

**SOUTH AFRICAN**



## **TECHNICAL GUIDANCE MATERIAL**

### **AIRCRAFT MAINTENANCE ORGANISATION CERTIFICATION**

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**SUBJECT: TECHNICAL GUIDANCE MATERIAL FOR AIRCRAFT MAINTENANCE ORGANISATION CERTIFICATION**

**EFFECTIVE DATE: 21 APRIL 2017**

#### **APPLICABILITY**

This Part applies to Part 145 Aircraft Maintenance Organisations.

#### **PURPOSE**

This section provides guidance for the inspector in certifying an AMO.

#### **REQUIREMENTS**

CAR 145.01.1

#### **AUTHORSHIP**

The publication has been prepared by the SACAA Airworthiness department.

#### **OFFICIAL LANGUAGE**

The text may be translated into other languages as required. The English language version remains the definitive.

## Contents

|   |    |
|---|----|
| CHAPTER 1 · INTRODUCTION .....  | 4  |
| DIRECTION & GUIDANCE .....  | 4  |
| CHAPTER 2 · CERTIFICATION DUTIES AND RESPONSIBILITIES .....   | 5  |
| RESPONSIBILITIES OF THE PROJECT MANAGER .....   | 5  |
| The Airworthiness Inspector assigned to the certification project as a Project Manager will have the following responsibilities:..... | 5  |
| RESPONSIBILITIES OF THE CERTIFICATION TEAM MEMBERS: .....   | 5  |
| The Airworthiness Inspector assigned to the certification project as a Team Member will have the following responsibilities: .....    | 5  |
| CHAPTER 3 · THE PRE-APPLICATION PHASE .....   | 5  |
| Initial Inquiry .....   | 5  |
| SACAA Standard Information Package .....  | 7  |
| Initiating the Certification Process (Receipt of POPS).....   | 7  |
| Conduct a Pre-application Meeting .....   | 8  |
| Terminating the Pre-application Phase .....   | 8  |
| CHAPTER 4 · THE FORMAL APPLICATION PHASE .....  | 9  |
| GENERAL .....   | 9  |
| Receipt of the Formal Application Package. ....   | 9  |
| Evaluate the Formal Application Package. ....   | 9  |
| CONTENTS OF THE FORMAL APPLICATION PACKAGE .....  | 9  |
| Conduct a Formal Application Meeting .....  | 14 |
| Terminating the Formal Application Phase .....  | 16 |
| CHAPTER 5 · THE DOCUMENT EVALUATION PHASE .....   | 39 |
| GENERAL .....   | 39 |
| Terminating the Document Evaluation Phase. ....   | 40 |
| CHAPTER 6 - REVIEW OF THE MAINTENANCE PROCEDURE MANUAL AND CAPABILITY LIST .....  | 40 |
| Section 1: General .....  | 40 |
| Section 2. Procedures.....  | 41 |
| PREREQUISITES AND CO-ORDINATION REQUIREMENTS .....  | 41 |
| REFERENCES, FORMS, AND JOB AIDS.....  | 41 |
| PROCEDURES .....  | 42 |
| Section 3 - Capability List.....  | 47 |
| GENERAL.....  | 47 |
| .....   | 49 |
| Section 4 - Quality Management System.....  | 49 |
| GENERAL.....  | 49 |

|   |    |
|---|----|
| Section 5 - MOP Approval.....   | 51 |
| GENERAL.....  | 51 |
| CHAPTER 7 · TRAINING PROGRAMME APPROVAL PROCESS .....   | 52 |
| SECTION 1 - GENERAL .....   | 52 |
| SECTION 2 - TRAINING PROGRAMME APPROVAL PROCESS .....   | 53 |
| GENERAL.....  | 53 |
| INITIATING THE APPROVAL PROCESS- PHASE ONE.....   | 53 |
| SACAA INVOLVEMENT IN PHASE ONE. ....  | 54 |
| REQUEST FOR INITIAL APPROVAL - PHASE TWO. ....  | 55 |
| ADDITIONAL RELEVANT SUPPORTING INFORMATION - PHASE TWO .....  | 56 |
| INITIAL REVIEW OF REQUESTS FOR APPROVAL - PHASE TWO .....   | 57 |
| TRAINING CURRICULA SUBMITTED WITH APPROVED MAINTENANCE ORGANISATION CERTIFICATE APPLICATIONS .....                        | 57 |
| IN-DEPTH REVIEW OF SUBMITTED CURRICULA- PHASE THREE .....   | 57 |
| EXPIRATION DATES FOR INITIAL APPROVALS. ....  | 59 |
| METHOD OF GRANTING INITIAL APPROVAL .....   | 60 |
| EVALUATING INITIALLY APPROVED TRAINING CURRICULA- PHASE FOUR .....  | 62 |
| ELEMENTS AVAILABLE FOR EVALUATING TRAINING-PHASE FOUR. ....   | 63 |
| METHOD FOR GRANTING FINAL APPROVAL- PHASE FIVE. ....  | 65 |
| WITHDRAWING APPROVAL OF TRAINING CURRICULA .....  | 65 |
| EXPIRED TRAINING CURRICULA.....   | 66 |
| CHAPTER 8 · DEMONSTRATION AND INSPECTION PHASE.....   | 66 |
| GENERAL .....   | 66 |
| Procedures .....  | 67 |
| CHAPTER 9 · ISSUING THE APPROVED MAINTENANCE ORGANISATION CERTIFICATE, SOPs, AND COMPLETING THE CERTIFICATION REPORT..... | 68 |
| CERTIFICATION PHASE .....   | 68 |
| PREPARATION OF SOUTH AFRICAN CIVIL AVIATION AUTHORITY (SACAA) CERTIFICATES .....  | 69 |
| ISSUANCE OF SPECIFIC OPERATING PROVISIONS, CERTIFICATE, AND COMPLETING THE APPLICATION FORM. ....                         | 70 |
| CERTIFICATION REPORT .....  | 70 |
| CERTIFICATION REPORT RETENTION. ....  | 71 |

## CHAPTER 1 · INTRODUCTION

### DIRECTION & GUIDANCE

This Guidance material provides direction and guidance on the certification process outlined in Part 145 of the South African Civil Aviation Regulations (CAR's) as applicable to an Approved Maintenance Organisation. This process, if followed, will lead to successful compliance with the CAR. Under no circumstances will an applicant be certified, until the South African Civil Aviation Authority (SACAA) is confident that the prospective certificate holder is capable of fulfilling the required responsibilities, and willing to comply with the CAR in an appropriate and continued manner.

Applicants requesting certification to operate under CAR Part 145 will be certified as Approved Maintenance Organisation. The certification process described in this Guidance Material is for an applicant seeking an Approved Maintenance Organisation, and it is also utilized by the Airworthiness Inspector's assigned certification projects.

## CHAPTER 2 · CERTIFICATION DUTIES AND RESPONSIBILITIES

### RESPONSIBILITIES OF THE PROJECT MANAGER

The Airworthiness Inspector assigned to the certification project as a Project Manager will have the following responsibilities:

- A. Serve as the primary spokesperson for the SACAA throughout the certification process.
- B. Act in a professional and responsive manner.
- C. Co-ordinate all certification matters with all other specialists assigned to the certification project.
- D. Ensure that all certification job functions are completed.
- E. Ensure that all correspondence to and from the applicant is co-ordinated through the Project Manager (PM).
- F. Ensure that all pertinent SACAA officials are kept fully informed of the status of the certification.

### RESPONSIBILITIES OF THE CERTIFICATION TEAM MEMBERS:

The Airworthiness Inspector assigned to the certification project as a Team Member will have the following responsibilities:

- A. Responding to the requests as raised from time to time by the PM,
- B. The PM may ask certification team members to review maintenance manuals, conduct inspections, prepare written reports and provide recommendations.
- C. Keeping the PM informed of the status of the certification apportioned to them.

## CHAPTER 3 · THE PRE-APPLICATION PHASE

### Initial Inquiry

- (1) During an initial inquiry the applicant will be given a Prospective Operator's Pre-assessment Statement (POPS) form (AMO POPS) and TGM for the Certification of an Approved Maintenance Organisation. The applicant should be directed to conduct a thorough review of the appropriate regulations, advisory material, and this directive to provide guidance for personnel, facility, equipment, and documentation requirements. As a result of this review, the applicant must address, in the POPS, how these requirements will be met. A discussion with the applicant during the pre-application phase should include the following subjects (but not limited to): The necessary technical expertise required by the applicant's proposed organisation, to include the following:
  - (a) Aviation related experience
  - (b) Proposed organisational structure
  - (c) Knowledge of the specific maintenance functions to be performed
- (2) The rating(s) required for the type of work to be accomplished;
- (3) The requirement of preparing and keeping current a capability list;
- (4) The requirements for sufficient personnel to meet the demands of the proposed maintenance organisation. This

includes at least one person that has the duties and responsibilities of a certifying staff individual that is qualified in accordance with SA CAR Part 66 that coincides with the ratings sought;

(5) Facility requirements for the ratings sought, to include:

- (a) The need for climate controlled conditions
- (b) The size of the facility and a facility floor plan
- (c) Appropriate test equipment
- (d) Precision tools
- (e) Special tools, test stands, etc.
- (f) Proper storage areas
- (g) Adequate power, lighting, clean & dry air, etc
- (h) Adequate facilities
- (i) Appropriate partitioning between work areas,
- (j) And a safe working environment for employees.

(6) The necessity of having current technical data available prior to certification. Technical data will include the following:

- (a) SA Civil Aviation Regulations (SACARs)
- (b) AMO Technical Guidance Material, (AMO TGM)
- (c) Type certificate data sheets, if applicable
- (d) SACAA Advisory information circulars and/or SACAA Directives
- (e) Approved Process, e.g., maintenance process specifications
- (f) Manufacturer's maintenance/overhaul/service/instruction manuals, and Service Bulletins etc.

*Note: Appliance manufacturer's maintenance manuals or instructions, though not specifically approved by the Authority, are considered to be in compliance with Part 145, 43, and 66 as applicable.*

(7) Statement of Compliance.

The Statement of Compliance will ensure that all applicable regulatory requirements are addressed during the certification process. It shall be in a form of a complete listing of all appropriate SACAR sections (Parts 145, 66 and 43 where applicable) listing each applicable SACAR sections, in sequence with the SACARs including the Technical Standards. After each listed regulation, there must be a brief narrative or specific reference to a manual/document that describes how the applicant will comply with that regulation. The compliance statement must be reviewed to ensure that the applicant has a clear understanding of the regulation and that the proposed method of compliance meets the intent of the regulation.

(8) Manual of Procedures.

The applicant should be directed to use SACAR 145.02.1(b) read together with SA-CATS 145.02.1 and MOP Guidance material as the guidance in developing part of the manual.

*Note: It is the applicant's responsibility to develop the manuals and procedures that ensure safe operating practices and compliance with the regulations. The team can offer suggestions for improvement but must not "write" the material.*

(9) Independent Quality Assurance System.

The applicant should be directed to use part of CAR 145.02.2 read together with the Technical Standard 145.02.2(2)

(10) Maintenance personnel and Certifying Staff training requirements.

(11) Qualification of Management Personnel and Certifying Staff.

(12) Lease/Contract Agreements , as appropriate.

### **SACAA Standard Information Package**

Furnish AMO TGM , Form CA145-01, Form CA 145-02, Form CA 145-19a , Prospective Operator's Pre- assessment Statement (POPS CA 145-23),CA 140-02, CA 140-03 and CA 145-24 to the applicant with instructions to complete and submit it to the SACAA Office.

For the SACAA to evaluate the complexity of the proposed approved maintenance organization, the POPS form will be used. This allows the establishment of the certification team, and the team will thus cater for the complexity of the certification. A Project Manager (PM) will be designated as the principal spokesperson for the SACAA during the certification. The applicant will use the POPS to detail the operation they wish to undertake, the equipment they have available, the facilities they plan to use, and the appropriate date when they plan to begin operation.

An applicant should be directed to conduct a thorough review of the appropriate regulations and advisory material to provide guidance for personnel, facility, equipment, and documentation requirements. As a result of this review, the applicant must address, in the POPS, how these requirements will be met.

**Note:** *Instructions for completing the POPS is located in Attachment E of this Guidance Material.*

### **Initiating the Certification Process (Receipt of POPS)**

Upon receipt of a completed and signed POPS the Manager: AMO (or designate) must accomplish the following:

- i. Assign sufficient SACAA Inspectors to the certification team.
- ii. Team members must strive at all times to maintain a professional and responsive relationship with the applicant. The team members handle all matters pertaining to the applicant, regardless of whom the applicant initially contacted.
- iii. Assign one team member to be the Project Manager (PM).

The PM will co-ordinate certification matters with the applicant, but will also ensure that the SACAA management personnel are kept fully informed of the project's current status. The designated certification team member assigned as PM will process the POPS as follows:

Obtain a certification number/project number from the assigned SACAA division. In most cases, this number will be the final AMO number. Check the "information only" blocks and enter the date the POPS was forwarded to the Director of Civil Aviation (DCA).

In the remarks section, enter "Proceeding with formal certification" and show the certification number

The assigned Project Manager (PM) will contact the applicant to arrange a pre-application meeting. The PM should communicate in advance of the meeting:

- (a) That the applicant's key management personnel should attend.
- (b) That the applicant should be prepared to discuss in general terms various aspects of its proposed operation.
- (c) What the applicant should expect from the SACAA?
- (d) That the applicant should bring its copy of the Civil Aviation Regulations to the meeting.

### **Conduct a Pre-application Meeting**

- B. Meet with the applicant to discuss the POPS. Accomplish the following during the meeting(s):
  - 1. Review the POPS to verify that all information is completed and accurate.
  - 2. Ensure that the applicant understands what is expected and all applicable regulations
  - 3. Provide the applicant with an Application Information Package to inform the applicant of what the formal application package must contain. This formal application package must contain the following attachments:
    - (a) A completed SACAA Application Form (Approved POPS) [SACAR Part 145.]
    - (b) A completed SACAA Form AMO (Application for Approved Maintenance Organisation Certificate and/or Rating CA 145-01).
    - (c) Two completed Manual of Procedures (MOP)
    - (d) Two completed Quality Assurance Manual. These can/or may be merged with the MOP.
    - (e) A completed initial training program (CAR Part 145.01.11).
    - (d) A completed Statement of Compliance (CAR Part 145.02.7).
    - (g) A completed schedule of events.
    - (h) Documentation identifying the qualifications of Management Personnel and Certifying Staff (CAR Part 145.02.4).
    - (i) Roster and records of certifying staff (CAR Part 145.02.14)
    - (j) A completed capability lists (CAR Part 145.02.8).
    - (k) When approval of a Class 1 Propeller Rating or a Class, 2, 3 Accessory Rating is being requested, the type or make, of the propeller or accessory.
    - (l) When a limited Rating is requested, the make and model of the particular item(s) to be maintained and the nature of the work to be performed,
    - (m) When a Specialised Service Rating is requested, a copy of the approved specification for the work to be accomplished.
    - (n) A copy of any leases or contract agreements.
    - (o) A list of all AMO certificates and ratings issued by another contracting state. The list shall include a copy of the AMO certificate and specific operating provisions (operations specifications) issued by that contracting state. A list of maintenance functions to be performed for it, under contract, by another AMO. A sample of Specific Operating Provisions (SOPs)
  - 4. Answer any questions the applicant may have about the AMO certification process.
  - 5. Evaluate if the pre-application meeting was successful.

### **Terminating the Pre-application Phase**



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

## CHAPTER 4 · THE FORMAL APPLICATION PHASE

### GENERAL

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

1. Ensure that all documents have been submitted and are completed.
2. The formal application package may be received by mail, or it may be hand delivered by the applicant. If it is hand delivered, 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 certification team has reviewed the formal application.

#### **Evaluate the Formal Application Package.**

1. Based on the initial cursory review of the application package, a decision must be made whether or not to continue with the certification process.
2. Upon receipt of the formal application package, the certification team must initially review it and make a determination of its acceptability within 10 working days.
3. The initial review determines whether the submitted material represents a feasible proposal and is of sufficient quality to allow for a productive formal application meeting and to proceed with the certification process. The following is provided as direction and guidance for this initial review:

### CONTENTS OF THE FORMAL APPLICATION PACKAGE

#### Schedule of Events

1. The schedule of events is a list of each major item, activity, program, and/or facility, equipment, tools acquisition. It also sets milestones for accomplishment or submission of the items. The schedule of events, when accepted, becomes the basis for agreement between the applicant and the certification team to accomplish the certification project. The applicant's ability to plan and carry out a realistic schedule of events will be a major factor in determining the applicant's fitness to hold a certificate. Therefore, when reviewing the schedule of events, the certification team must carefully consider the feasibility of the proposed schedule of events with respect to the following criteria:

- (a) Logic of sequence
- (b) Timeliness of events

- (c) Completeness of events
- (d) Inspector or other SACAA resource availability

Logic of Sequence. Many activities and events listed in the schedule of events must occur before other activities and events. For example, initial training for management and certifying staff cannot begin until the training program has been reviewed and accepted/approved; the initial training and test equipment/precision tool calibrations must have been accomplished prior to the demonstration and inspection phase.

Timeliness of Events. The schedule of events must be reasonable, and realistically provide sufficient time for the certification team to review the applicant's various documents, manuals, and proposals.

Completeness of Events. The number and kinds of submissions made by the applicant for evaluation and acceptance or approval varies according to the complexity of the proposed operation.

Inspector or Other Resource Availability. Availability and capability of personnel resources is another element of concern when determining whether a schedule of events can be met. The Maintenance Inspector must determine, for example, that appropriately qualified inspectors are available.

Also, the Maintenance Inspector must ascertain the qualifications of the available inspectors with respect to the proposed operation. The PM will also coordinate participation by other resources, such as engineering inspectors, specialists (engine test cell, etc.), as required.

The Schedule of Events also acts as a job aid for the inspector. The inspector can initial each item accomplished, ensuring all items within each phase of the certification process has been accomplished with the date.

#### Company Manuals and Programs.

The Certification Team must give the manuals and programs a cursory review, first to determine that the type of information required by the regulations has been submitted. The inspector must ensure that the manuals, documents, or programmes are in compliance with at least the SACAR Parts 145.02.1 and 145.02.2 read together with SA-CATS-145 etc. The required information may be included in the Manual of Procedures instead of individual manuals or documents.

#### Company Training Curriculum.

The Certification Team must review the training curriculum to determine that each of the following curriculum and standards are covered, as appropriate to the ratings requested:

1. Basic engineering theory relevant to the airframe structure and systems fitted to the class of aircraft the AMO intends to maintain.

2. Specific information of the actual aircraft type, which the person is intended to become a certifying person including the impact of repairs and system/structural, defects.
3. Company procedures relevant to the certifying staff's tasks.
4. The training program established for maintenance personnel and certifying staff shall include training in knowledge and skills related to human performance including co-ordination with other maintenance personnel and flight crews, as appropriate.

#### Management Personnel and Certifying Staff Qualifications.

The Certification Team must review the Management Personnel and Certifying Staff qualifications to determine that there are documents to support the basic information necessary to determine regulatory compliance. The depth of the review should be only to determine that there are no obvious omissions or significant discrepancies. A detailed review of the management personnel and certifying staff qualifications and effectiveness must be accomplished during the document compliance and the demonstration and inspection phase.

#### Documents of Purchase, Contracts, and Lease Agreements.

The Certification Team must review these documents to determine that they include the types of information such as; as appropriate (if applicable):

1. Facilities and Shop Equipment & Tools
2. Test Equipment
3. Contract training and or facilities
4. Contracting of maintenance

It is not necessary or desirable for a separate document to exist for every item the applicant will have to acquire items. However, there should be sufficient evidence to show that the applicant has made definitive arrangements to acquire the major items needed for certification.

#### Statement of Compliance

1. It ensures the applicant has adequately addressed all regulatory requirements applicable to the proposed operation.
2. It aids the certification team in determining where the regulatory requirements have been addressed in the applicant's manuals, programs, and procedures. In evaluating the applicant's Statement of Compliance the certification team may find it helpful to compare (in a side by side manner) the SA CARs, the applicant's manuals, and the Statement of Compliance. The Statement of Compliance documents how the applicant intends to comply with each applicable regulation.
3. The Certification Team must review the Statement of Compliance to determine that it complies with the form and

content as identified below:

- (a) Shall be in a form of a complete listing of all appropriate Civil Aviation Regulation sections (for example CAR Part 145 & Part 43) This list should reference any applicable subpart and each relevant section of the subpart. Next to the subparagraph, the applicant must provide a specific reference to a manual or other document. This statement also serves as a master index to the applicant's manual system to expedite the SCAA's review and approval of the manual system.
- (b) The applicant may choose to provide a brief narrative description that describes how the applicant will comply with each regulation. Where the compliance information has been developed (for example, the manual material submitted with the formal application), a manual reference or a description of the method of compliance must be entered next to the applicable regulatory section.
- (c) The list of the specific regulations and subparts, including all subparagraphs, must be presented in the manner of one of the examples described below:

**Example 1. Statement of Compliance (Reference)**

SACAR Part 145.02.1; 145.03.1 etc "Approved Maintenance Organisation Manual of Procedures": (c)(1) Approved Manual of Procedure (MOP) Section 1, Chapter 2, page 2, paragraph 3.  
(d)(2) MOP Section 2, Chapter 2, Page 3, paragraph 1.

**Example 2. Statement of Compliance (Narrative)**

SACAR Part 145.01.4. Maintenance organisation will properly identify the certificate number on affected documents when it identifies itself as a certificated AMO...

1. If the applicant's Statement of Compliance does not serve the preceding purposes, the deficient areas will be communicated to the applicant, and a resolution shall be negotiated. The Demonstration Phase will not be conducted until the certification team is satisfied, through its review of the Statement of Compliance and formal application package, that all regulatory requirements have been adequately addressed. The applicant's methods of compliance will be evaluated throughout the demonstration and inspection phase.
2. Preparation of the Statement of Compliance benefits the applicant by systematically ensuring that all applicable regulatory aspects are appropriately addressed during the certification process.
3. Initial Statement of Compliance. The initial Statement of Compliance shall be in the form of a complete listing of all pertinent sections and subparts relevant to parts 145 and 43 of the CARs. Where compliance information has been developed, a manual reference or description of method of compliance must be entered next to the applicable regulatory section. If the method of compliance has not been fully developed, the applicant should indicate that the compliance information will be provided in the final Statement of Compliance with a date when this will be provided.

4. The initial Statement of Compliance may be abbreviated where appropriate. However, the initial Statement of Compliance which does not clearly document an applicant's knowledge of regulatory requirements is unacceptable. Statements such as "will comply" are not sufficient. The initial Statement of Compliance (and later, the final Statement of Compliance) provides the only written evidence the applicant operator understands of the SACAR requirements.

5. Final Statement of Compliance. Demonstrations must not be conducted until the certification team is satisfied that all regulatory requirements have been adequately addressed through the team's review of the final Statement of Compliance. Review of the MOP is not possible if relevant portions of the Statement of Compliance are not complete.

6. The PM must review the Statement of Compliance within 10 working days to determine that it complies with the form and content and that the applicant has proceeded in an appropriate manner. The Statement of Compliance will be given a detailed review late in the certification process.

Application for Approved Maintenance Organisation and/or Ratings CA 145-01:

The form should provide:

1. The official name, location and mailing address.
2. Reasons for submission.
3. Rating(s) requested
4. Any maintenance function to be contracted outside of the organisation.
5. Name of owner
6. Authorised signature, title, and date.

Capability List.

The certification team must review the capabilities list to ensure that it is appropriate to the ratings requested.

A set of draft Standard Operating Procedures (SOPs).

The certification team must review the draft SOPs that were edited during the Pre-Application Meeting to ensure they accurately reflect the authorisations and limitations of the applicant's intended operations.

Package Acceptance.

1. If any of the items required for the formal application are missing or are incomplete, the entire formal application must be rejected. It should be returned to the applicant with a letter stating the reasons for its rejection following completion of the initial review.

2. The decision whether to accept the formal application before the formal application meeting and to proceed with the certification process by scheduling a meeting with the applicant must be tempered, with good judgement and a reasonably flexible attitude. Results of informal meetings, reviews, and observations of the applicant's capabilities during the pre-application phase should supplement the decision-making process. Other factors such as working relationships and understandings established during the pre-application phase should also be considered. However, the decision must be based primarily on the results of the initial review of the formal application and attachments. The decision to proceed is predicated on receipt of all required documents in the formal application and an initial approval of the contents.
3. 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. For example, if the chronology of the Schedule of Events needs to be adjusted for logic of sequence, timeless, or to accommodate inspector resource requirements, such adjustments can normally be accomplished during the meeting. Often minor and occasionally some significant discrepancies or omissions in manual material, training curricula, and/or the compliance statement can be resolved during the formal application meeting. Questions about management qualifications and documents substantiating the acquisition of facilities, equipment, and manuals, can be answered during this meeting.

### **Conduct a Formal Application Meeting**

The purpose of this meeting is 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. The PM is responsible for conducting the formal application meeting.

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 certification team members and maintenance organisation key management personnel must be present. Normally, the PM should open the meeting with the applicant; and all key management personnel, and the certification team present.

The PM should encourage the applicant and the applicant's key management personnel to present any questions they may have concerning the forthcoming certification process. The PM and the certification team members should answer and discuss freely all aspects of the certification process.

The team will determine the package's acceptability based upon the results of the meeting but the PM will not formally accept the application during the meeting. The delay will allow time for the applicant to resolve any omissions or any deficiencies discussed during the meeting.

The applicant should be notified by letter stating whether the formal application is accepted or rejected. The Authority's

acceptance of a formal application does not constitute approval or acceptance of individual attachments. These documents will be evaluated thoroughly during subsequent phases of the certification process. If, the formal application is not accepted, it will be returned with a written explanation of the reasons for its return.

The detailed schedule of events should be discussed, and needed revisions should be negotiated prior to proceeding.

During the formal application meeting, the certification team and the applicant will review the application package and resolve any discrepancies.

If mutual agreements cannot be reached on any discrepancies, the certification 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.

When agreement has been reached on corrective action for deficiencies, the certification team should then encourage the applicant to present any questions concerning the upcoming certification. The certification team members should answer these questions fully.

Before the conclusion of the formal application meeting, the certification team must make certain 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 certification 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. A letter accepting the application is necessary because the time limit begins upon receipt of the application in an acceptable form.

Acceptance of the application does not constitute acceptance or approval of any attached documents (curricula, sample manuals, 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.

Notification of acceptance of the formal application package does not in any way constitute acceptance or approval of the separate attachments. The attachments will be reviewed further, and additional corrective actions will be required, the applicant will be expected to take such corrective action. Acceptance or approval of each attachment will be indicated separately at a later date during the certification process.

If the applicant is unable to meet the Schedule of Events, the Authority will need equivalent amounts of time, as agreed upon during the meeting, to make the necessary reviews and inspections. Consequently, the proposed startup date could be

delayed.

- (i) 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. See Attachment A for an example of a rejection letter.

### **Terminating the Formal Application Phase**

If the certification team accepts the application package, the Formal Application Phase of the certification process is terminated, and the Document Compliance Phase begins. See Attachment B for an example of an acceptance letter.



**ATTACHMENT A**

**Rejection of Formal Application**

Reference: J44-XXXX

Enquiries: PM Name 00/00/00

Mr. G.G. Nkosi Accountable

Manager

International Maintenance, LTD

Lanseria

1611

Tel: +2711 545 1000

Fax: +2711 5451013

E- mail: PM@caa.co.za

Dear, Mr. Nkosi

This office has reviewed your formal application for an Approved Maintenance Organisation Certificate (AMO) dated 00/00/00. We find it necessary to return your application because of deficiencies in the following areas:

We are returning your letter of application with all attachments. It will be necessary to submit a new formal application when you have corrected the discrepancies noted above. Please contact us if we can be of any further assistance in clarifying the minimum requirements for your formal application.

Sincerely,  
Project Manager

## **ATTACHMENT B**

### **Acceptance of Formal Application**

Reference: J44/ XXXX

Tel: +2711 545 1000

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Enquiries: PM Name

E-mail: PM@caa.co.za

00/00/00

Mr. G.G. Nkosi  
Accountable Manager  
International Maintenance, LTD  
Lanseria  
1611

Dear Mr. Nkosi,

Your formal application has been reviewed and found acceptable. Acceptance of the application does not convey specific approval of the attachments. Approval or acceptance of the attachment will be appropriately conveyed after a detailed evaluation by the SACAA certification team. We look forward to working with your personnel in the continuation of the certification process.

Sincerely,

**Project Manager**

## CHAPTER 5 THE DOCUMENT EVALUATION PHASE

### GENERAL.

- A. The document evaluation phase is that part of the certification process where the applicant's manuals and other documents are carefully reviewed and either approved or rejected. The certification team members, for the most part, perform this phase, in the SACAA office.
- B. An important responsibility of the PM is to organise the certification team's efforts to promptly review the applicant's manuals and other documents. Two key elements useful in planning activities in the document compliance phase are the schedule of events and the compliance statement. The schedule of events determines what will be examined and when.

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 certification 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 certification team evaluate and approve or accept the applicant's manuals and any other required documents. Review of the applicant's submissions should be accomplished by simultaneous references to the South African Civil Aviation Regulations (CARs), the compliance statement, 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. The documents to be reviewed include:

1. A revised Schedule of Events, if applicable.
2. A completed SACAA Form AMO (Approved Application for Maintenance Organisation Certificate and/or Rating).
3. A completed Compliance Statement.
4. A completed Maintenance Procedure Manual (Refer to SA-CATS 145.02.1).
5. A completed Maintenance Training Program.
6. A completed Quality Assurance Program/manual SA-CATS 145.02.2
7. A completed Capability List. A list of makes and models of the particular item(s) to be maintained and the nature of the work to be performed for any limited ratings.
8. Management Personnel and Certifying Staff training and Qualifications records.
9. Documents of Purchase, Contracts, and Lease Agreements.
10. A copy of the approved specification for the work to be performed for a Specialised Service Rating.
11. Calibration Certificates on test equipment and/or precision tools, if applicable. This can be accomplished during the Inspection Phase. The applicant must be informed that the evaluation of Certificate of Calibrations on test equipment and precision tools will be accomplished. If evaluated during the inspection phase the applicant

must be aware that all required test equipment and precision tools must be appropriately calibrated and documented.

12. Document any Deficiencies (unacceptable documents).

- (a) 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 Certification Team should be ready to offer suggestions on how to improve the product **but avoid "writing" the applicant's manual**. The Certification team should remember that 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 certification 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.*

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

### Terminating the Document Evaluation Phase.

Once all required documents are approved or accepted, the Document Compliance Phase ends. The certification 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.

## CHAPTER 6 - REVIEW OF THE MAINTENANCE PROCEDURE MANUAL AND CAPABILITY LIST

### Section 1: General

#### I. OBJECTIVE.

This chapter provides guidance for evaluating, approving, accepting, and/or denying all CAR Part 145 Approved Maintenance Organisation, Manual of Procedures (MoP) submissions or revisions.

#### II. GENERAL

- A. **Regulatory Requirements.** Before issuing a certificate, a manual that includes the applicant's maintenance procedures must be approved by the Authority. Also, when a certificate holder revises an existing manual, these

revisions must be submitted to the SACAA for approval prior to implementation. The process in both of these situations is the same.

- B. **Non-regulatory Items.** There may be some recommendations included in this directive that are not required by the regulations. They have been included to assist the inspector and certificate holder/applicant in developing a more complete description of the AMO's overall functions and responsibilities.
- C. **If this task is performed as part of an original certification,** the entire manual will be submitted. If this task is performed as a revision, only that portion of the manual that is revised will be received.
- D. **AMOs may approve articles for return to service after a major repair.** In order to do this, the customer's work order and maintenance release may be used, in lieu of SACAA Certificate Relating to Maintenance of Aircraft (CRMA) under the privileges of their certificate. Additionally, the AMO must provide the customer:
1. A signed copy of the work order, showing the work accomplished.
  2. The maintenance release form signed by an authorised AMO representative (Certifying Staff Inspector).

**NOTE:** Both of these items may be on the same form, therefore requiring only one signature.

- E. **Work Performed For SACAR Part 96; 121; 127 and 135 Air Operators.** AMOs that perform work for air operators operating under a CAR Part 96; 121; 127 and 135 continuous maintenance program must include a section on how the operator's manual is to be complied with, how the work is to be performed and that a current copy of the air operator's manual will be provided. The MOP shall address the AOC's procedures and paperwork.
- F. **In-Progress Maintenance.** The AMO's MOP must have procedures that include designating the individual responsibility for briefing the arriving shift's supervisors and personnel of the exact status of in-progress maintenance. These procedures must also include accounting for the in-progress maintenance status in the AOC's work packages.

## Section 2. Procedures

### PREREQUISITES AND CO-ORDINATION REQUIREMENTS

- A. **Prerequisites**
1. Knowledge of the regulatory requirements of SA CAR Part 145 & 43
  2. Successful completion of the Government Safety Inspectors - Airworthiness Course
  3. Experience with SA CAR Part 145 operations
- B. **Co-ordination.** This task may require co-ordination with other specialities.

### REFERENCES, FORMS, AND JOB AIDS

A. References

1. SACAR Parts 66; 43,145, 91,96;121;127 and 135
2. Evaluate SACAR Part 145 Manual of Procedure /Revision

B. Forms.

C. Job Aids- AMO Certification Job Aid and Schedule of Events

## PROCEDURES

### Receive Certificate Holder/Applicant's Submitted Manual.

Ensure that:

1. Submission includes at least a copy of the manual
2. The Accountable Manager or an individual authorised by the Accountable Manager signs each page. A letter signed by the Accountable manager that identifies the authorised name(s) that can sign the MOP shall be kept on file with the AMO and submitted to the Authority.

### Review Certificate Holder/Applicant's Submitted Manual/Revision.

Review the manual/revision to ensure that it meets the regulatory requirements of SACAR 145.02.1 as appropriate to standards in SACAR Part 43 and 145.

|    |   |
|----|---|
| A. | <b>MANAGEMENT RESPONSIBILITY</b>                                  |
| 1. | List of effective pages.  |
| 2. | Revision page   |
| 3. | Company information & Company Registration                        |
| 4. | Table of contents   |
| 5. | Distribution list   |
| 6. | Corporate commitment  |
| 7. | List of management personnel                                      |
|    | Duties and responsibilities of management personnel               |
|    | Management Organization chart                                     |
|    | List of certifying personnel                                      |
|    | Human resources   |
|    | Description of facilities at each address intended to be approved |
|    | Scope of work   |
|    | Notification procedure to SACAA                                   |
|    | Manual of procedure amendment procedure                           |

In addition the manual/revision must include the following subjects:

Manual revision control system.

Ensure that:

- (a) For original certification, there is a list of effective pages. (Signed by all inspectors assigned to AMO)
- (b) For a revision, that the revision is in accordance with the control system in the certificate holder's current manual

The MOP must have Management Procedures including:

- i. Corporate commitment by the accountable manager
- ii. Management personnel
- iii. Duties and responsibilities of management personnel
- iv. Management organisational chart
- v. List of certifying staff (The list can be a separate document but must be referenced in the MOP with the appropriate procedures)
- vi. Manpower resources
- vii. General description of the facilities at each address intended to be approved
- viii. Organisations intended scope of work
- ix. Notification procedure to the Authority regarding changes to the organisation's activities/approval/location personnel
- x. Manual amendment procedures
- xi. Management Structure - the MOP must contain a description of the AMO's management structure as it pertains to all aspects of the AMO, including, but not limited to, maintenance structure, quality assurance structure, etc. Organisational entities, areas of responsibility, and titles of key management positions must all be identified in the management structure. This description should contain information on how the maintenance management structure interfaces with the quality management structure and the responsibilities of both. Organisational charts and diagrams may also be useful in showing the relationship between departments, units, etc., within the company.

Names of management and certifying staff personnel.

The names of the individuals filling management positions can be listed in the MOP or may be separate from the MOP provided that the MOP describes the procedures to establish and maintain a current list. Refer to SACAR Part 145 read together with SA-CATS 145.02.1(1) (2).

The list of names filling management positions that describes their duties and responsibilities for which they are specifically authorised to deal directly with the Authority. The list may be separate from the MOP provided that the MOP describes the procedures to establish and maintain a current list. Refer to SA-CATS 145.02.1(1) (2)

The names of the individuals filling the certifying staff positions, which have been authorised by the AMO, can be listed in the MOP or may be separate from the MOP provided that the MOP describes the procedures to establish and maintain a current list. Refer to SA-CATS 145.02.1(1) (5)

Maintenance Procedures in the MOP should cover:

1. Supplier evaluation procedure
2. Acceptance/inspection of aircraft components and material from outside contractors
3. Storage, tagging and release of aircraft components and material to aircraft maintenance
4. Acceptance of tools and equipment
5. Calibration of tools and equipment
6. Use of tooling and equipment by staff (including alternate tools)
7. Cleanliness standards of maintenance facilities
8. Maintenance instructions and relationship to aircraft/aircraft component manufacturer's instructions including updating and availability to staff
9. Repair Procedure
10. Aircraft maintenance program compliance
11. Airworthiness Directives procedure
12. Optional modification procedure
13. Maintenance documentation in use and completion of same
14. Technical record control
15. Rectification of defects arising during base maintenance
16. Release to service procedure
17. Records for the operator
18. Reporting of defects to the Authority/Operator/Manufacturer
19. Return of defective aircraft components to stores
20. Defective components to outside contractors
21. Control of computer maintenance record systems
22. Reference to specific maintenance procedures such as:
  - a) Engine running procedures,
  - b) Aircraft pressure run procedures,
  - c) Aircraft towing procedures,
  - d) Aircraft taxiing procedures
  - e) Additional Line Maintenance Procedures
23. Line maintenance control of aircraft components, tools, equipment etc.
24. Line maintenance procedures related to servicing/fuelling/de-icing, etc.
25. Line maintenance control of defects and repetitive defects
26. Line procedure for completion of technical log
27. Line procedure for pooled parts and loan parts
28. Line procedure for return of defective parts removed from aircraft



### Quality System Procedures

1. Quality audit of organisation procedures
2. Quality audit of aircraft
3. Quality audit remedial action procedure
4. Certifying staff qualification and training procedures
5. Certifying staff records
6. Quality audit personnel
7. Qualifying inspectors
8. Qualifying technicians
9. Exemption/deviation process control
10. Concession control for deviation from organisation's procedures
11. Qualification procedure for specialised activities such as non-destructive testing, welding, etc.
12. Control of manufacturer's work teams
13. See Section III of this chapter for guidance.

### Documentation

Other procedures that should be covered on the MOP, should include, but not limited to:

1. Contracted operators
2. Air operator procedures and paperwork
3. Air operator record completion
4. Sample of documents
5. List of subcontractors
6. List of line maintenance locations

### Additional procedures

In addition to the subjects listed above the following must be included in the MOP (appropriate to the ratings sought):

#### *Incoming inspections*

A system or method for the following types of inspections of incoming articles and/or materials:

1. New items from the manufacturer, for:
  - i. Shipping damage
  - ii. Traceability of life limits, if applicable

- iii. Identification and tagging of parts to manufacturer's invoice
2. Overhauled or repaired parts from an approved agency, for:
- i. Shipping damage
  - ii. Traceability of life limits, if applicable
  - iii. Traceability of overhaul record and/or maintenance release tag
3. Items sent out for contracted maintenance functions, for:
- i. Shipping damage
  - ii. Conformity to specifications (SACAA and manufacturer's), to include type of material and state of preservation
  - iii. Items of unknown origin, for:
    - a) Shipping damage
    - b) Conformity to specifications, drawings, or dimensions (SACAA and manufacturer's), to include type of material and state of preservation
    - c) Airworthiness status including Airworthiness Directives and traceability of life limits, if applicable
    - d) Functional tests, as applicable

#### *Preliminary inspections*

A system or method for preliminary inspection of articles to be repaired for:

- a) State of preservation
- b) Functional operation prior to disassembly, if applicable
- c) Traceability of life limits and/or time since overhaul, if applicable
- d) Identification and tagging of parts to manufacturer's invoice

#### *Hidden damage inspections.*

A system or method for inspection of damaged parts for hidden damage. Ensure that items are disassembled as necessary and inspected for hidden damage in adjacent areas.

#### *In-progress inspections.*

A system or method of inspection, testing, and/or calibration, during and after disassembly and at various stages while work is in progress.

#### *Final inspection.*

A system or method of inspection, testing, and/or calibration of units at completion of work.

Inspection and in-progress work records. A system of forms for recording the results of all inspections and in-progress work, and procedures for utilizing and retaining them, per CAR Part 145. Samples must be included. Procedures that designate the individual responsible for briefing the arriving shift's supervisors and personnel of the exact status of in-progress maintenance.

*Rest and duty limitations for persons performing maintenance functions.*

A system or method to insure the following:

1. Minimum rest period of 8 hours prior to beginning of a duty,
2. Work more than 12 consecutive hours of duty,
3. In situations involving unscheduled aircraft un-serviceability, persons performing maintenance functions for aircraft may be continued on duty for up to 16 consecutive hours or 20 hours in 24 consecutive hours.
4. Following unscheduled duty periods, the person performing maintenance functions shall have a mandatory rest period of 10 hours.
5. An AMO shall relieve the person performing maintenance functions from all duties for 24 consecutive hours during any 7 consecutive day period.

Capabilities List - See Section 3 of this chapter.

Additional manual material. Ensure that the additional material included in the manual is not contrary to the regulations.

### **Section 3 - Capability List**

#### **GENERAL**

This Section provides information, guidance and a format, for each Approved Maintenance Organisation, for the development of an Approved Maintenance Organisation capability list as is required for the approval of Class 1 Propeller ratings, Class 1, 2 Accessory ratings or as may be required by any other Limited propeller, Radio, and instrument rating. It is a requirement by SAGAR Part 145 that each maintenance organisation must submit and kept current a capability list. The capability list must identify each article by make and model, part number, or other nomenclature designed by the article's manufacturer. This Guidance Material sets forth an acceptable means, of complying with the South African Civil Aviation Regulations (SACAR) and the development of procedures for the Manual of Procedures.

- A. The approved maintenance organisation may not perform maintenance, preventive maintenance, or a modification on an article until a self-evaluation has been completed on each article prior to describing the article on the capability list.
- B. The applicant must develop procedures for the preparation and revision of the capability list, in the maintenance procedure manual, that is acceptable to the SACAA. The procedures should specify what information is to be furnished on the list along with instructions on how the AMO intends to ensure compliance with the SACAR's with regards to

the availability of qualified/trained personnel, current manufacturer's technical data, facilities, tools, equipment and test apparatus necessary to assure completion of the work. Also the maintenance procedure manual must address the following:

1. The capability list or form should list each component by manufacturer or vendor, model, part name, Part number, ATA code, and SACAA rating and model aircraft.
2. MOP procedures for keeping the capability list current
3. MOP procedures for adding components/parts to the list to include:
4. Shop person authorised to update the component /parts list.
5. Company person authorised to approve revision of the list.
6. Availability of current applicable manufacturer technical data or other SACAA approved data.
7. Trained and qualified personnel.
8. Appropriate facilities.
9. Required equipment or tools.
10. MOP procedures for the disposition and retention of all forms.

The capability list itself should have provisions for:

- i. The company name.
- ii. The company division/department/shop.
- iii. The company document number.
- iv. The revision number on each page.
- v. Method of identifying each revision on each revised page.
- vi. Page number on each page.
- vii. A list of effective pages.
- viii. A record of revision page.
- ix. A forward or introductory page.
- x. Tables of contents to identify each section.

If the list is referenced in the company's SACAA approved Specific Operating Provisions, procedures for review and acceptance by the SACAA. If the capability list is a separate document, it should have provisions for control of revisions and distribution.

- C. The company must also develop a standard for use to assure or certify that all the requirements of SACAR Part 21 are complied with before submitting additions to the SACAA for acceptance, as an amendment, to the existing AMO capability list. This form should contain at least the following:

1. There should be a standardised company format for each workshop to complete, to revise the list, containing at least the following information:

- (a) Part number
- (b) Description
- (c) Manufacturer/Vendor
- (d) Company capability which may include:
  - (i) Overhaul
  - (ii) Repair
  - (iii) Inspection
  - (iv) Testing
  - (v) Calibration
- (e) Workshop responsible
- (f) ATA code
- (g) Adequate facility
- (h) Required tools/equipment
- (i) Approved test equipment
- (j) Approved technical data
- (k) Trained and qualified personnel
- (l) Miscellaneous information
- (m) SACAA acceptance - if components to be included on SACAA acceptable capability list.
- (n) Provisions for signature of responsible shop personnel submitting the amendment to the capability list and the date.
- (o) Provisions for signature of company person authorising approval of the amendment and the date.
- (p) The capability form on the following page of this Guidance Material may be used or each AMO may develop their own equivalent form or list via the computer, as long as it fulfils all the requirements of this Guidance Material.

**Note:** The capability list(s) shall be available in the facility for inspection by the public and the Authority. **Note:** The capability list(s) and self-evaluation(s) shall be retained for two years from the date accepted by the accountable Manager.

## Section 4 - Quality Management System

### GENERAL

Pursuant to CAR Part 145.02.2 an AMO certificate holder must establish and maintain a program to ensure that the maintenance

system complies and continues to comply with the regulations. A good quality system monitors procedures to ensure good quality maintenance practices, airworthy aircraft, and aeronautical products.

**Note:** It is not intended that this program is based upon a system of end product inspection, but rather upon periodic verifications of all aspects of the systems and practices used in the performance of maintenance, to ensure compliance with regulations and approved company procedures. The program should provide an unbiased picture of the AMO's performance, to verify that activities and results comply with the Maintenance Procedures Manual and confirm that the MOP and the systems and procedures described within remain effective and are achieving the AMO's objective.

A. The program must:

1. Be under the sole control of either the person responsible for quality management, or a person to whom, pursuant to CAR Part 145.02.2, the management function for the program has been assigned;
2. As a minimum, cover all functions defined within the approved manual;
3. Include all elements necessary to confirm that the AMO is in compliance with the applicable regulations and the MOP;
4. Ensure that all referenced procedures remain applicable and effective;
5. Be responsive to any changes within the AMO that could affect the MOP and/or the AMO certificate ratings, and it must address the need for MOP amendments resulting from such changes. The MOP must be reviewed periodically to ensure compliance with current regulations.
6. Employ audit checklists to identify all functions controlled by the MOP. Having regard to the complexity of the AMO's activities, checklists must be sufficiently detailed to ensure that all maintenance functions are addressed. Specifically, the program must include the following elements:
  - (a) An initial internal audit, using the audit checklists that cover all aspects of the AMO's technical activities, within 12 months of the date on which the certificate is issued. And further audits should be conducted at least once a year for each aircraft type maintained.
  - (b) A recurring cycle of further internal audits, conducted at intervals established in the approved MOP;
  - (c) Records of findings of compliance and non-compliance resulting from the audits required by (a) and (b);
  - (d) Procedures to ensure that the findings of the audits are communicated to the person appointed as Quality Assurance Manager and made available to the accountable Manager;
  - (e) Where appropriate, immediate and long term actions to correct the root cause of each non-compliance noted;
  - (f) Follow up procedures, to ensure that necessary corrective actions (both immediate and long term) instituted by the AMO are effective; and
  - (g) A record keeping system to ensure that details of audit findings, corrective actions, and follow up inspections are recorded, and that the records are retained for two complete cycles.

B. The audits required by 6, (a) and (b) may be conducted on a progressive or segmented basis, provided that the entire

organisation system is verified within the applicable interval. Auditors should not have any day-to-day involvement in the area of maintenance activity that is to be audited. An organisation whose structure and size does not justify the establishment of full-time auditors may undertake the use of part-time auditors from within its own organisation or from an external source. In all cases, the organisation should develop suitable procedures to ensure the persons directly responsible for the activities to be audited are not selected as an auditor or are part of the auditing team.

- C. Functions related to quality assurance may be performed by persons within the AMO or by external agents. Personnel may be assigned responsibilities for other duties, in addition to those related to the program, provided that the quality assurance responsibilities take precedence over all other responsibilities.
- D. Quality Control (QC) is an element critical to a fully functional Quality Management System. The Quality Section of the MOP needs to provide clear guidelines on how the QC function will be deployed by the Organization. It is advisable the QMS Manager also has the QC function report to him/her.

## **Section 5 - MOP Approval**

### **GENERAL**

- A. Before approving the MOP, the AMO's initial training curriculum must be approved (See Chapter 7 of this guidance material)
- B. If the MOP is approved:
  - 1. Place "Approved", with date, office identification, and signature of inspector(s) on the list of effective pages. If more than one inspector is assigned to the approved maintenance organisation (Maintenance & Avionics Inspector) then each person will sign on the list of effective pages, as appropriate.
  - 2. File office copy of manual as follows:
    - (a) If an original manual, file a copy of the entire Maintenance Procedure Manual in the certificate holder/applicant's office file
    - (b) If a revision, remove affected pages, insert revised pages in current manual, and update the manual control system.
    - (c) Return the other copy of the manual to the applicant with a letter, if applicable
- C. If the MOP must be rejected:
  - 1. Return all copies to the applicant with letter explaining discrepancies,
  - 2. Explain to applicant that the manual must be corrected and resubmitted in order to proceed with the certification or revision process

- D. Document. File all supporting paperwork in the certificate holder/applicant's office file.

## CHAPTER 7 · TRAINING PROGRAMME APPROVAL PROCESS

### SECTION 1 - GENERAL

- A. A maintenance organisation must establish an initial and recurrent training program for maintenance personnel and certifying staff. Maintenance personnel and certifying staff shall meet the qualification requirements and receive initial and continuation training to their assigned tasks and responsibilities. The training program established by the AMO shall include training knowledge and skills related to human performance, including co-ordination with other maintenance personnel and flight crew as appropriate.
- B. The AMO shall establish the curriculum and standards for training, as well as the pre-qualification standards for the personnel that will attend the training. The Pre-qualifications standards are intended to insure that the trainee has a reasonable chance of successfully completing any of the courses required by the AMO.
- C. In assessing the adequacy of the applicant's training programme, the inspector should determine that the scope of maintenance and inspection personnel training is sufficient to ensure performance of maintenance by the applicant, is maintained to a high degree of airworthiness.
- D. The level of training required for each individual is a function:
1. Of his or her experience and the complexity
  2. Of the work he or she is expected (authorised) to perform. In many cases the work may be complex and require the use of specialised equipment. In such cases, required training may range from on- the-job training to formal classroom training and appropriate examinations. In any case, the programme should provide sufficient training for each individual to competently perform the work authorised.
- E. The size and scope of the applicant's proposed operation have no bearing on the need for an effective training programme. All organisations need such a programme; however, a small organisation should not be expected to duplicate all of the facilities provided by a large operator. Training of the certifying staff shall be performed by the AMO or by an institute selected by the AMO. In either case, the AMO shall establish the curriculum and standards for training, as well as pre-qualification standards for the personnel intended for training. Pre-qualification standards are intended to ensure that the trainee has a reasonable chance of successfully completing any course.
- F. Curriculum components. An acceptable curriculum will consist of at least the following elements:
1. Subjects, appropriate to ratings requested



2. Course content, appropriate to ratings requested
  3. Objective testing and grading criteria
  4. Classroom or theory, appropriate to ratings requested
  5. Total number of hours required for successful completion
  6. A schedule of required tests, which indicates the sequence of examinations for each subject in the curriculum
  7. The order of instruction for each subject element.
- G. The training programme shall include details of the number of personnel who will receive initial training to qualify personnel to become certifying staff personnel over specified time periods. If there is any change to the curriculum it will have to be approved by the SACAA Inspector, in writing.
- H. Following the satisfactory completion of the inspections described in this chapter and the required correction of any deficiencies by the applicant, the SACAA inspector should submit his recommendations by letter or memo to the Project Manager (PM) as to the applicant's ability, in respect of maintenance, to carry out the proposed operation.

## SECTION 2 - TRAINING PROGRAMME APPROVAL PROCESS

### GENERAL

- A. Training curriculum approval follows the five phase general process for approval or acceptance described in this model directive. The basic steps of this process must be followed. Each phase, however, may be adjusted to accommodate existing circumstances. Depending on the complexity of the organisation and the availability of SACAA resources, the approval/acceptance process may be accomplished in only a few days, or the process may last many months. The approval/acceptance process applies to each organisation requesting approval of a new curriculum or a revision to a currently approved curriculum. Inherent in the approval process is the SACM's responsibility to deny approval of any training which does not meet regulatory requirements or which has been found deficient. Training curricula, which have been granted approval and later found either to be in conflict with regulatory requirements or to be ineffective, must be appropriately modified by the organisation, or SACAA approval must be withdrawn. This guidance material establishes procedures for granting approval or withdrawing approval of all or part of a training curriculum.
- B. The training approval process discussed in this guidance material applies only to applicants for an Approved Maintenance Organisation Certificate. CAR Part 145.02.4. (2) States that maintenance personnel and certifying staff shall have training and recurrent training. Allows that training may be performed by an outside agency. If this option is used, the AMO establishes the curriculum and standards for training.

### INITIATING THE APPROVAL PROCESS- PHASE ONE.

The training approval process can be initiated by either the AMO or the SACAA as follows:

1. AMO Initiated. The organisation informs the SACAA that it is planning to establish a new training curriculum or to change

an existing curriculum

2. SACAA Initiated. The SACAA informs an organisation that revisions to its training program are required based on recently acquired information relative to training techniques, aviation technology, operator performance, or regulatory changes.

When a proposal is initiated by the AMO, one of the first steps the SACAA inspector should take is to obtain the following basic information:

3. Type of equipment
4. Proposed training schedules
5. Proposed contract training, if any
6. Facilities to be used

### **SACAA INVOLVEMENT IN PHASE ONE.**

- A. Early in the process, the SACAA and the AMO should establish, through discussion, a common understanding of both the regulatory training requirements and the direction and guidance provided in this guidance material. The SACAA inspector and the AMO must examine the entire operation to ensure that any training necessitated by authorisations, or limitations, such as those in the specific operating provisions, deviations, is included in the organisation's training curricula. The training program is the area most affected by operational changes. The Inspector should review all general requirements in the CAR's and in this guidance material that apply to the proposed operation.
- B. The Inspector should be aware of changes to the information initially provided by the organisation. The Inspector should discuss with the AMO the sequence and timing of events, which occur in the development, and the granting of initial and final approval of a training curriculum. If the AMO's proposal involves complex operations, such as ceramic coating or composite repair, the inspector must consult appropriate sections of this guidance material and other relevant documents and be prepared to advise the AMO during this phase. In such a case, the inspector should determine whether assistance from a SACAA specialist is needed.
- C. A SACAA inspector should be prepared to provide advice to an AMO during training curriculum development. During phase one; the operator must be informed of the procedure for requesting initial approval and of the types of additional supporting information that the inspector will require the AMO to submit. An inspector should be prepared to provide guidance to the AMO on the following:
  1. The general formats and content of curricula, curriculum segments and training modules.
  2. Courseware
  3. Facilities
  4. Qualifications of instructor personnel

5. Other areas of the organisation's proposed training program

D. Early SACAA involvement is also important for the following reasons:

1. SACAA advice and guidance during development of training may provide a useful service to the organisation. This advice may save the AMO and the SACAA from unnecessary use of resources. It may also prevent the AMO from submitting a training curriculum proposal that would not be approved/accepted by the SACAA.
2. The inspector can become familiar with the material the AMO intends to submit. This facilitates review of the proposal before the granting of initial approval.
3. The inspector can begin planning long range needs, such as arranging for the utilisation of a SACAA specialist to assist in the evaluation of the program's overall effectiveness.

*Note: Early SACAA inspector involvement in the development of training programs is appropriate. A SACAA inspector must act in an advisory capacity only. The inspector must avoid active participation in the actual training program development. The organisation is responsible for the development of its own training program. The SACAA inspector must not assume that responsibility.*

## **REQUEST FOR INITIAL APPROVAL - PHASE TWO.**

- A. Phase two begins when the AMO submits its training curriculum in writing, for initial approval, to the SACAA. The AMO should submit to the SACAA an outline of each curriculum segment and any additional relevant supporting information requested by the SACAA inspector. These outlines, any additional supporting information, and a letter must be submitted to the SACAA. This letter should request SACAA approval of the training curriculum. Two copies of each curriculum should be forwarded along with the letter of request to the SACAA. The curriculum may be a section of the MOP.
- B. Each AMO must submit its own specific curriculum segment outlines appropriate for the ratings requested. These outlines may differ from one AMO to another and from one category of training to another in terms of format, detail, and presentation. Each curriculum should be easy to revise and should contain a method for controlling revisions, such as a revision numbering system, if not part of the MOP.
- C. Each curriculum outline must include the following information:
  1. AMO Name
  2. Title of curriculum including the category of training, such as indoctrination, or recurrent.
  3. Consecutive page numbers
  4. Page revision control dates and revision numbers

D. Each curriculum must also include the following items, as appropriate:

1. Prerequisites prescribed by the CARs or required by the operator for enrolment in the curriculum
2. Statements of objectives of the entire curriculum and a statement of the objective of each curriculum segment
3. A list of each training device, if required
4. An outline of each training module within each curriculum segment (Each module should contain sufficient detail to ensure that the main features of the principal elements or events will be addressed during instruction.)
5. Training hours will be applied to each curriculum segment and the total curriculum.
6. The checking and qualification modules of the qualification segment used to determine successful course completion.

## **ADDITIONAL RELEVANT SUPPORTING INFORMATION - PHASE TWO**

When applying for an Approved Maintenance Organisation Certificate, an AMO must submit any additional relevant supporting information requested by the SACAA inspector as supported by CAR Part 145.02.4 (2).

This additional information is necessary for determining whether the proposed training program is feasible and adequately supported. It is information, which would be difficult to include in a curriculum outline format. The type and amount of supporting information will vary depending on the type of training. The inspector must determine the appropriate types of supporting information to be required.

This should be limited to information used for determining the proposed training programme's acceptability. The following list of types of relevant supporting information is not all-inclusive, but includes information that is typical.

1. A description of facilities is appropriate if the inspector is unfamiliar with the facilities or if the facilities are not readily available for examination.
2. A list of instructors and their qualifications may be requested. This information is particularly important if the operator intends to use contract instructors.
3. A detailed description of each training device is appropriate when the training device is not readily available for the inspector's examination.
4. A detailed description of minimum student qualifications and enrolment prerequisites is appropriate when such prerequisites are not described in detail in the curriculum. Examples of these prerequisites may need to be detailed as supporting information may include, previous training programs, experience with other AMO's and recency of experience. This description may be useful to the inspector when determining whether the proposed amount of detail outlined in training modules and proposed training hours are adequate.
5. Copies of training forms and records to be used for recording student progress and the completion of training may be required. This ensures the organisation has planned for the CAR record keeping requirement. This type of supporting

information shall be required of applicants for an AMO. It may also be required of an organisation with any significant revision to existing training programs. These forms, records, or computer transmittal worksheets must be designed so that attendance and course completion information is recorded and retrievable for verifying regulatory compliance.

6. Supporting information may include samples of courseware, such as training modules/lesson plans and instructor guides. Description of other types of courseware, such as home study, computer based instruction, should be in enough detail to provide an understanding of how the training will be administered and of the proposed instructional delivery method. This information should describe the instructor/student interaction and indicate methods for measuring student learning.

## **INITIAL REVIEW OF REQUESTS FOR APPROVAL - PHASE TWO**

In phase two the inspector must review the submitted training curriculum and supporting information for completeness, general content, and overall quality. A detailed examination of the documents is not required during phase two.

If after initial review, the submission appears to be complete and of acceptable quality or if the deficiencies are immediately brought to the AMO's attention and can be quickly resolved, the inspector may begin the phase three in-depth review. If the submission is determined to be incomplete or obviously unacceptable, the approval process is terminated and the inspector must immediately return the documents (preferably within 5 working days) with a written explanation of the deficiencies. The documents must be immediately returned, so the operator will not erroneously assume the inspector is continuing the process to the next phase. The approval process can be resumed when the revised training curriculum or curriculum segment is resubmitted.

## **TRAINING CURRICULA SUBMITTED WITH APPROVED MAINTENANCE ORGANISATION CERTIFICATE APPLICATIONS**

An applicant for a certificate in the early stages of certification may be unable to provide all information required for its training program. For example, the applicant may not yet know what training facilities or devices it intends to use. The lack of such information in the formal application does not necessarily indicate that the training curriculum attachment be returned. There should be an understanding between the applicant and the Project Manager (PM) that such parts are missing. The PM may initiate the phase three in-depth reviews without this type of information. Initial approval, however, of a curriculum segment must be withheld until all parts pertinent to the curriculum segment have been examined. For example, it may be appropriate to initially approve a training curriculum segment even though the entire program has not been evaluated and approved. However, effective evaluation of training curricula can be hampered when excessive number of incomplete segments is permitted. The PM shall either delay initial approval of training curricula or return them to the applicant when excessive number of incomplete curriculum segments has been submitted with the formal application.

## **IN-DEPTH REVIEW OF SUBMITTED CURRICULA- PHASE THREE**

Phase three is initiated when the SACAA begins a detailed analysis and evaluation of a training curriculum or curriculum segment. The purpose of this phase is to determine the acceptability of training curricula for initial approval. This phase ends

either with the initial approval or with the rejection of all or part of the training curriculum. To complete an evaluation in a timely manner the inspector may need to involve other SACAA personnel early in this phase. Certain specialists or offices may be required to participate in the approval process as follows:

- i. The security inspector (SI) should be involved in security and hazardous materials training issues if required.
- ii. Various aviation safety inspector specialists should be involved when appropriate.

*For example, non-destructive testing (NDI) specialists should be involved with evaluating special NDI Procedures.*

- iii. The inspector's line manager and certain department personnel may need to be involved with locating and directing additional SACAA resources to accomplish the approval process.
- iv. SACAA may be requested to provide assistance with obtaining training quotas for selected inspectors or with obtaining information concerning exemptions.

Before granting initial approval for a specific curriculum or curriculum segment, the inspector must ensure that the following evaluations are accomplished:

1. A side-by-side examination of the curriculum outline with the appropriate regulations and with the direction provided in this model directive must be performed. This examination is to ensure that training will be given in at least the required subjects. It should also ensure that appropriate training would be given on safe operating practices.
2. An examination of the courseware developed or being developed by the operator must be performed. This review should include a sampling of available courseware such as training modules and lesson plans, audio-visual programs, procedure documents, and student handouts. The courseware must be consistent with each curriculum outline. From this review, the inspector should be able to determine whether the operator is capable of developing and producing effective training courseware.
3. The training hours specified in each curriculum segment outline must be evaluated.

An inspector should not attempt to measure the quality or sufficiency of training by the number of training hours alone. This can only be determined by direct observation of training and testing (or checking) in progress. The specified training hours must be realistic in terms of the amount of time it will take to accomplish the training outlined in the curriculum segment so as to achieve the stated training objectives. During the examination of courseware, an inspector should note the times allotted by the organisation for each training module. These times should be realistic in terms of the complexity of the individual training modules. The number of training hours for any particular curriculum segment depends upon many factors. Some of the primary factors are as follows:

(a) Regulatory requirements

- (b) Complexity of the specific aircraft or component
- (c) Complexity of the type of operation involved
- (d) Amount of detail that needs to be covered
- (e) The experience and knowledge level of the students
- (f) Efficiency and sophistication of the operator's entire training program (including items such as instructor proficiency, training aids, facilities, courseware and the organisation's experience with the aircraft.)

If after completing these evaluations, the inspector determines that the curriculum or curriculum segment is satisfactory and adequately supported, and that the training hours are realistic, initial approval should be granted. Sometimes a portion of the submittal may appear to be unsatisfactory. However, if that portion is dependent upon another undeveloped portion or another unsatisfactory portion, initial approval must be withheld. For example, the initial training on ultrasonic equipment set-up segment is satisfactory but related training modules within the initial equipment operation training curriculum segment are unsatisfactory. In such a case, it may be inappropriate to grant approval to the initial equipment training curriculum segment until the operation training curriculum segment is determined to be satisfactory.

During phase three of the approval process, the inspector must establish priorities to ensure that, if appropriate, the granting of initial approval is not unnecessarily delayed. These priorities should assure that deficiencies are resolved so that initial approval can be granted before the organisation's planned starting date for training.

#### **EXPIRATION DATES FOR INITIAL APPROVALS.**

When the inspector determines that a training curriculum or curriculum segment should be initially approved, the inspector must also determine an appropriate expiration date for the initial approval. **The expiration date is important throughout phase four** of the approval process.

The initial approval expiration date provides an incentive to the AMO for refining all aspects of the program to assure that this requirement is met. The expiration date also provides the inspector with a time frame to plan evaluation activities for determining the effectiveness of the training. The expiration date assigned to an initially approved training curriculum must not exceed 24 months from the date of initial approval.

The inspector may reduce the expiration date of initial approval, if it is apparent that a 24-month time frame will unnecessarily delay final approval. The inspector should be aware that shortening the initial approval expiration date would commit him/her to completing the final approval phase within a shorter time period. The inspector may grant final approval any time before the expiration date.

Except when unforeseen circumstances preclude an adequate evaluation of training effectiveness, an extension to the initial approval expiration date should not be permitted. A new expiration date, however, may be established for a curriculum segment when there are significant revisions to an initially approved curriculum segment.

## METHOD OF GRANTING INITIAL APPROVAL

- E. Initial approval is granted by letter. Sample letters granting initial approval or denying approval are included at the end of this paragraph (figures 1 and 2). The initial approval letter must include at least the following:
1. Specific identification of the curricula and/or curriculum segments initially approved, including page numbers and revision control dates.
  2. A statement that initial approval is granted, including the effective and expiration dates.
  3. Any specific conditions affecting the initial approval, if applicable.
  4. A request for advance notice of training schedules so that training may be evaluated.
  5. If the inspector authorises a reduction in the programmed hours, a statement concerning the basis for the reduction in requirements.
- F. An initial letter serves as the primary record of curriculum or curriculum segment pages that are currently effective. In the past, initial approval was stamped on each of a curriculum. If this method is no longer necessary, the inspector and each organisation may agree to use the method to account for revisions to training documents. If this method is used, the stamp must clearly indicate initial approval and the expiration date. Other acceptable methods include a list of effective curriculum or curriculum segment pages or pages with a pre-printed signature and date blocks.
- G. The original pages of the curriculum or curriculum segment, shall be returned to the operator with the transmittal letter. These documents should be retained by the organisation as an official record. A copy of the training curriculum or curriculum segment, with a copy of the transmittal letter granting initial approval attached, shall be maintained on file in the SACAA office by the inspector during the period that the initial approval is valid. The inspector shall also maintain on file with the curriculum all additional relevant supporting information.

### FIGURE 1

### LETTER OF INITIAL APPROVAL



Reference: J44/XXXX

Tel: +2711 545 1000

Enquiries: PM Name

Fax: +2711 545 1013

E-mail: PM@caa.co.za

00/00/00

Mr. G.G. Nkosi  
Accountable Manager  
International Maintenance, LTD  
Lanseria  
1611

Dear Mr. Nkosi,

Effective \_\_\_\_\_, initial approval is granted to International Maintenance Ltd.'s training Curriculum, pages 1 through 10 dated 11 March 0000. This training curriculum is initially approved in accordance with the provisions of SAGAR Part 145.01.11 of the Civil Aviation Regulations (CARs), effective February 02, 2007.

Initial approval of this training curriculum shall remain in effect until \_\_\_\_\_, (no more than 24 months), or upon granting of final approval, whichever occurs first. In accordance with SAGAR Part 145. International Maintenance LTD is requested to notify this office at least 24 hours in advance of any training to be conducted under this program so that the SACAA may evaluate the effectiveness of the training.

Sincerely,

Project Manager

## FIGURE 2

### LETTER OF DENIAL OF INITIAL APPROVAL

Reference: J44/XXXX

Enquiries: PM Name

00/00/00

Mr. G.G. Nkosi  
Accountable Manager  
International Maintenance, LTD  
Lanseria  
1611

Tel: +2711 545 1000

Fax: +2711 545 1013

E-mail: PM@caa.co.za

Dear Mr. Nkosi,

This letter is in response to your request of Revision 2 to International Maintenance LTD's training of curriculum, dated February 2, 2007. Your request for initial approval is denied for the following reason(s):

Your initial and recurrent training does not coincide with your list of maintenance activities listed on your application.

Sincerely,

Project Manager

### EVALUATING INITIALLY APPROVED TRAINING CURRICULA- PHASE FOUR

Phase four begins when the organisation starts training under the initially approved curriculum during the Demonstration and Inspection Phase. This phase should provide the AMO with adequate time to test the program and the flexibility to adjust the program during SACAA evaluation. The inspector must require an AMO to provide ongoing schedules of all training and checking to be accomplished under an initially approved training curriculum. The inspector must closely monitor training conducted under initial approval. Whenever possible, the first session of training conducted under initial approval should be monitored by the inspector or a qualified maintenance/avionics inspector. A SACM inspector does not need to observe every training session. A sufficient sampling of the training sessions, however, should be observed as a basis for a realistic evaluation. Inspectors qualified in the type of operation, and other individuals knowledgeable of the curriculum subject matter, should assist in evaluating the training. Often adjustments can be made by changing courseware and instructional delivery without (or with only minor) revisions to the initially approved curriculum. Conversely, it may be necessary for the organisation to substantially change the curriculum that may require another initial approval action by the inspector before the changes can be put into effect.

As a check on the effectiveness of the applicant's training programme, the inspector should examine, on a random basis, the qualifications of the inspection and maintenance staff to determine recent training received and their ability to perform

their authorised work processes in respect of inspections and overhaul, repair and alterations appropriate to their ratings.

Sometimes proposed revisions may be transmitted to the inspector just before the initial approval expiration date. If the change is significant, the inspector may need to establish a different expiration date for the curriculum segment, or for the revised portions, to allow adequate time for a proper evaluation.

An inspection of training facilities, training devices, and instructional aids must be performed if the inspector is not familiar with the operator's training program capabilities.

During phase four, the organisation must demonstrate the ability to effectively train maintenance/avionics inspectors. Each deficiency identified during the evaluation of training conducted under an initially approved curriculum must be discussed with the operator. If the deficiencies are significant, they must be documented and kept on file. In most cases, when the cause of a deficiency has been accurately identified, the organisation will make necessary changes to correct the deficiency to obtain final approval. Each significant deficiency identified must be immediately corrected. If an organisation does not take corrective action, the inspector shall advise the AMO in writing that initial approval is withdrawn.

#### **ELEMENTS AVAILABLE FOR EVALUATING TRAINING-PHASE FOUR.**

The inspector must develop a plan for a systematically evaluating training given under the initially approved curriculum. This plan should remain in effect throughout the initial approved training curriculum. There are four elements that can be evaluated when assessing the overall effectiveness of training programs. These four elements are:

1. Curriculum segment outlines
2. Courseware
3. Instructional delivery methods and training environment
4. Testing and checking

Before evaluating a training program, an inspector must become familiar with the contents of the curricula or curriculum segments to be evaluated. This preparation is essential if an inspector is to determine whether an AMO has developed an effective course of instruction from its initially approved training curriculum.

Direct examination of courseware includes reviewing materials such as training modules, lesson plans and workbooks. The inspector must determine whether the courseware is consistent with the curriculum or curriculum segment and that it has been organised to facilitate effective instructional delivery. Courseware is usually the training program element that is most adaptable to revision or refinement. Inspectors must review at least a sampling of the courseware.

Direct observation of instructional delivery includes surveillance of training methods, such as instructor lectures, computer

based instruction presentations, and hands-on demonstration. Effective learning can only occur when an instructor is organised, prepared, and properly uses the courseware and various training aids. The inspector must determine that the instructional delivery is consistent with the courseware. For example, the inspector should note whether the instructor teaches the topics specified in the training module lesson plan. Training aids and devices should function as intended during the instructional delivery. In addition, during training, the inspector should be sensitive to the type of questions being asked by students and should identify the reasons for any excessive repetition. These conditions may indicate ineffective instructional delivery or courseware. The inspector must also determine if the instructional environment is conducive to learning. Distractions, which adversely affect instructional delivery, such as excessive temperatures, extraneous noises, poor lighting, cramped classrooms or workspaces, are deficiencies because they interfere with learning.

Direct observation of testing and checking is an effective method for determining whether learning has occurred. Examining the results of tests, such as oral or written tests provides a quantifiable method for measuring effectiveness. The inspector must examine and determine the causal factors of significant failure trends.

Direct observation of training and checking in progress is an effective method of evaluating training. Sometimes the opportunity for direct observation, however, will be limited. In such cases, if the AMO is using an already established training facility elsewhere, the inspector may rely more on his/her evaluation of other sources of information, such as reports of surveillance and investigation. A result of inspection reports, enforcement actions, and other indications of training effectiveness and other relevant information about the organisation's performance. The inspector must establish methods to evaluate these sources of information for trends that may develop while training is being conducted under initial approval. For example, repeated reports of deficiencies may be traceable to a lack of specific training or ineffective training. Such information may provide indications that revisions or refinements are needed for a curriculum segment and/or training module.

- (a) Curriculum Segment Outlines - Curriculum segment outlines contain the specific training modules and the amount of time allocated for the curriculum segment. The modules must be consistent with regulatory requirements and safe operating practices. This element requires direct examination.
- (b) Courseware - Courseware converts curriculum outline information into usable instructional material. Courseware must be consistent with the curriculum outline and be organized to permit effective instructional delivery. It is readily adaptable to adjustments and refinement by the AMO. This element usually requires direct examination.
- (c) Instructional Delivery Methods And Training Environment - Instructional delivery methods are used to convey information to the student. Effective learning is maximized if the instructional delivery adheres to and properly uses the courseware. The training environment should be conducive to effective learning. This element requires direct observation.
- (d) Testing And Checking - Testing and checking is a method for determining whether learning has occurred. Testing and checking standards are used to determine that a desired level of knowledge and skill has been acquired. Testing and checking also measures the effectiveness of courseware and instructional delivery. This element requires direct observation.

## METHOD FOR GRANTING FINAL APPROVAL- PHASE FIVE.

This phase involves the granting of final approval of an operator's training curriculum. Based on the results of the evaluation, the inspector must determine whether to grant or deny final approval of a training curriculum. This determination must be made before the expiration date of the initial approval. If the inspector decides that final approval should be granted the following procedures apply: Programs that contain a List of Effective Pages. Final approval of the training curriculum can be granted and documented by the inspector on the List of Effective Pages. This means that the SACAA has given final approval of every page of the operator's training curriculum, as listed on that page, but only one SACAA approval block must be completed and signed.

1. The stamped page that documents final approval of the training curriculum and/or curriculum segment shall be stamped for approval, dated, and signed by the inspector. The approval stamp that appears on the page should be a facsimile of the stamp that appears in this paragraph.
2. The original curriculum and/or curriculum segment must contain the one page that documents the SACAA approval on the List of Effective Pages. The curriculum and/or curriculum segment must be transmitted to the operator with an approval letter signed by the inspector in accordance with this model directive.
3. Programs that do not contain a List of Effective Pages the original and a copy of each page of the training curriculum and/or curriculum segment shall be stamped for approval dated, and signed by the inspector. The approval stamp shall appear on each page and have a facsimile of the following stamp:

|                             |  |
|-----------------------------|--|
| <b>SACAA Final Approval</b> |  |
| Name of Inspector           |  |
| Signature                   |  |
| Effective Date              |  |

4. The original stamped curriculum or curriculum segment must be transmitted to the organisation with an approval letter signed by the inspector. This letter must specifically identify the curriculum or curriculum segment, containing a statement that final approval is granted, and provides the effective date of approval. This letter must also state that final approval shall remain in effect until otherwise notified by the SACAA that a revision is necessary in the interest of safety. If the inspector is authorising a reduction in the programmed hours specified by the regulations, the letter must contain a statement the basis for reduction. A copy of the stamped curriculum or curriculum segment, and a copy of the letter must be kept on file in the SACAA office.

## WITHDRAWING APPROVAL OF TRAINING CURRICULA

Before withdrawing approval of an operator's curriculum or curriculum segment, the inspector shall make reasonable efforts to convince the AMO to make the necessary revisions. It is important to understand that withdrawing approval could be

detrimental to the AMO's business. The AMO's ability to continue to hold a certificate may be in question if a new curriculum is not submitted for initial approval within a reasonable period of time. A decision to withdraw approval must be based on sound judgment and justifiable safety reasons. When sufficient reasons are established, it is mandatory for the inspector to take immediate action to remove the SACAA approval from an ineffective or non-compliant training curriculum. When approval is withdrawn, the inspector must ensure that the operator clearly understands that any further training conducted under an unapproved curriculum is contrary to SACAR requirements. Enforcement action must be taken if any company employee who received any further training is used in maintenance conducted as an AMO. The three methods for withdrawing approval of a training curriculum are as follows:

- A. Allowing an initially approved training curriculum to expire without granting final approval.
- B. Withdrawing approval of an initially approved curriculum before the expiration date.
- C. Withdrawing approval of a training curriculum, which has already received final approval, in accordance with the SACARs and this model directive.

## **EXPIRED TRAINING CURRICULA**

A training curriculum granted initial approval has an expiration date. Usually, this date shall not be later than 24 months after the initial approval date. If the inspector does not grant final approval before the expiration date, training under that curriculum must terminate as of that date. Therefore the inspector shall not allow an initially approved curriculum to expire due to the SACAA's inability to administratively grant final approval. Final approval may not be granted to an AMO's training curriculum for several reasons.

One reason, for example, may be the operator's inability to achieve an acceptable level of training effectiveness during phase four of the approval process. Another example of a reason for not granting final approval is the discontinued use of the initially approved curriculum.

When the inspector decides not to grant final approval before the expiration date, he/she must notify the operator of this decision in writing, at least 30 days before the expiration date of the initially approved curriculum. An operator not so notified may mistakenly assume that the initial approval will continue in effect until receipt of notification of either final approval or termination. The notification letter should contain the reasons for allowing the curriculum to expire and should state that any further training under the expired curriculum will not be in compliance with regulatory requirements. An inspector who fails to provide this 30-day notification must establish a new expiration date so appropriate notification can be given to the operator.

## **CHAPTER 8 DEMONSTRATION AND INSPECTION PHASE**

### **GENERAL**

- A. In this phase the certification team determines that the applicant's proposed procedures and programs for training and directing personnel in the performance of their duties are effective. In this phase the emphasis is on compliance with the regulations, company manual procedures, and safe operating practices. The certification team inspects the

applicant's housing, facilities, equipment, and materials. As previously mentioned, certain segments of the document evaluation phase often occur simultaneously with certain events in the demonstration and inspection phase. For example, inspectors have evaluated and accepted the training program (document evaluation phase) at the same time they have started observing the applicant's management and certifying staff actual training at the applicant's facilities (demonstration and inspection phase). Guidance for observing training is outlined in Chapter 7, Paragraph XI.

1. Through observation, monitoring, and other forms of on site evaluation, the certification team will be exposed to many types of activities.
2. Regulatory Compliance. During the evaluation, the certification team shall determine the applicant's ability to comply with all applicable sections of the regulations and the approved maintenance procedure manual.
3. 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.
4. 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.
5. Unsatisfactory Demonstration. If a particular demonstration of compliance is unsatisfactory, the certification team must discuss with the applicant how to correct the problem. Re-inspection should be scheduled as necessary. The certification team may want to follow up with a letter indicating the nature of the failure and its corrective action. Deficiencies will have to be corrected before the process can continue.
6. Satisfactory Demonstration. If the applicant's demonstrations and inspections are successful, the certification team will record on appropriate documents and ensure that the documents are part of the certification file.

## **Procedures**

### Co-ordinate and schedule an inspection and demonstrations.

Co-ordination is required between the MI, certification team members, and the applicant.

### Request Demonstrations.

The certification 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 is part of the certification file.

### Perform a housing and facility inspection.

During the demonstration and inspection phase, inspect the maintenance organisation facilities to ensure that the work to be accomplished is protected from weather elements, dust, and heat. Ensure that workers are protected to the point that the

quality of their work to be performed will not be impaired.

Evaluate the Maintenance Organisation to ensure the following:

1. The number of personnel is sufficient to satisfy the volume and type of work to be performed, as required by SAGAR Part 145.02.4(1)(c).
2. Storage of flammables should meet acceptable industry standards i.e. storage in a fireproof cabinet.
3. Ensure that oxygen, oil, dirty shop towels, welders and battery shops are segregated.
4. Acceptable industry standards shall be followed for the proper protection and storage of materials. Ref. SA-CATS 145 duties and responsibility of management personnel. Hardware and Equipment Storage.
5. Maintenance Records

Use the AMO Job Aid and Schedule of Events to ensure a thorough inspection.

Debrief the Applicant

- A. Debrief the applicant as part of the inspection.
- B. Include both acceptable and unacceptable areas.
- C. Be clear when indicating any area that must be corrected.
- D. Advise the applicant that a formal letter containing a list of discrepancies (if any) will be sent.

Notification of Discrepancies

- A. Inform the applicant in writing of the discrepancies.
- B. Cite the unacceptable procedure, policy, instruction or method and explain how it is inconsistent with the appropriate regulation.
- C. Inform the applicant that the certification approval cannot be granted until the discrepancy is resolved.
- D. Notify the PM.
- E. File Documentation.

If no discrepancies are found

- A. Inform the applicant of the satisfactory results.
- B. Complete required documentation.
- C. Notify the PM.
- D. File documentation.

For guidance on granting or denying final approval of training performed during this phase, see Chapter 7 of the Guidance Material.

**CHAPTER 9 • ISSUING THE APPROVED MAINTENANCE ORGANISATION CERTIFICATE, SOPs, AND COMPLETING THE CERTIFICATION REPORT**

**CERTIFICATION PHASE**



- A. The certificate and approved Specific Operating Provisions are issued to the applicant after all significant unsatisfactory items have been corrected. This action completes the certification process. The applicant shall not be certificated under any circumstance until the Project Manager (PM) has determined that the applicant is fully capable of fulfilling its responsibilities and that the applicant will comply with the South African Civil Aviation Regulations (SACARs) in an appropriate manner.
- B. After certification:
1. The AMO holder is responsible for continued compliance with SACAA regulations, authorisations, limitations, and provisions of its Certificate and SOPs.
  2. The SACAA is responsible for conducting periodic inspections of the AMO holders operations to ensure the AMO holder's continued compliance with the SACAA regulations, authorisations, limitations and provisions of its certificate and SOPs.

#### **PREPARATION OF SOUTH AFRICAN CIVIL AVIATION AUTHORITY (SACAA) CERTIFICATES**

- A. The following information must be imprinted or typed on the appropriate form when the certificate is prepared for issuance:
- a) The Certificate Holder's Name. The certificate holder's full and official name shall be entered directly below the words "This certificate is issued to."
  - b) The Certificate Holder's Address. The physical location address of the certificate holder's principal base of operations shall be entered directly below the certificate holder's name. A post office box address is not acceptable unless it also reflects the physical location of the principal base of operations. The address on the certificate must be a physical location and may or may not be the same as the mailing address.
  - c) The Certification Statement of Authority. The pre-printed certification statement of authority on the Approved Maintenance Organisation Certificate (SACM 145-C-01) shall not be modified.
  - d) The Assigned Certificate Number. The final certificate number will be obtained from the SACAA, and will be imprinted or typed in the space provided on the form.
  - e) 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. A change of name for the applicant/ organisation or a change in the certification statement of authority has the effect of a new certification; 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.

- f) The Signature Block. Approved Maintenance Organisation certificates issued to Approved Maintenance Organisations complying with SAGAR Part 145, shall be signed by the appropriate SACAA.
- g) The Signature, Title, Block. The full title of the person signing the certificate shall be entered in the space provided.

#### **ISSUANCE OF SPECIFIC OPERATING PROVISIONS, CERTIFICATE, AND COMPLETING THE APPLICATION FORM.**

- 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 SOPs must contain:
  - 1. The AMO Certificate Number
  - 2. The class and limited ratings issued in detail, including special approvals and limitations issued.
  - 3. Date issued
  - 4. Delegated authorisations
- B. Before issuance, the applicant and the appropriate inspectors will sign the SOPs. The original certificate and SOPs will then be given to the new certificate holder.
- C. Complete the AMO-Application Form for issuance of certificate and ratings.




#### **CERTIFICATION REPORT**

- A. When the new organisation is certificated, the PM is responsible for assembling a certification report. This report must be signed by the PM and will include the name and title of each team member who assisted in the certification project. The report will be maintained in the permanent file relating to the new AMO during the business life of the AMO. The report shall consist of 5 sections, 1 through 5, as follows:
  - 1. The formal application form.
  - 2. The final Statement of Compliance.
  - 3. A copy of the specific operating provisions issued.
  - 4. A copy of the certificate issued.
  - 5. A summary of major difficulties experienced during the certification process and/or phase and specialty must note any recommendations that may enhance the process. For standardization, the following format for summaries of major difficulties and/or recommendations will be arranged as follows:
    - a) Pre-application Phase (Maintenance and Avionics). Include summaries of difficulties or recommendations by specialty.

- b) Formal Application Phase (Maintenance and Avionics). Include summaries of difficulties or recommendations by specialty.
- c) Document Compliance Phase (Maintenance and Avionics). Include summaries of difficulties or recommendations by specialty.
- d) Demonstration and Inspection Phase (Maintenance and Avionics). Include summaries of difficulties or recommendations by specialty.

#### **CERTIFICATION REPORT RETENTION.**

The certifying office (SACAA) shall retain the original of the certification report as long as the certificate holder remains active.

|   |                              |                      |
|---|------------------------------|----------------------|
| <b>DEVELOPED BY:</b>  |                              |                      |
|    | <b>PATRICK KUNENE</b>        | <b>21 APRIL 2017</b> |
| <b>SIGNATURE OF MANAGER:<br/>AIRWORTHINESS AMO</b>                                  | <b>NAME IN BLOCK LETTERS</b> | <b>DATE</b>          |
| <b>REVIEWED &amp; VALIDATED BY:</b>   |                              |                      |
|   | <b>MDUDUZI SIKHOSANA</b>     | <b>21 APRIL 2017</b> |
| <b>SIGNATURE OF SENIOR<br/>MANAGER: AIRWORTHINESS</b>                               | <b>NAME IN BLOCK LETTERS</b> | <b>DATE</b>          |
| <b>APPROVED BY:</b>   |                              |                      |
|  | <b>SIMON SEGWABE</b>         | <b>21 APRIL 2017</b> |
| <b>SIGNATURE OF EXECUTIVE:<br/>AVIATION SAFETY OPERATIONS</b>                       | <b>NAME IN BLOCK LETTERS</b> | <b>DATE</b>          |