



Advisory Circular:

DEVELOPMENT OF TECHNICAL MANUAL OF PROCEDURES

Subject: GUIDANCE MATERIAL FOR DEVELOPMENT OF TECHNICAL MANUAL OF PROCEDURES

Date: 14 September 2009

1. APPLICABILITY:

1.1. Part 147 of the Civil Aviation Regulations (CAR) of 1997 as amended

2. PURPOSE:

The primary purpose of the Civil Aviation Authority (CAA) approved Manual of Procedures (MOP) is to provide an authoritative source of information considered necessary to show compliance and for safely operating the organisation. This material identifies the information that must be contained in the MOP as required by the Civil Aviation Regulations (CAR) of 1997 as amended Part 147. This document provides guidance as to the form and manner which the contents of the approved MOP shall be constructed. Although mandatory terms such as "shall" or "must" are used in this guidance material (GM), because the GM method of compliance is not mandatory, these terms apply only to applicants who seek to demonstrate compliance by following the specific procedures described in this GM.

3. RELATED CIVIL AVIATION REGULATIONS (CAR)

Part 147 of SACAR state the requirements for manual of procedures. SA Civil Aviation Technical Standard supplements these regulations by stating the information which shall be contained in the manual of procedures. Other information that is necessary for design, operating, or handling of this manual is determined by individual organisations. Additionally, information that may affect MOP contents must be discussed with the SACAA inspector.

4. DEFINITIONS

4.1. **Manual of Procedures (MOP)**

4.2. **Safe Operation.**

For the purposes of this GM, safe operation means operation of the organisation in a manner that is mandatory, or is recommended, for compliance with the requirements.

4.3. **Procedure.**

A procedure is a step-by-step method used to accomplish a specific task.

- i Abnormal: A procedure requiring action, due to failure of a system component, to maintain an acceptable level of safety for continued compliance.
- ii Normal: A procedure associated with systems that are functioning in their usual manner.

4.4. **Revision**

A change to the content of the Manual of Procedures through the deletion, or modification of material

4.5. **Appendices and Supplements**

Additions to the MOP that may or may not supersede existing material

- i. Appendix. An addition to the MOP to cover the optional equipment or specific requirements (Other Authorities; Institutes or Systems etc.).
- ii. Supplement. Information that supersedes or is in addition to the basic MOP resulting from the issuance of a regulations; Aeronautical Information Circulars, or from approved changes to procedures, or information.

4.6. **SACAA-Approval**

Approval by the Commissioner for Civil Aviation.

5. **GENERAL GUIDELINES**

Previously approved MOP may be affected by this TGM. When such manuals are amended, the concepts of this TGM should be applied, if practicable

5.1. **Segregation of Approved and Unapproved Material. (Material Contents of documents)**

CAA-approved information be segregated, identified, and clearly distinguished from each unapproved part of the MOP. Unapproved material should be labeled that it is for guidance information only and must be located in a different section than the approved material. Information that may not be required under the CAR, but is approved by the CAA should be placed in the same section as other approved material. Information that is neither required by the CAR nor approved by the CAA should be labeled as guidance information and placed in a different section than any approved material.

5.1.1. Provisions for approval of and revisions to the MOP are as follows:

- i. Each page of the MOP should bear the notation, a unique date of approval or revision number for that page, the organisation name or appropriate document identification number.
- ii. All MOP, revisions, appendices, and supplements requiring CAA approval must be submitted using approval procedures acceptable to the CAA. A log of currently approved pages in the MOP should be furnished by the applicant in each copy of the manual. A location should be provided on the log for the approval signature and the approval date. Alternatively, a specific approval page can be furnished for the approval signature, the approval date, and the current revision status.
- iii. When revisions are incorporated, a means of indicating those parts of the information that have been changed should be provided. For example, vertical bars placed in the margin of the revised page may be used for this purpose. Each revised page should be identified in the same manner as the original, with the exception of the new date and revision notation, as applicable.
- iv. Appendices and supplements should be incorporated in the MOP in a separate section appropriately identified at the end of the basic manual. Supplements should normally follow appendices. Format, page identification, organization, and other details should be the same as that of the basic manual.
- v. Appendices and supplements may be developed by the organisation, applicant and should be submitted to the CAA for approval.
- vi. It may be necessary to provide a greater amount of descriptive and procedural information in appendices and supplements than that appearing in the basic MOP, if the appendix or supplement is the only source for this information.

6. MANUAL OF PROCEDURES CONTENTS

The MOP should be divided into the following sections, as appropriate for the specific organisation. For purposes of standardization, it is recommended that the sequence of sections and of items within sections follow this outline.

6.1. Introductory Section

The intent of the introductory material is to identify the revision status and control the applicability and content of the Manual. The normal content of this section is as follows:

6.2. **Title Page.** The title page should include the organisation's name, approval number and an appropriate document identification number. Provision should be made for including the approval date of the basic document and the signature, name, and title of the SACAA approving official.

6.3. Log of Revisions

Revision Number	Date Published	Approval Signature
0	12/12/2007	

6.4. Revision highlights, if appropriate.

Chapter	Highlights
1	Change of accountable manager

- 6.5. **List of effective Pages (including all information necessary to determine which pages has been revised or amended).**

Page	Revision	Date	
12	2	12/12/2007	

- 6.6. Compatibility listing of appendices and supplements produced by the organisation.
- 6.7. Compatibility listing of appendices and supplements produced by the organisation.
- 6.8. Table of Contents (alternatively, a Table of Contents for each section may be placed at the beginning of that section).
- 6.9. List of Abbreviations.
- 6.10. **List of definitions**
- 6.11. **Format:** Procedures should be presented in either a narrative or a checklist format, depending upon the intended use of the MOP.
- i. **Narrative.** This format is acceptable if sources of procedures information other than the MOP are intended for use (e.g., Standard and maintenance manual.' Procedures presented in this format should be drafted in a manner from which the needed sequence can be easily established.
 - ii. **Checklist.** This format should be used if the MOP is intended to be used directly by the flight crew for operating procedures.
- 6.12. **Procedures Development:** Prior to initial certification, it is essential to verify that the proposed procedures are technically valid and operationally practicable. It is recognized that such procedures may have had only limited operational exposure at the time of certification and may need to be revised based on service experience.
- 6.13. **Procedures Content:** The content and level of detail for the procedures provided in the MOP should be based on the intended use of the Manual. More information and detail should be provided in MOP that are intended to be the primary source of information than for MOP that are not intended to be used directly by the personnel.

7. MANAGEMENT RESPONSIBILITY

This section general Include all descriptive information necessary to identify the configuration of the organisation. Such information shall include.

7.1. Procedure

A document that specifies as applicable, the purpose and scope of an activity; **what** shall be done and **by whom; when, where, and how** it shall be done; what materials, equipment, and documentation shall be used, and how it shall be controlled.

All procedures have to follow the format in the same light as defined in the above statement.

7.2. Corporate commitment

A statement containing the commitment of the accountable manager and the organisation to comply with the airworthiness requirements as set out in this document and approved by the Commissioner.

This **MANUAL OF PROCEDURE** defines the organisation and procedures upon which the South African Civil Aviation Authority PART 147 approval is based.

These procedures are approved by the undersigned and must be complied with, as applicable, when work/orders are being progressed under the terms of the PART 147 approval.

It is accepted that these procedures do not override the necessity of complying with any new or amended regulation published by the South African Civil Aviation Authority from time to time where these new or amended regulations are in conflict with these procedures.

It is understood that the South African Civil Aviation Authority will approve this organisation whilst the South African Civil Aviation Authority is satisfied that the procedures are being followed and work standards maintained. It is further understood that the South African Civil Aviation Authority reserves the right to suspend or cancel the PART 147 approval of the organisation if the South African Civil Aviation Authority has evidence that procedures are not followed or standards not upheld.

On behalf of **Quote Organisation's Name)**

**SIGNATURE
ACCOUNTABLE
MANAGER**

NAME IN BLOCK LETTERS

DATE RECEIVED

7.3. Management personnel

A list of the key management personnel and their positions.

7.4. Duties and responsibilities of the management personnel

A statement containing the duties and responsibilities of each management position mentioned in (2). For clarity, additional positions may be added. This is for applies to all key management personnel.

7.5. Management organisation chart

The chart must show all line management positions down to supervisory level.



Note: This structure has to show the accountable manager's seniority and QA report directly to the AM.

7.6. Personnel

- ❖ The titles and names of the personnel required by CAR 147.02.4
- ❖ The duties and responsibilities of the personnel mentioned in (a), including matters for which they have responsibility to deal directly with the Commissioner on behalf on the organisation.
- ❖ Details of the procedures required by CAR 147.02.4 regarding the competence of it personnel.

7.7. General description of facilities at each address intended to be approved

- ❖ A description of the facilities and layout referred to in CAR 147.02.5 is required.

7.8. Organisation's intended/approved scope of work

- ❖ A statement of the scope of work being applied for.

7.9. Notification procedure to the Commissioner regarding changes in the organisation's activities/approval/location/personnel.

- ❖ A statement indicating who is responsible for notifying the Commissioner regarding changes, and what changes are subject to notification. **What** shall be done and **by whom; when, where, and how**

7.10. Manual of procedure amendment procedures

- ❖ A statement regarding the responsibility and procedure for amendment of the manual of procedure, as well as the associated documents referred to in the manual of procedure. . **What** shall be done and **by whom; when, where, and how**

8. DESIGN PROCEDURES-THESE ARE THE PROCEDURES USED BY THE ORGANISATIONS IN RELATION WITH THE INTENDED SCOPE OF APPROVAL

8.1. Procedure

A document that specifies as applicable, the purpose and scope of an activity; **what** shall be done and **by whom; when, where, and how** it shall be done; how

All procedures have to follow the format in the same light as defined in the above statement.

8.2. Arrangement with approved design organization

- ❖ A description of, or reference to, the manner in which CAR 147.02.12 will be complied with.

8.3. Initial design assessment.

- ❖ A description or flow chart of the design assessment.

8.4. Acceptance of design and drawings and airworthiness standards and CAR's applicability.

- ❖ A description of, or reference to, a procedure for acceptance of the Design of products, parts or appliances. **What** shall be done and **by whom; when, where, and how**

8.5. Changes to design changes

- ❖ A description of, or reference to, a procedure for the changes in the Design of products, parts or appliances. **What** shall be done and **by whom; when, where, and how.**

8.6. Use of software by personnel

- ❖ A description of, or reference to, a procedure for the methods in which special tools and equipment are used. **What** shall be done and **by whom; when, where, and how**

8.7. Design documentation

- ❖ A description of, or reference to, a procedure for the relevant documentation to be used and instructions for the completion thereof. **What** shall be done and **by whom; when, where, and how**

9. QUALITY CONTROL SYSTEM

9.1. Minimum standards for a quality control system

9.1.1. objectives of the quality control system: –

- ❖ To monitor, and report to management, the level of compliance with the organisation's manual of procedure and airworthiness requirements;
- ❖ To correct any non-compliance identified and to implement actions to prevent the recurrence of such non-compliance; and
- ❖ To present to management for the purpose of review and implementing further corrective or preventive action, quality indicators such as audit reports, accidents, incident occurrences, customer complaints and personnel reports

9.2. THE QUALITY CONTROL SYSTEM –

9.2.1. THESE PROCEDURES ARE USED TO SHOW COMPLIANCE WITH THE QUALITY SYSTEM REQUIREMENTS

- 1) Quality audit of the organisation
- 2) A description of, or reference to, a procedure of the quality audits to be performed on the organisation. .
What shall be done and by whom; when, where, and how
- 3) Quality audit of products, parts or appliances
- 4) A description of, or reference to, a procedure of the quality audits to be done on the products, parts or appliances during Design work. **What shall be done and by whom; when, where, and how**
- 5) Quality audit remedial action
- 6) A description of, or reference to, a procedure of remedial actions to be taken after quality audits. **What shall be done and by whom; when, where, and how**
- 7) Management analyses and overview
- 8) A description of, or reference to, a procedure for bringing to the attention of management quality indicators (such as audit reports, progress on corrective action, accidents, incidents, occurrences, customer complaints and personnel reports) and documenting the appropriate action decided and implemented to maintain an adequate level of conformance to air-worthiness requirements. **What shall be done and by whom; when, where, and how**
- 9) Personnel competence and training
- 10) A description of, or reference to, a procedure for the competence required of personnel and the programme of training and recurrent training of personnel. **What shall be done and by whom; when, where, and how.** This procedure is best handled by the use of a training programme
- 11) Personnel records
- 12) A description of, or reference to, a procedure of the methods to be used for keeping technical records of personnel. **What shall be done and by whom; when, where, and how.**
- 13) Quality audit personnel.
- 14) A chart or a list indicating the qualifications of quality audit personnel. **What shall be done and by whom; when, where, and how.** This procedure is best handled by the use of a training programme.
- 15) Qualifying inspectors and mechanics
- 16) A description of, or reference to, a procedure for the competence required of qualifying inspectors or mechanics, and a programme of training and recurrent training of personnel. **What shall be done and by whom; when, where, and how.** This procedure is best handled by the use of a training programme
- 17) Exemption/concession control

18) A description of, or reference to, a procedure to be used when permission is required to deviate from the requirements of the organisation's manual of procedure, or to deviate from specified product, part or appliance Design tasks. **What shall be done and by whom; when, where, and how.**

19) Specialised activities

20) A description of, or reference to, a procedure for applying specialised activities. **What shall be done and by whom; when, where, and how.**

21) Measures must be taken to ensure that the system is understood, implemented and complied with at all levels.

10. **SPECIFICATION AND SUBMITTAL OF MOP. REVISIONS, APPENDICES AND SUPPLEMENTS.**

10.1. The format and contents of the MOP, revision, appendix, or supplement should be proposed by the applicant and approved by the CAA well before submittal of material. The time required for CAA review and approval, and the manner in which MOP material and supporting documentation will be submitted, should also be established well in advance of the actual submittal. Large submittals may be broken down into smaller packages of related material and submitted to the CAA as it becomes available.

11. **APPROVAL OF MOP. REVISIONS. APPENDICES AND SUPPLEMENTS**

11.1. **CAA Approval of an MOP:**

MOP, revisions, appendices, and supplements are to be approved by an inspector manager of the appropriate section or his designated representative.

ISSUED BY: CERTIFICATIONS

DIVISION: CERTIFICATION ENGINEERING

APPROVED BY SM: CERTIFICATIONS

SIGNATURE OF SM: CERTIFICATIONS	NAME IN BLOCK LETTERS	DATE

