GENERAL

CIVIL AVIATION AUTHORITY OF BOTSWANA

ADVISORY

CIRCULAR

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CAAB Document GAC-002

ACCEPTABLE FLIGHT SAFETY DOCUMENTS SYSTEM

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SECTION 1   POLICY & GENERAL INFORMATION

1.1   PURPOSE

This General Advisory Circular (GAC 002) provides guidance to individuals, organizations and other facilities and other entities regarding the development and submission of an integrated flight safety documents as required by the Botswana civil aviation regulations.

1.2   STATUS OF THIS ADVISORY CIRCULAR

This General Advisory Circular is an original issuance.

1.3   BACKGROUND

A. There are ICAO Standards that require that flight safety documents in the form of operations and maintenance manuals providing and procedures to the personnel supporting commercial air transport operations and operators of large and turbine powered aircraft.

> The Botswana aviation regulations require that these standards be met for the operations and maintenance policy/procedure manuals, including –
>
> - Flight operations manual
> - Cabin crew member manual
> - Flight Dispatch Manual
> - Station (Ground) Operations Manual
> - Flight Operations Training Programme Manual
> - Aircraft Type-Specific Operating Manuals
> - Maintenance Control Manual
> - Maintenance Organization Procedures Manual
> - Maintenance Training Manual

B. The ICAO Standards specify the minimum contents of those documents and provide that the documents may be in volumes to the overall manuals.

C. The ICAO Standards also require that these documents are developed using the "flight safety documents" concept which requires that these documents are:

- Easily accessed and searched by the user through table of content and indexing
- The contents of the manuals that have policy and procedures shared by more than one technical specialty are integrated ("interfaced") to ensure that they are consistent and the procedures do not conflict.

1.4   APPLICABILITY

This advisory circular is applicable to:-

> Other operators should consider the guidance of this GAC when developing their operations and maintenance manuals

1) Commercial air transport operators; and

2) Other operators of large turbojet aircraft.

> Advisory Circulars (ACs) are intended to provide advice and guidance to illustrate a 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)

1.5   RELATED REGULATIONS

The following regulations are directly applicable to the guidance contained in this advisory circular –

- Civil Aviation (Aircraft Operations) Regulations, 2011

- Civil Aviation (AOC Certification & Administration) Regulations, 2011

1.6   RELATED PUBLICATIONS

For further information on this topic, operators and individuals are invited to consult the following publications-

1) Civil Aviation Regulations of Botswana
   - AOC Certification
   - Flight Preparation Records

> This Advisory circular and copies of these regulations may be obtained from the Flight Safety Directorate of CAAB

2) International Civil Aviation Organization (ICAO)
   - Annex 6, Part I, International Commercial Air Transport – Aeroplanes
   - Document 9376-AN/914, Preparation of Operations Manual

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

1.7   DEFINITIONS & ACRONYMS

A. The following definitions are used in this advisory circular-

1) **Aircraft operating manual**. A manual, acceptable to the CAAB, containing normal, abnormal and emergency procedures, checklists, limitations, performance information, details of the aircraft systems and other material relevant to the operation of aircraft.

2) **Flight Manual.** A manual, associated with the certificate of airworthiness, containing limitations within which the aircraft is to be considered airworthy, and instructions and information necessary to the flight crew members for the safe operation of the aircraft.

3) **Flight safety document system.** A set of interrelated documentation established by the operator, compiling and organizing information necessary for flight and ground operations, and comprising, as a minimum, the operations manual and the operator's maintenance control manual.

4) **Human Factors principles.** The principles which apply to aeronautical design, certification, training, operations and maintenance and which seek safe interface between the human and other system components by proper consideration to human performance.

5) **Human Performance.** Human capabilities and limitations which have an impact on the safety and efficiency of aeronautical operations.

6) **Maintenance organization's procedure manual.** A document endorsed by the head of the maintenance organization which details the maintenance organization's structure and management responsibilities, scope of work, description of facilities, maintenance procedures and quality assurance or inspection systems.

7) **Maintenance Program.** A document which describes the specific scheduled maintenance tasks and their frequency of completion and related procedures, such as a reliability programme, necessary for the safe operation of those aircraft to which it applies.

8) **Master Minimum Equipment List (MMEL).** A list established for a particular aircraft type by the organization responsible for the type design with the approval of the State of Design containing items, one or more of which is permitted to be unserviceable at the commencement of a flight. The MMEL may be associated with special operating conditions, limitations or procedures.

9) **Minimum equipment list (MEL)**. A list which provides for the operation of aircraft, subject to specified conditions, with particular equipment inoperative, prepared by an operator in conformity with, or more restrictive than, the MMEL established for the aircraft type.

10) **Operations manual.** A manual containing procedures, instructions and guidance for use by operational personnel in the execution of their duties.

11) **Operator's maintenance control manual.** A document which describes the operator's procedures necessary to ensure that all scheduled and unscheduled maintenance is performed on the operator's aircraft on time and in a controlled and satisfactory manner.

B. The following abbreviations and acronyms are used in this advisory circular –

1) **AC**   Advisory Circular
2) **AOC**   Air Operator Certificate
3) **AOM1**   Aircraft Operating Manual, Part 1
4) **AOM2**   Aircraft Operating Manual, Part 2
5) **AOM3**   Aircraft Operating Manual, Part 3
6) **CAAB**   Civil Aviation Authority of Botswana
7) **CSM**   Crew Scheduling Manual
8) **CCM**   Cabin Crew Manual
9) **FCOM**   Flight Crew Operating Manual
10) **FOM**   Flight Operations Manual
11) **FOTM**   Flight Operations Training Manual
12) **ICAO**   International Civil Aviation Organization
13) **MCM**   Maintenance Control Manual
14) **MEL**   Minimum Equipment List
15) **MOE**   Maintenance Organization Exposition Manual
16) **MOPM**   Maintenance Organization's Procedures Manual
17) **MTM**   Maintenance Training Manual

18) **OMA**	Operations Manual, Part A
19) **OMB**	Operations Manual, Part B
20) **OMC**	Operations Manual, Part C
21) **OMD**	Operations Manual, Part D
22) **ISARPs**	ICAO Standards and Recommended Practices
23) **SOM**	Station Operations Manual
24) **SOP**	Standard Operating Procedures

SECTION 2   GENERAL CONCEPTS: FLIGHT SAFETY DOCUMENT SYSTEM

2.1   INTEGRATED SYSTEM

2.1.1   IMPORTANCE OF AN INTEGRATED SYSTEM

A.   The guideline in this section address the major aspects of an operator's flight safety documents system development process, with the aim of ensuring compliance with the elements of systems safety.

B.   The guidelines are based not only upon scientific research, but also upon current best industry practices, with an emphasis on a high degree of operational relevance.

C.   Development of a flight safety documents system is a complete process, and changes to each document comprising the system may affect the entire system.

D.   It is important for operational documents to be consistent with each other and with regulations, manufacturer's requirements and human factors principles.

E.   It is also necessary to ensure consistency across departments as well as consistency in application.

2.1.2   DIFFICULTIES IN ACHIEVING AN INTEGRATED SYSTEM

A.   Guidelines applicable to the development of operational documents have been produced by government and industry sources and are available to operators.

B.   Since the availability of this guidance is disjointed across a number of publications, it is difficult to apply the best practices as a whole. Application also varies relative to the individual authors' perceptions of a good product.

> As a result, documents within a company system also tend to be disjointed with different authors applying different formats and standards.

C.   Most organizations fail to apply guidelines across the entire process of operational documents in the development of the flight safety documents system.

2.2 ORGANIZATION

2.2.1 A flight safety documents system should be organized according to criteria which ensure easy access to information required for flight and ground operations contained in the various operational documents comprising the system and which facilitate management of the distribution and revision of operational documents.

2.2.2 GROUPING OF INFORMATION

Information contained in a flight safety documents system should be grouped according to the importance and use of the information, as follows –

1) Time critical information, e.g. information that can jeopardize the safety of the operation if not immediately available;

- Time critical information should be placed early and prominently in the flight safety documents system.
- System critical information, time sensitive information and frequently used information

2) Time sensitive information, e.g. information that can affect the level of safety or delay the operation if not available in a short period of time;
3) Short time period;
4) Frequently used information;
5) Reference information, e.g. information that is required for the operation but does not fall under (2) or (3) above; and
6) Information that can be grouped based on the phase of operation in which it is used.

2.3 DESIGN

2.3.1 TERMINOLOGY & MEANING

A. A flight safety documents system should maintain consistency in terminology and in the use of standard terms for common items and actions.

B. Operational documents should include a glossary of terms, acronyms and their standard definition, updated on a regular basis to ensure access to the most recent terminology. All significant terms, acronyms and abbreviations included in the flight safety documents system should be defined.

2.3.2 FORMATING & STYLE

A flight safety documents system should ensure standardization across document types, including –

This standardization includes a consistent location of specific types of information, consistent use of units of measurement and consistent use of codes.

- Writing style, terminology;
- Use of graphics and symbols, and
- Formatting across documents.

2.3.3 FRONT END

A. Where possible and appropriate, each document should contain a consistent presentation in the front that includes a –

1) A record of revisions;
2) List of effective pages
3) Table of contents, containing the titles of no more than 2 level of headers

The table of contents and index shall have separate tables to enable the user to have immediate access to these portions of the document.

4) Index, of not more than 3 level of indexing, to the important words and phrases within the manual.

5) An explanation of the purpose of the manual, construction, availability, revisions and distribution.

B. If a system of bulletins is the selected method of providing timely manual updates, the bulletins shall be inserted under a tab immediately following the list of effective pages.

2.3.4 MASTER INDEX

A. A flight safety documents system should include a master index to locate , in a timely manner, information included in more than one operational document.

B. The master index should be available as an attachment in the back of each primary user manual and it should consist of no more than three levels of indexing

> Pages containing abnormal and emergency information must be tabbed for direct access.

2.3.5 CONFORMANCE WITH QUALITY SYSTEM

A flight safety documents system should comply with the requirements of the operator's quality system, if applicable.

2.4 OPERATOR RESPONSIBILITIES

2.4.1 Validation

A. The flight safety documents system should be validated before deployment, under realistic conditions.

B. Validation should involve the critical aspects of the information use, in order to verify its effectiveness. Interactions among all groups that can occur during operations should also be included in the validation process

2.4.2 Deployment

A. Operators should monitor deployment of the flight safety documents system, to ensure appropriate and realistic use of the documents, based on the characteristics of the operational environment and in a way which is both operationally relevant and beneficial to operational personnel.

B. This monitoring should include a formal feedback system for obtaining input from operational personnel.

2.4.3 Amendment

2.4.3.1 External Sources Revision

A. The operator's information gathering, review, distribution and revision control system should be adequate to process information and data obtained from all sources relevant to the type of operation conducted, including, but not limited to the-

- State of the operator

- State of Design
- State of Registry
- Manufacturers and equipment vendors

B. Manufacturers provide information for the operation of specific aircraft that emphasizes the aircraft systems and procedures under conditions that may not fully match the requirements of operators.

> The operator's system should be capable of responding to this information in a timely manner and in co-ordination with the Flight Safety Inspectorate of the CAAB.

2.4.3.2 Internal Changes

The operator's information gathering, review, distribution and revision control system should be adequate to process information resulting from changes that originate within the operator, including –

1) Changes resulting from the installation of new equipment;

2) Changes in response to operating experience;

> Operators should ensure that crew co-ordination philosophy, policies and procedures are specific to their operation.

3) Changes in an operator's policies and procedures;

4) Changes in an operator's certificate; and

5) Changes for purposes of maintaining cross fleet standardization.

2.4.4 COMMUNICATION CHANGE INFORMATION

2.4.4.1 Methods of Communication

A. Operators should have standardized methods for communicating new information to their personnel.

> As frequent changes diminish the importance of new or modified procedures, it is desirable to minimize changes to the flight safety documents system

- The specific methods should be responsive to the degree of communication urgency.

B. New information should be reviewed and validated considering its effects on the entire flight safety documents system.

2.4.4.2 Tracking of Distribution Change Information

A. The method of communicating new information should be complemented by a tracking system to ensure currency by operational personnel.

B. The tracking system should include a procedure to verify that operational personnel have the most recent updates.

SECTION 3 SAFETY OVERSIGHT REVIEW

An operator's flight safety documents system will be reviewed by the Flight Safety Directorate –

1) On a regular basis (at least once a year);

2) After major events (mergers, acquisitions, rapid growth, downsizing, etc);

3) After technology changes (introduction of new equipment); and

4) After changes in safety regulations.
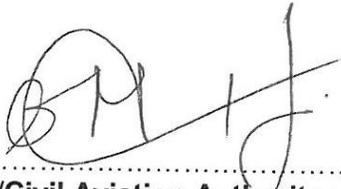
For/**Civil Aviation Authority of Botswana**

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End of Advisory Circular