

CHAPTER 4

Manuals, Procedures and Checklists

1.0 PURPOSE

- 1.1 This Chapter provides direction and guidance to be used by the Authority inspectors for processing, reviewing, and accepting or approving manuals, procedures and checklists.
- 1.2 Section 1 contains general background information and definitions of the terms used in this Order.
- 1.3 Section 2 contains guidance for Flight Operations Inspectors and Airworthiness Inspectors for approving or accepting an operator's manuals, procedures, and checklists

2.0 REFERENCE

- 2.1 [Part 9](#) of the Nigeria Civil Aviation Regulations.
- 2.2 CHECKLISTS: [All Operations Manuals and Documents Evaluation Checklists](#).

3.0 OVERVIEW OF MANUAL REQUIREMENTS

- 3.1 Part 9 of the Nigeria Civil Aviation Regulations requires operators to prepare and keep current various manuals and checklists for the direction and guidance of flight and ground personnel conducting air transportation operations.
- 3.2 Operations Manual - Regulation 9.3.1.2 of the Nigeria Civil Aviation Regulations requires that each operator prepare and keep current an operations manual providing operator procedures and policy guidance for all of its personnel. The air operator's operations manual must include a description of the organisational structure and the relationship between the operations department and the other departments of the company. The manual must also include adequate policy, direction, and guidance for the safe and efficient performance of the duties assigned to each category of employee. The Operations Manual may be published in parts, as a single document, or as a series of volumes. The Manuals shall be submitted to the Authority for Approval/Acceptance within a reasonable time that will enable the Authority Inspectors to review the manuals, before the intended effective date.

4.0 DEFINITIONS

- 4.1 The following terms are defined according to their use in this Order:
 - 4.1.1 Abbreviated Procedure: A list of sequential procedural steps without an amplified description or amplified set of instructions;
 - 4.1.2 Accepted: "Accepted" is used to describe a document, manual, or checklist that does not have, or is not required to have, Authority approval. Only portions of an operator's manuals are required to have Authority approval. The remaining portions are "accepted" by the Authority. Operators are required to submit the entire operations manual to the Authority for review. If the Authority

concludes that an accepted section of the operations manual is not in compliance, the Authority must formally notify the operator of the deficiency. Upon notification, the operator must take action to resolve the deficiency;

- 4.1.3 Aircraft Flight Manual (AFM): An approved aircraft flight manual is prepared by the manufacturer and approved by the State of aircraft design;
- 4.1.4 Aircraft Operating Manual (AOM): An approved aircraft operating manual is a manual that is developed by, or for, a specific operator for a specific aircraft type and which is approved by the Authority, in accordance with the provisions of Regulation 9.3.1.4 of the Nigeria Civil Aviation Regulations;
- 4.1.5 "Alternate": When "alternate" is used to describe a procedure or checklist, it refers to a procedure that may be employed instead of another procedure. Alternate procedures may either be normal, non-normal, or abnormal procedures;
- 4.1.6 Amplified Procedure: A description of sequential procedural steps with detailed explanatory descriptions and/or instructions accompanying each step;
- 4.1.7 Approval / Acceptance Page: The first page in a Manual that shows the Title of manual, Manual Reference, Issue Number and Date, various levels of responsibilities for Manual preparation, Check & Recommendation, Operator's Approval and Authority's Approval / Acceptance. This Page can only be changed during a **re-issue** of the Manual. See Appendix A for Sample Approval / Acceptance Page Content.
- 4.1.8 Approved: When "approved" is used to describe a document, manual, or checklist, it means that it requires Authority approval, and that the Authority has evaluated and specifically approved the document, manual, or checklist;
- 4.1.9 *Caution: An instruction concerning a hazard that if ignored could result in damage to an aircraft component or system which would make continued safe flight improbable.
- 4.1.10 Checklist: A formal list used to identify, schedule, compare, or verify a group of elements or actions. Although a checklist may be published in a manual, it is usually intended to be used by itself, so that reference to a manual is made unnecessary. Checklists are usually formatted and presented on paper, however, they may be formatted on electronic or mechanical devices, or presented in an audio format. A checklist may or may not represent an abbreviated procedure. The items listed on a checklist may be unrelated and may not represent a procedure, such as most "normal" checklists. Abnormal and emergency checklists, however, do represent procedures;

NOTE: Checklists and procedures are often confused. Operators have sometimes titled procedures "expanded checklists" or titled checklists "abbreviated procedures." A procedure is a set of actions or decisions prescribed to achieve a specified objective. A checklist is a physical aid used to overcome the limitations of human memory.

- 4.1.11 **Document:** A written description of a system, a method, or a procedure; a written statement of authorisations, conditions, or limitations; or a file of information. A document serves as an official record of understanding and agreement between the Authority and the operator, describing the means the operator will use to comply with regulatory requirements. An approved document is not a

- manual. Relevant information from a document, however, may be extracted and published in user manuals. For example, the Operations Specifications (OpSpecs) are not a manual but an approved document from which information is extracted;
- 4.1.12 **Effective Date of Manuals:** The date the policies and procedures in a Manual are expected to take effect. The date shall be a realistic date preceded by the operator's approval.
 - 4.1.13 **Emergency:** When "emergency" is used to describe a procedure or checklist, it refers to a non-routine operation in which certain procedures or actions must be taken to protect the crew and the passengers, or the aircraft, from a serious hazard or potential hazard;
 - 4.1.14 ***High Workload Environment:** Any environment in which multiple demands on the flight crew necessitate the prioritising of work functions. For example, IFR operations below 10,000 feet during arrival or departure from a terminal area (including taxiing) are considered to be high workload environments;
 - 4.1.15 **Immediate Action:** An action that must be taken in response to a nonroutine event so quickly that reference to a checklist is not practical because of a potential loss of aircraft control, incapacitation of a crewmember, damage to or loss of an aircraft component or system - which would make continued safe flight improbable;
 - 4.1.16 **Maintenance Control Manual (MCM):** A manual approved by the Authority containing procedures, instructions and guidance for use by maintenance and other concerned operational personnel in the execution of their duties;
 - 4.1.17 **Non-normal or "Abnormal":** When "non-normal" or "abnormal" is used to describe a procedure or checklist, it refers to a nonroutine operation in which certain procedures or actions must be taken to maintain an acceptable level of systems integrity or airworthiness;
 - 4.1.18 **Normal:** When "normal" is used to describe a procedure or checklist, it refers to a routine operation (without malfunctions);
 - 4.1.19 **Normal Checklist:** A checklist comprised of all of the phase checklists used sequentially in routine flight operations;
 - 4.1.20 **Operations Manual (OM):** A manual approved/accepted by the Authority containing procedures, instructions and guidance for use by operational personnel in the execution of their duties;
 - 4.1.21 **Phase Checklist:** A checklist used to establish and/or verify aircraft configuration during a specific phase of flight. An example of a phase checklist is an "after takeoff checklist;"
 - 4.1.22 **Pilot Flying (PF):** The pilot who is controlling the path of the aircraft at any given time, whether or not the aircraft is in flight or on the ground;
 - 4.1.23 **Pilot Monitoring (PM):** The pilot who is not controlling the path of the aircraft. The pilot monitoring monitors the course of the flight and is responsible for radio communication with ATC, flight attendants, and passengers. Furthermore, he/she maintains the flight plan, monitors fuel, reads checklists, and operates the landing gear and flaps;

- 4.1.24 Policy: A written requirement established by an operator's management that is expected to be complied with by appropriate employee personnel. A policy may be within a procedure or stated separately. A written requirement such as, "No flight may depart on a cross-country flight without a spare case of oil" is an example of a policy;
- 4.1.25 Procedure: A logical progression of actions and/or decisions in a fixed sequence that is prescribed by an operator to achieve a specified objective. In short, a procedure is step by step guidance on how to do something;
- 4.1.26 Recommendation: A preferred technique or action described by the operator which employees are expected to follow whenever practical. A recommendation is not a policy requirement;
- 4.1.27 Supplemental: When "supplemental" is used to describe a procedure or checklist, it refers to a procedure which may be employed in addition to a normal, non-normal, or abnormal procedure. Supplemental procedures may either be normal or non-normal procedures;
- 4.1.28 Systems Management: The management of those systems which sustain the mechanical functions of the aircraft as opposed to the management of the aircraft's thrust, flight path, or aerodynamic configuration;
- 4.1.29 Technique: A method of accomplishing a procedural step or manoeuvre;
- 4.1.30 User Manual: A segment of an Operations Manual (OM) or a MCM that provides instruction, policies, procedures, and guidance to a specific category of employee. Examples of user manuals that are commonly used in the air transportation industry include the following:
- a) Aircraft operating manual;
 - b) Training programmes manuals and Security manual;
 - c) Cabin crew or cabin service manual;
 - d) Operations Control manual;
 - e) Station operations manual;
 - f) Route guides and airport manual;
 - g) Dangerous goods handling manual;
 - h) Runway analysis manual.

NOTE: The user manual titles listed above are only examples of common titles currently in use in industry. Inspectors should not interpret this as a list of required titles. Operators may choose to divide the OM in any convenient way and may select different user manual titles.

- 4.1.31 *Warning: An instruction about a hazard that if ignored could result in injury, loss of aircraft control, or loss of life;

NOTE: Items marked with * provide information or instruction of such significance that special emphasis is required.

5.0 DISTRIBUTION AND AVAILABILITY OF MANUALS

- 5.1 Each operator is required to maintain a complete manual (or set of manuals) at his principal base of operations and to furnish a complete manual (or set of manuals) to the Authority.
- 5.2 In addition, each operator must make available or furnish applicable parts of the manual (user manuals) to flight and ground operations personnel who conduct or support flight operations and to each station where operations are conducted. The manual may be in conventional paper format or in another form that is convenient for the user.
- 5.3 Each employee to whom the manual or a user manual is furnished must ensure it is kept current. Each employee must have access to appropriate manuals or parts of manuals when performing assigned duties.

6.0 REVIEW OF MANUALS

- 6.1 Manuals must be reviewed by the Flight Operations Inspectors and other qualified inspectors to ensure they contain adequate content and are in compliance with applicable regulations, safe operating practices, and the operator's operations specifications. While inspectors are encouraged to provide guidance and advice to operators in the preparation of their manuals, the development and production of an acceptable manual is solely the responsibility of the operator.
- 6.2 **Initial Review.** Before the initial certification of an applicant, a comprehensive review of the applicant's OM, user manuals and MCM must be conducted by the Flight Operations Inspectors. In addition, those items in the operator's Statement of Compliance that require the operator to develop a policy statement, system, method, or procedure, must be addressed. If user manuals are furnished, those topics that apply to the specific user must be addressed. Each topic must be presented with enough detail to ensure that the user can properly carry out the portion of the policy or procedure for which the user is responsible.
- 6.3 **Review of Changes to Manuals.** The inspector should review each revision or proposed revision to a manual. Inspectors should not limit this review to a strict consideration of the change itself but should also consider the impact of the change on the operator's overall manual system, training programme, and type of operation. Changes in the operator's operations specifications should be accompanied by a review of applicable sections of the operator's manual.
- 6.4 **Enroute and Ramp (Apron) Inspection.** Inspectors conducting en-route and ramp inspections should review the flight manual and those portions of the OM or MCM carried by the flight crew for completeness and currency. When a flight is long enough to make it practical, inspectors should review these manuals more in-depth, particularly those sections that are operationally relevant to the flight in progress.
- 6.5 **Periodic Review of Manuals.** The continual review of an operator's manuals is necessary because both the aviation environment and the operations conducted by the operator are constantly changing. Each Inspector is responsible for developing a surveillance plan for the operator's manual system. At least one portion of the operator's operations manual should be reviewed annually, and the entire operations manual should be reviewed over a period of 1 to 3 years (depending on the

complexity of the operation). This periodic review should be planned as a distinct event so that every portion of the manual is systematically reviewed at some time over a 1-to-3-year cycle. This periodic review should be coordinated between airworthiness inspectors and other inspectors to ensure an appropriate exchange of information and to avoid redundant reviews.

- 6.6 Retention of Checklists Used for Manual Review:** All Checklists used for the evaluation and review of Manuals shall be retained in their respective Manuals at all times.

7.0 FORMAT AND STYLE OF MANUALS

- 7.1** Each page of a manual must include the most recent revision date. In general, manuals and checklists should be easy to use and understand, and in a format that can be easily revised. When evaluating manuals and checklists for ease of use and understanding, inspectors should consider the following guidance concerning format and style:

- 7.1.1 Form.** All or part of a manual may be prepared and maintained in conventional paper format (book form) or in other forms, such as microfilm or computer-based storage with electronic image;

- 7.1.2 Preface Page.** A page of a user manual containing a brief statement of the manual's purpose and intended user. The preface page should also contain a statement which emphasises that the procedures and policies in the user manual are expected to be used by company personnel;

- 7.1.3 Revision Control.** Each manual should be easy to revise. Also, each manual should contain a revision control page or section from which the user can readily determine whether the manual is current. This page or section should preferably follow the preface page but it can be organised in any logical manner. The control date of the most recent revision of each individual page must appear on each page. Operators should establish a bulletin system to bring temporary information or changes that should not be delayed by a formal revision process, to the attention of the user. The temporary amendment or bulletin system should have a means of control that includes giving bulletins a limited life and systematically incorporating them into appropriate manuals in a timely manner. A Notification of Temporary Amendment/bulletin shall be sent to the Authority for record purposes. Handwritten amendment to user manuals is strictly prohibited. Users should be able to easily determine whether they possess all current bulletins;

- 7.1.4 Table of Contents.** Each manual should have a table of contents containing lists of major topics with their respective page numbers;

- 7.1.5 References.** Manuals must include references to specific regulations when appropriate. A reference to regulations or other manual material is appropriate when it is necessary to clarify the intent of the text or when it is useful to the user for looking up specific subject matter. References should not be made to advisory circulars and to preambles of the Regulations, as these sources are advisory and not binding in nature. Operators should use caution when adapting the text of advisory documents into their manuals. Advisory text may not translate into a directive context;

- 7.1.6 Definitions.** Significant terms used in manuals should be defined. Any acronym or abbreviation not in common use should also be defined;

7.1.7 **Elements of Style.** Manuals and checklists should be composed in the style of general technical writing. This style should be clear, concise, and easy to understand. When evaluating manuals, inspectors should be knowledgeable of the following suggestions for accomplishing clarity in technical writing.

- a) Whenever possible, short, common words should be used. Examples of this include: using the words "keep" or "hold" instead of "maintain"; using the word "start" instead of "establish"; and using the word "stop" instead of "terminate";
- b) When a word has more than one meaning, the most common meaning should be used. For example, the word "observe" should be used to mean "see and take notice of" rather than "obey and comply";
- c) Operators should standardise terminology whenever practical. For example, since the terms "throttles" and "thrust levers" refer to the same item, the operator should choose one term and use it consistently throughout the manual. Once a particular term has been used in a specific sense it should not be used again in another sense grade;
- d) Terms which command actions should be clearly defined, such as "checked," "set," and "as required." Since auxiliary verbs such as "may" and "should" are ambiguous and can create room for doubt, they should not be used when a definite action is commanded. Instead, verbs such as "shall" and "must" are preferable to use when an action is commanded, because they are more definite;
- e) All "instructions" should be given in the imperative mood and the active voice. For example, "Hold the speed between VREF and VREF plus 10 knots" is preferable to "The speed needs to be held between VREF and VREF plus 10 knots;"
- f) To provide appropriate degrees of emphasis on specific points in the text, "cautions," "warnings," and "notes" should be in the operator's manuals and checklists;
- g) Any instruction, particularly a warning or a caution, must begin with a simple directive in the imperative mood that informs the reader precisely what must be done. To avoid obscuring the directive in the background information, the directive must be stated first and then followed with an explanation. An example of how a directive can be obscured in background information is as follows: "Warning - To avoid the hazard of striking ground handling personnel with the free end of a swinging tow bar, do not place feet on rudder pedals until the Pilot in command (PIC) takes the salute from the ground handler. The hydraulic nose wheel steering can sling the tow bar with hazardous force." In contrast the following is an example of the preferred method of placing the directive first: "Warning - Do not place feet on rudder pedals until the pilot in command (PIC) takes the signal from the ground handler. The hydraulic nose wheel steering can sling a tow bar with sufficient force to cause serious injury to ground handling personnel;"
- h) Descriptions in the manual should not be overloaded, but should be presented simply and sequentially. An example of an overloaded description is as follows: "A Constant Speed Drive (CSD) per engine drives the AC generator at a constant speed of 8,000 RPM regardless of the speed of the engine or the load on the generator." The following is an example of a clearer, more concise description: "A CSD is mounted between each engine and generator."

The CSD holds the generator speed at a constant 8,000 RPM;"

- i) Long sentences should be avoided in the manual. The following example consists of subject matter put into a long sentence which makes it difficult to understand: "During gear retraction, the door operating bar located on the landing gear leg contacts and turns the latch, withdrawing the roller from the slot as a second roller entraps the door operating bar." The following example consists of the same subject matter used in the previous example, however, when it is broken down into shorter sentences, it is easier to understand: "During landing gear retraction, the door operating bar on the landing gear leg is pressed against the door latch. The latch turns, freeing the door roller. The roller moves out of the slot. A second roller then traps and holds the door operating bar."

8.0 ADEQUACY OF PROCEDURES

8.1 The following general guidance is provided for inspectors to use when evaluating procedures in any manual, including flight manuals:

8.1.1 Objective - The objective of a procedure must be stated clearly unless it is so commonly understood that a statement of the objective is not necessary;

8.1.2 Logical Sequence - Procedures are to flow in a logical step-by-step sequence. The most effective procedures are usually simple and each contains only the information necessary for accomplishing that procedure. Preferably procedures should be described in a sequential step by step format rather than a narrative format;

8.1.3 General Considerations:

- a) A procedure must be an acceptable method for accomplishing an intended objective;
- b) The individual responsible for each step of a procedure must be clearly identified;
- c) The acceptable standards of performance for a procedure are to be stated if those standards are not commonly understood or clearly obvious;
- d) Since a variety of personnel with differing levels of expertise are involved in procedures, adequate information concerning the accomplishment of a procedure must be provided for the least experienced individual. A procedure may be described very briefly and concisely when the user is capable of achieving the objective without extensive direction or detail. When the user has limited training or experience, however, a procedure must be described in enough detail for the user to correctly accomplish it. When the user has limited access to other sources of information and guidance while performing a procedure, enough detail should be provided to make the user independent of other sources of information;
- e) When a form, checklist, or tool is necessary to accomplish a procedure, the location of that item must be indicated in the procedure;

- f) Enough time should be available under normal circumstances for the user to accomplish a procedure. If sufficient time is not available to the user for accomplishing a procedure, either the procedure itself or the user's duties must be revised.

9.0 APPROVAL AND ACCEPTANCE OF MANUALS AND CHECKLISTS

9.1 General

- 9.1.1 This part contains direction and guidance for Inspectors when reviewing an operator's manuals and checklists for approval or acceptance. This process is based on the general process for approval or acceptance
- 9.1.2 The Approval Process - The approval process for an operator's checklist normally consists of phases one, two, three, and five of the general process. It may be necessary, however, for a Inspector to require that phase four (the demonstration and inspection phase) be included in the approval process.
- 9.1.3 The Acceptance Process - The acceptance process for a manual or manual section normally consists of phases one, two, and three of the general process. The operator must submit to the Inspector current copies of required manuals for Authority review. An operator's entire manual system must be reviewed during the document evaluation phase of initial certification. Once an operator is certified, the operator may revise, distribute, and use accepted material even though the Inspector has not completed a review of it. If after review, the Inspector determines that portions of the manuals or checklists are unacceptable, the operator must revise the unacceptable portions after notification by the Inspector.
- 9.1.4 Evaluation of Manuals for Authority Acceptance or Approval - An operator may develop and publish in its manual any policy, method, procedure, or checklist that the operator finds necessary for the type of operations conducted. These policies, methods, procedures, and checklists, however, must comply with the Regulations and be consistent with safe operating practices. Inspectors should encourage operators to be innovative and progressive in developing such policies, methods, procedures, and checklists. The Inspector's role in the review process is to provide an independent and objective evaluation of the operator's manual material. The Inspector must ensure that the operator's material complies with the Regulations, is consistent with safe operating practices, and is based on sound rationale or demonstrated effectiveness.
- 9.1.5 Discrepancies - When an Inspector finds a discrepancy in an operator's existing manual material, the Inspector shall take action to have that discrepancy resolved. Usually such discrepancies can be resolved through informal discussions. When informal discussion cannot resolve the discrepancy, the Inspector is required to formally recommend withdrawal of Authority approval or acceptance from the operator.

9.2 Establishing a Framework for Review

- 9.2.1 Methods for Manual or Checklist Organisation - During the Pre-application phase, the Inspector should inform the operator that there are various methods that can be used to organise and format

manuals, manual sections, and checklists requiring Authority approval/acceptance. The Inspector may inform the operator of the content of the following subparagraphs, which describe at least four possible methods that an operator may use:

- 9.2.2 Limited Content - An operator may choose to limit the content of the manual solely to approved material. When this method is used, the entire manual must be approved and the operator may not revise the manual without additional review by the Inspector. While this method facilitates the Authority review and acceptance, the manual may be difficult to use because the intended user may have to frequently switch back and forth between the approved checklists and other manuals containing accepted material. When the operator chooses this method, Certification Project Manager (CPM's) must ensure that a header or footer is on each page indicating the material is approved;
- 9.2.3 Grouping Material - An operator may choose to group the Authority approved material in specified sections of the manual and place accepted material in the remaining sections. With this method, the Inspector must ensure that a header or footer is on each page of the approved sections indicating that the material on that page is approved by the Authority. The operator may submit the approved and accepted sections to the Inspector as separate packages;
- 9.2.4 Interspersed Material - An operator may choose to intersperse Authority approved material and accepted material throughout the manual. When an operator chooses this method, the Inspector must ensure that the operator has clearly identified approved material each time it appears in the manual. This method of organisation allows for efficient manual use, but makes the operator's publication process and the approval process difficult;
- 9.2.5 Approval Document - The operator may choose to place material in an "approval document" solely for the purpose of obtaining Authority approval of that material. An approval document is a document and therefore may not be used as a manual. After the document has been approved, the operator must develop user manuals, which incorporate the approved information from the document along with detailed, guidance and supplementary information. When this method is used, the user manuals are treated as "accepted" material and do not have to be individually approved. The Inspector must, however, review the user manuals to ensure that the information in them is consistent with the approval document. When using this method, the operator may revise the information in user manuals without prior approval by the Authority, provided the revision is consistent with, and does not conflict with, the information in the approval document. If the operator or the Inspector finds it necessary for the approval document to be revised, the operator must submit the proposed revision for review and approval. A revision to an approval document must be approved before the operator can incorporate the changed information into the user manuals. When an operator uses this method for submitting manual or checklist material for approval, CPMs must ensure that the operator has stated on the first page of the user manuals that the manual contains approved material. The manuals or checklists provided to the user, however, do not have to be specifically identified as being approved ones.
- 9.2.6 Submission of Material - During the Pre-application phase, the Inspector should advise the operator on how to submit the documents, manuals, checklists and subsequent revisions for approval or acceptance.

9.2.7 Approval Submission - For material that requires approval by the Authority, the Inspector should advise the operator to submit the following:

- a) Two copies of the document, manual, manual section, checklist, or revision to be approved; one copy of the printed version of the electronic checklist (as applicable); one copy of a report indicating differences between the proposed and current versions of the electronic checklist (as applicable); or
- b) One copy of the document, manual, manual section, checklist, or revision, and two copies of the page control sheets for the material (the page control sheets, must show an appropriate revision number or original page number for each page, and the effective date of each page);
- c) A copy of any supporting documentation or analysis.

9.2.8 Acceptance Submission - For material that is to be evaluated for acceptance by the Authority, the Inspector should advise the operator to submit the following:

- a) A copy of the manual, manual section, checklist, or revision to be reviewed; and
- b) A copy of the page control sheets for the material to be reviewed when appropriate.

9.2.9 The Inspector will perform a cursory review of submissions - This review is intended to ensure that the applicant's submission is clear and contains all required documentation. This review is performed before the in-depth review.

9.3 In-Depth Review Phase

9.3.1 A detailed analysis of the operator's submission is performed during the document evaluation phase. During this phase, a qualified inspector must review the operator's submission in detail to determine that the submission is complete and technically correct. The time to complete phase three depends on the scope and complexity of the submission. During the cursory review, the Inspector should determine how long the in-depth review will take. The Inspector shall give the operator an estimate of the time it should take to complete the review process at the formal application meeting.

9.3.2 The review and analysis should confirm that the operator's submission conforms to, or is consistent with, the following:

- a) Civil Aviation Regulations;
- b) Criteria and guidance in this Order;
- c) The operator's Operations Specifications (OpSpecs);
- d) Criteria and guidance in NCAA-AC-OPS001, as amended;
- e) Applicable aircraft flight manuals, manufacturer's operating bulletins, and airworthiness directives;
- f) Safe operating procedures;
- g) The operator's cockpit resource management policies.

- 9.3.3 The Inspector should thoroughly consider the operator's experience and history when evaluating procedures and checklists. When an operator has a history of successful operations, the Inspector should normally approve submissions consistent with the operator's existing procedures.
- 9.3.4 The Inspector may require verification tests of some procedures and checklists before granting approval.
- 9.3.5 These verification tests may be conducted in either phase 3 or 4 of the certification process. For example, verification of an aeroplane checklist would occur in phase 3 of the process to permit the applicant to commence flight training.
- 9.3.6 Review of electronic checklist modifications, in applications with the ability to automatically detect the completion of an action, shall include verification that detection is based on monitored conditions that are consistent with the objective of the action (for example, a checklist action item for LANDING GEAR. DOWN would show complete on the sensing of the gear handle being down and the gear indication being down). The review and verification should be accomplished using a paper copy of the electronic checklist annotated with the monitored condition for each action whose completion is automatically detected.

9.4 Granting Authority Approval

- 9.4.1 The Inspector recommends issue of approval to manuals, manual sections, and checklists. During this phase the Inspector must formally notify the operator of the approval and also complete a specific record of the approval. For manuals and manual sections, which are not required to have Authority approval, written notification of acceptance is not required and shall not be given.
- 9.4.2 Notification of Approval. When the Inspector has evaluated and found the document, manual, manual section, or checklist, satisfactory the following approval procedures shall apply:
- a) For a document, manual, or checklist that contains page control sheets, the Inspector shall annotate both copies of the page control sheets with the phrase "NCAA Approved." Under the words "NCAA Approved," CPMs shall enter the effective date of approval and sign both copies on behalf of the Authority. The operator may pre-print the words "NCAA Approved" and blank lines for the date and signature on the page control sheets or the Inspector may use a stamp to add the approval annotation on each sheet;
 - b) For manuals, manual sections, or checklists that do not contain page control sheets, the approval annotation must be placed by the Inspector on each page of the material. In this case the approval annotation must be made on two copies of the material. The annotation shall be the same as discussed above. This procedure should be used only for very short manuals, manual sections, or checklists (usually fewer than 5 pages) or when the use of page control sheets are not practical or serve little purpose;
 - c) When page control sheets are used, the Inspector shall return one copy of the annotated page control sheets to the operator. In the remaining cases one copy of the approved material must be returned to the operator with a notification letter stating that the material is



approved. The letter should also contain a statement advising the operator to maintain, for its records, the signed page control sheets or the material with the approval annotation. The Inspector shall retain the second copy of the signed page control sheets, or the annotated material, Authority files;

- d) When electronic checklists are submitted for approval, the operator will prepare a release/cover sheet for the printed version of the electronic checklist. The release/cover sheet will contain the pre-printed words and lines as discussed above. The Inspector's annotation shall be the same as discussed in subparagraph above.

9.4.3 Notification of Disapproval. The co-ordination, revision, and editing activities that take place throughout all phases of the process should eventually result in approved products. Under certain circumstances, however, it may be appropriate for the Inspector to terminate the process. For example, the operator may not take any action on the material for 30 days. To terminate the approval process, the Inspector shall return the entire submission to the operator with a letter that states that the Authority is unable to grant approval, along with the reasons why it cannot be granted.

9.4.4 The Inspector shall maintain a record of approval for each operator-submitted document, manual, manual section, and checklist. Records of approval to revisions of this material must also be maintained. The records should consist of page control sheets, notification letters, and any other related correspondence. While superseded portions of documents, manuals, or checklists do not have to be retained, CPMs may retain this type of material if they determine that it is appropriate. The Inspector should include with the material in the operator's file a brief memorandum containing the reasons for retaining the material.

10.0 FLIGHT SAFETY DOCUMENTS SYSTEM

The following outline addresses the major elements of an operator's flight safety documents system development process, with the aim of ensuring compliance with these Regulations.

10.1 ORGANISATION

10.1.1 A flight safety documents system shall 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.

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

- (a) Time critical information, e.g., information that can jeopardize the safety of the operation if not immediately available;
 - (b) Time sensitive information, e.g., information that can affect the level of safety or delay the operation if not available in a short time period;
-



-
- (c) Frequently used information;
 - (d) Reference information, e.g., information that is required for the operation but does not fall under *b*) or *c*) above; and
 - (e) Information that can be grouped based on the phase of operation in which it is used.

10.1.3 Time critical information shall be placed early and prominently in the flight safety documents system.

10.1.4 Time critical information, time sensitive information, and frequently used information shall be placed in cards and quick-reference guides.

10.2 Validation

A flight safety documents system shall be validated before deployment, under realistic conditions. Validation shall involve the critical aspects of the information use, in order to verify its effectiveness. Interactions among all groups that can occur during operations shall also be included in the validation process.

10.3 Design

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

10.3.2 Operational documents shall 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 documents system shall be defined.

10.3.3 A flight safety documents system shall ensure standardization across document types, including writing style, terminology, use of graphics and symbols, and formatting across documents. This includes a consistent location of specific types of information, consistent use of units of measurement and consistent use of codes.

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

Note: The master index must be placed in the front of each document and consist of no more than three levels of indexing. Pages containing abnormal and emergency information must be tabbed for direct access.

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

**10.4 Deployment**

Operators shall 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. This monitoring shall include a formal feedback system for obtaining input from operational personnel.

10.5 Amendment

10.5.1 Operators shall develop an information gathering, review, distribution and revision control system 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.

Note: 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. Operators shall ensure that such information meets their specific needs and those of the local authority.

10.5.2 Operators shall develop an information gathering, review and distribution system to process information resulting from changes that originate within the operator, including:

- (a) Changes resulting from the installation of new equipment;
- (b) Changes in response to operating experience;
- (c) Changes in an operator's policies and procedures;
- (d) Changes in an operator certificate; and
- (e) Changes for purposes of maintaining cross fleet standardization.

Note: Operators shall ensure that crew co-ordination philosophy, policies and procedures are specific to their operation.

10.5.3 A flight safety documents system shall be reviewed:

- (a) on a regular basis (at least once a year);
- (b) after major events (mergers, acquisitions, rapid growth, downsizing, etc.);
- (c) after technology changes (introduction of new equipment); and
- (d) after changes in safety regulations.



10.5.4 Operators shall develop methods of communicating new information. The specific methods shall be responsive to the degree of communication urgency.

Note: As frequent changes diminish the importance of new or modified procedures, it is desirable to minimise changes to the flight safety documents system.

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

10.5.6 The method of communicating new information shall be complemented by a tracking system to ensure currency by operational personnel. The tracking system shall include a procedure to verify that operational personnel have the most recent updates.



APPENDIX A
SAMPLE MANUAL APPROVAL / ACCEPTANCE PAGE CONTENT

APPROVAL / ACCEPTANCE PAGE

TITLE OF MANUAL:

MANUAL REFERENCE:

ISSUE NO. & DATE:

PREPARED BY:

NAME:

DESIGNATION:

SIGNATURE:

DATE:

THE UNDERSIGNED XYZ LIMITED PERSONNEL DECLARE THAT THEY HAVE READ AND UNDERSTOOD THE CONTENTS OF THIS MANUAL.

CHECKED AND RECOMMENDED FOR APPROVAL BY:

NAME:

DESIGNATION:

SIGNATURE:

DATE:

ORGANIZATIONAL APPROVAL

APPROVED BY:NAME:

DESIGNATION:

SIGNATURE:

DATE:

APPROVAL / ACCEPTANCE BY NCAA:

NAME:

DESIGNATION:

SIGNATURE & STAMP:

DATE: