. Complete required documentation and facilitate the internal approval process.
- 3.15.3. File documentation.

**3.16. Unsatisfactory Demonstration.**

- 3.16.1. If a particular demonstration of compliance is unsatisfactory, the SACAA team must discuss with the applicant how to correct the problem. The SACAA team may want to follow up with a letter indicating the nature of the findings and its corrective action. Non-conformances will have to be corrected within 30 days, before the process can continue.

Depending on the nature and severity of the findings the SACAA team may opt to carry out a follow up inspection to verify proper closure of the findings. Should the applicant fail to address the identified findings within the identified period, the inspection carried out will be terminated and the applicant shall apply for a re-inspection, and he/she shall be held liable for the costs of such inspection.

**3.17. Satisfactory Demonstration.**

If the applicant's demonstrations and inspections are successful, the SACAA team will record on appropriate documents and ensure that the documents are part of the aircraft file.

**3.18. Certification - Issuing the Certificate(s)**

### 3.18.1. Issuing Approvals

The acceptance letters, approvals, and certificates are issued to the applicant after the satisfactory completion of the demonstration phase and after all significant unsatisfactory items have been corrected. This action completes the C of A process. The applicant shall not be certificated under any circumstance until the SACAA has determined that the applicant is fully capable of fulfilling its responsibilities and that the aircraft complies with the South African Civil Aviation Regulations (SACARs) in an appropriate manner.

### 3.18.2. SACAA Internal Process and Preparation of the Certificates

- a. After the successful completion of the demonstration phase the assigned SACAA Inspector shall compile the package and present it to the internal Airworthiness Technical Review Board.
- b. The relevant forms to issue the certificate should be completed and the C of A prepared for the Manager or delegated SACAA official's approval.
- c. The following information must be imprinted or typed on the appropriate form when the certificate is prepared for issuance:
  - i. The aircraft registration.
  - ii. The aircraft manufacture
  - iii. The aircraft serial number
  - iv. Airworthiness Category
  - v. Expiry date
  - vi. Limitations and restriction if applicable.
  - vii. The Assigned Certificate Number.
  - viii. The Effective Date of the Certificate. The date to be entered in the space provided shall be the date of issuance. If a certificate is to be changed due to an address change or a change of the certificate holding office; the date of original issuance shall be retained on the changed certificate. An amendment of the certificate operational category or limitation or restriction change in the certification has the effect of a new certification; the applicant shall apply for such amendment and an amendment inspection shall be conducted separately therefore, a new certificate and certificate number shall be issued. For this situation the issuance date of the new certificate will be entered in the space provided.
  - ix. The Signature space on the Certificates issued to the aircraft complying with SACAR Parts, shall be signed by the appropriate SACAA delegates.
  - x. The Signature, Title, space. The full title of the person signing the certificate shall be entered in the space provided.

### 3.18.3. Issuance of Certificates and Completing the Process.

- a. When it is determined that the applicant has met all regulatory requirements, the appropriate certificate and specific operating provisions will be presented to the applicant. The package may contain the following.
  - i. The Certificates
  - ii. Clients approved manuals
  - iii. Authorisations, which the client might have applied for.
  - iv. Any other substantiating data which the client might have submitted as part of the substantiating information.
- b. Before issuance, the applicant will sign the acknowledgment of receipt of such documents. The original certificates will then be given to the new certificate holder.

**Note:** The SACAA will endeavour to complete the entire process within the timeframe stipulated in the current Service Level Agreement.



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**3.18.4. Package Retention.**

The SACAA shall retain the C of A package on file for the period the aircraft remains active on the register.

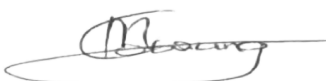
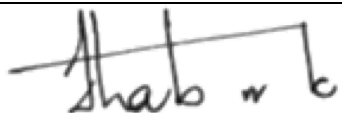

**3.18.5. Responsibility of the Owner or Operator**

The owner or operator is responsible for continued compliance with SACAA regulations, authorisations, limitations, and provisions of its Certificate.

**3.19. Enquiries**

All C of A issuance related enquiries may be forwarded to the Airworthiness Department.

**4. DOCUMENT AUTHORISATION**

<b>DEVELOPED BY:</b>		
	<b>Madira Motaung</b>	<b>10 February 2023</b>
<b>SIGNATURE OF M:ARI</b>	<b>NAME IN BLOCK LETTERS</b>	<b>DATE</b>
<b>REVIEWED &amp; VALIDATED BY:</b>		
	<b>Lobang Thabantso</b>	<b>10 February 2023</b>
<b>SIGNATURE OF SM: AW</b>	<b>NAME IN BLOCK LETTERS</b>	<b>DATE</b>
<b>APPROVED BY:</b>		
	<b>Eric Mataba</b>	<b>10 February 2023</b>
<b>SIGNATURE OF E: ASO</b>	<b>NAME IN BLOCK LETTERS</b>	<b>DATE</b>