



CIVIL AVIATION AUTHORITY OF BOTSWANA

AIRWORTHINESS

ADVISORY

CIRCULAR

CAAB Document AAC-010

MAINTENANCE DATA CONTROL

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1. PURPOSE

This Airworthiness Advisory Circular (AAC) provides information to guide and serves as an acceptable means of compliance with airworthiness data requirements.

2. STATUS OF THIS ADVISORY CIRCULAR

This AAC is an original issuance.

3. EFFECTIVE DATE

This AAC becomes effective immediately.

4. APPLICABILITY

This guidance is intended for Approved Maintenance Organisations (AMOs) that maintain Botswana registered aircraft.

5. RELATED REGULATIONS

Copies may be obtained from the Government Printer.

- Civil Aviation (Approved Maintenance Organisations) Regulations: Regulation 32 – *Airworthiness Data.*

6. RELATED PUBLICATIONS

For further information on this subject, operators are advised to review the following publications -

Copies may be obtained from Document Sales Unit, ICAO, 999 University Street, Montreal, Quebec, Canada H3C 5H7.

- ICAO Annex 8 - Airworthiness of Aircraft
- ICAO Doc 9760 - Airworthiness Manual

7. DEFINITIONS AND ACRONYMS

7.1 The following definitions are used in this circular

Applicable means relevant to any aircraft, component, or process specified in the AMO's approval class rating schedule and in any associated capability list.

Organisation. This refers to an approved maintenance organisation, unless otherwise specified.

7.2 The following acronyms are used in this circular

AAC Airworthiness Advisory Circular

AMC Acceptable Means of Compliance

AMO Approved Maintenance Organisation

CAA Civil Aviation Authority

CAAB Civil Aviation Authority of Botswana

ICAO International Civil Aviation Organization

MPM Maintenance Procedures Manual

Advisory Circulars (ACs) are intended to provide advice and guidance to illustrate an acceptable means, but not necessarily the only means, of complying with the regulations, or to explain certain regulatory requirements by providing informative, interpretative and explanatory material. Where a regulation contains the words "prescribed by the Authority," the AC may be considered to prescribe a viable method of compliance, but status of that "prescription" is always "guidance" (never regulation).

NDI	Non Destructive Inspection
NDT	Non Destructive Testing
STC	Supplementary Type Certificate
TC	Type Certificate

8. BACKGROUND

- 8.1 Regulation 32 of the Civil Aviation (Approved Maintenance Organisations) Regulations, 2012 requires an AMO to have in its custody airworthiness data appropriate to support the maintenance work performed on the aircraft or aircraft component.
- 8.2 The source of the data should be the CAAB, the design organisation or any other approved design organisation in the State of manufacture or State of design, as appropriate.
- 8.3 The person or organisation maintaining an aircraft or aircraft component should ensure that all applicable maintenance data is current and readily available for use when required.

9. APPLICABLE MAINTENANCE DATA

- 9.1 The organisation should use applicable current maintenance data in the performance of maintenance, including modifications and repairs. The applicable maintenance data includes any of the following:
 - (a) Any applicable requirement, procedure, operational directive or information issued by the Authority responsible for the oversight of the aircraft or component;
 - (b) Instructions for continuing airworthiness, issued by TC holders, STC holders, any other organisation required to publish such data, and in the case of aircraft or components from other countries, the airworthiness data mandated by the Authority responsible for the oversight of the aircraft or component;
 - (c) Any applicable standard, such as but not limited to, maintenance standard practices recognized by the CAAB as a good standard for maintenance;
 - (d) Maintenance instructions on how to carry out the particular maintenance task, excluding the engineering design of repairs and modifications.
- 9.2 In the case of maintenance data provided by an operator or customer, the organisation should hold such data when the work is in progress.

10. ADDITIONAL REQUIREMENTS

- 10.1 Except as specified in sub-paragraph 9.1(d) above, each AMO should hold and use the following minimum maintenance data relevant to the organization's approval class rating:
 - (a) All maintenance regulations/requirements and associated AMC's, approval specifications, and guidance material;
 - (b) All applicable national maintenance requirements and notices which have not been superseded by a CAAB requirement, procedure or directive; and,

- (c) All applicable Airworthiness Directives.

10.2 In addition to sub-paragraph 10.1, an organisation with an approval class rating in category A - Aircraft, should hold and use the appropriate sections of the following maintenance data where published:

- (a) Operator's aircraft Maintenance Program,
- (b) Aircraft maintenance manual,
- (c) Repair manual,
- (d) Supplementary structural inspection document,
- (e) Corrosion control document,
- (f) Service Bulletins,
- (g) Service Letters,
- (h) Service instructions,
- (i) Modification leaflets,
- (j) NDT manual,
- (k) Parts catalogue,
- (l) Type Certificate Data Sheet, and,
- (m) Any other specific document issued by the TC or STC holder as maintenance data.

10.3 In addition to sub-paragraph 10.1, an organisation with an approval class rating in category B - Engines/APUs, should hold and use the appropriate sections of the following maintenance data where published:

- (a) Engine/APU maintenance and repair manual,
- (b) Service bulletins,
- (c) Service letters,
- (d) Modification leaflets,
- (e) NDI manual,
- (f) Parts catalogue,
- (g) Type certificate data sheet, and,
- (h) Any other specific document issued by the TC holder as maintenance data.

10.4 In addition to sub-paragraph 10.1, an organisation with an approval class rating in category C - Components other than complete engines/APUs, should hold and use the appropriate sections of the following maintenance data where published:

- (a) Vendor maintenance and repair manual,
- (b) Service Bulletins,
- (c) Service Letters, and
- (d) Any document issued by the TC holder as maintenance data on whose product the component may be fitted when applicable.

10.5 Appropriate sections of the sub-paragraphs 10.2 to 10.4 means in relation to the maintenance work scope at each particular maintenance facility. For example, a base maintenance facility should have almost complete set(s) of the maintenance data whereas a line maintenance facility may need only the maintenance manual and the parts catalogue.

10.6 An organisation only approved in class rating category D – Specialized services, should hold and use all applicable specialized service(s) process specifications.

11. MAINTENANCE DATA INTEGRITY

11.1 The organisation should establish procedures to ensure that if found, any inaccurate, incomplete, or ambiguous procedure, practice, information, or maintenance instruction contained in the maintenance data used by maintenance personnel is recorded and notified to the author of the maintenance data.

- 11.2 The referenced procedure should ensure that when maintenance personnel discover inaccurate, incomplete, or ambiguous information in the maintenance data they should record the details.
- 11.3 The procedure should then ensure that the AMO notifies the problem to the author of the maintenance data in a timely manner. A record of such communications to the author of the maintenance data should be retained by the AMO until such time as the TC holder has clarified the issue by e.g. amending the maintenance data.
- 11.4 The referenced procedure should be specified in the maintenance organization's Maintenance Procedures Manual (MPM).

12. CHANGES TO MAINTENANCE DATA

- 12.1 The organisation may only modify maintenance instructions in accordance with a procedure specified in the MPM.
- 12.2 With respect to those changes, the organisation should demonstrate that they (changes) result in equivalent or improved maintenance standards and should inform the TC holder of such changes. Maintenance instructions for the purposes of this paragraph means instructions on how to carry out the particular maintenance task excluding the engineering design of repairs and modifications.
- 12.3 The referenced procedure should address the need for a practical demonstration by the mechanic to the quality personnel of the proposed modified maintenance instruction. Upon being satisfied, the Quality personnel should approve the modified maintenance instruction and ensure that the TC or STC holder is informed of the modified maintenance instruction.
- 12.4 The procedure should include a paper/electronic traceability of the complete process from start to finish and ensure that the relevant maintenance instruction clearly identifies the modification. Modified maintenance instructions should only be used in the following circumstances;
 - (a) Where the TC / STC holder's original intent can be carried out in a more practical or more efficient manner.
 - (b) Where the TC / STC holder's original intent cannot be achieved by following the maintenance instructions. For example, where a component cannot be replaced following the original maintenance instructions.
 - (c) For the use of alternative tools / equipment.

13. WORK (JOB) CARDS

- 13.1 The organisation should provide a common work card or worksheet system to be used throughout relevant parts of the organisation.

Relevant parts of the organisation means with regard to aircraft base maintenance, aircraft line maintenance, engine workshops, mechanical workshops and avionics workshops. Therefore, for example, engine workshops should have a common system throughout such engine workshops that may be different to that in aircraft base maintenance.

- 13.2 The work cards should differentiate and specify, when relevant, disassembly, accomplishment of task, re-assembly, and testing. In the case of a lengthy maintenance task involving a succession of personnel to complete such task, it may be necessary to use supplementary work cards or worksheets to indicate what was actually accomplished by each individual person. A work card or worksheet system should refer to particular maintenance tasks

- 13.3 In addition, the organisation should either transcribe accurately the maintenance data onto such work cards or worksheets or make precise reference to the particular maintenance task or tasks contained in such maintenance data.
- 13.4 Work cards and worksheets may be computer generated and held on an electronic database subject to both adequate safeguards against unauthorized alteration and a back-up electronic database which should be updated within 24 hours of any entry made to the main electronic database. Complex maintenance tasks should be transcribed onto the work cards or worksheets and subdivided into clear stages to ensure a record of the accomplishment of the complete maintenance task.
- 13.5 Where the organisation provides a maintenance service to an aircraft operator who requires their work card or worksheet system to be used then such work card or worksheet system may be used. In this case, the organisation should establish a procedure to ensure correct completion of the aircraft operators' work cards or worksheets.

14. AVAILABILITY

- 14.1 The organisation should ensure that all applicable maintenance data is readily available for use when required by its maintenance personnel.
- 14.2 Data being made available to personnel maintaining aircraft means that the data should be available in close proximity to the aircraft being maintained, for supervisors, mechanics and certifying staff to study.
- 14.3 Where computer systems are used, the number of computer terminals should be sufficient in relation to the size of the work programme to enable easy access, unless the computer system can produce paper copies. Where microfilm or microfiche readers/printers are used, a similar requirement is applicable.

15. CURRENCY OF MAINTENANCE DATA

- 15.1 The organisation should establish a procedure to ensure that maintenance data it controls is kept up to date.
- 15.2 In the case of operator/customer controlled and provided maintenance data, the organisation should be able to show that either it has written confirmation from the operator/customer that all such maintenance data is up to date or it has work orders specifying the amendment status of the maintenance data to be used or it can show that it is on the operator/customer maintenance data amendment list.
- 15.3 To keep data up to date a procedure should be set up to monitor the amendment status of all data and maintain a check that all amendments are being received by being a subscriber to any document amendment scheme.


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