IHB 6-1

CIVIL AVIATION AUTHORITY OF BANGLADESH

INSPECTOR HANDBOOK ON FLIGHT OPERATIONS

(CODE # IHB 6-1)

IUUSE-3
15 MAY 2017

DIRECTORATE OF FLIGHT SAFETY & REGULATIONS

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DIRECTORATE OF FLIGHT SAFETY & REGULATIONS

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APPROVAL

This Inspector Handbook on Flight Operations has been Coded in the CAAB documentations system as IHB 6-1 and is usually known as 'Flight Operations Inspectors Handbook'. The document provides the technical guidance for the conduct of aviation safety oversight by the Civil Aviation Authority of Bangladesh. The manual has been refurbished as 'Issue-3' following changes made in the ICAO Doc 8335-AN/879. The manual facilitates flight operations inspectors of Civil Aviation Authority of Bangladesh receive detailed guidance concerning the establishment and maintenance of safe, regular and efficient air transport operations in accordance with the provisions of the *Convention on International Civil Aviation,* its associated Annexes as adopted/adapted in the various Parts of CAR '84 of Bangladesh and the relevant ANOs. Special guidance has been taken from ICAO Doc 8335-AN/879 for the construction of this manual.

In accordance with Annex 6, the associated Parts of CAR '84 and relevant ANOs, there is a need for CAAB to exercise a positive and continuing measure of control over any operator of Bangladesh that offers, or intends to offer, commercial air transport services. The method by which CAAB exercises the necessary control of its operators is through the issuance of AOCs. The organization, administration and procedures required for inspection, certification and continuing safety oversight of operators are outlined, including the establishment of a safety oversight system within the Civil Aviation Authority.

This IHB 6-1 concentrates on the technical and safety requirements to be met by an operator before the issuance of the air operator certificate as well as during the conduct of the operations authorized by the certificate. The Operations Inspectors, through their expert evaluation and vigilance, shall ensure that all air operators establish the technical and safety requirements to the best satisfaction of CAAB.

This IHB 6-1 will be treated as a dynamic document. As a result of amendments to the CAR '84 and the progress of aviation safety practices, there will be the need for amendments.

Comments on this document, would be appreciated from any one. These will be taken into consideration in the preparation of subsequent issues/amendments. Comments concerning the document should be addressed to 'Director Flight Safety & Regulations, CAA Bangladesh, Headquarters, Kurmitola, Dhaka-1229, Bangladesh.

Wg Cdr Chowdhury M Ziaul Kabir
Director, Flight Safety & Regulations
Civil Aviation Authority, Bangladesh

Date: 09 MAY 2017

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RECORD OF AMENDMENTS

AMENDMENT NUMBER	DATE	PAGES AFFECTED	DATE ENTERED	INITIAL

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CHAPTER-00

FOREWORDS

A. DISTRIBUTION OF FOI HANDBOOK

This FOI Handbook shall be distributed among the Operations Inspectors and other officials of CAAB immediately after the final approval by Chairman and the DD (FS) shall ensure the distribution of the initial issue of the document to all concerned. The DD (FS) shall also ensure the dissemination of the subsequent amendments to this document to the recipients on a timely manner. The DD (FS) shall allocate the Control Number of the document to the officials as indicated below and shall maintain record.

This document shall not be published in the CAAB website and shall not be accessed by any un-authorized persons. The recipients of this document shall remain responsible to keep the document up to date by inserting the latest amendments in order to ensure that an up to date copy of the whole document is readily available with them either as hard copy or as electronic copy or both. The distribution list is as under:

SL NO	DESIGNATION	CONTROL NO
01	Master Copy (to be kept with DFSR)	001 (Master Copy)
02	Chairman	002
03	All FOIs of CAAB	003 to 020
04	All DFOIs of CAAB	021 to 040
05	DD (Econ)/AOC Project Manager	041
06	DD (FS)	042
07	Any other CAAB official(s) as desired by DFSR	043 to 099

B. COMMENT REPORT

Please complete this form to transmit your comments, questions, or suggestions concerning this Manual to the address on the back. Attach any reference pages, marking area where changes or questions apply.

Name: _____ Position: _____

Dept.:_____ Base:_____ Box Number: _____

Date Submitted: _____

E-mail Address: _____

MATERIAL UNCLEAR

Chapter _____ Page _____

Suggestions for improvement _____

_____

MATERIAL INCORRECT

Chapter _____ Page _____

Correction _____

_____

SUGGESTIONS FOR ADDITIONAL MATERIAL

Chapter _____

Subject _____

_____ _____

ADDITIONAL COMMENTS

_____ _____

_____ _____

C. MANUAL ADMINISTRATION

The purpose is to provide guidance for the:

1. Availability of this manual.
2. Compliance with this manual.
3. Revision of this manual.
4. Understanding of the manual formatting.
5. Application of standard symbols or methods.

D. PRIMARY USER OF THE MANUAL

1. This manual is the primary user manual for all operations inspector personnel involved in inspections and evaluations.
2. The guidance in this manual has precedence over any other guidance issued by the CAAB for operations inspections and evaluations.
3. These policies shall be followed by the operations personnel in the conduct of their inspections and evaluations.

E. AVAILABILITY OF THIS MANUAL

1. The latest version of this Operations Inspector Manual will be available to technical inspectors in soft or hard copy and in Intranet links.
2. A printed copy will also be maintained in the Technical Library.

F. COMPLIANCE WITH THIS MANUAL

1. Each assigned user must comply with policies and procedures provided in this manual.
2. Should the user identify any policy or procedure that might not be consistent with CAAB requirements, that information should immediately be communicated to their assigned supervisor.

G. MAINTENANCE AND OWNERSHIP OF MANUAL

1. The Operations Inspector Manual must be maintained in current status by the assigned user in accordance with the policies and procedures specified in this Chapter.

2. This manual is considered the property of CAAB and must be relinquished to the Directorate of FSR in the event of the user's retirement, termination, transfer or contract termination.

3. The content of this manual is managed and updated by the Directorate of FSR and is the express property of the government.

H. TYPES OF REVISION

The method of inserting the revision will be dependent on the type of revision. There are two primary methods of revising the text of this manual:

1. Time-Critical

   Time-critical information will be issued as Bulletins and will be placed in the front of the manuals under a tab labeled "Bulletins."

   a. These Bulletins will not effect the manual page numbering and will not be included in the LEP.

   b. These bulletins will be canceled when the information has been incorporated into a formal revision to the manual or is no longer pertinent.

2. Formal Manual Revision

   A page and text revision package (formal revision) will be issued with a revision number, highlights of the revision and include page insertion and replacement information.

   a. These Revision packages will include the insertion of the revision in the Record of Revisions.

   b. The issue page with the highlights of the revision and page insertion and replacement will be discarded after insertion of the revisions.

   c. To indicate review and insertion of a revision, the user must record the revision's effective date and their initials after the appropriate revision number on the Record of Revisions page located in the front of the manual.

I. EDITING CONVENTIONS

The following editing conventions apply to the use of certain specific terminology within the text:

1. Gender – In this manual, the male or female gender may be used in a generic sense to designate both sexes.

2. Will, Shall and Must – The words "will," "shall," and "must" are used in an imperative sense to state the requirement to accomplish the act prescribed. Compliance is mandatory.

3. May – The word "may" is used in a permissive sense to state authority or permission to do an act. Compliance is not mandatory.

4. Includes – The word "includes" means "includes, but is not limited to…"

5. Refer to – Where further discussion or reference is suggested, the notation "*Refer to….*" directs the reader to material located in another paragraph, chapter or manual. In these cases, the referenced location should be specific as to manual, chapter and paragraph.

6. CAR '84 – Where used in this manual, this acronym will be an abbreviation for the Civil Aviation Rule(s) 1984 of Bangladesh.

J. USE OF NOTES, CAUTIONS AND WARNINGS

These additions to the text are used to highlight or emphasize important points when necessary. They call attention of the user about safety and precautionary or additional information to make the job safe, easier and efficient. Consult the Comment Report form to standardize the email text of the submitted revision. Any employee that finds it necessary to depart from with the policies/procedures of this manual in order to properly accomplish the task must report this occurrence to the DFSR in writing.

1. NOTES

a. Notes provide amplified information, instruction, or emphasis.

b. Notes call attention to methods that enable a user to perform a job easier or wiser.

c. If a Note applies to consecutive procedural steps, it is placed under the topic heading for those steps.

2. CAUTIONS

a. Cautions are instructions about hazards that, if ignored, could result in damage to an aircraft component or system (see example).

b. Cautions specify methods and procedures that must be followed to avoid damage to equipment.

c. If the caution applies to consecutive subtasks/steps, it is placed before the first subtask/step.

d. If the caution applies to several, non-consecutive subtasks/steps, it is placed before the applicable subtask/step.

3. WARNINGS

Warnings are instructions about hazards that, if ignored, could result in injury, loss of aircraft control or loss of life.

K. DEFINITIONS & ACRONYMS FOR THIS MANUAL

1. DEFINITIONS

a. Applicant – The person or entity making application for AOC certification.

b. Conformance Checklist – A document that is used by an operator to demonstrate conformance to a Part of the CAR ’84 or the relevant ANO etc.

c. Certification Plan – A plan for accomplishing the required certification evaluations and inspections.

2. ACRONYMS

a. AOC – Air Operator Certificate

b. ATO – Approved Training Organization

c. AMO – Approved Maintenance Organization

d. CAAB – Civil Aviation Authority of Bangladesh

e. CASORT – Civil Aviation Safety Oversight Reporting and Tracking

f. CCR – Completed Certification Report

g. PM –Project Manager for Certification

h. ETOPS – Extended Twin Engine Operations

i. DFSR – Directorate/Director Flight Safety & Regulations

j. ICAO – International Civil Aviation Organization

k. RVSM – Required Vertical Separation Minima

l. SOE – Schedule of Events

m. CAR ’84 – Civil Aviation Rule(s) 1984

CHAPTER-01

AVIATION SAFETY INSPECTORS

This chapter provides foundation information about the generic role and expectations of aviation safety inspectors, including ground and flight operations inspectors.

1.1 THE INSPECTOR'S ROLE

A. It is a common mistaken perception that an inspector is personally responsible for the safety of the aviation community.

B. It is true that inspectors can have significant influence on aviation safety in the areas where they are assigned if they stay within certain key parameters in their inspector's role.

C. But the responsibility for aviation safety rests with the operators of the aircraft.

D. It is the "certificate or license holder" (Air Operator, Pilot, Engineer, Mechanic, Dispatcher, and Cabin Crew Member) who must ensure that they are always in compliance with the applicable regulations and relevant safety practices.

E. The CAAB does have a responsibility to ensure that the air operator and other certificate holders meet the minimum safety regulations before issuing the certificate authorizing operation and the continuing validation of that certification.

F. All inspectors should be qualified to provide "auditor" and "administration" services on behalf of the CAAB regarding the certification and continued validation processes. These roles are critical to the safety oversight system.

1.2 THE INSPECTOR'S PRIMARY FUNCTION

A. The primary function of an inspector is to:

1. Audit the aviation community (individuals, organizations and aircraft) for conformance with the laws and regulations applicable to aviation; and

2. While doing that task, also audit for conformance to aviation industry relevant safety practices; and

3. Make a technical decision; and

4. Make a record of that audit and that decision.

1.3 STANDARDIZED USE OF TERMS

The following terms and their application are defined in this section and should be applied to all inspector activities:

A. Conformance

B. Evaluation

C. Inspection

D. Investigation

E. Certification

F. Safety Issue

1.4 AUDIT FOR CONFORMANCE

Conformance is defined as "an action taken by an inspector that COMPARES the manual, procedures, programme, system, aircraft or an individual's performance TO THE ESTABLISHED STANDARD."

A. Conformance Example 1: Comparing a pilot's performance for conformance to the minimum established standards for the issuance of the license.

B. Conformance Example 2: Comparing the contents of the aircraft technical log for conformance with the CAR '84 mandated minimum contents for such a log.

C. Conformance Example 3: Comparing the contents of an aircraft Minimum Equipment List for conformance with the minimum required contents of the Minimum Equipment List.

D. Conformance Example 4: Comparing the contents of the aircraft maintenance programme (schedule) for conformance with the manufacturer's MRB document.

E. Conformance Example 5: Walking across the ramp where servicing, fueling and loading activities are occurring and mentally comparing for conformance with the published standards.

F. Conformance Example 6: Seeing maintenance being performed on the ramp and stopping to compare the work methodology for conformance with the published standards.

G. Conformance Example 7: Listening to conversations at a party about someone's flying exploits and mentally comparing them for conformance to the published regulations.

1.5 PRIMARY INSPECTOR AUDITING CATEGORIES

It is very important that the CAAB have a standard terminology regarding this critical terms. When an inspector uses these terms, other inspectors and the operators should interpret the term as defined here. As an inspector goes through the workday, he is continuously auditing for conformance in his conversations with the aviation public, on his walks across the ramp, when he visits facilities, etc. Conformance assessments become a way of life for the good inspector. Making the technical decision, then determining what should be recorded, is discussed. There are 3 primary categories that can be used to describe the auditing functions performed by an inspector:

A. Evaluations;

B. Inspections; and

C. Investigations.

1.6 EVALUATIONS

The term, *evaluation*, is used to describe an inspector action taken *before* the document, procedure, system, aircraft or airmen is *approved for use* in aviation operations.

A. Evaluation Example 1: Auditing a proposed aircraft operating checklist before approving it for use by an air carrier for the conduct of flight operations.

B. Evaluation Example 2: Auditing a proposed maintenance programme (schedule) before approving it as the air carrier timetable for completing maintenance checks.

C. Evaluation Example 3: Auditing a proposed aircraft operations manual before authorizing it for

D. use by the air carrier's flight crew members.

E. Evaluation Example 4: Auditing the performance of a pilot during a flight check before issuance of

F. the license or rating.

G. Evaluation Example 5: Auditing the aircraft to determine that it meets the minimum requirements for flight operations in the category of the airworthiness certificate to be issued.

1.7 INSPECTIONS

The term, *inspection*, is used to describe a specific inspector action when evaluating a document, record, procedure, individual or system that is *currently approved for use* in aviation.

A. Inspection Example 1: Auditing an aircraft operating checklist currently being used by an air carrier for the conduct of flight operations.

B. Inspection Example 2: Auditing a maintenance programme (schedule) currently being used by an air carrier for maintaining an aircraft.

C. Inspection Example 3: Auditing an aircraft operations manual currently being used by the air carrier's flight crew members.

D. Inspection Example 4: Auditing the performance of a licensed pilot during a re-examination flight check after an accident.

E. Inspection Example 5: Auditing the aircraft after a flight operation to determine if it met the minimum requirements for flight operations for that flight operation.

F. Inspection Example 6: Auditing the crew's performance on a revenue flight to determine that they are conforming to the air carrier's procedures.

1.8 INVESTIGATIONS

A. The term, *investigation*, is used to describe the overall process of inspector actions when following up on a reported complaint, incident, accident or enforcement case.

B. Depending on its complexity, an investigation may include both evaluations and inspections.

C. An investigation usually involves a series of activities conducted over a period of time. An "evaluation" is an act of auditing for conformance with a published standard. The list of evaluations in the Action numbers for each technical specialty is more than 4 times longer than the inspection numbers. Evaluations are a key process of certification and – *for the purposes of selecting Action numbers* – are only accomplished before issuance of an authorization, approval, license, or certificate.

D. An "inspection" is an act of auditing for conformance with a published standard.

1. Inspections are primarily accomplished on an ongoing basis after the certification process has been completed.

2. Inspections are, however, a key part of the latter stages of a certification process to confirm that the individual or organization is ready for issuance of an authorization.

3. An "investigation" usually involves an individual or organization that is currently operating in aviation.

1.9 CERTIFICATION

A. The term, *certification*, is used to describe the overall process of inspector actions to approve, license, or certificate an individual, document, procedure, record or organization.

B. Depending on its complexity, a certification may include both evaluations and inspections.

1. For example, a certification for an original air operator certificate will include a complex series of evaluations to approve the documentation and other arrangements, followed by a battery of inspections before the AOC holder is approved for operations in aviation.

2. But the "certification" actions associated with a single revision of a Minimum Equipment List will probably consist only of evaluations conducted by each of the inspector technical specialties prior to approval for use in aviation.

C. A certification usually involves a series of activities conducted over a period of time.

1.10 SAFETY ISSUE

A. The term, *safety issue*, is used to describe a finding or observation made by an inspector as a result of almost any activity (except "evaluation").

B. Safety issues can result from inspections, investigations, and other contact with the aviation public.

C. But safety issues are not generally associated with evaluations or certifications accomplished by the technical inspector.

D. Examples of safety issues primarily focus on the technical inspector's assessment that an individual or organization has failed, either inadvertently or by decision, to:

1. Conform to aviation law, regulations and directives issued by Bangladesh;

2. Conform to relevant industry safety practices; or

3. Maintain the required fitness to hold a certificate or license.

E. The CAAB will then pursue resolution of those identified safety issues. The priority of that resolution process will be directly associated with the assessed impact to public safety.

1.11 AUDITING STANDARDS

A. The concept of auditing is based on the establishment of specific standards as the basis for making an objective evaluation.

1. The primary standards that will be applied are the current aviation regulations, mandatory technical guidance and other relevant industry-wide and regional safety standards.

2. These regulations and other relevant standards are derived from the ICAO Convention, ICAO Annexes and regional agreements.

3. As a signatory State, Bangladesh has agreed by treaty that those minimum safety standards will be required.

B. To implement this, Bangladesh has published or adopted regulations and guidance that is applicable to the aviation community.

1. The aircraft manufacturers' also publish relevant technical standards and practices in the development of the type certification and maintenance documents during the original certification of the aircraft. A "certification" usually involves a document, individual, aircraft or organization that is NOT YET APPROVED for operations in aviation. By definition, there is NO safety issue if the document, record, procedure, individual or system being evaluated is not CURRENTLY BEING USED in aviation.

2. In addition, there are regional documents published by organizations outlining the safety standards to be applied during flight in those regions.

3. These constitute the standards that will be audited by the inspectors on behalf of the CAAB.

1.12 APPLICABLE AUDITING STANDARDS

A. The creditability of a safety inspector's audit findings is directly related to the basis for making such a finding.

1. Inspectors should avoid expressing personal opinions to members of the aviation community.

2. This is especially true when the inspector is not sure of the proper answer.

B. The basis for making a decision, which will require resolution action by a member of the aviation community, should be, limited to law, regulations, mandatory technical guidance, and relevant safety practices.

C. This is applicable to all certification evaluations and later inspections and surveillance. The following sources may be used as a basis for evaluation decisions and discussions:

1. Law

   For inspector auditing purposes, applicable Bangladesh law may be used and includes treaties and other regional agreements to which Bangladesh is a Signatory State. The specific law and applicable section should be cited when issuing a written evaluation decision.

2. Safety Regulations

   For inspector auditing purposes, applicable Bangladesh regulations may be used. The specific regulation and applicable section/subsection should be cited when issuing a written evaluation decision.

3. Mandatory Technical Information

   For inspector auditing purposes, technical information published by the CAAB, FAA, aircraft manufacturer or ICAO State of Design may be used. The specific source and applicable page/ paragraph should be cited when issuing a written evaluation decision.

4. Relevant Safety Practices

   For inspector auditing purposes, relevant safety practices that are published by the CAAB, FAA, EASA, ICAO and aircraft manufacturer may be used. The specific source and applicable page/ paragraph should be cited when issuing a written evaluation decision.

1.13 INFORMAL DISCUSSIONS

A. The previous guidance is also applicable to informal discussions from the standpoint that inspectors should confine their evaluation discussions and decisions to known actual requirements.

B. Inspectors are not expected to memorize the exact source locations of regulatory requirements.

C. It is possible that an inspector may make a mistake as to a specific requirement or source

D. document in an informal discussion. If this does happen, the inspector now has an obligation to provide the person with the correct information.

1.14 INSPECTOR RECOMMENDATIONS

A. It is true that an inspector that has creditability with the aviation community can make recommendations that are readily accepted. It is critical that inspectors' understand that their personal opinions are not usually an acceptable basis for making an audit finding.

B. But the acceptability of an individual inspector's recommendations should not be the basis for any evaluation decision. If the inspector believes that a specific safety requirement should be published by the CAAB, that individual should submit his or her recommendation, including the proposed terminology, to the DFSR for consideration.

C. Inspector recommendations should be based on the applicable *published* auditing standards:

1. The inspector is cautioned to refrain from making recommendations based solely on personal opinion or past experience.

2. The members of the aviation community will not be expected to make changes to their practices based on inspector personal opinions.

1.15 PARTY TO NON-CONFORMANCE

A. This is not to suppose that the inspector is to say nothing when they observe nonconformance with the legislation standards.

1. It is a requirement that, as soon as an inspector recognizes that an aviation operator or its personnel are about to get into a situation that may result in non-conformance with the standards, the inspector must tell the individuals that they may be in a non-conformance situation – paraphrasing the applicable legislation.

2. If this is not done, the inspector has become "party" to the non-conformance.

B. Failure to provide this inspector input complicates, or even invalidates subsequent resolution of the safety issues.

1. It is not acceptable for an inspector to knowingly fail to advise the operator or its individuals when it appears that non-conformance is about to occur or is occurring.

2. On the other hand, the inspector as an auditor has then accomplished his duty. The inspector should not allow himself to be drawn into further explanations or argumentative situations.

3. Should the operator or individuals continue in the non-conformance situation, it is not necessary for the inspector to re-emphasize the point.

1.16 IMMEDIATE SAFETY OF FLIGHT ISSUES

The only time the inspector has an obligation to insist on corrective action is in a situation involving immediate safety of flight.

CHAPTER-02

THE CAAB INSPECTION ORGANIZATION

2.1 GENERAL

2.1.1 The AOC provides the basis for CAAB to regulate the activities of operators and the means to authorize an air operator to commence operations. The AOC, thus enables CAAB to exercise the continued safety oversight of the operator.

2.1.2 The AOC and the associated operations specifications issued to an air operator by CAAB are also intended to provide a basis for another State to authorize operations in its territory by that air operator, provided that the requirements under which the certificate was issued were at least equal to the applicable Standards specified in Annex 6, Part I, and Part III and the associated Parts of CAR '84.

2.1.3 The inspection organization operates as an independent entity within the CAAB, directly responsible to Chairman through the Directorate of Flight Safety & Regulations. The size of the operations inspection organization is a function of the scale of flight operations conducted in Bangladesh by both commercial and general aviation. In order to carry out its responsibilities efficiently, the organization has been divided into specialized sections. The specialized sections vary to suit the specific needs, but in most cases it separates at least the flight operations, maintenance, financial and legal functions, and subdivides flight operations and maintenance into commercial air transport operations and general aviation. In any event, close coordination is accomplished by all sections.

2.2 INSPECTORS' QUALIFICATIONS FOR AOC CERTIFICATION

A. Each operations member of a certification team should normally have at least twelve months relevant experience in his or her area of responsibility within the team, in the appropriate discipline.

B. Inspectors who do not meet this requirement may be attached to the team but may not be primary members (unless the DFSR issues a waiver).

C. An inspector who does not have this experience in the requisite technical discipline, but who has completed a full certification as an attached inspector, may be appointed to a subsequent certification team.

1. At least one flight operations and one airworthiness inspector should normally be qualified or trained on the aircraft type(s) proposed for operation by the applicant.

2. Except in unforeseen circumstances, this team should be allowed to complete the certification project without a change in the team membership.

3. At least one FOI must have qualification on the aircraft type prior to conducting:

    a. Approval of operations manual that includes training programmes

    b. Approval of crew member checking methods

    c. Acceptance of the aircraft operations Manual

    d. Approval of the MEL

    e. Approval of all-weather operations

    f. Approval of ETOPS operations

    g. Surveillance of demonstration flights;

    h. Flight simulator acceptance;

    i. Check Pilot appointments.

D. Other Inspectors should have an understanding of the type of aircraft equipment, navigational systems and/or proposed techniques.

2.3 GENERAL RESPONSIBILITIES

2.2.1 The inspectorate is responsible for conducting the required investigations and assessments preliminary to the issuance of an AOC and its associated operations specifications, and for exercising continuing safety oversight of operations for the purpose of:

A. Making recommendations to Chairman regarding the issuance or amendment of the AOC and the associated operations specifications, and the operator's competence to continue to exercise the privileges of the certificate;

B. Making recommendations to the Chairman concerning any special conditions that, in light of the investigation, may need to be imposed;

C. Informing Chairman and the operator of any deficiencies needing rectification; and,

D. Making recommendations to Chairman concerning appropriate enforcement action.

2.2.2 In carrying out its responsibilities, the inspectorate neither shares nor diminishes the direct responsibility of the operator for safety and compliance with CAR ‘84. During the process of its investigation, the inspectorate inevitably influences both the formulation of operating standards and the methods employed by the operator to meet these standards. Consequently, the inspectorate is adequately staffed by competent and suitably qualified personnel and that appropriate guidance defines the type of *influence that the inspectorate may exercise.*

2.3 STAFFING

2.3.1 The ability of Bangladesh to effectively supervise and control commercial air transport operations in the public interest is dependent upon the competence of the CAAB inspectorate. To effectively fulfill its responsibilities, the inspectorate has been properly organized and staffed with qualified personnel capable of accomplishing the required wide range of technical inspection activities.

To adequately perform their duties, the CAAB inspectorate staff have been enriched with the qualifications, operational or technical work experience, and training compatible with the operations that they are required to certificate or inspect and that their qualifications compare favourably with those of operator personnel they will encounter in their inspections. Efforts are under way so as to ensure that CAAB inspectorate staff shall enjoy conditions of service and remuneration consistent with their education, technical knowledge and experience and comparable to those personnel of the operator whose activities they will inspect and supervise.

2.3.2 CAAB delegates responsibility for some activities to designated personnel of an operator. In the operational field this applies to type ratings, instrument ratings and pilot proficiency checks. Candidates for designated examiner are proposed by the operator. The qualification and approval of these designated personnel, covering examiner activity in both the aircraft and flight simulation training devices, as necessary, are conducted by the CAAB. These approvals are normally conditional on continuing employment with the same operator. The CAAB closely supervises the subsequent activities of the designated examiners. CAAB has established the requirements for minimum annual numbers of examinations to be conducted by each designated examiner. There are requirements, on a periodic basis, for the observation of ratings and proficiency checks conducted by designated examiners to facilitate CAAB monitor performance and renew the designated examiner's approval when necessary. CAAB also approves flight crew of an operator to function as line check pilots or line check flight engineers. Such personnel are not in the same category as designated examiners; however, their qualifications and checking activities are adequately supervised by the CAAB. For detailed information the Designated Check Pilot (DCP) portion of the CPD 6-1 document for use by the inspectors of CAAB and the designated Check Airmen from the air operators may be referred.

2.3.3 Whenever CAAB will be unable to provide sufficient staff for its operations inspectorate, it shall arrange for experienced personnel from operators who will be seconded to the CAAB to act as inspectors as per the provision outlined in ICAO Doc 8335. To this end in view, CAAB shall address the strategy to mitigate potential conflict of interest issues by having established and documented the policy that such inspectors shall not conduct inspections on the events and activities of the same operator. While recruiting and/or selecting such personnel, however, CAAB should ensure that operator personnel, seconded as CAAB inspectors, are adequately trained and qualified and subsequently supervised in the carrying out of their duties.

2.3.4 In addition to the above, and to meet the inspector deficiency, if needed, CAAB will arrange to use the services of experienced inspector personnel from COSCAP-SA or another State Authority on a part-time basis. The details of such arrangement, including procedures for requesting the services of an inspector on a particular occasion or for a specific period of time, been documented in an agreement between the CAAB and COSCAP-SA in the Institutional Frame-work and Procedure Document of COSCAP-SA. The document is available in COSCAP-SA website www.coscapsa.org.

2.4 DUTIES AND RESPONSIBILITIES OF A CAAB INSPECTOR

2.4.1 The CAAB shall have assigned inspector to each operator, who would be responsible for managing the CAAB oversight of the operator. This assignment shall be for a specified one year and renewable. Alternately, CAAB will assign another inspector to the operator and thus rotate the inspectors among the operators. For large air operator like Biman Bangladesh Airlines, CAAB will assign at least two more DFOIs to assist the inspector assigned to Biman. This is due to the size and complexity of the Biman's activities and on the specialized inspector qualifications that may be required.

2.4.2 The primary function of the inspection staff is to determine the operational level of safety that the operator is capable of achieving and does in fact achieve in actual operations. To do so, the major part of the inspector's work involves inspecting, assessing, reporting and making recommendations. Recommendations, as well as criticism, concerning operations observed are to be based on fact, not opinion, and are to be carefully and fully documented. Any deficiencies noted by inspectors need to be immediately directed to the attention of the personnel involved. Should necessary corrective action not be accomplished within a reasonable time, as specified by the inspector, the matter should be reported to the Chairman for a decision regarding possible restrictions on operations or enforcement action against the operator.

2.4.3 The inspectors should maintain frequent contact with their assigned operators in order to assess the functioning of their organization and the performance of their staff during the conduct of operations, maintenance and training. In the course of these contacts with the operator's management and its operational and technical personnel, the inspector should always promote compliance with the safety regulations and strive to establish and maintain harmonious relationships. The importance of the inspector's good judgment, initiative, behaviour, attitude and sense of fairness, coupled with the necessary firmness in dealing with the operator's representatives, cannot be overstressed.

2.4.4 The duties and responsibilities of an individual inspector will vary depending upon the technical specialty and the specific tasks which are assigned. However, inspectors are expected to accomplish some or all of the following tasks as they relate to a particular specialty:

A. Conduct routine inspections such as the inspection of a station facility, apron, en-route operation and base and carry out oversight or checks considered necessary at prescribed intervals;

B. Assess the effectiveness of the operator’s SMS and the level of resources allocated to it;

C. Conduct such inspections or oversight in accordance with an established work program and applicable standard procedures and instructions;

D. Advise the operator, in writing, of any significant deficiency, requesting a proposal for remedial action;

E. Conduct follow-up on inspection reports to ensure that appropriate action has been taken in a timely manner;

F. Submit reports on each inspection or investigation in the manner prescribed, and complete and process the applicable inspection forms;

G. Investigate and report, as required, possible violations of the basic aviation law or related safety operating regulations and rules;

H. Continuously review the operator's pertinent documentation company policies, operating instructions and information to staff and system of amendments to determine whether they are accurate and made available in a timely manner to persons requiring their use;

I. Keep appropriate inspectorate staff informed on all aspects of the current operation and projected developments in the company including changes in executive personnel, in assigned responsibilities and in the operator's organization in general; and

J. Conduct qualification, approval and supervisory activities with respect to personnel proposed as designated examiners by an operator.

2.4.5 All safety oversight activity of an inspector, with respect to a particular operator, should be carefully planned. While it may not be possible to cover all aspects of an operation during every inspection, as much as possible should be covered over a specific period of time, and appropriate records should be maintained. Inspections should also be planned on the basis of a risk assessment exercise so that aspects of the operation that involve the greatest risk should receive more frequent attention. The planning by the inspector should take into account the results of the hazard identification and risk assessment conducted and maintained by the operator as part of the operator's SMS.

CHAPTER-03

QUALIFICATIONS AND TRAINING OF THE INSPECTOR

(This Chapter should be read as additional information to the Qualification and Training Manual CPD 6-1of CAAB)

3.1 COMPETENCIES OF THE INSPECTOR

CAA Bangladesh should establish and control the competencies of its safety inspectors. For this purpose it should provide training or take other actions to reach the established level of competency, and it should evaluate the effectiveness of these actions. The CAAB should ensure that safety inspectors are competent to carry out the tasks assigned to them and that they are aware of the consequence of their actions for aviation safety.

3.2 QUALIFICATIONS OF THE INSPECTOR

3.2.1 Ideally an inspector should be at least as qualified as the personnel to be inspected or supervised. To carry out in-flight inspections, an inspector should be qualified on the type of aircraft concerned or on a type of aircraft with similar operational characteristics, and also possess appropriate route experience. However, it is recognized that although an inspector should be qualified on either the type of aircraft flown or on a similar type of aircraft, it cannot be expected that in all cases the inspector would possess the same level of flying experience on that type as the personnel under inspection or, in the case of operator fleets with multiple types, that the inspector should be qualified on all types. Furthermore, in the case of route inspections, an inspector cannot be expected to possess actual flying experience on all of the routes on which inspections are conducted. The inspector should, however, at least be experienced on comparable routes and be adequately briefed on the particular route under inspection.

3.2.2 CAAB inspectors may obtain aircraft type qualifications through courses conducted by aircraft manufacturers, approved flight schools or airline operators' training courses. As a general rule, it is not desirable for the inspector to obtain qualifications from an operator under the CAAB inspectional jurisdiction. The maintenance of an inspector's pilot qualifications may, if necessary, be carried out using approved flight simulation training devices which is approved by CAAB.

3.2.3 While not absolute, the qualifications and experience requirements listed below are provided as broad guidelines for initial employment of technical staff of the CAAB inspectorate:

A. a broad air transport background of five years or more;

B. experience with the problems of operating or maintaining transport aircraft;

C. meteorological and climatological knowledge and experience;

D. experience in technical training including visual aids, training devices and aircraft flight simulation training devices;

E. a reputation for possessing qualities of initiative, tact, tolerance and patience; and

F. experience in auditing techniques.

Note: The experience in auditing techniques, while required, can be provided by CAAB, using a suitable training course and subsequent supervised practical auditing experience.

3.2.4 A flight operations inspector, for example, should have extensive operational experience — generally not less than 5 000 hours as a pilot-in-command of civil or military air transport aircraft. An inspector conducting line or flight crew licensing checks should be required to hold a current airline transport pilot license (ATPL). An inspector monitoring line or flight crew licensing checks should undergo full type conversion course in which case inspector's pilot qualifications may, if necessary, be carried out using approved flight simulation training devices which is approved by the CAAB. Persons seeking a position as a flight operations inspector should have held previous appointments either in operational management, as an airline pilot and designated examiner, or training instructor, or as a military pilot where equivalent experience in air transport operations would have been acquired.

3.2.6 The satisfactory execution of the various functions of the CAAB inspectorate depends on the qualifications, experience, competence and dedication of individual inspectors. In addition to the crucial importance of technical competency in performing certification, inspection and surveillance functions, it is likewise critical that inspectors possess a high degree of integrity, are impartial in carrying out their tasks, are tactful, have a good understanding of human nature and are able to get along well with people. Persons subject to oversight by inspectors are often apprehensive and sensitive to perceived intrusions by CAAB representatives into what they consider their own domain. Such apprehension or resentment can usually be reduced or overcome when the inspectors responsible for oversight take care to explain that their objective is to assist rather than hinder and that their oversight activities are being carried out in the interest of enhancing safety. Considering the specialized and sensitive nature of the inspector's mission, it is essential that the qualifications, previous experience and personal characteristics of each person to be employed to perform inspection and oversight duties be verified and carefully evaluated before selections and appointments are made.

3.2.7 EXEMPTION POLICY

In cases where suitable pilots fulfilling the above criteria are not available, the Chairman, Civil Aviation Authority may, at his discretion, relax the requirements, taking into consideration the pilot’s seniority, past performance, flying record, experience, progression towards a higher rating and utility to the Flight Operations Inspectors.

3.2.8 RECRUITMENT OF DESIGNATED FLIGHT OPERATIONS INSPECTORS

Pursuant to the provisions outlined in ICAO Doc 8335, CAAB will arrange for experienced personnel of its operators to be seconded to CAAB to act as Designated Flight Operations Inspectors (DFOIs). To mitigate potential conflict of interest issues, CAAB will ensure that a DFOIs in such a case shall not be involved in inspections concerning the operator from which the secondment was effected. To this effect CAAB ensures that operator personnel, seconded as DFOIs to CAAB, are adequately trained and qualified and subsequently supervised by the regular FOIs in carrying out of their duties, as outlined in Para 1.3 E 1, Part-1 Chapter 5.1 and 7.1 (Table serial number 14) of Civil Aviation Policy Document (CAP 6-1).

3.3 TRAINING OF INSPECTORS AND THE MAINTENANCE OF TECHNICAL QUALIFICATIONS

3.3.1 INITIAL TRAINING

3.3.1.1 The initial training of CAAB inspectorate staff should consist of a competency-based instruction with respect to CAAB regulations and procedures. Newly engaged inspectors should accompany experienced staff on inspections for a practical introduction to the tasks.

3.3.1.4 Course material is also available for the training of inspectors who will be involved in the inspection of foreign operators. An example of this is the European Aviation Safety Agency Guidance Material on the Qualification of SAFA Inspectors. Course material is also available in the ICAO FSIX website at www.icao.int/fsix/FAO_regs.cfm.

3.3.2 CONTINUATION TRAINING

3.3.2.1 CAAB inspectorate personnel represent the authority and, as such, require the continuous development of their competencies related to their respective responsibilities. This should be accomplished through periodic flight and ground training such as accident investigation courses, technical report writing and supervisory training.

3.3.2.2 To ensure that CAAB inspectorate personnel maintain proficiency and keep current on aircraft and equipment, techniques, procedures and new developments in their respective areas of expertise, it is essential that they receive periodic technical training. In some States this training may be available at an aviation training facility operated by the CAAB. More often, however, such training will need to be obtained through courses offered by manufacturers, private training facilities, other States or under ICAO auspices. It is emphasized again that in order to maintain good relationships and avoid possible embarrassment or controversy, it is not desirable for CAAB inspectorate personnel to acquire this training from an operator or organization under their inspectional jurisdiction.

3.3.2.3 Insofar as possible, the maintenance of license qualifications and of an acceptable level of proficiency and knowledge of aircraft performance, limitations, equipment, systems, operations, etc., will permit inspectors to better assess the knowledge, techniques and overall competence of the personnel of an operator. For example, flight operations inspectors should receive recurrent flight training on aircraft supplemented periodically by training in a flight simulation training device. However, where circumstances require the inspector to supervise more than one operator, or where an operator uses several different types of aircraft, it becomes extremely difficult and costly for an inspector to maintain pilot proficiency and knowledge of aircraft systems and associated ground services for all types involved. In such cases it may have to be accepted that inspectors are not fully qualified on all aircraft types under their jurisdiction.

3.3.2.4 Only through periodic practical and specialized theoretical training, both technical and supervisory, can facilitate the CAAB inspectorate manpower to be used effectively and CAAB personnel maintain a high level of expertise. The net result of such training is better job performance and greater respect from the operator.

3.3.3 OJTs and Recurrent training – detailed information may be acquired from the Qualification and Training Manual of FOIs of CAAB.

CHAPTER-04

THE COMMERCIAL AIR TRANSPORT OPERATOR

4.1 RESPONSIBILITIES OF THE OPERATOR

4.1.1 The operator has a responsibility for the safe conduct of operations and for compliance with any laws or regulations of CAAB. These laws and regulations, which are the means by which Bangladesh implements the provisions of the Annexes, are not in themselves sufficient to provide the operator with comprehensive and detailed instructions on which to base an operation. The responsibility for the development of operating instructions necessary for the safety, regularity and efficiency of an operation therefore rests upon the operator. These operating instructions must not conflict with the laws and regulations of CAAB or those of other States into or over which operations are conducted. The primary means used by an operator to promulgate these operating instructions is the operations manual and the MCM

4.1.2 CAAB requires an operator to implement an SMS in accordance with the instructions of the relevant Parts of CAR '84. This SMS, which needs to be acceptable to CAAB, is required to cover, as a minimum:

A. the identification of safety hazards;

B. the necessary remedial action to maintain an acceptable level of safety;

C. continuous monitoring and regular assessment of the safety level achieved; and

D. continuous improvement to the overall level of safety.

4.1.3 The SMS is also required to clearly define the lines of safety accountability throughout the organization and the direct accountability for safety of the senior management.

CHAPTER-05

THE OPERATOR — ORGANIZATION

5.1 GENERAL

To facilitate the inspectors have adequate knowledge about an operator, this chapter entails a broad spectrum about the structure, activities and mode of operandi of an air operator.

5.1.1 CAR '84 states that an operator shall establish and maintain a method of control and supervision of flight operations as one of the prerequisites for the issuance and continued validity of an AOC. The operator therefore needs to have the capability of organizing, conducting and supervising the intended or existing commercial aviation operation.

5.1.2 The number of management and supervisory personnel required depends upon the size and complexity of the operation. It is necessary for the operator to establish the responsibilities and functions of the different officers involved, their relationship with the other officers and their relationship within the flight operations area and the organization as a whole. The authority, tasks, responsibilities and relationships of each key position are to be clearly understood and followed by the individuals occupying these positions.

5.2 ORGANIZATION AND ADMINISTRATION

5.2.1 A sound and effective management structure is essential. It is particularly important that the operational management should have proper status in the organization and be in suitably experienced and competent hands. Clear lines of authority and specific duties and responsibilities of subordinate elements and positions need to be established.

5.2.2 Acceptable procedures are to be established and followed for conveying company decisions, procedures and operating instructions to affected personnel to keep them informed at all times of items relevant to their activities.

5.2.3 The operator needs to develop a complete description of the qualifications required for and the duties and responsibilities of the key management positions, these include:

A. operations manager/director flight operations

B. chief pilot

C. fleet manager(s)

D. cabin crew manager

E. safety manager

F. training manager

G. maintenance manager

H. ground services manager

I. quality manager

J. security manager

5.2.4 Some of the above positions may be combined, depending on the size and complexity of the operation, if the management structure is acceptable to the CAAB.

5.3 OPERATIONS MANUAL

5.3.1 The operations manual is the means used to define the company structure and individual duties and responsibilities.

5.3.2 With respect to the company's organizational structure the operations manual will contain:

A. Description of the organizational structure including the general organization of the company and of the operations department. The relationship between the operations department and the other departments of the company and the subordination and reporting lines of all divisions, departments, etc., which pertain to the safety of flight operations, should be defined;

B. The name of each manager responsible for flight operations, airworthiness and maintenance, crew training and ground operations, with a description of their function and responsibilities and their contact details;

C. Description of the duties, responsibilities and authority of operations management personnel pertaining to the safety of flight operations and in compliance with applicable regulations;

D. Description of the system for supervision of the operation by the operator including how the safety of flight operations and the qualifications of personnel involved in all such operations are supervised and monitored. In particular, it contains the procedures related to the competence of operations personnel and the control, analysis and storage of records, flight documents and safety-related data; and

E. System for the promulgation of additional operational instructions and information, supplementary to that in the operations manual, including the applicability of this information and the responsibilities for its promulgation.

CHAPTER-06

AOC CERTIFICATION

6.1 INTRODUCTION

6.1.1 The purpose of an AOC is to certify that specified commercial air transport operations are authorized by CAAB and are to be conducted in compliance with applicable regulations and rules (CAR '84). The CAAB will need to establish procedures for the issuance of an AOC and for the continuing safety oversight and inspection by the CAAB of the operations conducted in accordance with the AOC and the related operations specifications. An AOC comes in two parts, the AOC itself and the associated operations specifications that define the operation.

6.1.2 During the certification process, the inspector is to be satisfied that the applicant, who will have the ultimate responsibility for the safety of the operation, is eligible for the issuance of an AOC and has the ability and competence both to conduct safe and efficient operations and to comply with applicable rules and regulations. CAAB, in addition to assessing the ability and competence of the applicant, should also endeavour to guide the applicant in organizational and procedural matters which will result in a safe and economically successful operation. Thus, if the objectives of both CAAB and the applicant are achieved in the certification process, they will have commenced their shared responsibility for safety, regularity and efficiency of operations, which will in turn enhance the public confidence in the operations conducted by the applicant as an operator and holder of an AOC.

6.1.3 At the commencement of the certification process, the CAAB should appoint an inspector as the project manager and establish a certification team consisting of qualified and experienced inspectors of the necessary specializations, such as operations, maintenance and avionics. The applicant should be informed that the project manager will be responsible for coordinating all aspects of the certification process and will be the focal point for dealing with all matters between the applicant and the CAAB.

6.1.4 Since each operation may differ significantly in complexity and scope, the project manager and the certification team of CAAB need considerable latitude in taking decisions and making recommendations during the certification process. The ultimate recommendation by the project manager and decision by the CAAB regarding certification and awarding an AOC is to be based on the determination of whether or not the applicant meets the requirements established by CAAB in its air navigation regulations and is adequately equipped and capable of conducting the proposed operation in a safe and efficient manner.

6.2 CERTIFICATION PROCEDURE

6.2.1 The procedure for the application and granting of an AOC is best organized in phases and will normally take the following sequence:

A. pre-application phase;

B. formal application phase;

C. document evaluation phase;

D. demonstration and inspection phase; and

E. certification phase.

6.2.2 Each of these phases is briefly introduced below, and each will be dealt with in greater details in the succeeding chapters.

6.3 PRE-APPLICATION PHASE

6.3.1 A prospective operator who intends to apply for an AOC should enter into preliminary discussions with the CAAB and should be provided with complete information concerning the type of operations which may be authorized, the data to be provided by the applicant and the procedures which will be followed in the processing of the application. It is essential that the applicant has, in this pre-application phase, a clear understanding of the form, content and documents required for the formal application. A standard information package should be developed by CAAB to provide information to applicants. Inspectors shall assist CAAB in developing the same.

6.3.2 The CAAB should advise the prospective operator on the approximate period of time that will be required to conduct the certification process, subsequent to the receipt of a complete and properly executed application. This advice is of particular importance in the case of new operators so that such applicants may avoid undue financial outlays during the certification period.

6.3.3 In those cases where an applicant's organization is in the formative stage, and the applicant has little or no operating experience, the applicant should be advised that it may not be possible to judge the organization’s operating competency until a sufficient period of operational proving, including proving flight operations, has been carried out, and that the overall period required to reach a final decision on the application may be protracted and considerable financial outlays unavoidable.

6.3.4 The importance of a thorough and careful preliminary assessment of the application cannot be overemphasized. The more thoroughly the applicant's competence is established at this stage, the less likelihood there will be of having serious problems in the document evaluation and the demonstration and inspection phases preceding certification or during the course of subsequent operations. Analysis of the application should indicate either that it is acceptable on a preliminary basis or that it is unacceptable. If in the latter case the deficiencies are such that they can be rectified, the applicant should be given a reasonable opportunity to resubmit the application. Such an assessment is essential at an early stage to reveal any critical deficiencies in the proposals and will enable the applicant to prepare alternative proposals addressing the identified deficiencies.

6.3.5 If the application is acceptable to the CAAB on the basis of the preliminary assessment, the applicant should be encouraged to proceed with preparations for the commencement of operations on the basis that an AOC will be issued subject to satisfactory completion of the remainder of the certification procedure.

6.3.6 The pre-application phase should include a parallel assessment of the financial, economic and legal status of the applicant and the proposed operation. The financial viability of the operation may be the most critical factor in reaching a decision on whether or not an AOC should be awarded. The applicant needs guaranteed access to sufficient financial resources to obtain all the required equipment, facilities and manpower and to fully support operations in the early stages when revenues are difficult to predict and may, in any case, be very low. Marginal or severely limited resources frequently result in an adverse effect on safety and efficiency; experience indicates that operators tend to take short cuts on such vital matters as required maintenance, acquisition of adequate spare parts, training of personnel and other similar matters with safety implications. The determination of the financial resources of the applicant is usually based on an audit of the operator's assets and liabilities and a thorough evaluation of all financial information and other pertinent data such as proposed arrangements for the purchase or lease of aircraft and major equipment.

6.3.7 Aspects that should therefore be considered are:

A. sufficient financial resources;

B. route structure and aircraft appropriate to the proposed operation;

C. an intended level of service that meets a need or demand and is in the public interest;

D. the proposed operation is in accordance with bilateral or multilateral air transport agreements relating to traffic rights, frequencies, capacity, routes, etc., to which the State is a party; and,

E. the availability of traffic studies or other data indicating that the proposed operation should be economically successful.

6.3.8 In case CAAB does not have the qualified personnel or staff to carry out the financial, economic and legal assessment of the applicant and the proposed operation, it is essential that CAAB obtain the necessary professional assistance from other agencies to assist in the assessment and certification process.

6.3.9 It is essential that the financial, economic and legal aspects be assessed as satisfactory early in the certification process, before committing additional resources to that process. If the proposed operation is not considered to be viable in respect of the financial, economic and legal factors, further action should be suspended until it is determined whether these deficiencies can be rectified.

6.4 FORMAL APPLICATION PHASE

6.4.1 Upon completion of the assessment concerning the financial, economic and legal aspects of the application and after any deficiencies have been corrected, a provisional determination should be made regarding the general feasibility of the operation. If the operation is found to be provisionally acceptable, the second phase of the certification process, the formal application phase, can be undertaken.

6.4.2 The formal application for an AOC, accompanied by the required documentation, should be submitted in the manner prescribed by the CAAB.

6.4.3 The submission of a formal application is interpreted by the CAAB to mean that the applicant is aware of the regulations and rules applicable to the proposed operation, is prepared to show the method of compliance and is prepared for an in-depth evaluation, demonstration and inspection related to the required manuals, training programmes, operational and maintenance facilities, aircraft, support equipment, record keeping, dangerous goods programme, security programme, flight crew and key management personnel, including the functioning of the administrative and operational organization.

6.5 DOCUMENT EVALUATION PHASE

6.5.1 The document evaluation phase involves the detailed examination of all documentation and manuals provided by the applicant to establish that every aspect required by the regulations is included and adequately covered.

6.5.2 In order to facilitate this phase of the certification process, the applicant should have coordinated all aspects of the development of the required documentation with the CAAB certification team, prior to submission of the formal application.

6.6 INSPECTION AND DEMONSTRATION PHASE

6.6.1 Inspections in this phase will involve base and station facility inspections, inspection of the operational control and supervision facilities and inspection of training programmes and training facilities.

6.6.2 Following satisfactory inspection as laid down in Para 6.6.1, inspection in this phase will involve inspection of aircraft, associated documents and crew for technical clearance, aircraft airworthiness and serviceability, aircraft documentations and crew competence for aircraft ferry and/or any other special flight(s).

6.6.3 Demonstrations will involve demonstration of the operational control system, emergency evacuation and ditching demonstrations, and may involve demonstration flights.

6.7 CERTIFICATION PHASE

6.7.1 The certification phase is the conclusion of the certification process when the CAAB project manager has determined that all certification requirements, both operational and economic, have been completed in a satisfactory manner, and that the operator will comply with the applicable regulations and is fully capable of fulfilling its responsibilities and conducting a safe and efficient operation.

6.7.2 The culmination of this phase is the issuance of the AOC, and the associated operations specifications under the authority of which the operation will be conducted.

6.7.3 Subsequent to the issuance of an AOC, the CAAB will be responsible for continued surveillance and for conducting periodic inspections to ensure the operator's continued compliance with CAAB regulations, authorizations, limitations and provisions of its AOC and operations specifications. These periodic inspections are components of a continuing safety oversight programme.

Note: All relevant Forms and Checklists on Air Operator Certification can be found in Part-II, Chapter-68 (Appendices)

CHAPTER-07

AOC CERTIFICATION PRE-APPLICATION PHASE

7.1 INITIAL INQUIRY AND CAAB RESPONSE

7.1.1 The pre-application phase commences with the applicant making an initial inquiry by letter, telephone call or personal visit to the CAAB.

7.1.2 CAAB inspectors should advise the applicant to thoroughly review the CAAB regulations, directives and advisory materials and provide guidance concerning personnel, facilities, equipment and technical data requirements and an explanation of the certification process, in a standard information package for applicants for an AOC.

7.1.3 The standard information package should include a form for the prospective operator's pre-assessment statement to be completed by the applicant (see Attachment A to this Part), and an advisory pamphlet containing: a description of the application process for obtaining an AOC; an introduction to the specific CAAB regulations; guidance on the evaluation of an applicant for certification; guidance on the issuance of an AOC and associated operations specifications; and instructions for completing the pre-assessment statement form. Any other CAAB directive or advisory material necessary for the certification process should also be provided.

7.1.4 The purpose of the prospective operator's pre-assessment statement is to establish the intent of the applicant to continue with the process for certification and to thus enable the CAAB to commit resources and plan the certification process.

7.2 CAAB ACTION ON RECEIPT OF OPERATOR'S PRE-ASSESSMENT STATEMENT

7.2.1 On receipt of a completed prospective operator's pre-assessment statement, the CAAB will appoint a project manager and a certification team consisting of appropriately qualified operations and airworthiness inspectors.

7.2.2 The CAAB certification team will conduct a review of the applicant's pre-assessment statement and, if the information provided is considered acceptable, the project manager will schedule a pre-application meeting with the applicant.

7.3 PRE-APPLICATION MEETING

7.3.1 The purpose of the pre-application meeting is to confirm the information provided in the pre-assessment statement to determine whether or not the applicant has sufficient knowledge of the appropriate CAAB regulations and requirements and to confirm, for the applicant, the expectations of the CAAB.

7.3.2 The pre-application meeting should be attended by the CAAB Project Manager and certification team and the key management personnel of the applicant. The applicant should be prepared to discuss, in general terms, all aspects of the proposed operations.

7.3.3 The applicant should be provided with an overview of the certification process and made aware of the government department responsible for financial, economic and legal matters, and for the necessary assessment of the applicant's financial resources and ability to support the proposed operations. It is essential that the financial, economic and legal assessments are commenced early since an AOC should not be granted without a satisfactory assessment of these aspects from the appropriate department.

7.3.4 The CAAB project manager and the certification team should prepare an application package for delivery at the pre-application meeting. This package should be more detailed than the standard information package designed to assist the applicant in the preparation of a formal application for certification. This application package should contain:

A. the advisory pamphlet;

B. a list of the documents that should be provided with the formal application;

C. a schedule of events in the certification process;

D. an example of the type of operations specifications associated with an AOC; and,

E. any other information that may be helpful.

The required documents should be discussed in detail at the pre-application meeting to provide the applicant with as much assistance as possible.

7.3.5 Subsequent to the pre-application meeting, the certification team will evaluate the results of the meeting. Should the certification team consider that the applicant is not ready to make a formal application, advice should be given on further preparation and another pre-application meeting should be scheduled or, alternatively, the applicant may be advised to withdraw the intent to apply for certification.

7.3.6 Should the certification team establish that the information provided in the pre-application statement is satisfactory and that the applicant has a clear understanding of the certification process, the applicant should then be invited to prepare and proceed with a formal application.

Note: All relevant Forms and Checklists on Air Operator Certification can be found in Part-II, Chapter-68 (Appendices)

CHAPTER-08

AOC CERTIFICATION (FORMAL APPLICATION PHASE)

8.1 FORMAL APPLICATION PACKAGE

8.1.1 The formal application for certification should be an application form or letter with attachments containing the information required by CAAB, comprising a formal application package. The development of the application and the attached documents should have been coordinated with the CAAB certification team subsequent to the pre-application meeting. Such coordination, between the personnel of the applicant and the CAAB certification team, will ensure the quality of the application package and facilitate the later document evaluation process.

8.1.2 The application should be signed by the applicant's accountable manager and should contain at least the following information:

A. a statement that the application serves as a formal application for an AOC;

B. the name and address of the applicant;

C. the location and address of the applicant's principal place of business and the main base of operations;

D. a description of the applicant's business organization and corporate structure, and names and addresses of those entities and individuals having a major financial interest;

E. the name and address of the applicant's legal representative;

F. the identity of key management personnel, for example:

1. chief executive officer,
2. operations manager;
3. chief pilot;
4. fleet manager(s);
5. cabin crew manager;
6. safety manager;
7. training manager;
8. maintenance manager;
9. ground services manager;

10. security manager; and

11. quality manager;

G. the nature of the proposed operations — passenger/cargo/mail, day or night, visual flight rules (VFR) or instrument flight rules (IFR), whether or not dangerous goods are to be transported; and,

H. the desired date for the operation to commence.

8.1.3 The attachments that need to accompany the formal application are:

A. the identification of the operation specifications sought, with information on how associated conditions will be met;

B. the schedule of events in the certification process with appropriate events addressed and target dates;

C. an initial statement of compliance or detailed description of how the applicant intends to show compliance with each provision of the air navigation regulations;

D. the management structure and key staff members including titles, names, backgrounds, qualifications and experience, with regulatory requirements satisfied;

E. the details of the SMS;

F. a list of designated destination and alternate aerodromes for scheduled services, areas of operation for non-scheduled services and bases for operations, as appropriate to the intended operations;

G. a list of aircraft to be operated;

H. documents of purchase, leases, contracts or letters of intent;

I. arrangements for crew and ground personnel training and qualification and the facilities and equipment required and available;

J. the operations manual;

K. the MCM;

L. details of the method of control and supervision of operations to be used; and

M. the status of the assessment of financial, economic and legal matters by the appropriate government department.

8.2 ATTACHMENTS TO THE FORMAL APPLICATION

8.2.1 IDENTIFICATION OF OPERATIONS SPECIFICATIONS SOUGHT: The CAAB should have standard operations specifications to ensure that operators conducting similar operations with comparable equipment function to the same standards. The applicant will identify the desired operations specifications appropriate to the intended operation from the CAAB's standard operations specifications provided at the pre-assessment meeting. These desired operations specifications will include the applicant's intended authorizations, conditions and limitations specific to the aircraft type or types and to the proposed operations, and will form the basis for the operations specifications that will ultimately be issued in association with the AOC.

8.2.2 SCHEDULE OF EVENTS: The schedule of events is a key document that lists items, activities, programmes, aircraft and facility acquisitions that will be made ready for inspection by the CAAB before certification. Pursuant to the instructions laid down in ANO (AT) A-2, the schedule will include:

A. dates when crew members and maintenance personnel will commence training;

B. when maintenance facilities will be ready for inspection;

C. when each of the required manuals will be ready for evaluation;

D. when aircraft will be ready for inspection by airworthiness and operations;

E. when terminal facilities will be ready for inspection;

F. if and when emergency evacuation demonstrations, ditching demonstrations and demonstration flights are planned; and

G. the dates of proposed assessments of training staff and other persons subject to CAAB approval. The dates should be logical in sequence and provide time for CAAB review, inspection and approval of each item.

The overall plan is to be kept under constant review to maintain control of the certification process.

8.2.3 INITIAL STATEMENT OF COMPLIANCE: The initial statement of compliance should be a complete list of all CAAB regulations applicable to the proposed operation. Each regulation, or sub-part, should be accompanied by a brief description or a reference to a manual or other document. The description or reference should describe the method of compliance in each case. The method of compliance may not be finalized at the time of the formal application, in which case a date should be given by which the final information will be provided. The purpose of the statement of compliance is to ensure that the applicant has addressed all regulatory requirements. It aids the CAAB certification team to assess where the regulatory requirements have been addressed in the applicant's manuals, programmes and procedures.

8.2.4 MANAGEMENT STRUCTURE AND KEY STAFF MEMBERS: The CAAB regulations should demand basic management positions and the qualifications for these positions, with some variation in the requirement dependent upon the complexity of the proposed operation. The requirements should cover the following positions:

A. chief executive officer or general manager;

B. operations manager;

C. chief pilot;

D. fleet manager(s);

E. cabin crew manager;

F. safety manager;

G. training manager;

H. maintenance manager;

I. ground services manager;

J. security manager; and

K. quality manager.

The list should include the management positions, the names of the individuals involved and their qualifications and relevant management experience and, where appropriate, their licenses, ratings and aviation experience.

8.2.5 SMS: The details of the applicant's SMS which shall include:

A. the safety policy;

B. safety organization;

C. safety assessments;

D. occurrence reporting;

E. hazard identification;

F. risk assessment and risk management;

G. event investigation and analysis;

H. performance monitoring;

I. safety promotion and safety assurance.

8.2.6 AERODROMES AND AREAS: A list should be provided of the destination and alternate aerodromes designated for proposed scheduled operations and areas of operation for non-scheduled operations.

8.2.7 AIRCRAFT TO BE OPERATED: A list of the aircraft to be operated should be provided, with the make, model, series and the nationality and registration marks for each aircraft and details of the origin and source for each aircraft, if these details are known. It is possible that the details for individual aircraft may not yet be available, in which case, evidence should be provided as described in 8.2.8 below.

8.2.8 DOCUMENTS OF PURCHASE, LEASES, CONTRACTS OR LETTERS OF INTENT: Documents of purchase, leases, contracts or letters of intent should provide evidence that the applicant is actively procuring aircraft, facilities and services appropriate to the operation proposed. If formal contracts are not completed, letters or other documents showing preliminary agreements or intent should be provided. These documents should relate to aircraft, station facilities and services, weather reporting, communications facilities, maintenance, aeronautical charts and publications, aerodrome analysis and obstruction data, outsourced training and training facilities.

8.2.9 CREW AND GROUND PERSONNEL TRAINING AND REQUIRED FACILITIES: Details of the facilities required and available for training company personnel and of the training programme with dates for commencement and completion of the initial programme should be provided. Training should include:

8.2.9.1 Subjects:

A. human performance;

B. threat and error management;

C. the transport of dangerous goods; and,

D. security.

8.2.9.2 Specific attention should be paid with respect to:

A. crew members;

B. company procedures indoctrination;

C. emergency equipment drills;

D. aircraft ground training;

E. flight simulators and other flight simulation training devices; and,

F. aircraft flight training.

8.2.9.3 All the above aspects should cover both initial and recurrent training.

8.2.10 OPERATIONS MANUAL: The operations manual, which may be provided in separate parts, should set out the applicant's general policies, the duties and responsibilities of personnel, operational control policy and procedures, and the instructions and information necessary to permit flight and ground personnel to perform their duties with a high degree of safety. The size, as well as the number of volumes, of the operations manual will depend upon the size and complexity of the proposed operations commensurate with ANO (OPS) B-1.

8.2.11 METHOD OF CONTROL AND SUPERVISION OF OPERATIONS: This should set out the applicant's proposals for control and supervision of operations including dispatch, flight watch or flight following, and communication procedures.

8.2.12 ASSESSMENT OF FINANCIAL, ECONOMIC AND LEGAL MATTERS: The status of the assessment of financial, economic and legal matters should be clearly identified in the formal application package since a successful outcome of this assessment is essential to the issuance of an AOC.

8.3. CURSORY REVIEW OF THE FORMAL APPLICATION PACKAGE

8.3.1 The CAAB certification team will make a cursory review of the formal application package to check that the required attachments have been presented, that these attachments address the required information and that the documentation is of an appropriate quality.

8.3.2 The cursory review of the required operations documents as well as other safety-related manuals of the applicant should include the system of checking that the manuals shall have the procedures for the distribution, amendment and use by operations personnel. The review should ascertain whether the manuals are easy to revise, the revision status is easy to determine including the last revision and the manual reference is appropriate with CAR '84.

8.3.3 In the case of the operations manual, the cursory review should also extend to the need to address the required subjects, including at least:

A. operations administration and supervision

B. safety management

C. policy and procedures regarding flight operations and fuel quantities

D. minimum flight altitudes

E. aerodrome or heliport operating minima

F. rules to limit flight time and flight duty periods and for the provision of adequate rest periods for flight and cabin crew members, complemented as applicable by fatigue risk management provisions

G. aircraft performance

H. route guide

I. procedures for search and rescue

J. instructions for the carriage of dangerous goods and emergency response action in the event of a dangerous goods incident

K. navigation instructions

L. communications instructions

M. initial and recurrent training programmes

N. security procedures and instructions

8.3.5 During the cursory review, the CAAB project manager should identify the need for additional expertise on the certification team, e.g. to deal with a specific aircraft type or a particular navigation system.

8.4 ACCEPTABILITY OF THE FORMAL APPLICATION

8.4.1 If the formal application package is incomplete or otherwise unacceptable, the project manager will coordinate with the CAAB inspectors and will inform the applicant, providing details of the deficiencies and advice on the resubmission of the formal application.

8.4.2 If the information in the formal application package is considered acceptable by the certification team, the project manager will schedule a formal application meeting with the applicant.

8.5 FORMAL APPLICATION MEETING

8.5.1 A formal application meeting will be conducted between the CAAB project manager, the certification team and all the key management personnel of the applicant, with the objective of resolving any questions on the part of either the CAAB, or the applicant, to establish a common understanding on the future procedure for the application process.

8.5.2 The certification team, during the meeting, will confirm the following:

A. that, the management background information satisfies regulatory requirements;

B. it should address any errors or omissions in the application package;

C. resolve any scheduling date conflicts and agree on a process for revising event dates;

D. reinforce the communication and working relationships between the CAAB certification team and applicant personnel; and,

E. determine the acceptability of the formal application package.

It should be understood that acceptance of the formal application package by the CAAB project manager does not constitute acceptance or approval of any of the attachments which will be subjected to later in-depth review. The identification of significant discrepancies during the in-depth review may require further meetings between appropriate members of the CAAB certification team and the applicant personnel.

8.5.3 Subsequent to the formal application meeting and subject to successful acceptance of the application package, the CAAB project manager will provide the applicant with a letter acknowledging receipt and acceptance of the formal application.

Note: All relevant Forms and Checklists on Air Operator Certification can be found in Part-II, Chapter-68 (Appendices)

CHAPTER-09

AOC CERTIFICATION (DOCUMENT EVALUATION PHASE)

9.1 GENERAL

9.1.1 After the formal application has been accepted, the CAAB operations inspectors will commence a thorough evaluation of all the documents and manuals that are required by the regulations to be submitted to the CAAB in the area of operations. The Inspectors should endeavour to complete these evaluations in accordance with the schedule of events prepared by the applicant and agreed at the formal application meeting. If a document or manual is incomplete or deficient, or if non-compliance with regulations or safe operating practices is detected, the document or manual should be returned to the applicant for corrective action followed by resubmission.

9.1.2 Documents or manuals that are satisfactory will be approved or accepted, as required by the regulations. Approval should be indicated within a previously specified period by a signed document or certificate. Acceptance of material that does not require formal approval should be indicated either by letter or by the absence of any CAAB objection to the material.

9.1.3 The complexity of the information that needs to be addressed in the applicant's documents and manuals depends upon the complexity of the proposed operation.

9.2 EXAMPLES OF DOCUMENTS AND MANUALS TO BE EVALUATED

9.2.1 ANO (AT) A-2 provides information on the documents and manuals required to be submitted by a prospective applicant. The following is a non-exhaustive list of the documents and manuals that should be provided by the applicant and evaluated by the CAAB during this phase:

A. draft operations specifications

B. statement of compliance

C. management personnel résumés providing qualifications and aviation experience

D. aircraft flight manuals

E. operations manual (individual manuals and items listed below form part of the operations manual):

F. aircraft operating manual

G. minimum equipment list (MEL)

H. configuration deviation list (CDL)

I. aircraft performance manual

J. mass and balance control manual

K. aircraft loading and handling manual or ground handling manual

L. training manuals for flight crew, cabin crew, operations personnel and ground personnel

M. route guide

N. dangerous goods manual

O. passenger briefing cards

P. aircraft search procedure checklist (operational control procedures, dispatch, flight following, etc.)

Q. SMS manual, including a description of the flight safety document system

R. security programme manual

S. MCM

T. maintenance programme including maintenance schedule

U. training manual for maintenance personnel

V. plan for emergency evacuation demonstration

W. plan for ditching demonstration

X. plan for demonstration flights

9.2.2 All manuals are to be provided with procedures for the development, control and distribution of each manual, the means to keep the manual up to date and the means for the publication and distribution of amendments.

9.2.3 Manuals will require appropriate revision and amendment when new requirements, operations or equipment are introduced.

9.3 EVALUATION OF THE DOCUMENTS

9.3.1 *Draft operations specifications*: Operations specifications form part of the AOC. The CAAB standard operations specifications will have been given to the applicant at the pre-application meeting and a list of desired operations specifications identified to form the draft operations specifications.

This draft will have been edited by the applicant and the CAAB certification team to add necessary authorizations, conditions and limitations to produce operations specifications appropriate to the applicant's intended operation. Information on the operations specifications should be available in the operations manual. Subsequent amendments to the specifications can be initiated later by the operator or the CAAB as required by changing circumstances.

9.3.2 *Statement of compliance:* The certification team will evaluate the statement of compliance, the purpose of which is to ensure that the applicant has met all regulatory requirements applicable to the proposed operation. The statement also indicates to the certification team where the regulatory requirements have been addressed in the applicant's manuals, programmes and procedures. The final statement of compliance needs to be completed and accepted by the CAAB prior to the commencement of the flight operations inspection.

9.3.3 *Management personnel résumés providing qualifications and aviation experience:* The list should include the management positions, the names of the individuals involved and their qualifications and relevant management experience and their licenses, ratings and aviation experience.

9.3.4 *Aircraft flight manuals (an airworthiness requirement):* Flight manuals are required to be provided specific to individual aircraft and are subject to the control of CAAB. Arrangements for the administration, control and amendment of copies of the flight manuals should be examined together with the means for providing aircraft performance and limitations information to the flight crew. The flight manual should contain at least the information required by Part VIII of CAR '84.

9.3.5 *Operations manual:* The operations manual is the means by which the applicant intends to control all aspects of the intended operation. Its structure normally consists, pursuant to Rule 124 of CAR '84, of four parts as below:

A. a general section;

B. aircraft operating information;

C. areas, routes and aerodromes; and,

D. training.

9.3.5.1 Requirements for the provision of an operations manual, including indication of specific items that require the approval of the State of the Operator, structural organization and mandatory content, are given in Rule 124 of CAR '84 and ANO (OPS) B-1.

9.3.5.2 The operations manual and subsequent amendments have to be submitted to the CAAB for scrutiny and where required acceptance or approval. The CAAB will require revision of the manual as necessary to achieve compliance with CAAB regulations and safety requirements.

9.3.5.3 Prior to initiating the ground or flight operations phase of the inspection, a detailed review of the operations manual should be completed by the operations inspectors. The operations manual should provide, in a clear and concise manner, the necessary policy guidance and instructions to the applicant's personnel on how operations are to be conducted. The operations manual should not contain information that is not relevant to the proposed operations. Thus, at the outset, a determination should be made as to the adequacy of the operations manual. The subsequent ground and flight operational inspections will determine the capability of the applicant's organization to effectively carry out the policies and instructions set forth in the operations manual.

9.3.5.4 An adequate operations manual should at least:

A. implement the CAAB regulations including any specified mandatory material and not conflict with the regulations of any other State where operations will be conducted;

B. provide clear, complete and detailed operating instructions, policies and procedures so that operational staff, i.e. crew members and ground operations, loading, maintenance, operational control and administrative personnel, are fully informed of what is required of them. Through the proper use of this material, it will be expected that such personnel perform their duties to a high degree of precision, thus resulting in safe and efficient operations. Procedures should be effective, represent sound safety philosophy and be capable of being accomplished;

C. make provisions for revision to ensure that the information contained therein is kept up to date;

D. present the necessary guidance and instructions to personnel in a suitable and convenient format. It should be ascertained that the applicant has provided the required instructions following the guidance provided regarding the form and content of these documents; and

E. outline standardized procedures for all crew member functions.

9.3.5.5 In connection with the detailed review of the operations manual, the CAAB operations inspector should ascertain that effective procedures have been established by the applicant for the revision, distribution and use of the operations manual. Each manual should be numbered and issued according to a specific distribution list, and each holder made responsible for its prompt and accurate update.

The distribution list should contain all operations personnel and others requiring the information therein for proper performance of their duties. Those parts of the manual required to be carried on board each aircraft should be designed for convenient use and all parts should permit ready and accurate reference.

9.3.5.6 *SMS manual*: An SMS manual is required include documents on all aspects of the SMS. The manual must include the following:

A. the statement of safety policy and objectives, which clearly describes the safety accountabilities and emergency response planning;

B. the safety risk management, which includes hazard identification processes and risk assessment and mitigation processes;

C. the safety assurance, including safety performance monitoring with an investigation capability; and,

D. safety promotion and training.

9.3.5.7 *Aircraft operating manual:* Aircraft operating manuals for each type of aircraft to be operated are required Rule 124 of CAR '84, ANO (AT) A-2 and ANO (OPS) B-1. Aircraft operating manuals are required to contain:

A. normal, abnormal and emergency procedures;

B. details of the aircraft systems;

C. SOPs of the operator;

D. checklists to be used; and

E. Associated crew briefing.

9.3.5.8 *MEL*: An MEL is required for each type and model of aircraft to be operated, which provides for the operation of the aircraft, subject to specified conditions, with particular equipment inoperative. This list prepared by the applicant in conformity with, or more restrictive than, the master minimum equipment list (MMEL) for the type approved by the State of Design, is tailored to the applicant's aircraft and installed equipment. The MEL is required to be approved by CAAB. For this the draft MEL prepared by the company shall have to be reviewed by the inspectors from both the operations and the airworthiness sections. The MEL needs to be available to flight crew, maintenance personnel and personnel responsible for operational control. The MEL also needs to include instructions for its use.

9.3.5.9 *CDL:* A CDL for each aircraft type and model may be established by the organization responsible for the type design and approved by the State of Design to provide for the commencement of a flight without specified external parts. The CDL contains any necessary information on associated operating limitations or performance corrections and should be available to flight crew, maintenance personnel and personnel responsible for operational control. A CDL needs to include instructions for its use.

9.3.5.10 *Aircraft performance manual*: Aircraft performance manuals are required for each type and model of aircraft to be operated. The manuals need to contain adequate performance information and procedures for the calculation of performance for all phases of flight to enable aircraft to be operated within the performance limitations specified in the aircraft flight manual. The manual should cover performance limitations for take-off, en-route and landing in all engines operating and in appropriate engine inoperative situations, and should take into consideration appropriate factors affecting performance, such as line-up distance for take-off, runway conditions (wet, contaminated, etc.), aircraft configuration and technical status and environmental conditions. The applicant should have a system for the provision of current performance and obstacle data for the aircraft, routes and aerodromes/heliports in use.

9.3.5.11 *Mass and balance control manual*: The manual provides for a system to obtain, maintain and distribute to operational personnel information on the mass and balance of each aircraft operated and the means to keep this information up to date. The manual includes procedures for the preparation of load sheets, the distribution of passengers and cargo, determining passenger, baggage and cargo mass and for the use of standard mass, as well as last-minute change procedures.

9.3.5.12 *Aircraft loading and handling manual* or *ground handling manual:* This manual contains procedures and limitations for servicing, fuelling, loading and unloading, preflight preparation and post-flight securing, applicable to the aircraft type and model. The manual needs to be available to flight crew, maintenance personnel, ground handlers and handling agents.

9.3.5.13 *Training manuals for flight crew, cabin crew, operations personnel and ground personnel:* Training manuals are required for all operational, (maintenance) and ground personnel. These should cover all aspects of initial and recurrent training and conversion and upgrading training.

9.3.5.14 *Route guide*: The route guide is required to ensure that the flight crew and personnel responsible for operational control have the necessary information for communications, navigation aids, aerodromes/heliports, instrument procedures for departure, en route and arrival for the conduct of the particular operation.

9.3.5.15 *Dangerous goods manual:* All applicants will require a manual containing procedures for the handling of dangerous goods, emergency response to dangerous goods incidents and the training of personnel. The details required will depend upon the intended status of the applicant with respect to the transport of dangerous goods. If a declaration has been made that dangerous goods will be carried as cargo, the applicant will require comprehensive material on the control, loading and carriage of dangerous goods and on response to dangerous goods incidents and emergencies. If it is not intended to transport dangerous goods as cargo, the applicant will still need to cover dangerous items that form part of the normal aircraft equipment, dangerous items that are permitted to be carried by passengers and dangerous items that may be carried in the form of company material. In both cases, the operators will require procedures for the handling of dangerous goods, emergency response information and details of the required training appropriate to the level of activity proposed.

9.3.5.16 *Passenger briefing cards:* Passenger briefing cards need to be provided to supplement oral briefings and be particular to the type and model of aircraft and the specific emergency equipment in use.

9.3.5.17 *Aircraft search procedure checklist:* The checklist needs to be carried on board and describes the procedures to be followed in searching for a bomb in case of suspected sabotage and for inspecting aircraft for concealed weapons, explosives or other dangerous devices when a well-founded suspicion exists that the aircraft may be the object of an act of unlawful interference. The checklist should be supported by guidance on the appropriate course of action to be taken should a bomb or suspicious object be found and information on the least-risk bomb location specific to the aircraft.

9.3.5.18 *Operational control procedures, dispatch, flight following etc.:* The manual is required to contain the details of the applicant's operational control procedures and procedures for dispatch and flight following. It should cover procedures for use in emergency situations and all communication procedures.

9.3.5.19 *Policies limiting the flight time and flight duty periods and providing adequate rest periods for flight and cabin crew members:* These policies shall be included in the operations manual and need to be in accordance with the CAR '84 and the associated ANOs and the policies shall be approved by CAAB.

The applicant should state in its scheme the minimum times allocated to preflight preparation and immediate post-flight activities. There should be procedures to take into account duty periods, which include flight duty periods and activities other than flight duties, such as ground school, simulator training, attendance at emergency drill practice, management or office duties, particularly with respect to rest periods and the subsequent commencement of a flight duty period. Responsibility should be clearly defined for issuing instructions and decisions on questions relating to flight time, flight duty periods and rest periods and for processing reports when the pilot-in-command exercises his/her discretionary authority to extend duty or reduce rest periods. Provisions in the operations manual for a fatigue risk management system may complement these rules, with the approval of the State of the Operator.

9.3.5.20 *Security programme manual:* The manual should describe the operator security programme, which should meet the requirements of the security programme of CAAB as outlined in Part XVII of CAR '84. The manual should include the security procedures applicable to the type of operations and training programme for all security personnel.

9.3.5.21 *Plan for emergency evacuation demonstration:* The applicant needs to have a plan for demonstrating aircraft evacuation. Evacuation demonstrations carried out by the aircraft manufacturer or other operator for the same type and model of aircraft may be taken into account by the CAAB when a decision is made on the actual demonstration required. A description of the emergency equipment installed on the aircraft needs to be attached to the plan.

9.3.5.22 *Plan for ditching demonstration:* Where over-water flights are included in the proposed operation, the applicant needs to have a plan to demonstrate ditching equipment and the ability to carry out ditching procedures including the preparation of passengers, aircraft and ditching equipment.

9.3.5.23 *Plan for demonstration flights:* Where the CAAB has determined that demonstration flights are required, a plan for these demonstration flights should be prepared so that the applicant can demonstrate the ability to operate and maintain aircraft and conduct the type of operation specified. The determination by the CAAB as to whether or not demonstration flights will be required, and if such flights are required, their number and type, will depend on the CAAB's assessment of the capabilities of the operational and maintenance systems established by the applicant.

Note: All relevant Forms and Checklists on Air Operator Certification can be found in Part-II, Chapter-68 (Appendices)

CHAPTER-10

AOC CERTIFICATION (OPERATIONAL DEMONSTRATION AND INSPECTION PHASE)

10.1 GENERAL

10.1.1 CAR '84 requires an applicant to demonstrate the ability to comply with regulations and safe operating practices before beginning revenue operations. These demonstrations will include actual performance of activities and/or operations while being observed by inspectors of the certification team. This will also involve on-site evaluations of aircraft maintenance equipment and support facilities. During these demonstrations and inspections, the CAAB evaluates the effectiveness of the policies, methods, procedures and instructions as described in the manuals and other documents developed by the applicant. During this phase, emphasis should be placed on the applicant's management effectiveness. Deficiencies should be brought to the attention of the applicant, and corrective action should be taken before an AOC can be issued.

10.1.2 The preliminary assessment of the application should provide the CAAB with a general appreciation of the scope of the proposed operation and the potential ability of the applicant to conduct it safely. However, before authorizing the issuance of the AOC, the Inspectors will need to thoroughly investigate the operating ability of the applicant. This important and more detailed phase of the investigation and assessment will require the applicant to demonstrate thorough, day-to-day administrative and operational capabilities, including, in some cases, proving flights over proposed routes, the adequacy of facilities, equipment, operating procedures and practices, and the competence of administrative, flight and ground personnel. Demonstration flights may include any aspect to be covered by a special authorization in the operations specifications which will be associated with the AOC when issued. Training or positioning flights observed by a CAAB inspector may be credited towards meeting demonstration flight requirements. Emergency evacuation and ditching demonstrations may also be required during this phase of the investigation of the applicant's capabilities.

10.1.3 The operational demonstration phase should encompass all aspects of the proposed operation. Such matters as the inspection of the passenger services organization is also necessary and should be viewed and assessed as satisfactory by the inspectors.

10.1.4 Since the precise details of inspections will be determined by many factors, such as the nature, scope and geographical areas of operations, the type of airborne and ground equipment to be used and the method of operational control and supervision, it is not practicable to prepare comprehensive material adaptable to universal use. Consequently, the material that follows in this chapter should be regarded as a listing of the more important aspects of the operation to be investigated, the exact procedure for inspection being determined by the circumstances of each case.

10.1.5 It will also be necessary to ascertain that facilities located in other States, which are to be utilized, are adequate and that crew licenses are acceptable to other States where operations will take place. Arrangements for this determination are a matter of agreement between the CAAB and the other States concerned.

10.2 ORGANIZATION AND ADMINISTRATION

10.2.1 During the operational demonstration and inspection phase, the applicant's organizational structure, managerial style, direction and philosophy will be evaluated by the inspectors to ensure that necessary and proper control can be exercised over the proposed operation. A sound and effective management structure is essential. It is particularly important that the operational management should have proper status in the applicant's organization and be in suitably experienced and competent hands. Through discussions with key management personnel and through observation, the CAAB certification team will evaluate the appropriateness of the management structure and determine whether or not clear lines of authority and specific duties and responsibilities of subordinate elements and individuals are established. These duties and responsibilities need to be clearly outlined in the applicant's operations and other company documents. It should also be determined that acceptable processes are established for conveying company procedures and operating instructions to the personnel involved to keep them appropriately informed at all times. The authorities, tasks, responsibilities and relationships of each position need to be clearly understood and followed by the individuals occupying these positions.

10.2.2 At all levels, it is necessary that the applicant's personnel are thoroughly integrated into the operation and are made fully aware of the channels of communication to be used in the course of their work and of the limits of their authority and responsibility.

10.2.3 The applicant's staffing level needs to be evaluated by the inspectors to determine whether an adequate number of personnel are employed at management and other levels to perform the necessary functions. The number and nature of personnel will vary with the size and complexity of the organization. Through a sampling questioning process, the CAAB inspectors will determine whether or not management personnel are qualified, experienced and competent to perform their assigned duties.

10.2.4 Experience has shown that the quality of an operation is directly related to the standards maintained by its management. Competent management usually results in safe operations. An excess of managers can lead to fragmentation of responsibility and control and to as much difficulty and inefficiency as a shortage. Either case can result in a lowering of operational standards. Thus, the evaluation of an applicant's organization is a very significant phase of the certification inspection process. Once it has been determined that the applicant's organization is adequately staffed and managed, a detailed examination of the organization should be initiated, and the suitability and use of the associated operations and other branches should be assessed.

10.3 GROUND OPERATIONS INSPECTION

10.3.1 GENERAL

10.3.1.1 The purpose of this phase of the certification inspection is to ascertain, through on-site inspections, the adequacy and suitability of the applicant's staffing, training programme, ground equipment, facilities and procedures to conduct the operations specified in the application. This area is covered by the operations inspectors especially the ground operations inspector of CAAB.

10.3.1.2 Although the inspection of maintenance facilities and procedures is part of the ground inspection, it will be carried out separately by airworthiness inspectors who are part of the CAAB certification team. This aspect is therefore be covered in more detail in the Airworthiness Handbook.

10.3.2 FIXED FACILITIES

10.3.2.1 *Buildings:* This inspection should be designed to determine that the buildings to be utilized by the applicant at each base and terminal, including those located in other States, are properly equipped; are provided with the necessary sanitary facilities and security and emergency controls, warnings and equipment; and are adequate for the operation to be conducted. Such an inspection would include hangars, maintenance and overhaul workshops, administrative staff and operations personnel offices, passenger service areas, cargo storage, and handling buildings. Inspection on site may be replaced by an assessment of the buildings from the State's aeronautical information publication, charts or diagrams, complemented by documents, describing the facilities and ground handling arrangements, or by a review of existing usage by other operators.

10.3.2.2 *Aerodromes and heliports:* The destination and alternate aerodromes or heliports to be utilized in the operation should be inspected to determine their adequacy for operational use. However, this inspection requirement may be waived in those cases where the CAAB inspector is already familiar with the aerodrome or heliport and its associated facilities and is satisfied that they are adequate for the proposed operation. In those cases where the proposed operation covers a large part of the world, it will not be feasible for the CAAB certification team to determine the adequacy of all the aerodromes or heliports of potential use. Accordingly, the CAAB certification team should consider inspecting only those considered by the applicant to be for major use and recommend to the CAAB that, before awarding the AOC, the operations manual contain the list of aerodromes that are considered adequate for use, and should specify that the use of other aerodromes or heliports in the approved area of operations be prohibited without prior approval of the CAAB.

10.3.2.3 Approval of a particular aerodrome or heliport may be granted without inspection by the CAAB if the operator evaluates the facility as adequate for its operations, using an acceptable documented process, possibly as part of its SMS, and establishes operating minima and appropriate procedures.

10.3.2.4 Inspections or evaluations should cover at least the following items as applicable:

A. runways;

B. clearways;

C. stopways;

D. taxiways;

E. apron and parking areas;

F. lighting (including approach lighting);

G. visual and non-visual approach aids;

H. navigation facilities;

I. communications services;

J. ATS;

K. meteorological services;

L. aeronautical information services;

M. aerodrome service equipment (e.g. runway contaminant sweepers, snowploughs);

N. ground de-icing installations and equipment;

O. rescue and fire fighting equipment and services ;

P. availability of equipment and handling procedures for fuel and lubricants;

Q. public protection, including security precautions;

R. obstacles affecting flight operations;

S. instrument departure, arrival and approach procedures and associated charts; and

T. aerodrome/heliport operating minima.

10.3.2.5 In conjunction with the aerodrome inspection, the CAAB inspector should determine the adequacy of the applicant's procedures for acquiring current aerodrome data and instrument procedure charts and distributing these to all personnel who require such information in their performance of duty.

10.3.3 MOBILE EQUIPMENT

10.3.3.1 The mobile equipment to be utilized in the operation should be inspected with primary emphasis on adequacy, suitability and the safety aspects of its use. Such equipment would include fuelling vehicles, ground power units, oxygen and compressed gas servicing equipment, towing tugs, cargo and baggage handling equipment, catering vehicles, sanitary servicing trucks, de-icing equipment, etc.

10.3.3.2 An evaluation of the mobile equipment and the procedures for its use, performed by an audit organization, using suitable and recognized evaluation systems, may be acceptable at the discretion of CAAB. For example, equipment inspections conducted as part of industry-recognized fuel quality audits, de-icing/anti-icing quality control audits or audits for ground operations may be acceptable CAAB.

Note.: Commercial organizations or associations, such as the International Air Transport Association (IATA), generally manage these recognized evaluation systems.

10.3.4 OPERATIONAL CONTROL ORGANIZATION

10.3.4.1 *General:* Evaluation of the overall effectiveness of an operational control organization should include a thorough analysis of the following factors:

A. Annex 6, Part I, and Part III, Section II as well as Part-VI of CAR '84 require an operator to establish and maintain a method of control and supervision of flight operations that is approved by CAAB. Responsibility for operational control can be delegated only to the pilot-in-command, and to a flight operations officer/flight dispatcher if the approved method of control and supervision of flight operations requires the use of flight operations officer/flight dispatcher personnel. Because of the nature and extent of the duties and responsibilities involved in the supervision of flight operations, the State and the operator should consider the advantages of an approved method of control and supervision of flight operations requiring the services of a flight operations officer/flight dispatcher.

In such a system, the flight operations officer/flight dispatcher is assigned to duty in the company operations control centre and is responsible, while on duty, for carrying out the operational control procedures and policies specified in the operations manual. The flight operations officer/flight dispatcher may be licensed or not depending upon the requirements of CAAB.

B. The operations manual should specify the responsibilities and functions assigned to flight operations officers/flight dispatchers. The actual responsibilities assigned are part of the approved method of control and supervision of flight operations. Annex 6, Part I, and Part III, Section II as well as Part-VI of CAR '84 gives information on the duties of flight operations officers/flight dispatchers. The duties assigned will be very similar for all such operations personnel, whether licensed or unlicensed.

C. The responsibilities of a flight operations officer/flight dispatcher include the provision of assistance to the pilot-in-command in flight preparation; completion of operational and ATS flight plans; liaison with the air traffic, meteorological and communication services; and the provision to the pilot-in-command during flight of information necessary for the safe and efficient conduct of the flight. Flight operations officers/flight dispatchers should also be responsible for monitoring the progress of each flight under their jurisdiction and for advising the pilot-in-command of company requirements for cancellation, re-routing or re-planning, should it not be possible to operate as originally planned. In connection with the foregoing, it should be understood that the pilot-in-command is the person ultimately responsible for the safety of the flight.

Note.— The duties and responsibilities of a flight operations officer/flight dispatcher are established in Annex 6, Part I, and Part III, Section II as well as in Part VI of CAR '84 and related ANOs. Further guidance is contained in the Preparation of an Operations Manual *(Doc 9376) as well as in ANO (OPS) B-1. The requirements for age, skill, knowledge and experience for the licensing of flight operations officers/flight dispatchers are in Annex 1 as well as in Part-I of CAR '84 and related ANOs on* Personnel Licensing.

D. In evaluating the structure, responsibilities and performance of the operational control organization, it should be remembered that:

1. rapidly improving communications capabilities and advances in weather forecasting and reporting in some areas have brought about a trend towards consolidation and centralization of operational control facilities;

2. availability of computerized or stored flight plans and fuel load determination and the use of direct pilot/operations control centre communications have facilitated the performance of the operational control of flights; and

3. the pilot-in-command may, in many cases, have more up-to-date information and may be in a better position to evaluate evolving flight conditions than personnel in a distantly located operations control centre.

10.3.4.2 *Additional considerations*: In addition to the factors listed in 10.3.4.1, items such as the type of operation and its geographical scope and size should also be evaluated in relation to the level of support required. The guidelines below are provided to assist the CAAB inspector in determining the adequacy of operational control:

A. *Staffing:* The CAAB inspector should determine that:

1. the operational control centre is staffed with sufficient personnel to competently handle the assigned workload in accordance with State regulations;

2. the applicant observes the daily duty time limitations prescribed by State regulations for flight operations officers/flight dispatchers;

3. the applicant is not using flight operations officers/flight dispatchers to perform other functions such as that of clerks and maintenance officers, to the detriment of the primary function; and

4. the conditions at the operational control centre facilities such as space, temperature, lighting, noise level and controlled access are adequate for carrying out dispatch and operational control responsibilities.

B. *Communications:* The CAA inspector should determine that:

1. the communications facilities meet the requirements of the proposed operation;

2. the procedures to be used to notify flights regarding hazardous conditions relating to aerodromes or navigation aids, etc., are adequate;

3. notices to airmen (NOTAMs) will be made available to flight crew personnel in a timely manner;

4. emergency communications procedures and facilities are adequate;

5. flight operations officers/flight dispatchers are able to establish rapid and reliable voice communications with the flight crew at the gate;

6. communications between the operational control centre and appropriate ATS facilities are adequate;

7. air-ground communications and point-to-point circuits used for flight safety messages are adequate and are reasonably free of congestion to ensure rapid and reliable communications throughout the geographical area of operations;

8. flight operations officers/flight dispatchers are familiar with all facets of operations within their geographical areas of responsibility and are properly authorized and qualified in the use of all communications channels required by the approved method of control and supervision of flight operations;

9. the necessary emphasis is placed on the timely receipt of messages both in the aircraft and at the operational control centre or en-route stations; and

10. facilities for the communication of weather information to en-route stations and to aircraft are adequate.

C. *Meteorology:* The CAA inspector should:

1. if the applicant has established a meteorological department, determine that it will be provided with adequate staff and facilities;

2. determine whether adequate procedures have been established to ensure the availability of weather forecasts and reports needed by the applicant for flight planning purposes;

3. determine that the applicant has procedures to utilize all useful weather information pertinent to the area with which the operational control is concerned; 4) give particular attention to the level of knowledge possessed by individual flight operations officers/flight dispatchers with respect to meteorology in general and to the weather conditions in the area with which they are concerned;

4. determine that the applicant has provided the means whereby the pilots and the flight operations officers/flight dispatchers are provided with timely information pertaining to clear air turbulence, thunderstorms, icing conditions and volcanic ash, as well as to the best routes and altitudes for avoiding such occurrences;

5. give particular attention to procedures to be employed by operational control for disseminating information pertaining to clear air turbulence, thunderstorms, volcanic ash, icing conditions and other significant weather phenomena;
6. determine that the necessary procedures have been established for providing adequate weather information to the pilot-in-command at en-route stops; and
7. determine the adequacy of the procedures to be employed throughout the applicant's system with respect to in-flight meteorological reporting.

D. *Procedures:* The CAAB inspector should:

1. give particular attention to the exercise of responsibility by pilots-in-command and flight operations officers/flight dispatchers in their analysis of all factors pertaining to the flight. In this context, the inspector should determine that the flight operations officers/flight dispatchers will be able to perform their functions in accordance with the terms of the applicable operating instructions and procedures. It is emphasized again that the flight operations officer/flight dispatcher is responsible for assisting the pilot-in-command in the preflight planning, and authorization of delay and release of flights, in accordance with the approved method of control and supervision of flight operations;

2. determine that the applicant has established procedures to ensure that flight operations officers/flight dispatchers are adequately trained and informed on important aspects of flight planning such as weather forecasts and reports, fuel requirements, aerodrome limitations, NOTAM, navigation equipment, navigation facilities, ATM procedures and aircraft performance data;

3. determine the adequacy of procedures and methods to be used to comply with State regulations concerning aircraft performance, i.e. the computation of the mass of the aircraft and the centre of gravity location, critical speeds, climb gradients, runway and obstacle clearance limitations;

4. determine that procedures for the release of a flight are established, which will ensure that the aircraft and its load are in conformity with the relevant flight release documents, e.g. aircraft maintenance release, MEL, CDL, aircraft mass and balance form and manifest; and

5. determine that the procedures to be used for flight monitoring are adequate and meet the requirements of CAAB regulations.

E. *Operational and ATS flight plans:* The CAAB inspector should:

1. determine the adequacy of the data to be included in the operational flight plans to be used by the applicant; and

2. review the policy with regard to operational flight plans and ATS flight plans to determine compliance with State regulations.

10.3.5 FLIGHT CREW QUALIFICATIONS, LICENSING AND TRAINING

The CAAB inspector should determine that the applicant has established procedures and training programmes to ensure that flight crew qualifications meet the requirements of the CAAB regulations and that personnel are duly licensed and hold appropriate and valid ratings. In this regard, CAR ’84 has been developed based on Annex 1 and Annex 6, Part I, or Part III, Section II.

10.3.6 CABIN CREW COMPETENCY AND TRAINING

The CAAB inspector should also determine that the applicant has established a training programme to ensure that cabin crew members are competent in executing those safety duties and functions to be performed in the event of an emergency including a situation requiring emergency evacuation. For detail guidance, Operations Inspectors may refer to Part-II, Chapter-68, Appendix-20.

10.3.7 TRAINING PROGRAMMES

10.3.7.1 The training programme should be described in detail either in the operations manual or in a training manual which, whilst it will form part of the operations manual, will be issued as a separate manual. The choice will generally depend upon the extent of the operations and the number and types of aircraft in the operator's fleet. Most applicants find it convenient to set forth their training programmes in a training manual of one or more volumes to facilitate easy application and updating. Depending on the scope and complexity of the proposed operation, the training programmes required by Annex 6, Part I, or Part III, Section II, may be carried out under the direct control of the applicant or conducted by other training facilities under contract to the applicant, or a combination thereof. In any event the CAAB certification team will need to carry out a thorough analysis and inspection of all phases of the applicant's ground and flight training programmes. This analysis and inspection should permit a determination as to whether the training methods, syllabi, training aids/devices, training standards, related facilities and record keeping are adequate. The qualifications of ground and flight instructor personnel should be established and their effectiveness evaluated.

10.3.7.2 Factors to be considered in the assessment and inspection of an applicant's training programme are:

A. the completeness of the training syllabus and adequacy of facilities, aids, equipment and related training material. These items should satisfactorily provide for the particular type of training required and be utilized in such a manner as to achieve the desired training standards and objectives. Particular attention should be given to the availability of approved flight simulation training devices appropriate to the flight training syllabus;

Note: Guidance on the suitability, use and approval of flight simulation training devices is contained in the Manual of Criteria for the Qualification of Flight Simulation Training Devices (Doc 9625), Volume I — Aeroplanes, and Volume II — Helicopters, Third Edition (in preparation) as well as in Part-II, Chapter-68, Appendix-34 of this Handbook.

B. the adequacy and effectiveness of audio-visual training systems that use computer-based instructions, slides, videos and/or films for presenting instructions on aircraft systems, aerodrome qualifications and other related subjects;

C. the existence of provisions to obtain the necessary training material and to instruct personnel whenever new types of operations, new aircraft and/or equipment, or new or revised maintenance methods or procedures are introduced;

D. the competency of the applicant's instructors, check pilots and training supervisors;

E. the competency of personnel designated as examiners by an applicant, to whom the CAAB intends to delegate responsibility for type ratings, instrument ratings and pilot proficiency checks; and

F. the competency of training and checking personnel of training organizations to which the applicant intends to contract training.

10.3.7.3 In assessing the scope, quality and effectiveness of the training programme, the inspector should observe actual training or instruction being given so that it can be determined that:

A. the applicant adheres to the prescribed syllabus;

B. the applicant's ground and flight instructors and check pilots are competent; and

C. training personnel are able to recognize and appropriately deal with weak or unsatisfactory trainees.

10.3.7.4 During the inspection of the training programme, the applicant's plan for the maintenance of pilot qualifications, for conversion and pilot upgrading, should also be reviewed to ensure that:

A. the training and associated qualification checks are carried out in a conscientious manner by properly qualified and authorized personnel;

B. in flight training, no manoeuvre that might result in an accident is prescribed, taking into account the aircraft involved and the experience and qualifications of the pilot in training and also of the instructor or check pilot;

C. initial and recurrent training and checking is conducted in a systematic manner and in accordance with the training syllabus, without undue reliance upon the individual skill or preferences of the instructor or check pilot; and

D. simulation of abnormal or emergency situations is not permitted when passengers or cargo are carried.

Note.— Inspectors of CAAB must advise that hazardous flight manoeuvres which are required to be performed should be carried out in an approved flight simulation training device rather than in actual flight.

10.3.7.5 The inspector will normally find it convenient to approve the applicant's training programme in discrete self-contained sections such as initial training, recurrent training, transition training, conversion training and upgrading training, which can then be further divided into subsections such as ground training, simulator training and flight training. Should any section or subsection of the training programme not meet the required standards, it should be referred back to the applicant with a detailed explanation of its deficiencies and of the corrective action necessary. When all requirements for the training programme have been fully met, the applicant should be notified officially that the training programme has been approved. In this regard it should be made clear to the applicant that any subsequent change to the training programme will require the approval of the CAAB.

10.3.8 RECORD KEEPING

10.3.8.1 *General:* During the review of records to be maintained by the operator, the following factors should be taken into consideration by the CAAB inspectors:

A. In accordance with Annex 6, Part I, and Part III, Section II as well as Part-VI of CAR '84, an operator is required to maintain certain records pertaining to the conduct of the operations for a specified period. The primary objective of the inspection of operations and flight records is to ensure that operators comply with established procedures and appropriate CAAB regulations. The procedures for record keeping need to be evaluated by the inspectors as part of the certification inspection process to indicate the manner in which records will be kept and whether or not such recording will be conducted in compliance with relevant regulations of CAR '84.

B. The review should cover at least the proposals for the maintenance of records for the following:

1. flight crew members;
2. cabin crew members;
3. flight operations officers/flight dispatchers;
4. flight and cabin crew member duty periods, flight duty periods, rest periods and, for flight crew members, flight time;
5. operational flight planning;
6. operational control; and
7. finances.

C. Procedures for record keeping should be examined for:

1. potential accuracy and care in preparation;

2. classification and effectiveness of the filing system;

3. completeness of coverage;

4. compliance with required recording periods; and

5. security of access to records and protection from disasters.

10.3.8.2 *Flight crew member records:* An inspection should be conducted prior to the commencement of operations and should include a review of flight crew records to determine that the qualifications of flight crew members are current. The flight crew records should make provision for the following information:

A. full name;

B. current assignment;

C. flight crew member license — State issuing the license and, if appropriate, the validation or conversion, license type, number and ratings, including instrument rating, and the language proficiency endorsement;

D. medical assessment and date;

E. record of last proficiency check;

F. record of last instrument rating check;

G. flight time records, including flight time in aircraft for which currently qualified;

H. route and aerodrome qualifications (pilot-in-command, and co-pilot, if required by the operator);

I. training record, type of training, total time, dates and certification of satisfactory completion; and

J. crew member certificate, including the number and expiration date, if such certificates are issued.

10.3.8.3 *Cabin crew member records:* These records should make provision for the following information:

A. full name;

B. current assignment;

C. crew member certificate, including the number and expiration date, if such certificates are issued;

D. initial training, including dangerous goods, general indoctrination and aircraft emergency procedures training; and

E. recurrent training, including dangerous goods, emergency and evacuation procedures training on specific aircraft.

10.3.8.4 *Flight operations officer/flight dispatcher records:* CAAB inspector will conduct inspection prior to the commencement of operations and should determine compliance with applicable regulations pertaining to licensing and current qualifications. Flight operations officer/flight dispatcher records should contain the following information:

A. full name;

B. license and validity;

C. aircraft qualifications;

D. route or area qualification;

E. maintenance of competency; and

F. duty time records (if required by State regulations).

10.3.8.5 *Flight and cabin crew member duty periods, flight duty periods, rest periods and, for flight crew members, flight time:* The proposals for keeping these records should permit the operator and the CAAB to check compliance with the operations manual and CAAB regulations relating to flight time, duty period, flight duty period and rest period limitations. In addition, the proposals should cover the recording of reports when the pilot-in-command uses discretion to extend duty or reduce rest periods.

10.3.8.6 *Operational flight planning records:* This part of the inspection should cover the procedures for the keeping of records relating to individual flights to ensure that:

A. an operational flight plan will be completed and retained;

B. the operational flight plan provides for all of the information required by the operations manual;

C. flight preparation forms will be completed and recorded; and

D. oil and fuel records will be kept.

10.3.8.7 *Operational control records:* The proposals for operational control system records should be checked to ensure that:

A. an operational control log will be maintained and that all operational control duties will be adequately documented; and

B. all flights will be planned and conducted with the active participation of the flight operations officer/flight dispatcher on duty in accordance with the procedures laid down in the operations manual, if the approved method of control and supervision of flight operations requires the use of flight operations officer/flight dispatcher personnel.

10.3.8.8 *Financial records:* The procedures for keeping and reviewing financial records are beyond the scope of this manual but should be covered by appropriate instructions issued by the CAAB.

10.3.9 FUEL COMPUTATION PROCEDURES

10.3.9.1 The objective of this inspection is to determine whether the applicant's aircraft will be dispatched with adequate fuel loads calculated in accordance with statutory regulations and the policy set forth in the operations manual. To make this determination, the fuel computation policy and sample operational flight plans for flights to be dispatched from different bases on routes and route sectors calling for wide differences in fuel requirements and including sectors on which aircraft fuel capacity is critical, should be examined and the fuel to be carried validated against expected aircraft performance, with appropriate corrections for wind conditions and flight levels en route.

10.3.9.2 The fuel policy should consider the additional fuel necessary to proceed to an adequate aerodrome in the event of failure of one engine or loss of pressurization, at the most critical point while en route, whichever is higher.

10.3.10 AIRCRAFT MASS AND BALANCE PROCEDURES

10.3.10.1 This part of the inspection is to ascertain that aircraft will be safely and correctly loaded in accordance with:

A. the requirements for the computation of aircraft mass and balance in the operations manual;

B. regulations restricting mass to meet aircraft performance requirements;

C. mass and centre of gravity limitations as specified in the aircraft flight manual and the operations manual;

D. limitations on deck and bulkhead loading as specified in the aircraft flight manual and the operations manual; and

E. limitations in respect of the transport of dangerous goods as specified in the current edition of the Technical Instructions for the Safe Transport of Dangerous Goods by Air (Doc 9284) as adopted by CAAB. Other reference may be obtained from Part-II, Chapter-68, Appendix-36 of this Handbook.

10.3.10.2 In addition to the foregoing, another important feature of this evaluation is an investigation of the applicant's method of exercising overall mass control. The CAAB inspector should examine the system and methods whereby aircraft mass is checked and maintained to ensure that mass fluctuations due to modifications and other causes are fully taken into account and that the mass statement is accurate.

10.3.11 EMERGENCY EVACUATION DEMONSTRATION

10.3.11.1 An operator is required to assign to each crew member the necessary functions to be performed in an emergency or in a situation requiring emergency evacuation. Annex 6, Part I, and Part III, Section II and CAR '84, requires that the training, which includes instruction in the use of all emergency and life-saving equipment and drills in the emergency evacuation of the aircraft, be performed on an annual basis. It is considered that the most effective crew training in this regard would be accomplished by combined training of flight crew and cabin crew.

CAR '84 requires an applicant to establish, to the satisfaction of the CAAB inspectors, procedures to be followed, assignment of duties, qualifications of crew members and equipment to be used that will permit an emergency evacuation in 90 seconds or less, of the maximum number of persons, including crew members, authorized to be carried on each type of aircraft used in commercial air transport operations.

10.3.11.2 Unless reliable analytical methods or previous demonstrations by the aircraft manufacturer or other operators of the same type and model of aircraft are available to satisfy the CAAB inspector of the applicant's emergency evacuation capability, the certification inspection should require a demonstration of the adequacy of aircraft emergency procedures, crew member emergency evacuation training and emergency equipment. Specific points to be noted during an evacuation demonstration are:

A. the adherence by crew members to the execution of assigned duties and responsibilities both in the aircraft and on the ground;

B. the location of each crew member during the evacuation;

C. the effectiveness of the pilot-in-command in the exercise of command responsibilities;

D. the succession of command in the event of casualties;

E. the effectiveness of crew members in performing their assigned evacuation duties; and

F. the shortcomings, deficiencies or delays encountered.

10.3.11.3 In making their report on the demonstration, inspectors should record the following from the time each phase of the evacuation demonstration begins:

A. time to open each approved exit door;

B. time to deploy and inflate emergency evacuation slides;

C. time before the slide receives its first evacuees;

D. time for first evacuees to leave over-the-wing exits; and

E. total number of persons evacuating each exit.

10.3.11.4 If the applicant cannot satisfactorily demonstrate emergency evacuation for each particular type, model and configuration of aircraft within the time limit specified by CAAB, the applicant should be required to take steps to correct the deficiency which could include the following:

A. revising evacuation procedures;

B. improving crew training;

C. modifying or changing the equipment used;

D. changing the passenger compartment arrangement; and

E. reducing total passenger seating capacity.

10.3.12 DITCHING DEMONSTRATION

10.3.12.1 Unless data from reliable analytical methods or from previous demonstrations by the aircraft manufacturer or other operators of the same type and model of aircraft is available to satisfy the CAAB inspector that the applicant's procedures, equipment and training for a ditching situation are adequate, the CAAB certification team should conduct a simulated ditching demonstration during the operational inspection phase of the certification process for each aircraft type, model and configuration which will be operated on extended flights over water. The CAAB inspectors should first determine whether the aircraft has an airworthiness certification covering ditching. If the aircraft is not certificated for ditching, extended flights over water should not be authorized.

10.3.12.2 The following are specific points to be noted and evaluated during a simulated ditching demonstration:

A. was adequate preparation of the passengers and aircraft for a premeditated ditching conducted?

B. were there adequate items of emergency equipment, i.e. life rafts, inflatable slides, life jackets, medical kits, first aid kits and emergency locator transmitter (ELT), carried on board in sufficient number?

C. was emergency equipment properly stowed and could it be readily removed or ejected from the aircraft in the time specified?

D. were means provided and utilized to prevent emergency equipment from drifting away from survivors?

E. did slides, life jackets and life rafts inflate fully within acceptable time limits; did the slides deploy properly; and did other emergency equipment function properly?

F. were the emergency exits to be utilized selected, and could such exits be opened readily?

G. were emergency procedures and related checklists adequate, and were they properly used by the crew members?

H. was the crew properly trained?

I. were crew members familiar with and did they adhere to the timely execution of their assigned duties and responsibilities?

J. could crew members, using available emergency equipment and following the procedures outlined in the operations manual, facilitate the evacuation of the aircraft under the critical conditions expected during the short period of time the aircraft would remain afloat?

K. were adequate safety precautions followed by the crew members to prevent possible injury to passengers or themselves?

10.3.12.3 In the observation of the demonstration, to assist in the assessment of the ditching demonstration, the CAAB inspectors should record the following:

A. time from start of the simulated ditching demonstration until each exit door or emergency exit to be utilized was opened;

B. time when each life raft was launched;

C. time required to inflate each life raft; and

D. time when life rafts were boarded by all passengers and crew members.

10.3.12.4 Any deficiencies identified during the evaluation conducted by the CAAB certification team or noted during the ditching demonstration regarding the evacuation procedures or related emergency equipment, such as inflatable slides, emergency exits and life rafts, are to be rectified by the applicant. This may require additional evaluation or demonstrations before these emergency procedures can be considered acceptable by the CAAB certification team.

10.3.13 GROUND INSPECTION DEFICIENCIES

10.3.13.1 Unsatisfactory conditions noted by the CAAB certification team during the ground inspection need to be brought to the attention of the applicant for corrective action. The opportunity should be provided for the applicant to remedy any deficiencies affecting the safety of the operation before the commencement of any flight operations inspection. All discrepancies and items of non-compliance need to be corrected or resolved, with acceptable records of the corrective actions taken being kept, to the satisfaction of the CAAB certification team prior to the inauguration of commercial service.

10.4 FLIGHT OPERATIONS PROVING FLIGHT INSPECTION

10.4.1 GENERAL

10.4.1.1 Following the ground operations phase of the inspection programme prior to certification, it may be necessary, particularly in the case of new operators, to carry out a series of inspections in the course of flight. Such inspection flights provide an opportunity for the applicant to demonstrate the ability to carry out the proposed operations in accordance with applicable regulations. Passengers should not be carried during inspection flights prior to certification and observer personnel on board the aircraft should be kept to a minimum. However, it is generally desirable for the applicant to have on board company personnel who can take decisions and make commitments on behalf of the applicant concerning action to correct deficiencies.

10.4.1.2 All demonstration flights are to be conducted using the methods and procedures proposed by the applicant in the formal application package.

10.4.2 PLANNING

10.4.2.1 The applicant and the CAAB certification team should plan well in advance for the conduct of the flight operations proving flight inspection programme. All concerned need to have a clear understanding and agreement as to what needs to be accomplished by the applicant to show compliance with the applicable operating regulations and rules of CAAB. General objectives for pre-certification inspection flights should include the determination of the adequacy of:

A. in-flight procedures laid down in the operations manual and compliance with those procedures;

B. the facilities and equipment provided to the flight crew to conduct the flight safely and in accordance with regulations;

C. the support provided by the operational control system to the flight crew;

D. the general provision made for ground handling of the aircraft and assisting the flight crew to carry out their duties at all aerodromes utilized by the applicant along the routes; and

E. en-route facilities.

10.4.3 PREFLIGHT INSPECTION

10.4.3.1 The preflight procedures followed by the flight crew and the assistance rendered by the ground organization during the preflight phase should be observed for compliance with the operations manual. These procedures relate to the following:

A. meteorological and route briefing, provision of NOTAMs;

B. filing of the ATS flight plan;

C. flight planning;

D. fuel computation;

E. measures taken by the pilot-in-command concerning the:

1. airworthiness of the aircraft, including the maintenance release, and use of the MEL and, if available, the CDL;

2. complement of instruments and equipment required to be on board;

3. preparation of the operational flight plan;

4. fuel required and the fuel and oil on board the aircraft;

5. mass of the aircraft and the centre of gravity location;

6. capability to comply with the aircraft mass and performance limitations, climb gradient and

7. obstacle clearance requirements;

8. correct calculation of critical speeds (V1, Vr, V2, etc.) appropriate to the runway and take-off conditions;

9. security of the load and its correct distribution;

10. information concerning dangerous goods;

11. completion and signing of the operational flight plan and the aircraft mass and balance form;

12. carriage of the required publications and manuals, e.g. aircraft operating manual, aircraft flight manual, route guide, MEL and CDL, if available, and their correct amendment; and

13. carriage on board of required documents or appropriate copies of documents, e.g. certificate of registration, certificate of airworthiness, crew licenses, aircraft radio station license, journey log or technical log and noise certification attestation (when commercial operations commence, after issuance of an AOC, this list will include the AOC and its associated operations specifications, and passenger and/or cargo manifests as appropriate).

F. boarding of all crew including personnel in excess of the minimum crew and their briefing on the location and use of emergency equipment, no smoking signs, use of seat belts, location and use of emergency exits, etc.;

G. external and internal aircraft inspection by flight crew and cabin inspection by cabin crew;

H. procedures preparatory for radio and navigation equipment setting, including data entry in flight management avionics, if available;

I. procedures for inertial equipment initializing and cross-checking;

J. flight deck preparation and procedures and use of checklists and crew coordination.

10.4.4 IN-FLIGHT INSPECTION

10.4.4.1 Prior to take-off, the CAAB inspector should observe the following:

A. procedures preparatory to starting engines;

B. engine start-up procedures;

C. proper communication and coordination with the ground crew regarding:

1. engine start-up procedures;

2. removal of chocks; and

3. push back and ground towing, if so required, prior to taxiing.

D. taxiing and use of aerodrome chart;

E. use of checklists;

F. acceptance and recording of air traffic control (ATC) clearance; and

G. briefing of the flight crew for take-off, departure and initial climb, including use of navigation aids.

10.4.4.2 During the flight, the CAAB inspector should check the following items:

A. compliance with rules of the air;

B. flight crew knowledge of:

1. aircraft limitations;

2. aircraft normal and emergency procedures;

3. aircraft systems and equipment; and

4. cruise control;

C. adequacy of flight deck procedures;

D. crew discipline, coordination and vigilance;

E. altitude control and procedures for altitude/level change;

F. the operations manual, including the aircraft operating manual, to confirm that it will meet requirements that may arise during flight;

G. use of flight deck security procedures;

H. competence of crew members, including the language proficiency of flight crew members in the language used for radiotelephony communications;

I. flight crew use of company frequencies and operational control of the flight;

J. use of en-route and terminal navigation facilities;

K. pilot knowledge of routes and aerodromes, including departure contingency procedures;

L. adequacy of weather information and environmental data provided and their use by the flight crew;

M. use of air/ground communications;

N. use of navigation procedures and equipment;

O. use of checklists for each phase of flight;

P. adherence to ATC clearances and to changes to clearances;

Q. compliance with meteorological reporting procedures and with procedures for reporting hazardous flight conditions;

R. use and availability of flight documents, whether these are provided electronically or as hard copy. Special notice should be taken of the manner in which the maps and charts contained in the route guide section of the operations manual are used in flight and in the conduct of departure, arrival, approach and missed approach procedures;

S. adequacy and use of breathing oxygen in flight;

T. flight crew use of safety harnesses;

U. use of passenger cabin "no-smoking" and "seat belt" signs;

V. general compliance with the regulations of the State of the Operator and other States concerned with the operation;

W. flight crew management of the flight, including human performance, threat and error management and decision-making, and proficiency in the manual and automatic control of the aircraft in all phases of flight;

X. conduct of flight crew arrival, approach and landing briefing;

Y. adherence to aerodrome/heliport operating minima; and

Z. conduct of approach and landing procedures, after landing procedures, taxi and shut-down

AA procedures and use of appropriate checklists.

Note.— All of the foregoing checks are to be conducted without interfering with crew duties and vigilance in flight. In some cases, particularly with respect to b) above, it may be necessary for the CAAB inspector to complete the check during the post-flight phase.

10.4.4.3 *Cabin crew:* During the in-flight inspection, the CAAB inspector should observe the procedures used by the cabin crew for passenger briefing on:

A. stowage of carry-on baggage;

B. observing the "no-smoking" signs;

C. how and when to use seat belts;

D. when seat backs are required be in the full upright position;

E. procedures for donning oxygen masks and restrictions during use of oxygen;

F. emergency procedures including the location and use of emergency exits;

G. location and use of life jackets;

H. restrictions on the use of toilets; and

I. location and content of passenger emergency briefing cards.

10.4.4.3.1 The CAAB inspector should note that cabin crew members are provided with, and occupy, for take-off and landing, forward or rearward facing seats equipped with safety harnesses and that such seats are located near floor level and other emergency exits, as required by CAAB.

10.4.4.3.2 Cabin crew should be questioned regarding their familiarity with the location and use of various types of emergency equipment, i.e. life rafts, ELT, medical kits and first aid kits, and with their specific duties in the event of an emergency such as a ditching or an emergency evacuation. This discussion with the cabin crew members provides an opportunity for the CAAB inspector to assess the effectiveness of their training. The performance of cabin crew will be evaluated with regard to their effectiveness in performing their assigned duties and the fulfillment of their responsibilities for requiring passengers to comply with their instructions and CAAB regulations.

10.4.5 POST-FLIGHT INSPECTION

10.4.5.1 The following should be observed:

A. use of appropriate after shut-down checklists;

B. completion by the pilot-in-command of the journey log book or technical log and the reporting of any aircraft un-serviceability;

C. availability and, if necessary, completion of appropriate reports regarding incidents, near misses, bird strikes, lightning strikes, volcanic ash encounters or ingestion and any other unusual occurrences of operational significance;

D. where a stopover is scheduled for crew rest, the adequacy of the accommodation provided and the actual rest period available; and

E. where the stop is an intermediate stop, the arrangements made to assist the crew in the preparation for the next stage of the flight.

10.4.6 FLIGHT INSPECTION DEFICIENCIES

10.4.6.1 Unsatisfactory conditions noted by the CAAB inspector during any part of the flight inspection should be brought to the attention of the applicant for corrective action. The opportunity should be provided for the applicant to remedy any deficiencies affecting the safety of the operation before any further flights are undertaken. All discrepancies and items of non-compliance need to be corrected or resolved, with acceptable records of the corrective actions taken being kept, to the satisfaction of the CAAB certification team prior to the inauguration of commercial service.

10.4.6.2 Some examples of deficiencies requiring corrective action are:

A. flight crew member not properly trained, e.g. assistance from applicant supervisors or a CAAB inspector required;

B. flight crew member not familiar with aircraft, systems, procedures or performance;

C. cabin crew member not properly trained in emergency evacuation procedures or in the use of emergency equipment or not familiar with the location of that equipment;

D. numerous aircraft deficiencies and/or system malfunctions;

E. inadequate mass and balance or load control;

F. unsatisfactory operational control, e.g. improper flight planning and flight release procedures;

G. unacceptable maintenance procedures or practices; and

H. improper aircraft servicing and ground handling procedures.

Note: All relevant Forms and Checklists on Air Operator Certification can be found in Part-II, Chapter-68 (Appendices)

CHAPTER-11

AOC CERTIFICATION (CERTIFICATION PHASE)

11.1 FINAL PREPARATION FOR THE ISSUANCE OF AN AOC

11.1.1 The CAAB project manager will have notified the applicant of all discrepancies that need to be resolved before an AOC and its associated operations specifications can be issued. CAAB inspectors will assist project manager in identifying discrepancies.

11.1.2 The project manager reviews the final operations specifications and makes any changes necessary. CAAB inspectors will assist project manager in the review.

11.1.3 The project manager and the CAAB certification team need to ensure that all the requirements for certification have been met and also to have determined that the applicant is fully capable of fulfilling all the responsibilities incumbent in the conduct of the proposed operations and of complying with the applicable laws and regulations, and the provisions of the certificate and operations specifications.

11.1.4 An AOC will not be issued until the CAAB has ascertained that the economic and financial assessment of the applicant has presented a favourable report, and until the CAAB is satisfied that the operator has the financial resources to conduct its planned operations, including resources for the disruptions that can be reasonably expected in daily operations.

11.1.5 The project manager will provide appropriate recommendations on the issuance or denial of an AOC to the Chairman.

11.2 ISSUANCE OF AN AOC AND THE ASSOCIATED OPERATIONS SPECIFICATIONS

11.2.1 CAAB will assign an AOC number and determine the date of issuance. The certificate is signed by the Chairman CAAB. The associated operations specifications will be signed by the CAAB official responsible for its issuance at the level of Director Flight Safety & Regulations.

11.2.2 Aircraft engaged in commercial operations are required by CAR ‘84 to carry a certified true copy of the AOC and a copy of the associated operations specifications relevant to the aircraft type. The AOC certifies that the operator is authorized to perform commercial air operations, as defined in the associated operations specifications, in accordance with the operations manual and the CAR ‘84 of Bangladesh.

11.2.3 The following information shall be shown on the AOC of an operator:

A. Bangladesh as the State of the Operator;

B. CAAB as the issuing Authority of the AOC;

C. AOC number with its expiration date;

D. Name of the operator and any other trading name relevant to the particular certificate;

E. Address of the operator's principal place of business;

F. Location in the operator's documentation;

G. Contact details of the operator's operational management;

H. Date of issuance of the certificate; and,

I. Name and signature of CAAB official responsible for its issuance.

11.2.4 The contact details shall have to be convenient so that operational management can be contacted without undue delay by CAAB for issues related to flight operations, airworthiness, flight and cabin crew competency, dangerous goods and other matters, as appropriate, are required to be provided on board the aircraft and should include names, telephone and fax numbers, with country codes and e-mail addresses.

11.2.5 The period of validity of an AOC is generally one year as per ANO (AT) A-2.

11.2.6 The operations specifications associated with an AOC are an integral parts of the authorization under which an operator conducts operations.

11.2.7 In general, the operations specifications shall contain the following:

A. CAAB as the issuing Authority of the OPS SPECs;

B. AOC number;

C. Name of the operator;

D. Date of issuance; and,

E. Signature of the CAAB official responsible for its issuance;

F. The make, model and series, or master series, of the aircraft;

G. The type of operation and the geographical areas in which operations are authorized.

11.2.8 The specifications shall cover all aspects of the operation and include special limitations and authorizations with criteria as appropriate.

11.3 CERTIFIED TRUE COPY OF THE AOC

There are several ways to certify a copy of the AOC. In any case, the certification statement shall attest that the copy is a true copy of the original, and shall be signed and display an official stamp or seal. The certification statement shall be permanently affixed to the copy, either by placing it on the first page of the document itself or on each page of the document, or by attaching it to the entirety of it. A model certification statement is reproduced below.

CERTIFICATION

I hereby certify that the attached is a true copy of the [title of the AOC], issued at [place] on [date] by [the issuing authority]. Signed at [place] on [date]. [signed by the appropriate certifying authority according to the laws of its State] [official stamp/seal]

11.3.1 PERIOD OF VALIDITY OF AN AOC AND THE ASSOCIATED OPERATIONS SPECIFICATIONS

11.3.2 CAR '84 provides for the date of issuance and an expiry date to be entered on an AOC. CAAB issues an AOC for a period of one year. An AOC holder is required to be audited by CAAB approximately two months prior to the expiry date of the AOC provided.

11.3.3 In general, an AOC issued by CAAB remains valid until as below or as indicated in ANO (AT) A-2 wherein the ANO will have priority on this document:

A. CAAB amends, suspends, revokes or otherwise terminates the AOC;

B. the AOC holder surrenders the certificate to the CAAB;

C. the AOC holder suspends operations for more than a one year and/or as specified in the ANO (AT) A-2; or

D. the expiry date, if any.

11.4 IDENTIFICATION OF INDIVIDUAL AIRCRAFT BY NATIONALITY AND REGISTRATION MARKS

11.4.1 ICAO Standards as well as CAAB regulation call for the operations specifications to include designation of the make, model and series (or master series) of the aircraft that are to be used. CAAB requires that the nationality and registration marks of the individual aircraft involved in the operations authorized are also be included in the operations specifications.

11.5 AMENDMENTS TO THE AOC AND THE OPERATIONS SPECIFICATIONS

11.5.1 Any subsequent changes to the operation specified or to the equipment approved for use will necessitate amendments to the operations specifications. It is appropriate that an AOC will itself be a very basic document and that all aspects of the operation that might be the subject of change would be dealt with in the associated operations specifications such that changes involve reissue of the minimum documentation.

11.5.2 The process for the amendment of operations specifications will be similar to the original certification process, with the exception that in many cases it will be far less complex, dependent upon the subject of the change that necessitates the amendment. Where changes involve new types of operation, new geographical areas or new aircraft, the appropriate level of complexity will have to be applied to the process.

11.6 RENEWAL OF AN AOC

11.6.1 Part VI of CAR '84 requires that the continued validity of an AOC is dependent upon an operator maintaining the requirements for an adequate organization, method of control and supervision of flight operations, training programme as well as ground handling and maintenance arrangements consistent with the nature and extent of the operations specified in the AOC and the associated operations specifications, under the supervision of CAAB. Therefore, prior to the renewal of an AOC the inspectors of CAAB shall ensure that a holder of AOC possesses adequate amenities as mentioned above to be qualified for the renewal of AOC. The adequate amenities to be possessed by an operator shall be judged by the inspectors during the pre-renewal audit carried out on the operator.

11.6.2 Additionally, CAAB is required to conduct continuing surveillance of the operator and thus to continuously determine that the AOC remains valid at all times.

11.6.3 The operator needs to apply for renewal of the AOC prior to the expiration date. The request for renewal should contain the same basic information that was submitted prior to the original certification and should be received by the CAAB well before the expiration date of the AOC. In all cases, such renewal should not involve a complete recertification procedure and thus will not be an onerous or prolonged process, because of the continuing surveillance exercised by CAAB inspectors.

11.7 CONTENTS OF AOC & OPS SPECS

11.7.1 The air operator certificate (AOC) and operations specifications (OPS SPECs), conditions and limitations, issued by the authority shall contain all the elements identified in Annex 6, Part I and the corresponding Rules of CAR '84. The AOC and associated authorizations, therefore, shall provide details of certification and specific authorizations and limitations such as ETOPS, PBN, RNP, RVSM, AWOP, MNPS, RNAV, transport of Dangerous Goods etc which shall be evidenced in the AOC and OPS SPECs document themselves. The inspectors' procedure, during AOC certification shall ensure that other contents, in addition, have the following:

A. State of the Operator - Bangladesh

B. Issuing authority – CAAB

C. Monogram of CAAB

D. AOC Number and Expiry Date

E. Operator name, trading name (if different) & address

F. Date of issue & name, signature & title of authority representative; and,

G. The location, in a controlled document carried on board where the contact details of operational management can be found.

11.8 The Template of AOC can be found in Part-II, Chapter-68/Appendix-13.

11.9 The Template of OPS SPECs can be found in Part-II, Chapter-68/Appendix-14.

11.10 Procedure to fill up the AOC and Operations Specifications documents:

11.10.1 <u>To be completed by all applicants</u>

A. Company registered name and trading name if different: Address of company; mailing address; telephone; fax and e-mail: (Enter the official name and mailing address, telephone, fax and e-mail address of the company. Include any other name under which business is conducted if different from the official company name).

B. Address of the principal place of business, including telephone, fax and e-mail; Secondary business address; Type of operation: (This address should be the physical location where the primary activities are based. It is where the offices of management required by legislation are located. If the address is the same as under item 1, enter "same". Include secondary business addresses and identify the type of operation conducted at such addresses).

C. Proposed start-up date: (Enter the estimated date when operations or services are intended to commence).

D. Requested designator for aircraft operating agency in order of preference: (This information will be used to assign a company identification number, known as a designator for aircraft operating agency. You may indicate up to three, three-letter identifiers, such as ABC, XYZ. If all choices have already been allocated to other operators or maintenance organizations, another identifier will be allocated).

E. Management and key staff personnel - Name Title Telephone, fax and e-mail: (Enter the names, titles, telephone numbers and other contact details of management and key staff personnel).

F. Proposals for maintenance: (Indicate whether the applicant air operator intends to perform maintenance as an AMO or intends to contract out all or part of its maintenance, or perform its maintenance using an equivalent system).

G. Air operator proposed types of operation: (The proposed type of air operation will be indicated. Check all applicable boxes).

H. AMO proposed ratings: (The proposed maintenance organization ratings will be indicated. Check all applicable boxes).

1. Passengers and cargo
2. Cargo only
3. Scheduled operations
4. Charter flight operations
5. Airframe
6. Powerplant
7. Propeller
8. Avionics
9. Computers
10. Instruments
11. Accessory
12. Specialized service

I. Aircraft data (provide a copy of the lease agreement for all leased aircraft): Provide a copy of the lease agreement for all leased aircraft, wherein provide the following.

1. Number of aircraft by type and model. Aircraft nationality and registration marks where available.

2. Number of passengers seats and/or cargo payload capacity.

J. Geographic area(s) of intended operations and proposed route structure: (Indicate geographic area(s) of intended operation and proposed route structure).

K. Additional information that provides a better understanding of the proposed operation or business -attach additional sheets, if necessary: (Provide any information that would assist CAAB personnel in understanding the type and scope of the operation or business to be performed by the applicant. If an air operator intends to contract out maintenance and inspection of its aircraft and/or associated equipment, identify the AMO selected and list the maintenance and inspections that the contracting organization will perform. Provide copies of all maintenance contracts where applicable).

L. Proposed training (aircraft and/or flight simulation training device): (For air operator applicants, identify the type of aircraft and/or flight simulation training devices, including flight simulators, to be used and the training to be provided. For maintenance organization applicants, identify the types of aircraft to be maintained and in addition identify the training that the quality assurance staff, certifying staff and other maintenance staff will receive based on the ratings requested).

M. The signature and the information contained in this form denote intent to apply for an AOC and/or approval as a maintenance organization, as appropriate: (Signature of the pre-assessment statement by the accountable manager denotes intent to seek certification as an air operator or approval as a maintenance organization).

1. Type of organization:

2. Signature:

3. Date: (day/month/year)

4. Name and title:

Note: CAAB certification Team/Inspectors should advise prospective operators during interaction to extract any additional information required from ANO (AT) A-2.

11.10.2 To be completed by the Civil Aviation Authority, Bangladesh:

A. The application is to be forwarded by the receiving office to the CAAB with all available information and a recommendation on the action to be taken.

1. Received by (name and office):
2. Date received: (day/month/year)
3. Date forwarded to the Civil Aviation Authority, Bangladesh: (day/month/year):
4. For: ☐ Action ☐ Information only
5. Remarks:

B. The CAAB will authorize the appropriate CAAB office or department/section, where certification or approval action is to be continued, to designate a project manager and a certification team.

1. Received by:
2. Pre-application number:
3. Date (day/month/year):
4. Local office assigned responsibility for designation of the CAAB project manager and the certification team:
5. Date forwarded to local office for initiation of the formal certification or approval process: (day/month/year)
6. Remarks:

11.11 CHECKLISTS ON AIR OPERATOR CERTIFICATION, TEMPLATE OF AIR OPERATOR CERTIFICATE (AOC) AND TEMPLATE OF OPERATIONS SPECIFICATION (OPS SPECS)

A. All relevant Forms and Checklists on Air Operator Certification can be found in ANO (AT) A-2.

B. The Template of Air Operator Certificate (AOC) can be found in Part-II, Chapter-68, Appendix-13.

C. The Template of Operations Specification (OPS SPECs) can be found in Part-II, Chapter-68, Appendix-14.

CHAPTER-12

CONTINUING SAFETY OVERSIGHT OF THE OPERATOR BY CAAB

12.1 GENERAL

12.1.1 Continuing safety oversight of an operator by CAAB is inherent in the system of certification. It is an essential part of the responsibility of CAAB to ensure that the required standard of operation is maintained in order to provide a safe and reliable commercial air transport service to the public. Authority for this continuing process is contained in Rule 226 of CAR ’84.

12.1.2 The CAAB will have the authority and responsibility for exercising continuing safety oversight of commercial air transport operations to ensure that accepted safety practices and proper procedures for the promotion of safety in operations are maintained. To achieve this objective, the CAAB, through the CAAB inspectorate staff, is responsible for continuously monitoring operations conducted by each operator. Such surveillance could result in the revision of operations specifications or in the temporary suspension of an AOC and, in an extreme case, could result in the revocation of an AOC.

12.1.3 Required surveillance and the related inspections are planned and conducted by CAAB inspectors assigned to an operator as responsible for the standard of conduct of the operations. Whenever specialized assistance is required, the inspectors should request such help from the CAAB. All inspectors authorized to conduct safety oversight need to be in possession of credentials identifying them as inspectors employed by the CAAB. The credential of FOI can be found in Part-II, Chapter-68/Appendix-15.

12.2 The CAA ordinance 1985 and the CAR ’84 provide instructions for inspection of aviation installations by CAAB Inspectors such as the following:

A. Aircraft;

B. Aerodromes;

C. Hangars;

D. Workshops;

E. Ramp;

F. Fuel storage;

G. Operators/aviation agencies;

H. Dangerous goods agencies;

I. any other as applicable.

12.3 The operations inspectors have been issued with credentials by Chairman CAAB to facilitate access to facilities, aircraft and to conduct certification and licensing documentation for the purpose of inspections and enforcement. The credentials shall contain the following information:

A. Name of CAA Authority - CAAB;

B. Monogram of CAAB;

C. The reference to empowering legislation (Relevant Rule of CAR '84)

D. Sufficient legal authority delegated to carry out the assigned functions

E. Method established to control currency of credentials by mentioning date of issue and the period of validity;

F. Inspector name and photo;

G. Inspector signature;

H. Chairman signature; and,

I. Details on holder's authorization on the opposite side.

12.4 The specimen of the flight operations inspectors credential (both sides) has been shown in Part-II, Chapter-68, Appendix-15.

12.5 The inspector shall have the right to prevent an aircraft from commencement of operation for reasons of safety or just cause and the inspector shall have the right to prohibit any person from exercising the privileges of any aviation license, certificate or document for just cause. But to implement such action the inspector shall obtain verbal or written permission from the Chairman CAAB to comply with the instruction as laid down in Civil Aviation Ordinance 1960.

12.6 The safety oversight of operators is to be conducted on a continuous basis, whether or not the AOC has a specific duration with an expiration date. It should be based on periodic random inspections of all aspects of the operation. Over and above CAAB regulation prescribes one year duration for an AOC. Hence, an operator needs to apply for renewal of the AOC prior to the expiration date and CAAB should conduct an yearly mandatory audit at least two months prior to the date of expiry of the AOC.

12.7 The areas to be covered in the surveillance activities over a period of time should be similar to those examined during the original certification process. They should include at least a re-evaluation of the operator's organization, management effectiveness and control, facilities, equipment, aircraft maintenance, operational control and supervision, maintenance of flight and cabin crew standards, passenger and cargo safety procedures, dangerous goods procedures, security procedures, operational and personnel records, training, company manuals, financial viability and record of compliance with the provisions of the AOC, the associated operations specifications and pertinent operating regulations and rules.

12.8 During the surveillance activity, CAAB inspectors should conduct headquarters, station facility, aerodrome (or heliport), apron and en-route inspections to ensure that all important areas are covered and should record all surveillance activity in order to be able to answer any questions that may arise concerning the factual basis for the inspector's recommendations.

12.9 All safety oversight activity with respect to a particular operator should be carefully planned. It will not be possible to cover all aspects of an operation during every inspection, but as much as possible should be covered over a specific period of time, and appropriate records should be maintained. Inspections should also be planned on the basis of a risk assessment exercise so that aspects of the operation that involve the greatest risk should receive more frequent attention. The planning of inspections by the CAAB inspectors should take into account the results of the hazard identification and risk assessment conducted and maintained by the operator as part of the operator's SMS.

Note 1: Guidance on the conduct of a Ramp Inspection and the associated Checklist are provided in Part-II, Chapter 68, Appendix-03 and Appendix-04.

Note 2: Guidance on the conduct of a Station Facility Inspection Report has been provided in Part-II, Chapter 68, Appendix-12.

Note 3: Guidance on the conduct of any other inspections, as applicable, can be found in Part-II, Chapter-68 (Appendices).

CHAPTER-13

SAFETY OVERSIGHT PROGRAMME

13.1 In the first few months of a new operation, CAAB inspectors should be particularly alert to any irregular procedures, evidence of inadequate facilities or equipment, or indications that management control of the operation may be ineffective. They should also carefully examine any conditions that may indicate a significant deterioration in the operator's financial condition. Examples of trends which may indicate problems in a new operator's financial condition are:

A. significant lay-offs or turnover of personnel;

B. delays in meeting payroll;

C. reduction of safe operating standards;

D. decreasing standards of training;

E. withdrawal of credit by suppliers;

F. inadequate maintenance of aircraft;

G. shortage of supplies and spare parts;

H. curtailment or reduced frequency of revenue flights; and

I. sale or repossession of aircraft or other major equipment items.

13.2 When any financial difficulties are identified, inspectors should increase technical surveillance of the operation with particular emphasis on the upholding of safety standards. The inspectors should also refer the matter to the CAAB for any action deemed necessary, such as a financial audit.

13.3 During the certification process, the inspector will have determined the methods, systems or procedures that the operator intended to use to ensure compliance with the applicable regulations, the AOC and its associated operations specifications and the operator's operations and MCMs. A prime objective of the safety oversight programme is to confirm that such methods, systems or procedures are being followed and are effective in the demonstration of operator compliance and achievement of safety objectives.

13.4 Aircraft leases and contractual arrangements entered into by the operator for training, aircraft maintenance or servicing, etc., need to be thoroughly reviewed and a determination made of whether these arrangements are producing satisfactory results as far as the maintenance of safety standards and regulatory compliance are concerned.

13.5 The training programme should also come under close scrutiny during oversight to ensure that the training standards, which were demonstrated when the programme was initially approved, are being maintained. If there are indications that the training provided is not achieving the desired training objectives, or has resulted in a high failure rate on various tests or examinations, inspectors need to make certain that the operator revises the training programme to ensure that trainees will reach the required level of competence.

13.6 If the CAAB has approved flight crew proposed by an operator as designated examiners, their performance needs to be observed and evaluated during the course of the surveillance programme. This evaluation should be conducted, where possible, by an inspector qualified on the specific type of aircraft utilized by the operator. The evaluation may be accomplished either during an instrument rating or a proficiency check in an aircraft or a flight simulation training device approved for the purpose. Flight crew approved as designated examiners need to satisfactorily demonstrate knowledge of the aircraft and related systems, operator procedures, authorized route structure and pertinent regulations. Such individuals are to also demonstrate competency in evaluating the performance of other flight crew members. The personal ability and integrity of flight crew approved as designated examiners should be exemplary and their requirement for the prescribed standard of performance from flight crew being tested should not be in doubt. A similar but less thorough process is required for the oversight of operator flight crew approved only for line check functions.

13.7 As indicated previously, the oversight function should be accomplished on a continuing basis, planned and performed at specified times or intervals, or conducted in conjunction with the renewal of an AOC. Regardless of the method used, all significant aspects of the operator's procedures and practices should be evaluated and appropriate inspections, commensurate with the scale of the operator’s activities, conducted at least once every 12 months.

13.8 The safety oversight programme of an operator should:

A. establish that the operator has conducted, and is likely to continue to conduct, operations in accordance with good operating practices, the AOC's operations specifications, operations and MCMs and the relevant operating regulations and rules;

B. ensure that all changes in the applicable operating regulations and rules, in any amendments to the AOC or associated operations specifications, or otherwise any improvements in operating procedures, are put into practice and reflected in appropriate amendments to the operations manual or the MCM;

C. keep the CAAB informed of the competency, current operating practices and record of compliance of the operator;

D. afford the CAAB the opportunity to recommend CAAB regulatory or policy changes if the safety oversight inspections indicate such action would result in improvements in operating safety standards in general; and

E. establish whether the exercise of the privileges of an AOC and the associated operations specifications by a particular operator should be continued, made the subject of further operating limitations, or be suspended or revoked.

13.9 Throughout all phases of the surveillance programme, the standards of capability and competence should equal or exceed that required at the time of original certification of the operator. CAAB inspectors conducting surveillance and related inspections should carry out such activities in a thorough manner and require the operator to convincingly demonstrate that operations are being conducted in accordance with the AOC and associated operations specifications, the operator's manuals and appropriate civil aviation regulations.

13.10 In summary, the safety oversight programme should provide a comprehensive and conclusive assessment of an operator's continuing competence. Moreover, the associated inspection reports should indicate whether the safety oversight system and procedures employed by the CAAB are effective in determining an operator's competence, record of compliance and overall capability.

CHAPTER-14

RESOLUTION OF SAFETY ISSUES

14.1 When deficiencies are observed in the course of the safety oversight programme for a particular operator, the cause should be determined, prompt action taken to rectify the deficiency and appropriate follow-up initiated to determine the effectiveness of the corrective action. Additional inspections should be planned and conducted whenever problems in particular areas are repeated.

14.2 Should the safety oversight programme and related inspection reports reveal that an operator has failed to meet or is unable to meet or maintain the required standards for certification or the conditions specified in the AOC and its associated operations specifications, the CAAB inspector responsible for the safety oversight programme is to advise the operator of the deficiency observed and of the remedial action required. Remedial action will normally be required within a specified time. If an operator does not correct a deficiency as required, the CAAB inspector should inform the CAAB and, if necessary, make a recommendation that the AOC and its associated operations specifications be restricted, temporarily withdrawn or permanently withdrawn.

14.3 Whenever the CAAB inspector responsible for oversight of an operator believes that safety considerations dictate immediate action to suspend or revoke an AOC, the inspector should inform the CAAB. If, after careful review of all circumstances involved and necessary coordination and consultation within the CAAB, there is agreement on the need to suspend or revoke the operator's AOC, the CAAB should advise the operator in writing, summarizing both the proposed action and the reasons for it. When an AOC is suspended or revoked for any reason, the operator is required to promptly return the AOC to the issuing official. The ICAO international register of AOCs, when operational, should be updated by the CAAB with the status of the operator.

CHAPTER-15

LEASE AND CHARTER OPERATIONS (GENERAL)

15.1 The purpose of including material on lease and charter, and other aspects of cooperation between operators, in this manual is to draw to the attention of certificating authorities a number of legal and practical operational problems, which have to be considered in the certification of an operator proposing to utilize leased aircraft, or when an operator, in possession of an AOC, proposes to act as a lessor or lessee or otherwise cooperate with another operator. These practices are economically driven and advantageous to operators. However, CAAB will be responsible to ensure that safety takes precedence over any economic issues presented by the operator.

15.2 In recent years the practice of leasing aircraft has come into wide usage. Many leases involve aircraft owned by individuals or companies that are registered in one State and leased to operators from another State. The term “lessor” means the party from which the aircraft is leased and the term “lessee” means the party to which the aircraft is leased.

15.3 A dry lease is understood to be the lease of an aircraft where the aircraft is operated under the AOC of the lessee. It is normally a lease of an aircraft without crew, operated under the custody and the operational and commercial control of the lessee, and using the lessee’s airline designator code and traffic rights.

15.4 A wet lease is generally understood to be a lease of an aircraft where the aircraft is operated under the AOC of the lessor. It is normally a lease of an aircraft with crew, operated under the commercial control of the lessee and using the lessee’s airline designator code and traffic rights. Some authorities define a wet lease as the lease of an aircraft with at least the flight crew, while other authorities define a wet lease as the lease of an aircraft with at least one crew member, or the lease of an aircraft with an entire aircraft crew (flight and cabin crew members).

15.5 A damp lease is generally understood to be a wet lease of an aircraft where the aircraft is operated under the AOC of the lessor, with the flight crew and possibly part of the cabin crew being provided by the lessor. Part or all of the cabin crew is provided by the lessee. In such case, CAAB must be assured that that both the flight and cabin crew are trained to use common communications and emergency procedures and that the cabin crew receives appropriate training.

15.6 There are a number of different types of lease, which may be short term or long term. Lease arrangements may also be known as short term wet lease, charter or sub-charter. There may also be cascading subleases.

15.7 The cooperation between operators, either nationally or internationally, shall be subjected to oversight by the CAAB. These aspects concern code-sharing, franchising and interchange etc.

15.8 Suitable arrangements shall be made between the CAAB and other States involved to ensure elimination of any complex legal, safety, enforcement and practical problems for either the State of Registry of the aircraft or CAAB, or both. These problems arise because of possible uncertainty concerning which party is responsible for the safe operation and airworthiness of the aircraft, and uncertainty concerning the regulations of which State are applicable. CAAB and its counterpart State needs to resolve such uncertainties before a lease takes effect. The determination of responsibilities is a factual issue that depends upon the terms of the lease or other agreements. Determining which party to a lease is responsible for the operational control and airworthiness will in turn clarify the regulations of which State will apply, and what oversight responsibilities a particular State has for the operation of a leased aircraft. In some instances, the oversight responsibilities of the State of Registry and CAAB may overlap.

15.9 CAAB Inspectors should be aware that problems associated with leasing have become more widespread because a considerable number of lessors have entered the leasing market, including:

A. companies formed for the specific purpose of purchasing and leasing aircraft;

B. commercial banks and other financial institutions;

C. aircraft manufacturers; and

D. airline companies.

15.10 Some leases run for a long term while others are for short periods to cover temporary requirements.

15.11 CAAB Inspectors should understand that, in addition to the problems presented to State authorities, questions also arise concerning what steps can be taken to protect the financial interests and the assets of the lessor. This relates primarily to whether the laws and regulations of the State of Registry and its surveillance capabilities are adequate to cover the interests of the lessor in situations where the lessee, the operator of the aircraft, is from another State. Where the State of Registry and the State of the Operator are adequately carrying out their responsibilities for safety oversight, these actions should tend to protect the lessor's interests in a leased aircraft.

15.12 CAAB Inspectors should also understand that, in many States, national regulations may require CAAB to bear the responsibility for ensuring that every aircraft on its registry complies with the detailed technical and safety regulations promulgated by that State, wherever such aircraft may be operated - Bangladesh in this case. Practical problems arise because the aviation authorities in some States do not have sufficient personnel or funding resources to properly carry out their regulatory responsibilities, particularly in international commercial air transport. These responsibilities include ensuring that every aircraft on their registry, including those leased to an operator conducting flights under the authority of another State, are operated in compliance with the regulations of the State of Registry. These responsibilities in turn create serious surveillance and enforcement problems for the State of Registry because these leased aircraft are at times operated in distant areas where CAA personnel from the State of Registry would find it difficult to conduct safety inspections.

Compliance with the pertinent safety standards and regulations of the State of Registry may therefore diminish. Violations of regulations may occur by design or from ignorance and be unknown to the State of Registry. As a result, it is unlikely that enforcement action would be taken with respect to such leased aircraft.

15.13 This is for the knowledge for the CAAB Inspectors that the problems inherent in aircraft leasing were not anticipated when the *Convention on International Civil Aviation* was formulated. It was assumed that operators would normally own the aircraft they operated and that the nationality of an aircraft would normally be that of the operator, i.e. that the State of Registry and the State of the Operator would be one and the same. As a result, the Convention specifies in a number of respects that the fundamental responsibility for an aircraft lies with the State of Registry.

15.14 CAAB Inspectors may be aware that, various ICAO Assembly sessions recognized that a State of Registry may be unable to fulfill its responsibilities adequately when aircraft are leased or chartered, particularly without crew, by an operator from another State. A note was therefore added to Annex 6 — *Operation of Aircraft*, Chapter 3, and to ten other Annexes, suggesting that the State of Registry delegate to the State of the Operator, subject to the acceptance by the latter State, those functions of the State of Registry that can more adequately be discharged by the State of the Operator. It was recognized, however, that such a delegation would only be a matter of practical arrangement by which the State of Registry would discharge certain functions, which had been allocated by the Convention, through an agent, the State of the Operator.

15.15 Nevertheless, where aircraft were leased to operators in certain States willing to accept the responsibility, this arrangement provided for a partially acceptable interim solution because the State of Registry could delegate some of its responsibilities under the Convention to the State of the Operator. Such an arrangement, however, did not in all cases absolve the State of Registry from its responsibilities under its own national regulations for aircraft on its registry. The problem was more acute when an aircraft registered in one State was leased, under a dry lease, to an operator in another State where that State was unwilling, or unable, to accept delegation of responsibility from the State of Registry. Additionally, the leasing problems become even more severe where the safety standards of the State concerned may not be acceptable to the State of Registry, or to the lessor, or where the State of the Operator does not have the capability of properly administering and enforcing existing safety regulations. Under such circumstances the potential lessor may be reluctant to lease an aircraft to an operator from the other State or, if a lease was executed, the State of Registry could be considered negligent if it consented to delegating its responsibilities to such a State.

15.16 Good news for the CAAB Inspectors to know that, ICAO became increasingly aware of the foregoing problems and recognized the general desire of Contracting States for a provision that would permit the transfer of certain responsibilities from the State of Registry to the State of the Operator in case of a lease, charter or interchange of an aircraft. It was decided at the 23rd lesson of the Assembly that it was necessary to amend the Convention in order to relieve the State of Registry of its responsibility with respect to Articles 12, 30, 31, 32 (a) to the Convention and thereby to more effectively deal with this matter.

15.17 The amendment to the *Convention on International Civil Aviation* was approved by the 23rd Session of the Assembly in 1980.

Note: All relevant Forms and Checklists on 'Lease or Charter' can be found in Part-II, Chapter-68 (Appendices). The Model Agreement between States on the implementation of Article 83*bis* of the Convention has been outlined in Part-II, Chapter-68, Appendix-01.

CHAPTER-16

ARTICLE 83 *BIS* (TRANSFER OF CERTAIN FUNCTIONS AND DUTIES)

16.1 Notwithstanding the provisions of Articles 12, 30, 31 and 32 (a), when an aircraft registered in a Contracting State is operated pursuant to an agreement for the lease, charter or interchange of the aircraft or any similar arrangement by an operator who has his principal place of business or, if he has no such place of business, his permanent residence in Bangladesh, the State of registry may, by agreement with CAAB, transfer to it all or part of its functions and duties as State of registry in respect of that aircraft under Articles 12, 30, 31 and 32 (a). The State of registry shall be relieved of responsibility in respect of the functions and duties transferred.

16.2 The transfer shall not have effect in respect of other contracting States before either the agreement between States in which it is embodied has been registered with the Council and made public pursuant to Article 83 or the existence and scope of the agreement have been directly communicated to the authorities of the other contracting State or States concerned by a State party to the agreement.

16.3 The Protocol relating to the amendment of the Convention was signed in Montreal on 6 October 1980. This amendment came into force upon ratification by 98 Contracting States on 20 June 1997. The change in the Convention was intended to alleviate most of the safety oversight problems inherent in the lease, charter or interchange of aircraft. The primary purpose of the transfer of certain functions under an Article 83 *bis* agreement should be to enhance safety oversight capabilities by delegating responsibility for oversight to the State of the Operator, recognizing that this State is in a better position to carry out these responsibilities.

16.4 However, before agreeing to transfer any functions, the State of Registry should determine that the State of the Operator is fully capable of carrying out the functions to be transferred in accordance with the Convention and ICAO SARPs. This determination can be accomplished by various means, including an SOA conducted by the State of Registry or through review of reports of SOAs conducted either by ICAO, under the Universal Safety Oversight Audit Programme (USOAP), or by another Contracting State. There may be circumstances where States are unable to reach agreement on the delegation and acceptance of responsibilities as provided for in Article 83 *bis* or where delegation is not an alternative that is acceptable to the parties involved. In such circumstances the State of Registry would retain responsibility for maintaining proper surveillance of aircraft on its registry when operated under lease arrangements under the authority of another State.

16.6 Note 1 to Annex 6, Part I, Chapter 3, was further revised in 1983 by Amendment 16 to Annex 6, Part I, when reference to Article 83 *bis* was introduced to indicate the means by which States could proceed pending the entry into force of Article 83 *bis*. This note was again revised in 1998 by Amendment 23 to indicate that Article 83 *bis* had entered into force on 20 June 1997.

16.7 On 31 December 2007, Article 83 *bis* was in force for the 153 Contracting States which had ratified the Protocol or which had adhered to the Convention after 20 June 1997. Article 83 *bis* was not in force on 23 July 2009 for 33 States.

16.8 A model agreement was developed on the basis of agreements registered with ICAO and taking into account other related information. This model agreement is provided in Chapter-68, Appendix-01. It should be noted that the agreement is an example of only one of the numerous possibilities for which States can opt, since Article 83 *bis* provides that all or part of the referenced functions and duties of the State of Registry may be subject to such a transfer to the State of the Operator.

16.9 Agreements or arrangements for the transfer of responsibilities under the terms of Article 83 *bis* are required to be registered with ICAO. Such agreements registered with ICAO can be found on the ICAO-Net, searching for "all signatories" and "Article 83 *bis*" as the subject, at: www.icao.int/cgi/goto_m_leb.pl?applications/dagmar/main.cfm?UserLang=_e. Guidance may be obtained from ANO (AT) A-2 in respect of obligation for signing MoU by the States.

16.10 Where delegation of responsibility is not a viable solution, the State of Registry may have to consider the following alternatives:

A. amend its national laws and/or regulations to require cancellation of registration in its State when aircraft are dry leased to operators from States that are unwilling to accept delegated responsibility or whose safety programmes are not considered adequate for acceptance of delegated responsibility;

B. amend its national laws and/or regulations to provide that aircraft on its registry, dry leased to operators from other States, is required to be operated in accordance with the regulations of the State of the Operator; or

C. endeavour to obtain additional technical staffing and funding to maintain acceptable surveillance over the operation of aircraft on its registry that are leased to operators from other States.

16.11 CAAB may restrict dry leasing by their operators of aircraft which are registered in other States, from sources in other States, to types of aircraft that are currently on their own national registers.

16.12 CAAB may restrict wet leasing by their operators from sources in other States, of aircraft which are registered in other States, to types of aircraft that are within the current capability of the lessee to properly handle and dispatch.

16.13 This general summary concerning leased aircraft is intended primarily to acquaint States and operators with problems that may arise where an operator, using leased aircraft registered in another State, may have to comply with a confusing combination of:

A. regulations of the State of Registry;

B. regulations of CAAB; and

C. the operating regulations and rules of a third State over whose territory operations may be conducted.

16.14 AIRCRAFT LEASING ARRANGEMENT GUIDE

Guidance on the aircraft leasing arrangement has been provided in Part-II, Chapter 68, Appendix-16.

CHAPTER-17

DRY LEASE

17.1 GENERAL

17.1.1 Under most dry lease agreements the lessee, who provides the crew, is the accountable party who exercises operational control over the aircraft with all the attendant responsibilities. If the lessee does not have operational control of the leased aircraft under the lease agreement, the responsible authority needs to carefully evaluate the arrangements to ensure that the operation can be conducted with an adequate level of safety in accordance with the applicable regulations.

17.1.2 CAR '84 requires that when an applicant for an AOC, or an existing operator, wishes to use dry leased aircraft, the applicant or operator should provide the CAAB with the following information:

A. the aircraft type, model and serial number;

B. the name and address of the registered owner;

C. State of Registry, nationality and registration marks;

D. certificate of airworthiness and statement from the registered owner that the aircraft fully complies with the airworthiness requirements of the State of Registry;

E. name, address and signature of lessee or person responsible for operational control of the aircraft under the lease agreement, including a statement that such individual and the parties to the lease agreement fully understand their respective responsibilities under the applicable regulations;

F. copy of the lease agreement or description of lease provisions;

G. duration of the lease; and

H. areas of operation.

17.1.3 After careful review within the authority and liaison as necessary with other competent authorities, the CAAB needs to make the determination as to which party to the lease agreement is in fact responsible for the conduct of the operation. In making this determination, the CAAB will consider the responsibilities of the parties under the lease agreement for:

A. flight crew member licensing and training;

B. cabin crew member training;

C. airworthiness of the aircraft and the performance of maintenance;

D. operational control, including dispatch and flight following;

E. scheduling of flight crew and cabin crew members; and

F. signing the maintenance release.

17.1.4 If the lease arrangement is determined to be a dry lease involving aircraft that possess valid certificates of registration and certificates of airworthiness issued by an operator in Bangladesh, which is also the State of Registry, the problems of compliance with the safety regulations promulgated by CAAB can be readily managed and proper surveillance provided for the operation of the aircraft. If the dry lease arrangement is acceptable to the CAAB, the operations manual and/or the operations specifications should be amended to provide at least the following data:

A. names of the parties to the lease agreement and the duration thereof;

B. nationality and registration marks of each aircraft involved in the agreement;

C. type of aircraft to be used;

D. areas of operation; and

E. regulations applicable to the operation.

17.2 DRY LEASE OF AIRCRAFT REGISTERED IN OTHER STATES

17.2.1 In cases where the dry lease involves an aircraft of a nationality different from the State of the Operator, the regulatory and compliance problems become more acute. As with other applications for the use of dry leased aircraft, CAAB requirse that the operator, who is the lessee, provide the CAAB additional information as required.

17.2.2 When the State of Registry is not the State of the Operator, it is desirable for the State of Registry and the State of the Operator to enter into agreement regarding the transfer of all or part of the functions, duties or responsibilities of the State of Registry under the Convention, if possible under its national laws, to the State of the Operator. Such a transfer arrangement is provided by Article 83 *bis* for those States for which it is in force. When the State of Registry cannot carry out its oversight functions in accordance with the Convention, and it cannot reach a satisfactory agreement with the State of the Operator on the transfer of its oversight functions pursuant to Article 83 *bis*, the use of aircraft under dry lease arrangements should be discouraged. Should the parties to the proposed dry lease agreement wish to pursue the matter, the lessor, or the lessee, may endeavour to enter the aircraft, which is the subject of the proposed lease, on the registry of the State of the Operator of the lessee. This change of registration of the leased aircraft would help to ensure that an adequate level of safety oversight is being applied to the operation of the leased aircraft.

17.2.3 If the national laws of the State of the Operator permit dry leased aircraft owned by individuals or companies of a nationality different from that of the State of the Operator to be placed on its registry, the CAAB would require the following information:

A. the aircraft be subject to the airworthiness certification, maintenance and inspection procedures of the State (the State of the Operator) as the State of Registry;

B. the responsibility or custody of the aircraft and control of all operations be vested in the lessee;

C. the responsibility for the airworthiness and maintenance of the aircraft be vested in the lessee;

D. the duration of the lease be clearly established; and

E. the registration of the aircraft be valid so long as the lease is in force and the aircraft is operated in accordance with the regulations of the State, as the State of Registry and the State of the Operator, the terms or conditions specified in the operator's AOC, the associated operations specifications and the operations and MCMs.

17.2.4 Where a dry lease has been agreed, but no delegation of responsibility has been agreed to between the States concerned, and regardless of the registration of the dry leased aircraft, the lessee should be required to show that:

A. the flight crew hold current valid and appropriate certificates or licenses issued or validated by the State of Registry;

B. the aircraft will be maintained in accordance with the airworthiness requirements of the State of Registry; and

C. the aircraft will be operated in compliance with the applicable regulations of the State of Registry and the State of the Operator, the operator's AOC, the associated operations specifications and the operations and MCMs.

17.2.5 Several practical problems confront an operator who arranges a dry lease for an aircraft registered in another State. In order to satisfy the requirements of Article 32 (a) of the Convention and continuing airworthiness requirements, the operator is required to use flight crew and maintenance personnel who possess current certificates or licenses issued or rendered valid by the State of Registry. This may be accomplished by employing persons who already possess such certificates or licenses. Alternatively, if this is not feasible or desirable, the operator needs to arrange for personnel already employed to take the necessary written and flight tests or practical examinations in order to obtain appropriate certificates or licenses from the State of Registry. This may involve sending flight crew and maintenance personnel to the State of Registry for the requisite written examinations. Upon successful completion of these tests, arrangements need to be made for these individuals to take the required flight tests or practical examinations leading to appropriate certification or licensing by the State of Registry of the leased aircraft. In this context the operator may have to pre-position personnel with the aircraft to be leased in the State of Registry and make appropriate arrangements for the conduct of written and practical tests and the issue of certificates and licenses.

17.2.6 Perhaps the least costly method of overcoming the problem is to arrange for the State of Registry to validate licenses or certificates issued by the State of the Operator, or by another State, to the operator's personnel. Such validations would be subject to requirements established by the State of Registry.

17.2.7 Another low-cost option would be to have the State of Registry send an inspector to the State of the Operator, where the personnel and aircraft are located, to administer the required testing and certification for the operator's personnel. However, if such an arrangement is acceptable to the competent authority of the State of Registry, it may require reimbursement of the costs involved in providing such certification services.

17.2.8 Once the necessary certification, licensing or validation of certificates and licenses has been accomplished, the question arises concerning whether the State of Registry or the State of the Operator is responsible for ensuring that these individuals satisfy recent experience requirements and maintain their license qualifications required under the regulations of the State of Registry.

17.2.9 The question of compliance with the airworthiness requirements of the State of Registry is another serious problem inherent in a dry lease arrangement.

17.2.10 The State of the Operator needs to carefully evaluate all aspects of a dry lease arrangement before authorizing the use of such aircraft by an operator under its jurisdiction. Once authorized, it is especially important for the State of the Operator to carefully monitor the operations and maintenance of the leased aircraft. Should the State of the Operator have reason to believe that an operator is not complying with the regulations of the State of Registry, the competent authority of the State of Registry should be advised and a request made that the matter be investigated.

17.2.11 If the State of the Operator has accepted a delegation of responsibility from the State of Registry, the State of the Operator needs to ensure that the operator is complying fully with its regulations with respect to the dry leased aircraft.

17.2.12 The main question to be addressed is whether the State of Registry can or will be responsible for the operation and maintenance of a dry leased aircraft or whether the State of the Operator is capable of properly exercising these responsibilities when delegated by the State of Registry.

Note: Relevant Forms and Checklists on 'Lease or Charter' can be found in Chapter-68 (Appendices)

CHAPTER-18

WET LEASE

18.1 GENERAL

18.1.1 In wet leases the lessor normally exercises operational control of the aircraft. A wet lease situation therefore means that an aircraft will be operated under an AOC issued by the State of the lessor. In this case the State of the Operator may also be the State of Registry of the leased aircraft.

18.1.2 The terms of a wet lease agreement are important since they may obscure the true relationship between, and the obligations of, the parties to the agreement. Additional information may be needed by the authorities concerned. The actual lease arrangements and other relevant information need to be examined by the respective authorities responsible for monitoring the operation of the wet leased aircraft. The final determination of responsibility for the exercise of operational control will depend upon a careful examination of all the factors in the particular situation.

18.1.3 Where both parties to a wet lease agreement hold AOCs, serious factual questions arise concerning which party, the lessor or the lessee, is actually responsible for the operation and compliance with the applicable safety regulations. The responsible authority or authorities, if the lessor and lessee are from different States, need to resolve such questions before operations involving use of the wet leased aircraft can be commenced.

18.2 DETERMINATION OF RESPONSIBILITY FOR OPERATIONAL CONTROL AND SAFETY

18.2.1 Normally the decision as to whether the lessor or the lessee is responsible for the safety of the operation will be made by the CAAB or a designated representative assigned to supervise the operations conducted by the lessee. Consultation and coordination with counterparts from the State of the Operator of the lessor of the aircraft, who are assigned to work with the lessor, are most important in this decision process. The decision to be made is whether the aircraft should be operated under the lessor's AOC and associated operations specifications, or whether it should be operated under the authority of the lessee.

18.2.2 The usual determination is that if a party, the lessor, leases an aircraft to another and also provides the flight crew, maintenance and fuel for the aircraft, the lessor of the aircraft is regarded as the operator. If the lessor makes a charge for the use of the aircraft and related service, the operation of the aircraft will be subject to the applicable regulations of the State of the Operator of the lessor. Operational control of the aircraft may be the responsibility of the lessor even though the lease may be characterized in terms similar to those of a dry lease, expressly stating that services such as flight following, communications and weather information, are to be performed by the lessee. In some instances, it is therefore necessary to examine the manner in which the operations are to be conducted, to determine which party to a lease will actually have operational control and hence responsibility and accountability for safety.

18.2.3 In the rare event that there is a determination that the lessee will be the operator of a wet leased aircraft under a wet lease agreement, the responsible authority needs to determine whether the lessee can effectively maintain operational control of the aircraft. In such cases, the training and supervision of the flight crew, including how they are to be integrated into the lessee's operations, become critical considerations. If it is apparent that the lessee will not be able to maintain effective operational control under the terms of the agreement, the responsible authority is to require that those terms be modified. Otherwise the authority should not approve the proposed wet lease.

18.2.4 Additional complications may arise when an aircraft, dry leased to an operator, is registered in a State (State of Registry) different from the State (State of the Operator) responsible for the operator currently using that aircraft under the dry lease, and this operator is proposing to further lease the aircraft, as a wet lease, to another operator, possibly in a third State. In such cases there may be an agreement under Article 83 *bis* between the State of Registry of the aircraft and the State of the Operator, or the State of Registry may seek such an agreement because of a proposed wet lease to an operator from a third State. For example, an authority may conclude that although it can effectively carry out the State of Registry responsibilities when the aircraft is dry leased to an operator in another State, it cannot effectively execute those same responsibilities when that operator decides to wet lease the aircraft to a lessee in a third State.

18.2.5 In such cascading subleases, operational control resides with the operator holding the AOC under which the aircraft is operated. The State of the Operator is responsible for safety oversight of the operation.

18.2.6 Practical safety problems develop in wet lease operations when the lessor provides only the flight crew while the lessee provides the cabin crew. In such cases, the cabin crew members, employed by the lessee, will not be familiar with the aircraft, associated emergency equipment and the emergency procedures used by the flight crew. In these circumstances the lessee's cabin crew members will need to receive additional training, under the approved training programme of the lessor, with respect to their emergency duties on the particular aircraft. In addition, they may have no knowledge of the requirements of the lessor's State of the Operator with respect to flight and duty time limitations and the provision of rest periods, and to the performance of their duties and responsibilities aboard the wet leased aircraft. These aspects need also to be taken into account.

18.2.7 In some instances the registered owner of an aircraft involved in a wet lease does not possess an AOC or may not have experience or knowledge regarding aircraft operations. Difficult questions arise when such an owner wishes to lease aircraft to an operator of another State who has been granted an AOC by that State to operate wet leased aircraft. In such cases the same questions and problems regarding operator and State responsibility need to be addressed and resolved.

18.3 SHORT-TERM WET LEASE, CHARTER OR SUB-CHARTER

18.3.1 Some wet leasing operations, charters or sub-charters are organized for short terms at very short notice, for example, where an operator wishes to replace an unserviceable aircraft on a particular service and is forced to contract with another operator for that service to be operated.

18.3.2 Authorities should establish procedures for operators to provide lists of approved lessors and lessees to facilitate such short-term leases or charters. For operators in one State, potential lessors may be from another State and appropriate arrangements should be made between States which may be concerned.

18.3.3 In order to facilitate operations and such leases, information on the need for this type of arrangement and the possible lessors should be sought by a State from its operators such that appropriate arrangements could be put in place to enable approval for an actual short-term wet lease or charter to be given very quickly.

18.3.4 In the case of a short-term wet lease, charter or sub-charter, the lessor will retain all responsibilities and operational control.

18.4 GUIDANCE ON THE EVALUATION AND PROCESSING OF AIRCRAFT LEASE AND INTERCHANGE ARRANGEMENTS

A. Continuing economic deregulation of the global air transportation industry, and increasing international cooperation between the governments working through bilateral and multilateral agreements have resulted in greater numbers of aircraft lease and interchange agreements. These agreements are widely used to meet certain market demands and seasonal fluctuations in both the domestic and global air transportation systems.

B. For the purpose of standardization concerning surveillance, enforcement, and compliance with applicable CAR '84 requirements, the following definitions apply to lease and interchange agreements:

1. Lease Any agreement by a person (the lessor) to provide an aircraft to another person (the lessee) who will use the aircraft for compensation or hire purposes. A lease is not an agreement for the sale of an aircraft or a contract of conditional sale.

2. Dry lease. Any agreement in which a lessor such as an air operator, bank, or leasing company:

   a. Leases an aircraft without any crewmembers to an air operator (the lessee); and

   b. Which the lessee is clearly authorized to integrate into its operations; and

   c. Where the lessee is expected to assume all key AOC-related responsibilities for operational and maintenance arrangements.

3. Wet lease. Any agreement in which an air operator (the lessee) leases an aircraft from a Bangladesh AOC holder, foreign air operator, or other entity (the lessor) where the lessor:

   a. Provides the aircraft;

   b. Provides all of the required qualified crew members; and

   c. Operates the aircraft; and

   d. Retains all key AOC-related responsibilities (see list in above note box).

4. Damp lease. Any agreement in which an air operator (the lessee) leases an aircraft from a Bangladesh AOC holder, foreign air operator, or other entity (the lessor) where the lessor:

   a. Provides the aircraft;

   b. One or more of the required crew members; and

   c. Operates the aircraft; but

d. Does not discharge one or more of the key AOC-related responsibilities.

5. Charter. Any arrangement in which an individual, operator or organization, having passengers or cargo:

   a. Engages a properly authorized AOC holder to provide all necessary services to transport these passengers and cargo from one location to another;

   b. Does not operate the aircraft; and

   c. Does not assume any AOC-related responsibilities

6. Interchange agreement. Any agreement in which the operational control of an aircraft is transferred. by legal agreement:

   a. From one AOC holder to another AOC holder;

   b. For repetitive short periods of time;

   c. In which the latter AOC holder assumes all key AOC-related responsibilities, except for performance and recording of maintenance.

18.5 GUIDANCE REGARDING ALL LEASING ARRANGEMENTS

18.5.1 PROJECT MANAGER

Most of these leasing arrangements projects involve both the assigned operations and airworthiness inspectors. As in all request for an authorization from the DFSR, one person will be the project manager to ensure that the project is complete is completed in a quality and timely manner.

A. The project manager will normally be the assigned operations inspector.

B. The assigned airworthiness inspector will be the project manager on those leasing arrangements that involve the dry-leasing of foreign-registered aircraft.

18.5.2 PRIOR AUTHORIZATION OF DFSR IS REQUIRED

A. All leasing agreements and arrangements involving transportation of passengers and property for hire must be submitted to the DFSR for approval or acceptance prior to executing and implementing these arrangements.

B. Operators are expected to anticipate their possible leasing arrangements and obtain prior authorization as far in advance of a proposed implementation date as possible.

18.5.3 PRE-SUBMISSION DISCUSSIONS WITH PARTIES

A. Operators should be encouraged to discuss their proposed arrangements as early in the leasing process as possible.

B. These discussions will ensure that the operator is fully aware of both the operations and airworthiness submission requirements and time lines associated with the acceptance of the aircraft leasing arrangements.

C. These discussions will include a full briefing of the involved operators that includes the:

1. Provisions of the CAR ’84 /ANOs, Aircraft Leasing Arrangements;
2. Review of the definitions that are applicable to leasing and interchange;
3. Amplification of the key AOC-related functions that apply to aircraft leasing;
4. Required contents of the leasing agreement;
5. Required supporting documents that must be submitted;
6. General flow of events that will occur during the process; and
7. The approximate time lines for completion of the process.

18.5.4 TIME LINES BEFORE APPROVAL DECISION IS MADE

A. Short-term “charters” between two Bangladesh AOC holders with compatible operations approvals will generally be processed within 5+ working days.

B. Wet-leasing between two Bangladesh AOC holders with compatible operational approvals will also be processed within 7+ working days.

C. Wet-leasing a foreign AOC holder to perform flights on behalf of a Bangladesh AOC holder may have some issues that will require a protracted approval process.

1. 15+ working days for those foreign AOC holders will prior approval to operate to/from Bangladesh and have compatible operational authorizations with the Bangladesh AOC holder

2. 30+ working days for those foreign AOC holders without prior approval to operation to/from Bangladesh.

D. Dry-leasing of Bangladesh-registered aircraft of the same make, model and series can require, depending on the number of differences between those aircraft:

(i) 15+ working days for smaller air taxi aircraft

(ii) 30+ working days for aircraft of more than 5700 kg

E. Dry-leasing of Bangladesh-registered aircraft of a different make and model by Bangladesh AOC holder can require a formal certification project, with time lines

(i) 30+ working days for small air taxi aircraft

(ii) 45+ working days for aircraft of more than 5700 kg

F. Dry-leasing of a foreign-registered aircraft by Bangladesh AOC holder can require:

(i) 30+ working days for aircraft of the same make, model and series

(ii) 45+ working days for aircraft of make, model and series that has not previously been operated by the Bangladesh operator.

18.5.5 INITIAL APPLICATION REVIEW

A. As soon as possible after the formal submission of the leasing arrangements application documents, the assigned inspectors will conduct an initial review of the submission to ensure all required documents have been submitted and are complete for document conformance processing.

B. The assigned inspectors may choose to have a meeting with the applicant at the time of formal submission.

1. This is advantageous In situations where the number of application documents are expected to be few and the package can be accepted or rejected with minimal review requirements.

2. This practice is not advantageous when a larger number of application documents are expected, such as in wet-leasing with a foreign AOC holder or dry-leasing of a foreign-registered aircraft. In these cases, a separate initial application review meeting should be held with only DFSR.

18.5.6 DOCUMENT CONFORMANCE EVALUATION

18.5.6.1 GENERAL GUIDANCE

A. The assigned operations and maintenance inspectors will conduct joint or parallel evaluation of the documents that apply to both technical specialties.

B. The operations and maintenance inspectors will make a separate review of the general aspects of AOC holder responsibilities to understand the total relationships. Once that understanding is gained, the inspectors should focus on the key AOC-related responsibilities that should be well-defined in the lease agreement.

18.5.6.2 DETERMINATION OF OPERATIONAL CONTROL

A. Evaluation of an aircraft leasing agreement to determine which party has operational control is a critical function assigned to an operations inspector.

B. The CAR ‘84 provides that the DFSR shall determine that a person has operational control if that person exercises authority and responsibility for a specified number of operational functions, such as:

1. Assigning crewmembers for particular flights

2. Directly paying crewmembers for services, and

3. Initiating, diverting and terminating flights.

C. The DFSR determination of whether the lessor or lessee has operational control will be made by the assigned operations inspector. Such determination will be based on a careful review of the lease agreement, and any other circumstances regarding the actual operation

D. The DFSR has taken the position (concerning the safety regulations) that if a person leases an aircraft to another person and also provides the flightcrew, fuel, and maintenance, the lessor of the aircraft is the operator.

18.5.7 INSPECTION & DEMONSTRATION

18.5.7.1 WET LEASES BETWEEN BANGLADESH AOC HOLDERS

A. There is no requirement for an inspection or demonstration prior to authorizing the aircraft leasing arrangements.

B. The assigned inspectors should, however, plan and conduct inspections of either the first flight or early in the first week of such operations to ensure that all elements of the agreement relative to the key AOC-related responsibilities are being implemented properly

18.5.7.2 WET LEASES WITH FOREIGN AOC HOLDERS

A. Normally, an "orientation" visit is planned and conducted at the foreign AOC holder's primary facilities, including operational and maintenance control organizations, aircraft maintenance records and flight crew to ensure that the AOC holder is at least in compliance with ICAO

Annex 6/CAR '84 and their CAA is providing safety oversight.

B. The assigned inspectors should plan and conduct this orientation visit as soon as a determination has been made that the leasing arrangements are going to be acceptable.

18.5.7.3 DRY LEASES WITH BANGLADESH-REGISTERED AIRCRAFT

A. No additional inspection will be required if the aircraft is the same make, model and series as aircraft currently operated by the lessee and there are no appreciable differences.

B. Where appreciable differences exist, the assigned operations inspector should plan and conduct inspections of training-in-progress and the use of the documentation.

C. A full formal certification will be required if the aircraft is a make and model not previously operated by the AOC holder.

18.5.7.4 DRY LEASES OF FOREIGN-REGISTERED AIRCRAFT

A. Operations inspectors should wait for the determination of the acceptability of the maintenance arrangements and the arrangements with the lessor's CAA.

B. When the maintenance arrangements are determined to be acceptable and an official agreement is reached with the lessor's CAA, agreement may be made.

18.5.8 FINAL CERTIFICATION ACTIONS

After determining that the leasing arrangements and all submitted documentation are satisfactory, the DFSR shall amend the master operations specifications of that AOC holder. The amendment to the operations specifications shall contain the following information:

A. The names of the parties to the agreement and the duration of the agreement

B. The make, model, and series of each aircraft involved in the agreement

C. The kind of operation

D. The expiration date of the lease agreement

1. A statement specifying the party deemed to have operational control

2. Any other item, condition, or limitation the DFSR determines necessary

18.6 APPLICATION FOR APPROVAL/ACCEPTANCE OF LEASE ARRANGEMENTS

18.6.1 ALL APPLICATIONS

The following documents must be provided with all applications involving aircraft lease or interchange:

A. A complete copy of the aircraft lease agreement; and

B. An operator analysis showing how this leasing arrangement conforms with CAR '84 requirements.

18.6.2 WET LEASE APPLICATIONS BETWEEN BANGLADESH AOC HOLDERS

The requirements of paragraph 18.6.1 apply to applications involving wet leasing between Bangladesh AOC holders.

18.6.3 WET LEASE APPLICATIONS WITH FOREIGN AOC HOLDERS

In addition to the requirements of paragraph 18.6.1, the following documents must be provided with applications involving wet leasing with foreign AOC holders:

A. A complete copy of the foreign operator's AOC and Master operations specifications;

B. A copy of the foreign operator's Aircraft Display operations specifications for the aircraft type to be operated;

C. A copy of the Bangladesh Government authorization for commercial air transport flights to and from Bangladesh;

D. Copies of the foreign crew member's licenses and other required documents;

E. A copy of the foreign crew members training and qualification records to show that they are qualified and current;

F. Copies of each required aircraft document (C of R, C of A, Noise & Radio) for each aircraft the foreign operators will use for this lease;

G. Current airworthiness status of the aircraft (aircraft airworthiness records)

H. A completed copy of the Conformance Checklist established by CAAB.

18.6.4 DRY LEASE APPLICATIONS (BANGLADESH-REGISTERED AIRCRAFT)

In addition to the requirements of paragraph 18.6.1, the following documents must be provided with applications involving dry leasing of Bangladesh registered Aircraft:

A. A operator-generated copy of the conformity documents for the aircraft involved;

B. An operator-generated assessment of aircraft differences (variances) from the current fleet;

C. A copy of the Maintenance Program (and any necessary bridging information) applicable to the aircraft to be used;

D. A copy of the approved MEL to be used

18.6.5 DRY LEASE APPLICATIONS (FOREIGN-REGISTERED AIRCRAFT)

A. In addition to the requirements of paragraph 18.6.1, the following documents must be provided with applications involving dry-leasing of foreign-registered aircraft:

1. Copies of the validated licenses and other required documents issued by the State to Bangladesh crew members to be used;

2. A copy of the approved Minimum Equipment List to be used;

3. A copy of the approved Maintenance Program (and bridging documents) for the aircraft to be used;

4. A copy of the applicable Maintenance Control Manual for the aircraft to be used;

5. A operator-generated copy of the conformity documents for the aircraft involved;

6. An operator-generated assessment of aircraft differences (variances) from the current fleet;

B. This situation will require an official agreement between governments of the two governments

1. Outlining each CAA's responsibilities with respect to State of the Registry and State of the Operator ICAO obligations; and

2. Providing the DFSR worldwide access for inspection to the aircraft and crews involved.

18.7 CONTENTS OF THE LEASING AGREEMENTS

The following elements will be a part of all leasing agreements submitted for DFSR evaluation:

A. The official names of the parties;

B. The official addresses of the parties;

C. The duration of the agreement, with specific start and expiration dates;

D. The make, model, series and registration numbers of each aircraft involved in the agreement;

E. An explanation of the type of operations that will be conducted by the lessee

F. The interchange points (interchange agreements only);

G. The specifications regarding which party has responsibility and authority for operational control, including the final decisions for initiating, terminating or diverting a flight;

H. The specifications regarding which party has the responsibility and authority for provision of aeronautical data, weather and flight planning and operational flight plan for the operation of the aircraft;

I. The specifications regarding which party has the responsibility and authority for provision of aircraft loading, computation of mass and balance and performance associated with each flight of the aircraft;

J. The specifications regarding which party has responsibility and authority for crew scheduling including assignment to duty and compliance with duty, flight and rest period requirements;

K. The specifications regarding which party has responsibility and authority for ensuring that crew training, proficiency and line checks, and currency requirements are met;

L. The specifications regarding which party has responsibility and authority for maintenance control of the aircraft involved;

M. The specifications regarding which party has responsibility and authority for planning, arranging, performing and deferring maintenance for the aircraft;

N. The specifications regarding which party has responsibility and authority for maintaining the official maintenance records for the aircraft involved;

18.8 ADDITIONAL INSTRUCTIONS: DRY LEASE AGREEMENTS

18.8.1 GENERAL GUIDANCE

A. From any operational standpoint, dry lease of an aircraft by a Bangladesh AOC holder does not normally present a significant problem. Operational control of any dry leased aircraft rests with the operator lessee.

B. In most dry lease agreements, the lessor is either a bank, a leasing company, or a holding company which has neither the operational expertise and infrastructure nor the desire to assume responsibility and liability for controlling daily operations of the leased aircraft.

C. The air operator or other type of operator leasing the aircraft applies for an amendment of its operations specifications to list the leased aircraft. If an aircraft is dry leased from another operator, the lease agreement must be explicit concerning the maintenance program and Minimum Equipment List to be followed during the term of the dry lease.

18.8.2 MINIMUM REQUIREMENTS

A. An AOC holder may be approved by CAAB to dry lease an aircraft for the purpose of commercial air transportation provided that the following minimum conditions are met:

1. The AOC holder provides the Authority with a copy of the dry lease agreement to be executed;

2. The AOC holder has operational control of the aircraft during the period of the lease;

3. Dispatch and/or flight watch functions are performed by the AOC holder;.

4. The flight and cabin crewmembers are trained, qualified and scheduled by the AOC holder; and

5. The maintenance arrangements are acceptable to the Authority.

B. At a minimum, the dry lease agreement shall be explicit concerning the:

1. Entity that has operational control, with the authority for initiating and terminating flights;

2. Responsibility for crew training, qualification and scheduling;

3. Maintenance and servicing of aircraft, including the Maintenance program that will used;

4. Minimum Equipment List that will be used;

18.8.3 DRY LEASING OF FOREIGN REGISTERED AIRCRAFT

A. An AOC holder may be approved by the Authority to dry-lease a foreign-registered aircraft for commercial air transport in accordance with the regulatory requirements.

B. To be eligible for dry lease the foreign registered aircraft shall:

1. Have an appropriate airworthiness certificate issued, in accordance with ICAO Annex 8/Part VIII of CAR '4, by the country of registration and meets the registration and identification requirements of that country.

2. Be of a type design which complies with all of the requirements that would be applicable to that aircraft were it registered in Bangladesh, including the requirements which shall be met for issuance of a Bangladesh standard airworthiness certificate (including type design conformity to the manufacturers type certificate data sheets, condition for safe operation, and the noise, fuel venting, and engine emission requirements).

3. Be maintained according to an maintenance program approved by the State of Registry and acceptable to CAAB.

4. Be operated by qualified crew members employed by the AOC holder.

C. CAAB has determined the extent of the State of Registry's arrangements for continuing airworthiness and find that these arrangements are adequate for the type of operation;

D. CAAB will have free and uninterrupted access, both in Bangladesh and at any international location, to the:

1. Aircraft on the ramp and during flight time,

2. Maintenance and operations facilities,

3. Maintenance and operations personnel,

4. Training facilities and simulators used

E. The aircraft must be operated in accordance with the regulations applicable to Bangladesh AOC holders, and

F. The maintenance arrangements must result in the aircraft always being in compliance with the State of Registry requirements and the maintenance requirements applicable to Bangladesh AOC holders.

18.9 ADDITIONAL INSTRUCTIONS: WET LEASE AGREEMENTS

18.9.1 GENERAL GUIDANCE

A. The term "wet lease" is a leasing agreement whereby a AOC holder agrees to provide an aircraft and required crewmembers to another air operator.

1. The words "AOC holder" refer to Bangladesh person authorized to operate aircraft in commercial air transport.

B. CAR '84 requires that no Bangladesh AOC holder may allow others to conduct wet lease operations on its behalf unless CAAB is advised and has found the arrangements to be acceptable.

18.9.2 PROCESSING WET LEASE AGREEMENTS

This agreement should be immediately reviewed by the assigned operations and maintenance inspectors to assure that it is complete.

A. The wet lease agreement shall be explicit concerning the:

1. Entity that has operational control, with the authority for initiating and terminating flights;

2. Responsibility for crew training, qualification and scheduling;

3. Maintenance and servicing of aircraft, including the Maintenance program that will used;

4. Minimum Equipment List that will be used;

5. Following this review, the principal inspectors should make a written operational assessment of whether the lessor or the lessee will have operational control under the terms of the lease.

B. When a determination of operational control is made, the DFSR will advise the AOC holder without delay.

C. The lessor may be asked to submit any clarifying or supplemental information regarding the lease needed for making proper determination of operational control.

18.10 ADDITIONAL INSTRUCTIONS: INTERCHANGE AGREEMENTS

18.10.1 GENERAL

A. An interchange agreement is a subset of a dry lease agreement. An interchange agreement permits an air carrier to dry lease aircraft to another air carrier for short periods of time.

B. The aircraft may be listed on the operations specifications of both common carriage operators at the same time.

1. The registration markings of each aircraft must be listed on the operations specifications of each AOC holder.

C. The CAR '84 requires that each AOC holder should obtain prior approval from the CAAB before it conducts any operation using any aircraft.

18.10.2APPROVAL PROCEDURES

A. Matters which are commonplace in the normal operations of an air carrier frequently present major problems in an aircraft interchange. Therefore, special emphasis must be given to the review, approval, and monitoring of this type of operation.

B. The following direction and guidance is relevant when an application is received for an aircraft interchange.

1. Each air carrier party to an interchange agreement will submit an application for amendment of its operations specifications to CAAB.

a. Each air carrier will submit a copy of the interchange agreement or a written memorandum of its terms as part of the application.

2. Assigned inspectors will review the application and conduct the necessary evaluations and/or inspections to assure compliance with the CAR '84.

a. The results of these reviews and inspections by the DFSR will be communicated to parties to the interchange agreement.

b. Close coordination between the concerned principal operations, maintenance, and avionics inspectors must be maintained.

3. Important details may be overlooked, unless interchange operations are closely monitored.

a. For example, life rafts and emergency radios have been found improperly stowed during overwater flights on aircraft which have no provisions for their stowage.

b. In another example, an emergency radio was found unsecured on the flight deck where it could have created a hazardous condition in turbulent weather.

c. Equipment variances such as this and nonstandard cockpit arrangements of switches, instruments, and controls can be potentially dangerous unless effective training or corrective changes are accomplished before operation and are closely monitored thereafter.

Note: All relevant Forms and Checklists on 'Lease or Charter' can be found in Chapter-68 (Appendices)

CHAPTER-19

OVERSIGHT OF OTHER ASPECTS OF COOPERATION BETWEEN OPERATORS

19.1 CODESHARE ARRANGEMENTS

19.1.1 Codesharing is a marketing arrangement under which an airline places its designator code on a flight operated by another airline and sells and issues tickets for that flight. Operators throughout the world continue to form codeshare alliances to strengthen or expand their market presence or competitive ability. Codesharing may be between operators from the same State or operators from different States.

19.1.2 In deciding whether to authorize a codeshare arrangement, CAAB may consider whether the arrangement is in the public interest. Where the codeshare will involve an operator from another State, such public interest determinations should include consideration of whether the operations of that operator meet an acceptable level of safety. In making these safety determinations, CAAB should consider whether or not that operator will conduct operations in accordance with standards that meet or exceed minimum international standards.

19.1.3 In considering the safety of a proposed codesharing involving an operator from another State, CAAB should consider requiring an audit of the standards maintained by that operator in conducting its operations. Such a system of codeshare audits should establish criteria for determining satisfactory audit results. The initial audit would be followed by periodic audits for the duration of the codeshare arrangement. Should an audit reveal that an operator was failing to maintain a satisfactory standard of safety, the responsible authority should withhold or withdraw its approval of the codeshare.

19.1.4 A codeshare audit of the standards maintained by an operator from another State may, at the discretion of the responsible authority, be performed by a third party provider using one of the internationally recognized evaluation systems, which are designed to assess the operational, management and control systems of the operator.

19.1.5 An authority may consider requiring an operator to monitor a codeshare partner from another State on an ongoing basis. Such monitoring of a codeshare partner should include the following factors:

A. accident/incident rates;

B. the operator’s financial condition, ownership and economic condition;

C. the operator’s management, operating history, current organization, sophistication and stability (including any turnover of key personnel, strikes, etc.);

D. age of equipment, equipment on order and equipment being returned;

E. operational capabilities (e.g. international service as compared to only domestic service) and established infrastructure (e.g. approved maintenance and repair facilities, and flight simulation training devices); and,

F. the interface and cooperation between codeshare partners, including familiarity with personnel, sharing of data through meetings, conferences, etc.

19.2 FRANCHISING

19.2.1 The *Manual on the Regulation of International Air Transport* (Doc 9626) describes the concept and provides examples of franchise agreements. Airline franchising is a commercial arrangement that involves a franchiser operator granting a franchise or right to use various of its corporate identity elements (such as its flight designator code, livery and marketing symbols) to a franchisee operator to market or deliver the latter's air service products, typically subject to standards and controls intended to maintain the quality desired by the franchiser. Generally, this increasingly common practice consists of a large airline franchising part of its short-haul and medium-haul network to smaller, more cost-efficient operators.

19.2.2 Franchising arrangements are independent of, but may coexist with, a code sharing arrangement.

19.2.3 *Identification of the operator in the case of franchising:* Under Annex 6 provisions, an air operator is responsible for conducting the commercial operations in accordance with the AOC issued by the State of the Operator. Therefore, franchising flights are conducted under the responsibility of the operator that is actually operating the flight no matter what the aircraft livery or flight number might be. The oversight of such operation is normally conducted by the State of the Operator. However, if the operator uses aircraft registered in a State other than that of the operator, oversight may be required by the State of Registry if an agreement such as Article 83 *bis* or a bilateral agreement is not in place between the States concerned.

19.2.4 A franchising arrangement allows a franchisee airline to use the name or assume the public face of a franchiser airline of another or the same State. While such alliances can serve to "multi-nationalize" the economic identity of an operation, they can also add complexity to the exercise of safety oversight by States. The States involved should be clear about their oversight responsibilities for aircraft operations, including those under various commercial cooperative arrangements such as franchising.

19.3 INTERCHANGE

19.3.1 The *Manual on the Regulation of International Air Transport* (Doc 9626) defines the concept of interchange as follows: an aircraft interchange or interchange flight is a regularly scheduled, single-plane through service linking a route of one air operator at the interchange point to a route of a second air operator, with the same aircraft being crewed by and under the operational control of the respective authorized operator on each route.

19.3.2 An interchange provides passengers with the benefit of a single-plane service on what is essentially an interline operation and may provide additional benefits to the operators involved in terms of better aircraft utilization.

19.3.3 Interchange operations may involve operators from two States of the Operator, neither of which may be the State of Registry of the aircraft involved. It is therefore necessary for the States concerned to be clear about their respective responsibilities. Whilst in the case of interchange there can be no confusion over which operator has operational control, other aspects are similar to those encountered when aircraft are leased under a dry lease.

19.4 MODEL AGREEMENT BETWEEN STATES ON THE IMPLEMENTATION OF ARTICLE 83 *BIS* OF THE CONVENTION

A Model Agreement and associated information has been outlined in Part-II, Chapter-68, Appendix-01.

CHAPTER-20

STATE RESPONSIBILITIES REGARDING COMMERCIAL AIR TRANSPORT OPERATIONS BY FOREIGN OPERATORS (THE PRINCIPLES OF SURVEILLANCE OF FOREIGN OPERATORS)

20.1 INTRODUCTION

20.1.1 CAAB regulations and procedures for the approval, surveillance and resolution of safety issues, associated with commercial air transport operations by an operator from another State (herein after referred to as a "foreign operator") should be in conformity with the Annexes to the Convention. It is of particular importance to recognize that the primary role in the safety oversight of any operator is that of the State of the Operator which issued the AOC.

20.1.2 CAAB, in accordance with Article 12 to the Convention, should insure that every aircraft flying over or manoeuvring within Bangladesh territory shall comply with the rules and regulations of CAAB relating to the flight and manoeuvre of aircraft.

20.1.3 Article 33 to the Convention provides that certificates of airworthiness and certificates of competency and licenses issued, or rendered valid, by the State in which an aircraft is registered, shall be recognized by other States, provided that the requirements under which such certificates or licenses were issued or rendered valid are equal to or above the minimum standards which may be established from time to time pursuant to the Convention.

20.1.4 This requirement for recognition is now extended by Annex 6 — *Operation of Aircraft*, Part I, *International Commercial Air Transport — Aeroplanes*; and Part III, *International Operations — Helicopters*, Section II, such that Contracting States shall recognize as valid an AOC issued by another Contracting State, provided that the requirements under which the certificate was issued are at least equal to the applicable Standards specified in Annex 6, Part I, and Part III. Pursuant to this, CAAB shall recognize as valid an AOC issued by another Contracting State, provided that the requirements under which the certificate was issued are at least equal to the applicable Standards specified in CAR '84.

20.1.5 To assist in the approval and monitoring of the activities of foreign operators, States undertake under Article 21 to the Convention to provide information on the registration and ownership of individual aircraft. It is intended that this information, together with the identification of the State of the Operator and the operator, will be available on the ICAO secure site in the form of an aircraft information system linked to the international register of AOCs.

20.2 SAFETY CLAUSE

20.2.1 States enter into air services agreements to allow their operators to provide service to another State and vice versa. These bilateral agreements are often based primarily on political and economic considerations and do not always address safety. On 13 June 2001, the ICAO Council adopted a resolution and a related model clause on aviation safety that should be included in air services agreements. The Model Clause of Aviation Safety may be found in Section-68/Appendix-02.

20.2.2 The model clause addresses safety requirements that each party to an agreement would need to maintain and helps to ensure that aircraft using airspace and airports in another State are operated and maintained in accordance with ICAO Standards. Ongoing dialogue, as well as surveillance of air operations, would be required to maintain the validity of such an agreement.

20.2.3 This safety clause provides States with a standardized process to address concerns that they may have regarding the safe operation of aircraft from other States. In addition, by drawing attention to the safety aspects of a bilateral or multilateral air service agreement, a safety clause emphasizes the responsibilities of States for providing adequate safety oversight of commercial air transport operations.

20.2.4 The model clause on aviation safety contains no reference to sanctions or penalties for non-compliance with Standards on the basis that air service agreements normally include an article addressing non-compliance issues.

20.3 THE RIGHT OF STATES TO INSPECT AIRCRAFT FROM OTHER STATES

20.3.1 States are entitled, by Article 16 to the *Convention on International Civil Aviation*, to search aircraft from other States on landing and departure and to inspect the certificates and other documents prescribed by the Convention and its Annexes, provided there is no unreasonable delay to the operation.

20.3.2 Annex 6, Part I, 4.2.2.2 and Part III, Section II, 2.2.2.2 as well as the corresponding Rules of CAR ‘84, require that States (CAAB) shall establish a programme with procedures for the surveillance of operations in their territory by a foreign operator and for taking appropriate action when necessary to preserve safety.

20.3.3 Annex 8, Part II, 3.6 as well as the corresponding Rules of CAR ’84 allow the State (CAAB) to prevent a damaged foreign aircraft from resuming its flight operation on the condition that the CAAB shall advise the State of Registry immediately. The State of Registry will consider the airworthiness of the aircraft and prohibit the aircraft from resuming flight until it is restored to an airworthy condition or permit the aircraft to resume its flight, if considered airworthy, or permit the aircraft to conduct a non-commercial air transport operation, under prescribed limiting conditions, to an aerodrome at which it will be restored to an airworthy condition.

20.3.4 Article 29 to the Convention requires an aircraft to carry:

A. its certificate of registration

B. its certificate of airworthiness

C. the appropriate licenses for each member of the flight crew

D. its journey log book (often referred to as the technical log)

E. if it is equipped with radio apparatus, the aircraft radio station license

F. if it carries passengers, a list of names and places of embarkation and destination

G. if it carries cargo, a manifest and detailed declarations of the cargo

20.3.5 Annex 7 requires that an aircraft shall carry in a prominent position near the main entrance, an identification plate inscribed with at least its nationality and registration marks.

20.3.6 Annex 6, Part I and Part III, Section II, Rule 129 (b) and Rule 170 (32) (b) further requires the carriage of:

A. certified true copy of the operator's AOC and a copy of the associated operations specifications relevant to the aircraft type with a required minimum content, which includes the location on board the aircraft where the contact details, at which operational management can be contacted without undue delay, are listed;

B. if subject to the requirements of Annex 16, Volume I, a document attesting noise certification;

C. the aircraft flight manual or other document containing performance data;

D. the operator's operations manual or those parts of it that pertain to flight operations, which shall include the aircraft operating manual, checklists for normal, abnormal and emergency procedures and the MEL;

E. current and suitable charts to cover the route of the flight;

F. an aircraft search procedure checklist;

G. and information and instructions relating to the interception of civil aircraft.

20.3.7 When the licenses of the flight crew, the AOC and associated operations specifications, the document attesting noise certification, the certificate of registration or the certificate of airworthiness are issued in a language other than English, Annex 1; Annex 6, Part I, and Part III, Section II; and Annexes 7 and 8 require that these shall include an English translation.

20.3.8 The journey log book may be replaced by a general declaration containing the information recommended to be contained in the journey log book by Annex 6, Part I, 11.4.1, and Part III, Section II, 9.4.1, which is, in common practice, referred to as a voyage report.

20.3.9 In addition to the required documentation, other specific items for inspection should be listed in a documented procedure, such as a checklist with instructions for use. The inspection should be carefully planned and may only focus on part of the listed items, depending on the time available and the number of inspectors. For recurring operations by a foreign operator, the total list of items should be covered periodically over a series of inspections to assess the operator's compliance with international standards.

20.4 STATE APPROVAL FOR A FOREIGN OPERATOR TO OPERATE WITHIN ITS TERRITORY

Note.— The term "approval" for a foreign operator in this Part does not have the same meaning as the approval process for a national operator, as defined in Annex 6, Part I, Attachment F, paragraph 3. In the context of foreign operators, the term "approval" may be understood as a validation process for the AOC of the foreign operator, leading to the recognition of the AOC and to an authorization for operations by the foreign operator. Where suitable, the term "approval" is equivalent in Part VI to the term "validation", in relation to foreign operators.

20.4.1 As a result of the above and in order to exercise its authority and to satisfy its obligations under the Convention with respect to the safety of operations within its territory, a CAAB should develop procedures for the safety oversight of foreign operators and for the authorization of such operators to operate within its territory in a manner consistent with CAR '84.

20.4.2 *Bilateral or multilateral agreements*. In the case where bilateral or multilateral agreements have been established, approvals should be granted on the basis of such an agreement. Such agreements, which are considered technical agreements that may be concluded between CAAB and another State and both the States should recognize the AOCs of each State.

20.4.3 Where no bilateral or multilateral agreement exists, an administrative review of the relevant documentation of the operator should be performed at a minimum, and should be supplemented by safety-related information, if available, from ICAO or from safety programmes by States (such as ramp checks). An approval should be granted in the absence of any significant negative findings/major deficiencies.

20.4.4 In the case of any significant negative findings/major deficiencies, the document review should be followed by discussions with the State of the Operator seeking resolution of such deficiencies prior to granting an approval. This information can be supplemented, in part, by the consideration of audits, including operator audits. The State may consider audits performed by other States, by internationally recognized audit organizations or by its CAAB.

20.4.5 In case of significant negative findings/major deficiencies, States should deny the approval of a foreign operator and should consider appropriate additional measures.

20.5 VALIDITY AND RENEWAL OF APPROVALS

20.5.1 Approvals to foreign operators should normally be subject to a limited time period, taking into consideration the validity of the operator's AOC, and should be renewed from time to time. The limited time period of the approval may extend beyond the validity of the operator's AOC, for example, if the State of the Operator only issues AOCs of a short validity period (e.g. one year) or if the AOC expires soon after the initial approval, as long as the State receives, in a timely manner, documented confirmation that the AOC of the foreign operator has been renewed and remains valid.

20.5.2 In order to maintain an approval, foreign operators should be subject to appropriate surveillance by CAAB. This should include regular ramp checks and documentation reviews. In case any significant negative finding/major deficiency is encountered during this process, CAAB should take appropriate measures, including consultations with the State of the Operator and, if acceptable to the concerned State, an audit of the foreign operator. If significant negative findings/major deficiencies remain, CAAB may withdraw the approval of a foreign operator and should consider appropriate measures as appropriate.

20.5.3 A foreign operator may re-apply for approval following a withdrawal.

20.6 SHARING OF SAFETY INFORMATION

20.6.1 Safety relevant findings regarding foreign operators should be shared between CAAB and relevant Contracting States.

CHAPTER-21

APPLICATION BY A FOREIGN AIR OPERATOR

21.1 ACTION BY THE STATE

21.1.1 CAAB should establish procedures to facilitate the application by foreign air operators for approval to operate into Bangladesh.

21.1.2 These procedures should contain the required forms, instructions on completion and the documentation to be provided.

21.1.3 CAAB should be careful in their requirements for applications to request only details relevant to the evaluation of the safety of the operations under consideration and their future surveillance.

21.1.4 CAAB should reduce the amount of required data by using the information available to them from an official source, such as the international register of AOCs to be established by ICAO.

21.2 ACTION BY THE OPERATOR

21.2.1 The operator will need to make applications to each State into or over which it is intended to operate. The operator will also need to keep its own Authority, as the authority of the State of the Operator, informed of all applications to operate into other States.

21.2.2 Applications should be made direct to the CAAB to operate in Bangladesh. It may be possible to download information and both the instructions for making an application and the necessary forms from CAAB website. In absence of availability from website procedure laid down in 21.2.3 may be applied.

21.2.3 A foreign air operator intending to operate in Bangladesh should furnish the following information:

A. Company registered name and trading name if different. Address of company: mailing address; telephone; fax; and e-mail.

B. Address of the principal place of business including: telephone; fax; and e-mail.

C. Proposed start-up date of operations: (dd/mm/yy):

D. ICAO 3-letter designator for aircraft operating agency:

E. Operational management personnel Name: Title: Telephone, fax and e-mail:

F. Type of approval requested:

1. Air operator intends to conduct commercial flights to and from aerodromes in Bangladesh

2. Air operator intends to only conduct overflights and technical stops in Bangladesh

3. Air operator's proposed types of operation:

4. Geographic areas of intended operations and proposed route structure:

5. Passengers and cargo/Cargo only

6. Scheduled operations/Charter flight operations

7. Dangerous goods

G. Provide location on board or provide separate documentation where individual aircraft nationality and registration marks are listed as part of the aircraft fleet operated under the AOC:

H. Provide the following information:

Aircraft type (make, model and series, or master series), RVSM/ETOPS/ Noise/ certification.

I. Attach copies of:

1. AOC and associated operations specifications;

2. Insurance certificate;

3. In case of wet-lease of aircraft, approval of the CAA of the State of the Operator, with identification of the operator that exercises operational control on the aircraft; and

4. Document authorizing the specific traffic rights, issued by [*Department of Commerce*] or resulting from a bilateral air transport agreement (if required by the State to which the operator is flying to).

J. Signature: Date (dd/mm/yy): Name and title:

CHAPTER-22

EVALUATION OF AN APPLICATION BY A FOREIGN OPERATOR

22.1 When evaluating an application from another State to operate within Bangladesh, CAAB will examine both the safety oversight capabilities and record of the State of the Operator and, if different, the State of Registry, as well as the operational procedures and practices of the operator. This is necessary in order CAAB, in the terms of Article 33 to the Convention, to have confidence in the validity of the certificates and licenses associated with the operator, its personnel and aircraft, in the operational capabilities of the operator and in the level of certification and oversight applied to the activities of the operator by CAAB

22.2 A State can obtain information on the safety oversight capabilities, and the level of compliance with ICAO Standards, of another State by accessing information from the ICAO Universal Safety Oversight Audit Programme (USOAP). This information is available on the ICAO website www.icao.int and accessible through the FSIX — Safety Oversight Information — Audit Results (1999–2004) or Audit Results (CSA). Further information is available by accessing audit summary reports from the USOAP audits available to States on the ICAO-NET at www.icao.int/icaonet/.

22.3 Full information on USOAP audit results, available only to States, can be found on the ICAO SOA Secure Site which is accessible, subject to an appropriate password, through the FSIX home page. The SOA Secure Site was developed to provide all Contracting States with the ability to access safety critical information collected from Contracting States that completed the SAAQ and compliance checklists in preparation for the USOAP audit and from the safety oversight USOAP audits conducted under the CSA to date. This secure site contains final SOA reports including the audit findings, recommendations, State's action plan and comments, as well as the comments of the SOA Section on a State's action plan in addition to all relevant information derived from the AFDD.

22.4 States can obtain information on an operator from another State by applying to the State of the Operator for reports of any inspections that may have been conducted, and from the international register of AOCs to be established by ICAO.

22.5 A State can also request access to reports of audits of the operator in question, conducted by independent aviation audit organizations and/or by other air operators, such as code-sharing partners. Such non-regulatory audits should be used in conjunction with other information such as a report from the ICAO Universal Safety Oversight Audit Programme (USOAP) or other inspection results to evaluate the application.

CHAPTER-23

APPROVAL OF AN APPLICATION

23.1 Following receipt of an application by a commercial air transport operator from another State to provide an air service over or into its territory, CAAB may review the application in light of CAR '84. If CAAB decides to approve the service, it will issue an appropriate written authorization to the operator. This document may include additional authorizations, conditions and limitations for elements not listed in the operator's AOC and its associated operations specifications but considered necessary for compatible operations within Bangladesh. The additional authorizations should not authorize operations beyond the operations specifications associated with the AOC, nor duplicate authorizations in those operations specifications, but should be issued in exceptional cases, for example, to authorize operations to a restricted-use aerodrome.

23.2 These authorizations, conditions and limitations, that may be included, are intended to provide more detailed information and may address unique and special requirements associated with the airspace of Bangladesh where the operations will occur. The issue of these authorizations, conditions and limitations is part of the CAAB approval of the operations. Such authorizations, conditions and limitations should not conflict with the AOC and the operations specifications issued by the Authority.

CHAPTER-24

CONTINUED SURVEILLANCE OF OPERATORS FROM OTHER STATES (FOREIGN AIR OPERATOR)

24.1 GENERAL

24.1.1 Continued safety surveillance by CAAB on operations by foreign operators within Bangladesh territory is inherent in the system of approval and is an essential part of the CAAB's responsibility to ensure that the required operational safety standards are maintained within Bangladesh.

24.1.2 The necessary safety inspections should therefore be planned by the CAAB inspectors and conducted when aircraft from other States are within the territory of Bangladesh. These inspections should be planned such that they do not cause unreasonable delay in the operation of the aircraft.

24.2 INSPECTORS

24.2.1 All CAAB inspectors who conduct inspections of foreign aircraft are to be experienced inspectors who understand the difference between ramp inspections, conducted on their own operators as part of their AOC management responsibilities, and surveillance inspections conducted on aircraft of foreign operators. These inspectors will be specifically trained and authorized to conduct such inspections and possess appropriate credentials identifying them as inspectors employed by CAAB.

24.2.2 Searches or inspections of an aircraft should be conducted by inspectorate staff already experienced in the inspection of its national operators. The foreign operator's ramp inspections should be carried out in a similar manner to the ramp inspections of national operators, with some important differences, as the standards applied would be based primarily on international standards and not on national regulations. The inspectors should have demonstrated a language proficiency in English of at least ICAO operational level (level 4) and/or as per with ANO (OPS) A-14 for flight operations inspectors and of sufficient fluency for other inspectorate staff to ensure adequate communications with the foreign operator staff during the conduct of the inspection and the resulting follow-up actions. The inspectors need to be trained and knowledgeable in the following:

A. the Convention and its Annexes 1, 6, 7 and 8

B. differences between ICAO Standards and national regulations, which may be more detailed or restrictive

C. diplomacy, including dealing with potential language difficulties and cultural differences

D. sovereignty of foreign aircraft, which means that the inspector authority is limited to document, communicate and report findings,

E. observing, recording and reporting procedures during inspections of foreign operators

F. surveillance activities, which are not linked to the certification process of the operator

24.3 PRE-INSPECTION PLANNING

24.3.1 Inspectors should prepare for an inspection by updating themselves on any recent changes to national regulations with respect to operations by operators from other States.

24.3.2 A check should be made of the authority for the operator to operate, and to operate the particular aircraft concerned, by consideration of its nationality and registration marks. In the future, data may be available from the international register of AOCs to be established by ICAO.

24.3.3 The record of the operator's history in the State should be examined, including records of past aircraft inspections and, in particular, those of the specific aircraft concerned in the inspection to be conducted, to check for any outstanding actions or recurring trends that might warrant particular attention.

24.3.4 Ramp inspections customarily involve the aircraft and its crew, line station operations, servicing and maintenance, and the ramp and gate area condition and activity. Time constraints may apply only to the inspection of the aircraft and crew. Determination should be made of the number of inspectors and the specializations to be involved, the distribution of tasks and the time to be allocated to each task.

24.3.5 While the plan will include comprehensive inspections, it will not be possible to cover all the desired elements in the time available for a particular inspection without causing unreasonable delay to the operation. As inspections on aircraft of any one operator may be conducted at different airports by different inspectors, the overall inspection plan will need to take this into account. Some elements should be covered at every inspection, others can be covered over a number of inspections. Thus comprehensive records should be kept of all inspections of aircraft of a particular operator in a central database, accessible to and updated by the inspectors concerned. From these records it is necessary to plan the content of inspections so that a complete inspection of the aircraft of any one operator is undertaken over a defined period.

24.3.6 Selection of a particular aircraft to inspect should normally be done at random, in a non-discriminatory manner. However, CAAB should apply principles of risk management to identify operations perceived to present a higher safety risk and, as a result, conduct additional inspection activities aimed at those operations that can be linked to a specific:

A. State of the Operator or State of Registry;

B. aircraft type;

C. nature of operations (scheduled, non-scheduled, cargo, air taxi, etc.);

D. foreign operator; or

E. individual aircraft.

24.4 INSPECTIONS

24.4.1 The documents to be covered at any one inspection of a foreign operator are the following:

A. certificate of registration;

B. certificate of airworthiness;

C. certificates of competency, licenses and medical assessment of the flight crew;

D. AOC and associated operations specifications relevant to the aircraft type, which are required information to be carried on board until an international register of AOCs may eventually provide an alternative way to access this information;

E. aircraft flight manual or other document containing performance data;

F. radio station license;

G. journey logbook or technical log or general declaration;

H. maintenance release;

I. fuel and oil records;

J. document attesting noise certification.

24.4.2 The overall condition of the aircraft should be covered at every inspection:

A. out-of-tolerance leakage of fuel, engine oil or hydraulic fluid;

B. landing gear and wheel well areas;

C. fuselage and pylons, as applicable;

D. wings and pylons, as applicable;

E. engines, their intakes, exhaust cones and reverser systems;

F. propellers, as applicable; and

G. empennage or tail assembly.

24.4.3 Documents that should be covered over a defined number of inspections include:

A. MEL;

B. aircraft operating manual;

C. airfield performance data;

D. checklists for normal, abnormal and emergency procedures;

E. aeronautical charts (route guide);

F. aeroplane search procedure checklist;

G. visual signals for use by intercepting and intercepted aircraft;

H. mass and balance forms and their completion;

I. weather reports and forecasts;

J. operational flight plan; and

K. NOTAMs.

24.4.4 Aircraft equipment that should be covered over a defined number of inspections:

A. adequate oxygen supply for crew and passengers;

B. passenger briefing cards and contents;

C. portable fire extinguishers — flight crew compartment and cabin;

D. life rafts and life jackets or individual flotation devices, as applicable;

E. pyrotechnical distress signaling devices, as applicable;

F. first-aid kits and medical kits, as applicable;

G. penetration resistant cockpit door, as applicable; and,

H. emergency exit signs and lighting.

24.4.5 The following additional aircraft equipment should also be covered over a defined number of inspections, as applicable, to the aircraft and the operation:

A. ACAS;

B. ELT;

C. FDR and CVR; and

D. GPWS with forward looking terrain avoidance capability.

CHAPTER-25

ACTION ON FINDINGS — RESOLUTION OF SAFETY ISSUES

25.1 GENERAL

25.1.1 After a ramp inspection of a foreign operator, the inspector's actions resulting from findings will depend on the seriousness of the safety finding. Action may also involve the State of Registry of the aircraft, if different from the State of the Operator.

25.1.2 Bangladesh being the State in which territory the inspection will take place should have detailed procedures to guide the inspector when deciding an action. CAR '84 should define the scope of possible enforcement actions affecting foreign operators. There is a clear difference in the action resulting from a finding on an aircraft of a foreign operator, for which safety is the only basis for action, and from a finding on an aircraft of a national operator, for which safety as well as compliance with certification standards and with applicable national regulations need to be considered.

25.1.3 Several levels of seriousness of findings should be detailed in the inspection procedures, with a description of related types of action. Actions to be taken after findings during a ramp inspection of a foreign operator have been outlined in Table 6-1 of ICAO Doc 8335/AN-879.

25.1.4 Table 6-2 of ICAO Doc 8335/AN-879 is based on the ramp check guidance contained in Part-II, Section-68/Appendices. It describes various findings and gives examples of levels of seriousness. Table 6-1 of ICAO Doc 8335/AN-879 specifies examples of levels of seriousness of findings and related actions and Table 6-2 of ICAO Doc 8335/AN-879 specifies examples of findings and levels of seriousness.

25.1.5 A model clause on aviation safety consists of an article specifically addressing aviation safety (outlined in Part-II, Section-68, Appendix-02) which CAAB may incorporate into bilateral or multilateral air service agreements. Such a safety clause would assists States in ensuring that foreign aircraft operating in their airspace are operated and maintained in accordance with ICAO standards.

25.1.6 The safety clause provides States with a standardized process to address safety concerns they may have regarding the safe operation of foreign aircraft and emphasizes the responsibilities of States for providing adequate safety oversight of commercial air transport operations.

25.1.7 The model clause on aviation safety contains no reference to sanctions or penalties for non-compliance with Standards, on the basis that air service agreements normally include an article addressing non-compliance issues.

25.1.8 On 13 June 2001, the ICAO Council adopted a Resolution and Model Clause on Aviation Safety.

25.2 ICAO MODEL CLAUSE ON AVIATION SAFETY

The ICAO Model Clause on Aviation Safety is in Part-II, Section-68, Appendix-02.

CHAPTER-26

FUNCTIONAL OBLIGATIONS OF OPERATIONS INSPECTORS OF CAAB

26.1 The Operations Inspectors of Civil Aviation Authority of Bangladesh, in a broad sense, shall have two-fold obligations to perform in order to facilitate the certification of an applicant for AOC as well as continuation of operations by the existing commercial air transport operators in Bangladesh. The first obligation is of advisory nature and the other one is in the form of direct participation and involvement. The advisory obligation shall be aimed towards building a strong infra-structure within CAAB for certification and continued regulatory oversight. The direct contribution, in the form of direct participation and involvement, shall comprise of providing opinions/recommendations to CAAB on any relevant issue, reviewing the air operator's documents, manuals and policies and conducting inspection, audits and surveillances to facilitate an applicant for AOC to attain the level of standard in compliance with the rules and norms of Civil Aviation and, for an existing air operators, provide regulatory control and supervision to ensure continuous maintenance of standard with which the air operators were initially certified or recertified.

26.2 To assist in building up a strong CAAB structure and to respond to the various regulatory obligations of CAAB in respect of regulatory oversight responsibilities as outlined in CAR '84 coherent with the requirements of ICAO Annex 6 and the Protocol Questions of IUSOAP on Operations thereof, Operations Inspectors shall suggest, as applicable, and assist Chairman CAAB through the Director Flight Safety & Regulations in executing the following:

26.2.1 To facilitate the certification of commercial air transport operations, CAAB Inspectors shall assist the authority in establishing an organizational structure for the Directorate of Flight Safety & Regulations. The organizational structure shall be current and duly approved by a competent authority and shall include lines of responsibility and names and acronyms of the established authorities and each section dealing with aircraft operations certification and surveillance activities having outlined. In case of any deficiency, the FOIs shall advise the Chairman accordingly through proper channel;

26.2.2 CAAB Inspectors shall assist the authority in establishing and documenting procedures for coordination on certification, licensing and approval activities among flight operations, airworthiness of aircraft, finance and/or personnel licensing. A current approved organizational structure shall determine where the responsibility for the issuance of certificates is handled and that a process or procedure of certification has been mentioned and made to public and in practice;

26.2.3 The inspectors shall advise CAAB to have sufficient human resources to carry out its functions and mandate in that CAAB shall have the appropriate mechanism established for determining staffing needs, ability to attract new inspectors as well as existing vacancies and level of turnover in past years and ability to carry out all safety oversight related tasks including reviewing and revising regulations, training of technical staffs, development of guidance materials, issuance of approvals, conducting surveillances and resolving identified safety concerns;

26.2.4 The inspectors shall assist CAAB to ensure that CAAB shall clearly define all the functions and responsibilities of the Directorate of Flight Safety & Regulations, in that the document detailing functions and responsibilities for inclusion of the following tasks shall be clearly defined:

A. Certification process of air operators;

B. Issuance of the air operator certificate (AOC) and Operations Specifications (OPS SPECs);

C. Issuance of specific authorizations and limitations (ETOPS, PBN, RNP, RVSM, AWOP, MNPS, RNAV, transport of dangerous goods);

D. Development and/or revision of specific operating regulations;

E. Certification of general aviation operations; and,

F. Supervision of commercial air operators and legal action/information regarding deficiencies.

26.2.5 That, the job descriptions shall be developed for technical staff and key management personnel of CAAB associated with the Directorate of Flight Safety & Regulations;

26.2.6 That, minimum flight and work experience for operations inspectors shall have been developed in the CAAB with a view to ensuring that FOIs shall have sufficient number of years in air transport operations, shall have at least as qualified as the personnel to be inspected or supervised and that the experience of the FOIs shall be compatible with the activities they are required to certificate or inspect;

26.2.7 That, the operations inspectors shall be issued with credentials to facilitate access to facilities, aircraft and certification and licensing documentation for the purpose of inspections and enforcement and that the credentials should contain the reference to empowering legislation, method established to control currency of credentials and inspector photo etc. In this regard and as well as in order to ensure that sufficient legal authority has been delegated to operations inspectors to allow them to carry out their functions, FOIs shall receive guidance from CAR ’84 and the Procedure Documents as applicable;

26.2.8 That, when CAAB delegates its duties to other divisions, private agencies or individuals, the inspectors shall assist CAAB in ensuring that the requirements for competency shall be established for delegated entities and in that minimum qualifications and experience required for individuals receiving delegation shall be ensured, the delegated tasks shall be clearly defined and the evidence of effective implementation as outlined in this manual shall be maintained;

26.2.9 That, the CAAB inspectors shall review procedures for the delegation and evidence of effective implementation of the guidance material such as the DCP portion of the CPD 6-1 dcument established by CAAB in order to ensure that CAAB has developed a procedure by which it delegates any of its inspection or supervision responsibilities, such as competency checks, route checks, instrument ratings checks, conversion checks and upgrading checks, to designated inspectors and/or check airmen of an AOC holder;

26.2.10 That, the CAAB inspectors shall review regulations and procedures in order to verify procedures to ensure that CAAB has established procedures for renewal of the mandates for delegated check airmen as well as the duration of their designation;

26.2.11 That, the CAAB inspectors shall review mechanism for oversight and confirm adherence that CAAB shall conduct oversight of tasks delegated to other internal divisions, other bodies, regional organizations, private agencies or individuals as applicable;

26.2.12 That, the CAAB inspectors shall identify any deficiencies or concerns in the tasks delegated to other CAAB divisions, other bodies, regional organizations, private agencies or individuals and advice CAAB with a view to establishing a process for their resolution;

26.2.13 That, the CAAB inspectors shall develop a formal training programme detailing what type of training should be provided to operations inspectors. The contents of the training programme shall be reviewed in order to confirm the inclusion of initial, OJT, recurrent and specialized training with time periods to be provided, as applicable. The specialized training shall include the training programme for at least the Ground operations inspectors, Flight operations inspectors, Cabin safety inspectors, Dangerous goods inspectors and Security Inspectors;

26.2.14 That, the CAAB inspectors shall develop a periodic training plan detailing and prioritizing what type of training will be provided during the established period;

26.2.15 That, the CAAB inspectors shall ensure that training programme is appropriately implemented in order to verify that the type and frequency of training provided (initial, recurrent and specialized) is sufficient to acquire/maintain the required level of knowledge, skills, competence and qualifications in accordance with the duties and responsibilities assigned to each technical staff;

26.2.16 That, the CAAB shall have the requirement for the provision of OJT for the operations inspectors, the OJT shall be completed prior to being assigned the tasks and responsibilities and that the OJT is provided by an experienced, senior inspector;

26.2.17 That, the CAAB shall have a system for the maintenance of training records for its technical staff and operations inspectors The instruction and/or requirement for

the establishment and maintenance of training records shall be clearly outlined in order to ensure that the training records are systematically retained;

26.2.18 That, CAAB shall have a technical library available for operations inspectors or another method to ensure receipt, control and distribution of the necessary technical documentation to ensure document control system and method to determine currency of documents either through manual process or by electronic means;

26.2.19 That, CAAB shall have the relevant ICAO documents and other technical publications such as the CAAB Ordinances, CAR '84, Orders and Instructions, Current copies of Annexes 1, 6, 13, 17, 18 & the TI and copies of ICAO guidance material, i.e. Doc 8335, Doc 9376, etc be readily available and quickly accessible to the technical and administrative staff of Directorate of Flight Safety & Regulations. OPS 4.073;

26.2.20 That, the CAAB inspectors shall be provided with comprehensive procedures and checklists to assist them in carrying out their functions in a standardized and effective manner. These procedures and checklists shall be meant to address the following:

A. Operations organization

B. Operations inspectors duties, credentials and authority

C. Certification process and related inspections checklists

D. Guidelines on assessment of application forms

E. Guidelines on renewal, suspension and revocation of AOC and various authorizations

F. Surveillance policies and programme

G. Quality assurance

H. Guidelines on follow-up on discrepancies and enforcement actions

I. Safety management programme

J. Guidelines on resolution of safety issues.

26.2.21 That, CAAB shall ensure that the operations inspectors have sufficient office equipment available as means of communication and office equipment. These are: Telephone, Fax, Printer, Computers, Internet/Intranet etc.;

26.2.22 That, CAAB shall ensure that the operations inspectors be provided with transportation to perform their duties.;

26.2.23 That, CAAB shall ensure that sufficient information (booklet, pamphlet, circular, web page, etc.) shall be provided to a prospective air operator related to the regulations for obtaining an AOC and corresponding operations specifications. There shall be applicable forms available, pamphlets, web page, hard copies, etc., and these shall be available for:

A. Amendment to an AOC

B. Amendment to operations specifications

C. Authorizations or limitations

26.2.24 That, there shall be a formal application form for obtaining an AOC, operations specifications and/or special authorizations which a prospective air operator must complete and submit. These applicable forms should contain at least the following information:

A. Main base of operations;

B. Organizational structure;

C. Type of operation (passenger, cargo, etc.);

D. Type of aircraft;

E. Arrangements for crew and ground personnel training;

F. Proposed routes and areas of operations, destination and alternate aerodromes

G. Maintenance arrangements; and,

H. Financial data and a business plan.

26.2.25 To meet the obligation in the capacity of a direct contributor, a flight operations inspector shall assist CAAB by providing opinions/recommendations on any relevant issue, reviewing the air operator's documents, manuals and policies and conducting inspection, audits and surveillances. To this end, a flight operations inspector shall perform and, as part of a preliminary assessment of the applicant's technical fitness, shall ensure to conduct a general review of the procedures, practices and methods carried out (operations manual, air operator maintenance control manual, training manuals, etc.) by the prospective operators. The FOIs shall use this handbook in conjunction with any relevant portion of CAR '84, ANOs, Directives, Circulars etc. as Operations inspectors guidance material since

it contains certification process and procedures, instructions on the method of keeping records, procedures on inspections and surveillances together with all necessary checklists as applicable;

26.2.26 That, the operations inspectors of CAAB shall ensure that the organizational structure of an applicant for an AOC is reviewed to ensure that duties, responsibilities and authorities are clearly defined and that clear delineation of functional tasks and lines of reporting have been established and documented. This document shall contain Operations inspectors guidance material, manuals, checklists, etc. on the certification process, safety management, quality assurance management and emergency management etc.;

26.2.27 As part of a preliminary assessment of the applicant's technical fitness and during the entire certification process for processing the AOC, the inspectors of CAAB shall ensure coordination between the areas of operations, airworthiness and other areas concerned in the process Operations inspectors manual, guidance materials, checklists, etc.

26.2.28 In case CAAB grants exemptions, *also deviations and prolonged extensions,* from the regulations for an AOC to air operators, the CAAB inspectors shall highlight about the exemptions and that, if approved by Chairman, these exemptions may be issued using formal procedures that considers and assesses the impact to safety. In this case, notification to foreign states, as applicable, shall be made. Normally, CAAB shall not grant any exemption to a prospective air operator for reasons of safety;

26.2.29 That, CAAB shall ensure to establish a documented process for the certification of air operators that includes thorough technical evaluations that lead to approval/acceptance of required procedures, documents and operations. The instructions of this manual and the associated checklists shall be read/used together with the ANOs, CAAB Procedure documents and any other guidance material developed by CAAB shall be used by the inspectors for the certification process;

26.2.30 That, the operations inspectors shall ensure that an applicant for an AOC shall establish and maintains a flight safety documents system. This shall be ascertained during the certification process and prior to the issue of AOC;

26.2.31 That, the operations inspectors shall ensure that an applicant for an AOC will maintain the validity of its manuals at all times. During the certification process, prior to the issue of AOC. while checking the operators' manuals, the inspectors shall ensure that manuals shall contain the guidelines for keeping the manuals current and that through inspections/audits the inspectors shall ensure that the operators' manuals and documents are kept current at all times;

26.2.32 That, the operations inspectors shall review, accept or approve, as applicable, the contents of the applicant's operations manual consistent with ANOs and follow the regulations and procedures for approval or acceptance of an air operator operations guidance material to ensure that it covers, in addition to all the requirements as required by the CAR '84 and the related ANOs, at least the following, as applicable:

A. A statement that the operations manual complies with applicable laws and AOC conditions and the corresponding operations specifications;

B. A list and a summarized description of the different parts of the manual, their contents, applicability and utilization;

C. A statement that the operations manual contains operating instructions which are required to be complied with by all personnel;

D. A registration sheet for the amendments and revisions with the dates of registration and validity;

E. A list of effective pages;

F. Amendment and revision changes indicated by marks or signals in text, graphics and diagrams.

26.2.33 That, the inspectors shall ensure approval of the training manual, minimum equipment lists (MELs) and configuration deviation lists (CDLs) as part of the air operator's operations manual. During review and prior to the approval of the MEL/CDL, the inspectors shall coordinate between operations and airworthiness aspects;

26.2.34 That, the inspectors shall ensure approval of the flight manual. The flight manual shall be updated by implementing changes made;

26.2.35 That, the inspectors shall ensure that in compliance with the requirements of CAR '84, an air operator establishes procedures to maintain up-to-date and sufficient documentation concerning flight data recorder (FDR) parameter allocation, conversion equations, periodic calibration and other serviceability/maintenance information and ensures their availability to accident investigation authorities;

26.2.36 That, the inspectors shall ensure that in compliance with the requirements of CAR '84, an air operator establishes procedures to maintain up-to-date and sufficient documentation concerning FDR parameter allocation, conversion equations, periodic calibration and other serviceability/maintenance Review surveillance programme Review operations inspectors procedures;

26.2.37 That, the inspectors shall ensure that in compliance with the requirements of CAR '84, an applicant for an AOC and certified air operators establish procedures for

the inclusion in their operations manual instructions for the preservation of flight recorder records and, if necessary, associated flight recorders to the extent possible, in the event that the aeroplane becomes involved in an accident or incident;

26.2.38 That, the inspectors shall ensure that in compliance with the requirements of CAR ’84, an applicant for an AOC and certified air operators include in their operations manuals procedures for the retention of flight recorder records and flight recorders in safe custody pending their disposition as determined in accordance with Annex 13;

26.2.39 That, the inspectors shall ensure that an applicant for an AOC includes in its operations manual procedures to ensure that the operations manual is organized and structured in compliance with the requirements of Annex 6, Part I, Appendix 2, CAR ’84 and ANOs to include the following:

A. General

B. Aircraft operating information

C. Routes and aerodromes

D. Training

26.2.40 That, the inspectors shall ensure that, in compliance with the requirements of Annex 6, Part I, Appendix 2, CAR ’84 and ANO (OPS) B-1, an applicant for an AOC includes in its operations manual procedures to insert in its operations manual the instructions outlining the responsibilities of operations personnel pertaining to the conduct of flight operations as part of its general contents;

26.2.41 That, the inspectors shall ensure that, in compliance with the requirements of Annex 6, Part I, Appendix 2, CAR ’84 and ANOs, an applicant for an AOC includes in its operations manual procedures to insert in its operations manual the instructions outlining the limiting flight time, flight duty periods and rest periods for all crew members;

26.2.42 That, the inspectors shall ensure that, in compliance with the requirements of Annex 6, Part I, Appendix 2, CAR ’84 and ANOs, an applicant for an AOC includes in its operations manual standard operating procedures (SOP) for each phase of flight;

26.2.43 That, the inspectors shall ensure that, in compliance with the requirements of Annex 6, Part I, Appendix 2, CAR ’84 and ANOs, an applicant for an AOC includes in its operations manual procedures to insert in its operations manual instructions on the clarification and acceptance of air traffic control (ATC) clearances, particularly where terrain clearance is involved;

26.2.44 That, the CAAB inspectors shall ensure that, in compliance with the requirements of Annex 6, Part I, Appendix 2, CAR '84 and ANO (OPS) B-1, an applicant for an AOC includes in its operations manual procedures to insert in its operations manual instructions and training requirements for the avoidance of controlled flight into terrain (CFIT) and policy for the use of the ground proximity warning system (GPWS);

26.2.45 That, the inspectors shall ensure that, in compliance with the requirements of Annex 6, Part I, Appendix 2, CAR '84 and ANO (OPS) B-1, an applicant for an AOC includes in its operations manual procedures to insert in its operations manual instructions, procedures and training requirements for the avoidance of collisions and the use of the airborne collision avoidance system (ACAS;

26.2.46 That, the inspectors shall ensure that, in compliance with the requirements of Annex 6, Part I, Appendix 2, CAR '84 and ANO (OPS) B-1, an air operator includes in its operations manual a safety management system wherein contains a statement of safety policy and responsibility of personnel of the operator;

26.2.47 That, the inspectors shall ensure that, in compliance with the requirements of Annex 6, Part I, Appendix 2, CAR '84 and ANO (OPS) B-1, an air operator includes in its operations manual a system to provide aircraft operating information for its operations staff and flight crew, including mandatory revisions and for inclusion of the following:

A. Organization, update and revision system;

B. Certification limitations and operating limitations;

C. The normal, abnormal and emergency procedures to be used by the flight crew, related checklists, crew coordination and assignment;

D. Instructions for aircraft loading;

E. Data for mass and balance calculations;

F. Aircraft systems, associated controls and instructions for their use;

G. Emergency evacuation procedures, including type specific procedures, crew coordination and assignment.

26.2.48 That, the inspectors shall ensure that, in compliance with the requirements of Annex 6, Part I, Appendix 2, CAR '84 and ANO (OPS) B-1, an air operator includes in its operations manual certification limitations and operating limitations;

26.2.49 That, the inspectors shall ensure that, the aircraft operating information outlined in the operations manual of an operator contains an approved MEL/CDL for the aeroplane types operated and specific operations authorized. To this effect, the

inspectors shall verify the regulations and shall ensure that the process to issue the initial approval and approval of the amendments including applicable specific operations authorized (ETOPS, all weather operations, RVSM, RNP, etc.) have been accurately followed;

26.2.50 That, the inspectors shall ensure that, in compliance with the requirements of Annex 6, Part I, Appendix 2, CAR '84 and ANO (OPS) B-1, during the operations inspections, an air operator establishes a route guide to be used by its flight crew for each flight. The route guide should contain information relating to communication facilities, navigation aids, aerodromes, instrument approaches, instrument arrivals and instrument departures, as applicable, for the operation, and such other information as the air operator may deem necessary for the proper conduct of flight operations;

26.2.51 That, the inspectors shall ensure that, in compliance with the requirements of Annex 6, Part I, Appendix 2, CAR '84, ANO (OPS) H-2 and ANO (OPS) B-1, an air operator establishes and maintains training programmes, as part of the flight safety documents system, which includes for initial, recurrent, transition (conversion), re-qualification, upgrade, recency of experience, familiarization, differences, safety management and other specialized training, as applicable;

26.2.52 That, the inspectors shall ensure that, in compliance with the requirements of Annex 6, Part I, Appendix 2, CAR '84 and ANO (OPS) B-1, an air operator establishes in its training programmes the details of the initial and recurrent flight crew training. The inspectors shall also review air operator training programmes to confirm inclusion of the required types of training. While checking or recommending for the approval of air operator flight crew training programmes, the inspectors shall adhere to the following procedures:

A. The training program incorporates in the syllabus all trainings to be imparted in respect of a cockpit crew in regard to be familiar with the aircraft on all systems, limitations, performance, handling techniques and procedures for all phases of flights that include normal abnormal emergency procedures etc. and all around safety of aircraft and personnel that fall under the duties of a cockpit crew;

B. The training program shall include class-room, computer-based, simulator, actual aircraft, demonstration, LOFTs/route-flights that include RVSM MNPS R-Nav RNP ETOPs special operation, instrument and any other required for competency to operate as cockpit crew as applicable;

C. The training program shall be commensurate with the type FCOM and any related type manual as per the manufacture's specification;

D. The training program shall be in conjunction with the company standard operating procedure approved by the authority;

E. The training program shall be adequate and shall include practical demonstration on the use of safety items and procedures to be conducted by qualified and approved instructors;

F. The training program shall have a system to evaluate cockpit crew competency by the air operator and, when required, by the regulator; and,

G. All training programs shall have a system for recurrent training to ensure the company cockpit crew maintain continuous competency on handling proficiency and safety matters.

26.2.53 That, the inspectors shall ensure that an air operator establishes, as a part of flight safety document system, in its cabin crew training programmes the details of the cabin crew safety duties and functions pursuant to CAR '84 and the associated ANOs and that the air operator cabin crew training programmes includes the required types of training. While checking or recommending for the approval of air operator cabin crew training programmes, the inspectors shall adhere to the following procedures:

A. The training program incorporates in the syllabus all trainings to be imparted in respect of all around safety of aircraft and personnel that fall under the duties of a cabin crew;

B. The training program is commensurate with the type FCOM and any related type manual as per the manufacture's specification;

C. The training program shall be in conjunction with the company standard operating procedure approved by the authority;

D. The training program shall be adequate and shall include practical demonstration on the use of safety items and procedures to be conducted by qualified and approved instructors;

E. The training program shall have a system to evaluate cabin crew competency by the air operator and, when required, by the regulator; and,

F. All training programs shall have a system for recurrent training to ensure the company cabin crew maintain continuous competency on safety matters.

26.2.54 That, the inspectors shall ensure that, in compliance with the requirements of CAR '84 and the associated ANOs, an air operator establishes and maintains training programmes, as part of the flight safety documents system the details of the flight operations officer/flight dispatcher training. To this effect the CAAB inspectors shall undertake type training to evaluate and recommend for approval of the air operator flight operations officer/flight dispatcher training program. While checking or recommending for the approval of air operator flight operations

officer/flight dispatcher training programme, the inspectors shall adhere to the following procedures:

A. The training program incorporates in the syllabus all trainings to be imparted in respect of a flight operations officer/flight dispatcher in regard to the instructions outlined in Rule 127 of CAR '84;

B. The training program shall include class-room and practical exposure as applicable including the OJT;

C. The training program shall be commensurate with the type FCOM and any related type manual as per the manufacture's specification;

D. The training program shall be in conjunction with the company standard operating procedure approved by the authority;

E. The training program shall have a system to evaluate flight operations officer/flight dispatcher competency by the air operator and, when required, by the regulator; and,

f. All training programs shall have a system for recurrent training to ensure the flight operations officer/flight dispatcher maintain continuous competency.

26.2.55 That, the inspectors shall ensure on behalf of CAAB that, the contents of the operations manual shall be as part of the flight safety documents system and that the contents of the operations manual shall be reviewed and approved by CAAB as applicable and the instructions are duly implemented by the air operator before granting the AOC or any specific approval to a prospective air operator. The inspectors shall also assist CAAB in ensuring that the certification process as outlined in ANO (AT) A-2 conforms to this requirement prior to issue AOC or other certification to an air operator;

26.2.56 That, the inspectors shall ensure on behalf of CAAB that the air operator nominates a post holder responsible for the development and establishment of the air operator's safety management system and clearly defines his/her functions and responsibilities and that these shall be documented in the flight safety documents system of the operator;

26.2.57 That, the inspectors shall ensure on behalf of CAAB that the air operator establishes and maintains a flight data analysis programme as part of its safety management system While ensuring above the inspectors shall ensure that the operator declares practices its flight data analysis programme as non-punitive and shall ensure that the system contains safeguards to protect the source(s) of the data;

26.2.58 That, the inspectors shall ensure on behalf of CAAB that pursuant to the requirement of CAR '84 and the associated ANOs, the air operator provides ground and flight training facilities, simulators and/or cockpit procedure training

devices (fixed-based simulator [FBS], computer-based training [CBT], etc.) and syllabus materials to meet the requirement of the following:

A. Air operator training programme

B. List of approved training facilities

C. Training programme and records

26.2.59 That, the inspectors shall ensure that all applicable regulations are addressed in flight crew training programmes and that these are reviewed by the authority before granting the AOC or any specific approval of the air operator training programme. The operations inspectors approval procedures shall ensure that the following are addressed by an applicant of AOC:

A. Training policies and directives;

B. Administrative support of air operator;

C. List of designated instructors and line check airmen Comprehensive syllabi, including lesson plans for approved training;

D. Procedures for the conduct of examinations and manoeuvre tolerances;

E. Procedures to require that flight crew members are properly trained and examined on abnormal and emergency conditions; and,

F. Procedures for remedial training and subsequent examination of flight crew unable to achieve or maintain required standards

26.2.60 That, the inspectors shall ensure the air operator establishes for its pilots an ACAS training programme on ACAS-equipped aircraft as required by CAR ’84;

26.2.61 If a separate training organization is approved to provide air operators’ crew training, the inspectors shall ensure that the training provided and flight documentation used correctly reflect the air operators’ flight safety documents system and that the separate training organization maintains training programmes for implementation and both the operator and CAAB maintains a list of approved training organizations;

26.2.62 That, the inspectors shall ensure that an air operator establishes a flight dispatch/flight operations officers training programme prior to the issuance of an AOC. This should be coherent with ANO (AT) A-2 and the relevant requirement of CAR ’84. While checking or recommending for the approval of air operator flight operations officer/flight dispatcher training programme, the inspectors shall ensure that the air operator shall include the following:

A. Civil air law and regulations;

B. Aviation indoctrination;

C. Use of operations manual;

D. Aircraft performance;

E. Navigation;

F. Flight planning and monitoring;

G. Rules of the air, communication and air traffic management;

H. Meteorology;

I. Mass and balance control;

J. Use of MEL/CDL;

K. Transport of dangerous goods by air;

L. Security procedures;

M. Emergency response plan;

N. Flight observation; and,

O. Recurrent training programme.

26.2.63 That, the inspectors shall ensure that the air operator maintains, on a recurrent basis, the knowledge, skills and qualifications of flight dispatch/flight operations officers ground instructors;

26.2.64 That, the inspectors shall ensure that an air operator establishes an air operator cabin crew training programme prior to the issuance of an AOC cabin crew training programme to ensure that it includes theoretical and practical training addressing the following:

A. Basic indoctrination in the different functions, duties and responsibilities of cabin crew members;

B. Introduction to aircraft systems and limitations;

C. Aircraft emergency evacuation, life-safety equipment and related information to passengers;

D. Cabin crew members assignment, coordination and two-way communication;

E. Knowledge and skills related to the transport of dangerous goods;
F. Security procedures; and,
G. Recurrent training programme including an examination to determine competence.

26.2.65 That, the inspectors shall advise CAAB to promulgate regulations specifying the minimum requirements for air operators to select and appoint cabin crew instructors and inspectors;

26.2.66 That, the inspectors shall advise CAAB to promulgate regulations for air operator cabin crew instructors and inspectors to maintain their knowledge, skills and qualifications;

26.2.67 That, the inspectors shall verify to ensure to establish a surveillance programme for CAAB to ensure that the appointed instructors and examiners of an air operator for cabin crew maintain their competency with respect to delegated tasks;

26.2.68 That, the inspectors shall verify to ensure that an air operator formulates rules to limit flight time and flight duty periods and for the provision of rest periods for all its crew members and that these rules are in accordance with the CAR '84 and the associated ANOs thereof. Inspectors shall also ensure the above during certification process and approval procedures of an air operator;

26.2.69 That, the inspectors shall verify to ensure that an air operator maintains current records of flight time, flight duty periods and rest periods of all its crew members at all times. Inspectors shall ensure this by conducting periodic inspections and surveillance on the air operators;

26.2.70 That, the inspectors shall verify to ensure that an air operator establishes an organization and management system for the operational control of all flights in accordance with specific operating regulations applicable to aircraft operations. Inspectors shall ensure this during the certification process by confirming that the air operators' manuals contain about the establishment of the system including the definition of responsibilities and authority delegated to their officials;

26.2.71 That, the inspectors shall verify to ensure that an air operator establishes in its operations manual responsibilities for operational control and develops related policies, processes, standards and procedures. All these shall deflect in an air operator operations manual wherein the functions and responsibilities of flight crew and flight operations officers/flight dispatchers for the initiation, continuation, diversion and termination of flights are laid down and are in practice by the air operator;

26.2.72 That, the inspectors shall verify to ensure that an air operator establishes a policy and procedures for flight crew to record and report on routine meteorological observation during en-route and climb-out phases of the flight and special and other non-routine observations during any phase of the flight. The inspectors shall ensure that the instruction shall be laid down in the operations manual of the operator and shall be implemented by the operator as outlined in the operations manual;

26.2.73 That, the inspectors shall verify to ensure that an air operator establishes a policy and procedures for flight crew to record and report on volcanic activity;

26.2.74 That, the inspectors shall verify to ensure that an air operator makes available to flight crew and operational personnel, at any aerodrome authorized in its AOC and corresponding operations specifications, pre-flight aeronautical information essential for the safety, regularity and efficiency of air navigation;

26.2.75 That, the inspectors shall verify to ensure that an air operator establishes procedures for the preparation and dissemination of NOTAM to flight crew and operations personnel. Inspectors are to ensure during certification process that this system has been adopted by an air operator and that air operator develops appropriate guidance in the air operator operations manual (route manual) to this effect;

26.2.76 That, the inspectors shall verify to ensure that an air operator establishes procedures for the preparation and dissemination of the information contained in the Aeronautical Information Publication (AIP) to flight crew and operations personnel. Inspectors are to ensure during certification process that this system has been adopted by an air operator and that air operator develops appropriate guidance in the air operator operations manual (route manual) to this effect;

26.2.77 That, the inspectors shall verify to ensure that an air operator establishes procedures for the preparation and dissemination of the information contained in the Aeronautical Information Regulation and Control (AIRAC) to flight crew and operations personnel. Inspectors are to ensure during certification process that this system has been adopted by an air operator and that air operator develops appropriate guidance in the air operator operations manual (route manual) to this effect;

26.2.78 That, the inspectors shall verify to ensure that an air operator establishes procedures for the preparation and dissemination of the information contained in the Aeronautical Information Circular (AIC) to flight crew and operations personnel. Inspectors are to ensure during certification process that this system has been adopted by an air operator and that air operator develops appropriate guidance in the air operator operations manual (route manual) to this effect;

26.2.79 That, the inspectors shall assist CAAB in approving the method of determination of operating minima for aeroplane operators as well as for the helicopter operators of Bangladesh;

26.2.80 That, the inspectors shall verify to ensure that an air operator establishes standard operating procedures (SOPs) to provide guidance to flight operational personnel;

26.2.81 That, the inspectors shall verify to ensure that an air operator establishes checklists as an integral part of its SOPs and instructs its flight crew on how to use them. Inspectors shall ensure that such instructions are provided in SOPs on the use of checklists and/or training provided to flight and cabin crew;

26.2.82 That, the inspectors shall verify to ensure that an air operator establishes crew briefings as an integral part of SOPs;

26.2.83 That, the inspectors shall verify to ensure that an air operator establishes an organizational structure that includes the responsibilities and authority for the management of all ground handling functions prior to the issuance of an AOC. Inspectors are also to ensure to verify that the lines of responsibilities are clearly defined for ground handling functions and associated with the following, when applicable:

A. Ramp operations;

B. Passenger services;

C. Baggage services;

D. Cabin services;

E. Weight and balance control;

F. Ground support equipment; and,

G. Fuel services.

26.2.84 That, the inspectors shall verify to ensure that an air operator develops aircraft ground handling training requirements, subcontracting policies, handling processes, procedures and practices for all ground handling operations if applicable;

26.2.85 That, the inspectors shall verify to ensure that an air operator ground handling responsibility is permanently maintained, when all or part of the functions and tasks related to ground handling services have been contracted to a service provider;

26.2.86 That, the inspectors shall assist CAAB in promulgating legislation on the transport of dangerous goods by air in that Bangladesh shall incorporated the provisions of ICAO Annex 18 and the TI either directly or by reference into CAR ‘84;

26.2.87 That, the inspectors shall assist CAAB in establishing and implementing procedure to amend its regulations subsequent to an ICAO Annex 18 amendment and for identifying and notifying differences, if any, to ICAO Amendments. Inspectors are also to assist CAAB in ensuring that CAR ’84 is effected in a timely manner whenever an ICAO Annex 18 amendment or TI amendment is received;

26.2.88 That, the inspectors shall assist CAAB in designating and specifying to ICAO the appropriate authority within CAAB responsible for the transport of dangerous goods by air. This aspect is required even if CAAB does not issue approvals for the transport of dangerous goods;

26.2.89 That, the inspectors shall assist CAAB in persuading that the authority shall have a department or one or more officials nominated to administer the dangerous goods programme and to respond to queries from air operators and shippers. Clear assignment of responsibilities to this effect shall be documented. This

aspect is required even if CAAB does not issue approvals for the transport of dangerous goods;

26.2.90 That, the inspectors shall assist CAAB in persuading that the authority shall have a department or a designated official within CAAB and who shall be responsible for dangerous goods shall have with sufficient knowledge and authority for granting exemptions to the transport of dangerous goods by air, in accordance with the TI and corresponding Supplement. To this effect, the inspectors shall advise CAAB to have an adequate organizational structure with the experience and qualifications of staff assigned to dangerous goods clearly defined;

26.2.91 That, the inspectors shall assist CAAB in persuading that the organization/individual of CAAB responsible for dangerous goods establishes a dangerous goods training programme for the relevant technical staff in the CAAB;

26.2.92 That, the inspectors shall assist CAAB in facilitating the organization/individual of CAAB responsible for dangerous goods develop and implement guidance for its dangerous goods inspectors;

26.2.93 That, the inspectors shall assist CAAB in persuading CAAB grant specific authorization for the transport of dangerous goods by air;

26.2.94 That, the inspectors shall assist CAAB in ensuring that the organization/individual of CAAB responsible for the transport of dangerous goods by air shall ensure that authorized air operators develop and use an acceptance checklist to prevent acceptance of dangerous goods for transport by air unless they are accompanied by a completed dangerous goods transport document and their marking, package, over-pack or freight container are inspected in accordance with the acceptance procedure contained in the TI. To this effect CAAB shall set up an inspector procedures for issuance of authorization to transport dangerous goods;

26.2.95 That, the inspectors shall assist CAAB in ensuring that the organization/individual of CAAB responsible for the transport of dangerous goods by air shall ensure that authorized air operators will not load dangerous goods into the aircraft unless the appropriate loading, segregation and inspection for damage or leakage procedures are followed. Inspectors shall also ensure that the authorization process in coherent to CAR ’84 and that appropriate mechanism and checklists are used by authorized air operators as applicable;

26.2.96 That, the inspectors shall assist CAAB in ensuring that the organization/individual of CAAB responsible for the transport of dangerous goods by air shall ensure that the air operator of an aircraft in which dangerous goods are carried provides the pilot-in-command with written information (NOTOC), as specified in the TI. Inspectors shall also ensure that the authorization process in coherent to CAR ’84 and that appropriate mechanism and checklists are used by authorized air operators as applicable;

26.2.97 That, the inspectors shall assist CAAB in ensuring that the organization/individual of CAAB responsible for the transport of dangerous goods by air shall ensure that

the air operator has procedures for retaining the NOTOC on the ground and readily accessible to the aerodromes of last departure and next scheduled arrival for each of its flights on which dangerous goods are carried;

26.2.98 That, the inspectors shall assist CAAB in ensuring that the organization/individual of CAAB responsible for the transport of dangerous goods by air shall ensure that the air operator authorized to transport dangerous goods shall establish in-flight procedures for emergency response for aircraft incidents involving dangerous goods;

26.2.99 That, the inspectors shall assist CAAB in ensuring that the organization/individual of CAAB responsible for the transport of dangerous goods by air establishes inspection, surveillance and enforcement procedures to confirm compliance with dangerous goods regulations. The enforcement procedure shall be in accordance with Rule 333 of CAR ’84 and the Enforcement Procedure manual of CAAB;

26.2.100 Pursuant to the instructions of CAR ’84, the Directorate of FSR and/or the individual inspector of CAAB responsible for the transport of dangerous goods by air shall carry out regular and random inspections to confirm compliance with Annex 18, the TI and the associated CAR ’84. The directorate will prepare dangerous goods surveillance policy and programmes, execute inspections and keep records;

26.2.101 Pursuant to the instructions of CAR ’84, the Directorate of FSR and/or the individual inspector of CAAB responsible for the transport of dangerous goods by air ensure that initial and recurrent dangerous goods training programmes have been established and implemented by the organizations or agencies which are involved in the transport of dangerous goods by air. Inspectors shall ensure that pursuant to the policy as outlined in CAR ’84, specific training programmes shall be established and records shall be maintained by:

A. Shippers of dangerous goods, including packers and shippers' agents;

B. Air operators;

C. Agencies which perform, on behalf of the air operator, the act of accepting, handling, loading, unloading, transferring or other processing of cargo;

D. Agencies located at an aerodrome which perform, on behalf of the air operator, the act of processing passengers Agencies not located at an aerodrome which perform, on behalf of the air operator, the act of checking in passengers;

E. Agencies other than air operators involved in processing cargo; and,

F. Agencies engaged in the security screening of passengers and their baggage.

26.2.102 Inspectors of FSR shall review dangerous goods training programmes of air operators and provide approval of CAAB. Inspectors shall also develop

procedures for approval of dangerous goods training programmes. In this regard, Operations Inspectors of CAAB may refer to the DG Handbook developed by CAAB and the DG Inspection guide outlined in Part-II, Chapter-68, Appendix-36 of this document. Inspectors shall ensure that the approval for the transport of dangerous goods by air is reflected on the operations specifications of the air operator;

26.2.103 Pursuant to the instructions of CAR '84, the Directorate of FSR and/or the individual inspector of CAAB responsible for the transport of dangerous goods by air shall ensure that air operators who choose not to transport dangerous goods develop and implement training programmes for ground and flight personnel to enable them to recognize and refuse dangerous goods;

26.2.104 Pursuant to the instructions of CAR '84, the Directorate of FSR and/or the individual inspector of CAAB responsible for the transport of dangerous goods by air shall ensure that dangerous goods procedures and training programmes are incorporated in either the operations manual or a separate document as part of the flight safety documents system;

26.2.105 Pursuant to the instructions of CAR '84, the Directorate of FSR and/or the individual inspector of CAAB responsible for the transport of dangerous goods by air shall ensure that the air operator shall develop procedures to convey information to emergency services and to appropriate authorities in the event of an incident or accident of an aircraft carrying dangerous goods;

26.2.106 That, pursuant to Bangladesh ordinance, Rule 333 of CAR '84 and the CAAB approved Enforcement Manual of CAAB, the inspectors shall assist in implementing a documented process for the application of penalties related to violations of the dangerous goods regulations;

26.2.107 Since Bangladesh authorizes/approves aircraft leasing, Inspectors shall assist CAAB in setting aside the associated regulations to be promulgated. The regulation to be established in respect of aircraft leasing shall comprise of the following:

A. Dry leases;

B. Wet leases; and,

C. Damp leases.

26.2.108 The inspectors shall assist CAAB in establishing procedures for the acceptance or approval of aircraft leasing arrangements for Dry lease, Wet lease and Damp lease. The procedure shall address a minimum:

A. Flight crew training;

B. Cabin crew training;

C. Operational control;

D. Dispatch and flight watch; and,

E. Crew members scheduling.

26.2.109 Whenever Bangladesh ratifies Article 83 *bis* and enters into agreements for the transfer of responsibilities, the Inspectors shall assist in establishing procedures for the transfer and acceptance of tasks and functions in accordance with the approved format of transfer agreement and ensure that ICAO is notified of the transfer agreements;

26.2.110 Whenever Bangladesh enters into an agreement under the provisions of Article 83 *bis* as State of Registry, the Inspectors shall assist in reviewing the approval procedure wherein CAAB shall carry out. Due notification shall be given to ICAO to this effect as well;

26.2.111 That, the Inspectors shall assist CAAB in promulgating regulations that require a certified true copy of the AOC and corresponding operations specifications including leased aircraft to be carried on board the aircraft at all times. Inspectors shall verify the applicability of CAR '84, ANO (AT) A-2 and Procedure Document GEN, PEL and OPS as well as verify implementation at operators' level on the carriage of documents on board aircraft;

26.2.112 That, the Inspectors shall assist in ensuring by the Authority that a certified true copy of the transfer agreement of supervisory functions and duties pursuant to Article 83 *bis* of the Chicago Convention is carried on board at all times as per the requirement of CAR '84 and related ANOs and the Inspectors shall verify implementation at operators' level on the carriage of documents on board aircraft;

26.2.113 That, the Inspectors shall assist CAAB during certification process verifying that the air operator establishes a policy and procedures to enable cabin crew to discreetly communicate to flight crew in the event of suspicious activity or security breaches in the passenger cabin. Verify State regulations Review certification process and operations inspector procedures Sample operations manual or security manual to confirm implementation;

26.2.114 That, the Inspectors shall assist CAAB during certification process verifying that the air operator establishes a policy and procedures in relation to the flight crew compartment access;

26.2.115 That, the Inspectors shall assist CAAB during certification process verifying that the air operator establishes a policy and procedures in relation to a bomb threat or warning, when the aircraft is on the ground or in flight;

26.2.116 That, the Inspectors shall assist CAAB during certification process verifying that the air operator develops a procedure checklist for searching a bomb and/or inspecting an aircraft for concealed weapons, explosives and other dangerous devices;

26.2.117 That, the Inspectors shall assist CAAB during certification process verifying that the air operator develops a security training programme for flight and cabin crew approved by the authority before granting the AOC. The security training programme to shall have addressed the following:

A. Security of the flight crew compartment;

B. Aircraft search procedure checklist;

C. Determination of the seriousness of any occurrences;

D. Crew communication and coordination;

E. Appropriate self-defence responses;

F. Use of the approved non-lethal protective devices assigned to crew members;

G. Understanding of behaviour of terrorists;

H. Live situational training exercises regarding various threat conditions; and,

I. Post-flight concerns for the crew.

26.2.118 That, the Inspectors shall assist CAAB in promulgating regulations and additional requirements for an air operator applying for special authorization to operate a single-engine turbine powered aeroplane at night and/or in instrument meteorological conditions (IMC). The additional requirements, such as engine trend monitoring system, redundant electrical generating systems, radio altimeter, airborne weather radar, etc. shall have to be considered and these shall be enlisted in the AOCs and operations specifications;

26.2.119 That, the Inspectors shall assist CAAB in ascertaining the different categories of AOCs that shall be available to commercial air transport operators and these shall be enlisted in the AOCs and operations specifications;

26.2.120 That, the Inspectors shall assist CAAB in establishing that the AOC and associated authorizations, conditions and limitations, issued by CAAB contain all the elements identified in Annex 6, Part I, such as the following and these shall be enlisted in the AOCs and operations specifications:

A. State of the Operator and issuing authority;

B. AOC number and expiration date;

C. Operator name, trading name (if different) & address;

D. Date of issue & name, signature & title of authority representative; and,

E. the location, in a controlled document carried on board where the contact details of operational management can be found.

26.2.121 That, the Inspectors shall assist CAAB in assuring that the AOC issued by CAAB complements with operations specifications which contain authorizations, conditions and limitations to be complied with by the air operator;

26.2.122 That, the Inspectors shall assist CAAB in developing a formal inspection policy and procedures to be used by operations inspectors for conducting inspections of AOC holders and foreign air operators' policy/procedures and checklists for inclusion and effective implementation of the following:

A. Identification of inspections to be carried out for AOC holders and foreign air operators;

B. Guidelines for scheduling inspections;

C. Standardized checklists for inspections; and,

D. Inspection/audit process.

26.2.123 That, the Inspectors shall assist in ensuring that a formal surveillance programme is implemented to verify that all AOC holders and foreign air operators comply on a continuing basis with national regulations, international standards, AOCs and corresponding operations specifications. Inspectors shall develop surveillance program for each year (planned and completed) by confirming appropriate frequency of inspection (may be based on proven safety indicators or results of previous inspections) and shall keep the records and follow-up records for AOC holders and foreign air operators;

26.2.124 That, the Inspectors shall ensure that the established surveillance programme makes allowance for monitoring a commercial air transport operator's financial condition, and for monitoring unfavourable trends;

26.2.125 That, the Inspectors shall advise CAAB in ensuring that the surveillance policy and programme allow for coordination between the different departments or directorates of the authority (transportation, finances, legal, operations, personnel licensing, airworthiness, etc.);

26.2.126 That, the Inspectors shall advise CAAB in ensuring the actions to be taken if the deficiencies identified during the conduct of inspections are not rectified in a timely manner by an operator. Inspectors shall follow the CAAB approved enforcement manual to suggest implementation of the enforcement procedure.;

26.2.127 That, the Inspectors shall assist in ensuring that CAAB shall have implemented a documented process to take appropriate corrective actions, up to and including enforcement measures, to resolve identified deficiencies and safety issues. To this effect the Inspectors shall assist in ensuring that reports are made and adequate correspondences established for follow up actions towards the rectification of the deficiencies in a timely manner and, in case of enforcement, the following have been accomplished:

A. Fines

B. Restrictions

C. suspension/revocation of certificate

26.2.128 That, the Inspectors shall assist in ensuring that CAAB shall have a system which monitors and records progress, including actions taken by the air operator in resolving identified safety issues, to enable the possibility of tracking past deficiencies and regulatory non-compliance.

CHAPTER-27

AIR OPERATOR ADMINISTRATION (DITCHING DEMONSTRATION)

27.1 CONDUCTING DITCHING DEMONSTRATIONS

27.1.1 A ditching demonstration is required during the operational inspection phase of the certification process for each aircraft type, model and configuration which will be operated on extended flights over water routes (on any route which passes more than 50 nautical miles from land). The purpose of the demonstration is to evaluate the operator's ability to safely prepare passengers, airplane, and ditching equipment for a planned water landing. Prior to conducting this demonstration the CAAB should determine whether the aircraft has an airworthiness certification covering ditching. If the aircraft is not certificated for ditching, extended flights over water should not be authorized. During the demonstration, the following four areas are evaluated:

A. Emergency training programme;

B. Ditching procedures;

C. Crewmember competency;

D. Equipment adequacy and reliability.

27.1.2 Similar to the emergency evacuation, there are two types of ditching demonstrations which may be required: full-scale and partial. Since full-scale ditching demonstrations have been conducted by the manufacturer during the type certification process for most airplane types, it is likely that the CAAB will only require a partial demonstration by an applicant for an AOC.

27.2 PARTIAL DITCHING DEMONSTRATION.

The following procedures will be followed in conducting a partial ditching demonstration:

The demonstration must be conducted during daylight hours or in a lighted hanger if conducted at night;

A. All required crewmembers must be available and used;

B. Passenger participants (company personnel other than crewmembers who are acting as "passengers") will be used only when the operator's procedures require passengers to assist in the removing and launching of life rafts. If used, passengers will not receive any instructions before the demonstration except what is contained in the operator's manual;

C. To commence the demonstration, the crewmembers will simulate, in a parked airplane, a normal takeoff and climb to cruise flight. Engine start will be simulated and all checklists will be accomplished. Upon the CAAB team leader's signal, the captain will order the crew to prepare for ditching. At that time, the team leader will commence timing for 6

minutes in order to give the crew time to prepare for a simulated water landing. After the simulated water landing, all life rafts must be removed from storage. This action is not specifically time; however, the crewmembers must demonstrate competency in removing the rafts from storage and the raft must be capable of being removed from the airplane for deployment in a reasonable period of time;

D. When the ditching signal is given, each evacuee must put on a life preserver in accordance with the operator's manual and the flight attendants' briefing;

E. Each life raft must be removed from stowage for inspection;

F. One life raft, selected by the CAAB, will be inflated and launched and the evacuees assigned to that raft will get in it. The crewmembers assigned to the raft will locate and describe the use of each item of emergency equipment contained in the raft.

Note: For the purpose of the demonstration, "launching" a *life raft* means to remove it from stowage, manipulate it out of the airplane by means of stands or ramps, and position it on the ground before inflation. Launching a *slide raft* means to inflate it in the normal manner then lower it to the ground.

27.3 EVALUATION OF THE PARTIAL DITCHING DEMONSTRATION.

The following are specific points to be noted and evaluated during the ditching demonstration:

A. A sufficient number of items of emergency equipment, i.e. life rafts, inflatable slides, life jackets, medical kits, first aid kits, emergency locator transmitter, etc., are carried on board;

B. emergency equipment is properly stowed and can be readily removed or ejected from the aircraft in the time specified;

C. means are provided and utilized to prevent emergency equipment from drifting away from survivors;

D. slides, life jackets and life rafts inflate fully within acceptable time limits and other emergency equipment functions properly, including proper deployment of inflatable slides;

E. selection of emergency exits to be utilized and that such exits can be opened readily;

F. emergency procedures and related checklists are adequate and are properly used by the crew members;

G. the crew is properly trained;

H. crew members are familiar with and adhere to the timely execution of their assigned duties and responsibilities;

I. crew members, using available emergency equipment and following the procedures outlined in the operations manual, can facilitate the evacuation of the aircraft under those critical conditions expected during the short period of time the aircraft would remain afloat; and

J. adequate safety precautions are followed by the crew members to prevent possible injury to evacuees or themselves.

27.3.1 In assessing the effectiveness of the ditching demonstration the CAAB inspector should record the following:

A. Time from start of ditching until each exit door or emergency exit to be utilized is open;

B. time when each life raft is launched;

C. time required to inflate each life raft; and,

D. time when all life rafts are boarded.

Note: Any deficiencies noted during the ditching demonstration regarding the evacuation procedures or related emergency equipment such as inflatable slides, emergency exits, life rafts, etc., must be rectified by the applicant. This may require additional demonstrations before these emergency procedures can be considered acceptable by the CAAB.

27.4 AIR OPERATOR PARTIAL DITCHING DEMONSTRATION REPORT:

The Ditching Demonstration Report Form has been placed in Part-II, Section-68, Appendix-05. Following conduct of the Ditching Demonstration on an aircraft belonging to an air operator, CAAB Inspector should fill up the Form to provide necessary recommendation for issue of AOC or CAAB's acceptability for inclusion of a new type aircraft by the air operator. The report shall be preserved for record keeping.

CHAPTER-28

CONDUCTING EMERGENCY EVACUATION DEMONSTRATIONS

28.1 There are two categories of emergency evacuation demonstrations:

A. full-scale evacuation; and,

B. partial evacuation.

28.2 FULL-SCALE EVACUATION DEMONSTRATION:

28.2.1 The primary purpose of a full-scale evacuation demonstration is to ensure that the airplane design and seating configuration will permit the safe and complete evacuation of all passengers through 50 per cent of the installed emergency exits within a specified time frame. Adequacy of the crewmember compliment and operational procedures and training is also evaluated.

28.1.2 A full-scale evacuation demonstration requires the use of an aircraft, parked on apron or in a hanger, with a complete complement of crew members (flight deck and cabin) and each passenger seat occupied by a "passenger" participant. The crewmembers are required to simulate an aborted takeoff followed by a situation which requires the immediate evacuation of the aircraft in 90 seconds or less.

28.1.3 Full scale demonstrations are usually conducted by the manufacturer for the State of manufacture during the type certification process. Subsequent full-scale evacuations are only required when an airline uses a seating capacity which is greater than what has previously been demonstrated. It is unlikely that the CAAB will ever have to require an operator to perform a full-scale evacuation. Because a full-scale evacuation demonstration is a complex undertaking with an inherent risk of minor injury to the participants, in the event that a full-scale demonstration is required of a Bangladeshi operator, the CAAB will obtain assistance from another State which is highly experienced in conducting such demonstrations.

28.3 PARTIAL EVACUATION DEMONSTRATION:

28.3.1 For issuance of an AOC or variation to an AOC, the adequacy of an operator's training and procedures along with the proper functioning of emergency exits can be determined through a partial evacuation demonstration. In this demonstration, a full complement of crew members are required to carry out the procedures for an emergency evacuation, including opening 50 per cent of the emergency exits and successfully deploying the escape slides at those exits within a specified time frame. No passenger seats are occupied an no person is required to actually exit the airplane by means of an escape slide.

28.3.2 PROCEDURES FOR PARTIAL EVACUATION DEMONSTRATION: The following procedures will be followed in conducting a partial emergency evacuation demonstration:

A. A planning meeting will be held with the operator well in advance of the demonstration in order to discuss the exact procedures to be followed and the criteria for a successful demonstration.

B. The operator will provide for the demonstration an aircraft of the type, model, and cabin configuration for which approval is sought, along with a qualified and current cockpit crew and two complete compliments of cabin crew members. The purpose of requiring two complete compliments of Cabin Crew is so that the CAAB may select, immediately prior to the demonstration, the flight attendants who will actually participate in the demonstration. This is to lessen the possibility that the operator will provide extra training to those flight attendants which it knows in advance will participate in the demonstration, so that their performance will not be representative of the level of proficiency of all of the operator's Cabin Crew.

C. The demonstration will be conducted in darkness, either on an apron at night or in a hangar with the lights extinguished.

D. During the steps leading to the commencement of the timing of the demonstration, the airplane's electrical system will be fully powered by either an external power unit or the APU.

E. Crewmembers will simulate complete preparation for takeoff, including the execution of all checklists up to and including the takeoff checklist. Engine operation will be simulated. Cabin Crew will be seated at their normal stations for takeoff.

F. The cockpit crew will simulate the commencement of the takeoff roll followed by a high-speed, aborted takeoff due to an engine fire or other appropriate simulated malfunction.

G. The evacuation of the airplane will be signaled through the failure normal electrical power (by disconnecting the external power unit or APU). Interruption of normal power will be a clear signal to all involved that the timing of the demonstration has commenced. Outside, the aircraft's external lights (taxi lights, anti-collision lights, position and logo lights) will extinguish. Inside, normal cabin lighting will extinguish and all emergency exit lights and floor-level lighting (if installed) will illuminate if functioning properly.

H. Immediately upon failure of the normal electrical system the flight attendants will be required to unbuckle their safety harnesses, leave their jump seats, ascertain which exits are usable, open the usable exits, and deploy the escape slides. In order for the demonstration to be successful, the total time which elapses from the interruption of electrical power until full deployment of all activated slides must not exceed 15 seconds. Slides are not considered fully deployed until they reach the ground and are

inflated to a firmness which would safely support the egress of passengers.

I. To monitor, time, and evaluate the demonstration, CAAB personnel will be positioned in the cockpit and at each exit inside of the airplane and outside the airplane at each exit. The CAAB inspector who is responsible for the timing of the demonstration will be positioned outside of the airplane with a stop watch. He will commence timing when the external lights of the aircraft are extinguished. After precisely 15 seconds, he will call "time" to all participants and the demonstration will be considered complete. He will then confer with the CAAB team members who were stationed at the exits both inside and outside of the airplane to confirm whether or not procedures were properly followed and that the slides were adequately deployed by the time 15 seconds elapsed.

J. Only 50 per cent of the exits will be used. The operator's personnel inside the airplane should not know in advance which exits will be used and which will be rendered unusable. One method for indicating to the Cabin Crew immediately after the commencement of the demonstration which exits are unusable is to station CAAB personnel with bright flashlights outside of those exits. When the exterior lights of the airplane are extinguished and the timing begins, those CAAB personnel will shine their flashlights directly on the windows of the emergency exits which are to be considered inoperable, thus simulating a fire on that side of the airplane. In accordance with their procedures, Cabin Crew must look through the window of an emergency exit to make sure that it is usable before opening it and deploying the escape slide for use by passengers. In this case, if the cabin attendant approaches an exit and observes a light shining on the window, he or she will consider it inoperative and choose an alternative exit to be opened.

28.3.3 EVALUATION OF THE PARTIAL EVACUATION DEMONSTRATION: Specific points to be noted during the evacuation demonstration are:

A. adherence by flight and cabin crew members to the execution of assigned duties and responsibilities both in the aircraft and on the ground;

B. effectiveness of the pilot-in-command in the exercise of command responsibilities;

C. succession to command in event of casualties;

D. effectiveness of crew members in performing their assigned evacuation duties; and

E. shortcomings, deficiencies or delays encountered.

28.3.4 If the applicant cannot satisfactorily demonstrate emergency evacuation for each particular type, model and configuration of aircraft within 15 seconds, the applicant will be required to take steps to correct the deficiency which could include the following:

A. revising evacuation procedures;

B. improving crew training;

C. modifying or changing the equipment used;

D. changing the passenger compartment arrangement; and

E. reducing total passenger seating capacity.

28.4 AIR OPERATOR PARTIAL EMERGENCY EVACUATION DEMONSTRATION REPORT:

The Emergency Evacuation Demonstration Report Form has been placed in Part-II, Section-68, Appendix-06. Following conduct of the Emergency Evacuation Demonstration on an aircraft belonging to an air operator, CAAB Inspector should fill up the Form to provide necessary recommendation for issue of AOC or CAAB's acceptability for inclusion of a new type aircraft by the air operator. The report shall be preserved for record keeping.

CHAPTER-29

CONDUCTING PROVING FLIGHTS

29.1. BACKGROUND AND OBJECTIVES.

29.1.1 Proving tests consist of a series of flights which are designed to demonstrate prior to the issuance of the AOC that the applicant is capable of operating and maintaining each aircraft type which he proposes to use to the same standards required of an established carrier. Proving flights may also be required of a fully certified airline which is adding a new airplane type to its fleet. Successful proving flights may be considered the final proof that an operator is ready to commence revenue operations with a specific type of airplane. During these inspections, the CAAB will have the opportunity to observe and evaluate the in-flight operations within the total operational environment of the air transportation system. In the course of these flights, paying passengers will not be carried. However, it is generally desirable for the applicant to have on board company officials who can make decisions and commitments on behalf of the applicant concerning actions to correct deficiencies. These company officials may also serve as passengers for purposes of realism, so that the cabin crew can perform their normal duties such as passenger briefings and meal services.

29.1.2 The applicant and the CAAB inspector should plan well in advance for the conduct of the proving flights. All concerned must have a clear understanding and agreement as to what must be accomplished by the applicant to show compliance with the applicable operating regulations and rules. General objectives for pre-certification proving flights should include the determination of the adequacy of:

A. in-flight procedures laid down in the operations manual and compliance with those procedures;

B. the facilities and equipment provided to the flight crew to conduct the flight safely and in accordance with regulations;

C. the support provided by operational control to the flight crew;

D. the general provision made for ground handling of the aircraft and assisting the flight crew to carry out their duties at all aerodromes utilized by the applicant along the routes; and

E. en-route facilities.

F. Proving test flights are operated exactly as though the applicant is conducting revenue operations. However, during the course of the flights the CAAB inspector may introduce simulated situations which will require appropriate responses by crewmembers and ground personnel.

29.1.3 SPECIFIC PROCEDURES:

Proving flights will consist of a minimum of 10 hours (5 hours for domestic flights) flown over routes for which the operator seeks approval. At least 4 route segments must be flown, if practicable. If the operator seeks approval for night operations, 5 of the 10 hours must be flown at night, if practicable. The sequence of events for the proper planning for and carrying out of proving flights will be as follows:

A. Well before the proving flights (during the pre-application phase of the certification process) the CAAB inspector will have briefed the operator regarding the necessity for proving flights, what must be accomplished, and the areas which will be evaluated.

B. At least 10 days prior to the proving flights, the operator must submit a proving test plan consisting of a detailed schedule of the proposed flights including dates, times, and airports to be used, along with a list of names of all crewmembers who will be used on each flight. The applicant should also provide a list of names and titles of non-crewmember personnel who will be aboard the aircraft during the flights. Preliminary flight plan information containing predicted fuel, baggage, and passenger loads for each segment along with predicted gross takeoff and landing weights must also be provided.

C. After receipt of the proving test plan from the operator, the CAAB team will develop a proving flight scenario consisting of simulated emergencies and other means of testing the crewmembers' and operators operator's ability to cope with actual operational contingencies. Since the primary purpose of the proving flights is to ensure basic compliance with safe operating procedures during *routine* operations, the introduction of simulated abnormal and emergency conditions should be kept to the minimum required to evaluate the operator's capability to respond to such conditions. The following are typical scenarios which may be useful in evaluating the operator's capabilities:

D. Diversion to alternate airports for reasons such as weather or maintenance. This tests the company's communications, maintenance, ground handling, and other operational capabilities.

E. MEL or CDL situations - this tests crewmembers' understanding of specific operational limitations and the company's operations and maintenance procedures. For example, dispatching with an inoperative AC generator tests the operator's ability to comply with the operational and maintenance provisions of the MEL.

F. Performance problems - this requires the aircrew and dispatch or flight control personnel to demonstrate competency and knowledge of such items as aircraft performance, airport analysis charts, and alternative company procedures. For example, simulating one-half inch of standing

water on a departure runway will test the operator's ability to make performance adjustments.

G. Hazardous cargo - the introduction of simulated hazardous cargo will test the applicant's ability to properly document and handle such items.

H. Simulated aircraft emergencies such as engine failure - this tests the flight crew's knowledge and competency in handling emergency situations. It also tests the operator's communications, maintenance, and other capabilities. Under no circumstances may an actual engine shutdown be required. However, at the discretion of the CAAB team leader, a throttle may be retarded to idle thrust during flight and throughout the approach and landing.

I. Simulated cabin emergencies - this tests the ability of the cabin crew to deal with cabin abnormalities in accordance with established company procedures and to coordinate with the flight deck crew. Possible scenarios may include a simulated incapacitated passenger in need of immediate medical assistance, a simulated lavatory fire, or a simulated loss of pressurization.

29.1.4 The proving test flights are then carried out in accordance with the operator's plan and the CAAB scenario.

29.1.5 Following each segment of the flight, the operator should be debriefed by the CAAB team leader regarding the progress thus far. Unsatisfactory conditions noted by the team leader should immediately be brought to the attention of the applicant for corrective action. The opportunity should be provided to the applicant to remedy any deficiencies affecting the safety of the operation before any further flights are undertaken. All discrepancies and items of non-compliance must be corrected or resolved to the satisfaction of the CAAB team leader before the series of flights can be considered successful. Some examples of deficiencies requiring corrective action are:

A. Flight crew member not properly trained, e.g. requires assistance from applicant supervisors or a CAAB inspector;

B. Flight crew member not familiar with aircraft, systems, procedures or performance;

C. Cabin crew member not properly trained or not familiar with location or use of emergency equipment or emergency evacuation procedures;

D. Numerous aircraft deficiencies and/or systems malfunctions;

E. Inadequate mass and balance or load control;

F. Unsatisfactory operational control, e.g. improper flight planning and flight release procedures;

G. Unacceptable maintenance procedures or practices; and

H. Improper aircraft servicing and ground handling procedures.

29.1.6 Within the shortest possible time after the entire series of proving flights is completed, the operator will be provided with a detailed de-briefing and will be informed whether or not his overall performance was satisfactory or unsatisfactory. This will be followed with a letter detailing the same information.

29.2 AIR OPERATOR PROVING TEST FLIGHT REPORT:

A. The routine portion of the applicant's operational performance during the series of proving test flights will be evaluated using the Cockpit En-route Inspection Checklist/Report form, the Cabin En-route Checklist/Report and the Station Facility Inspection Checklist/Report as well as the criterion for en-route inspections and Station Facility Inspection contained in this handbook. These will be attached to the Proving Flight Checklist/Report form.

B. The Proving Test Flight Report Form has been placed in Part-II, Section-68, Appendix-07. Following conduct of the Proving Test Flight on an aircraft belonging to an air operator, CAAB Inspector should fill up the Form to provide necessary recommendation for issue of AOC or CAAB's acceptability for inclusion of a new type aircraft by the air operator. The report shall be preserved for record keeping.

Note 1: Guidance on the conduct of a Ramp Inspection and the associated Checklist are provided in Part-II, Chapter 68, Appendix-03 and Appendix-04.

Note 2: Guidance on the conduct of a Station Facility Inspection Report has been provided in Part-II, Chapter 68, Appendix-12.

Note 3: Guidance on the conduct of any other inspections, as applicable, can be found in Part-II, Chapter-68 (Appendices).

CHAPTER-30

AIR OPERATOR ADMINISTRATION (APPROVAL OF BASE TRAINING CAPTAIN AND INSTRUCTORS)

30.1 APPROVAL OF BASE TRAINING CAPTAIN AND INSTRUCTORS

30.1.1 Operators are required to provide enough instructors and Base Training Captains to carry out the flight training and checks specified in their approved training programmes. The CAAB must specifically approve operator personnel who are to serve as Base Training Captains after a thorough review of the candidate's background, experience, training, and competency. Whereas instructors are not specifically approved, they must meet certain qualifying criteria and their performance is subject to CAAB evaluation.

30.2 ELIGIBILITY REQUIREMENTS FOR CHECK AIRMAN. Operator personnel who are to serve as Check Airman must meet the following requirements:

A. For Pilot Check Airman, hold the required certificate and ratings to serve as a PIC of the specific aircraft in revenue service. For Check Flight Engineers, hold the required certificate and ratings to serve as flight engineer in the specific aircraft in revenue service.

B. For Pilot Check Airman and Check Flight Engineers, hold a Class 1 medical certificate.

C. For Pilot Check Airman and Check Flight Engineers, have completed the operator's approved FI and Check Airman qualification training program.

D. For Pilot Check Airman, meets the training and currency requirements to serve as PIC, including ground and flight training, proficiency or PPC, and 90-day landing currency. For Check Flight Engineers, meet the training and currency requirements to serve as a flight engineer.

E. Maintain line currency as a crew member in the position(s) for which checks are authorized .

F. Have achieved and maintained a favorable record as a crew member

G. Satisfactorily demonstrate to the CAAB the ability to conduct the category of checks for which he seeks approval.

30.3. CLASSIFICATION OF CHECK AIRMAN: There are seven Check Airman designations; five of which are pilot Check Airman designations and two are flight engineer Check Airman designations. Approval for each Check Airman designation is contingent on the Check Airman having been properly certificated in the applicable aircraft and crew position; having been trained in accordance with the operator's approved Check Airman training program for the specific designation; and having demonstrated to the CAAB the ability to conduct and

accurately evaluate an airman's performance on the flight checks authorized for that designation. The seven Check Airman designations are:

30.3.1 Proficiency Check Pilot – Aircraft:

This designation authorizes the Check pilot:

A. to conduct proficiency or PPC and to provide flight instruction from either seat in an aircraft in actual flight;

B. supervise the re-establishment of landing currency;

C. conduct special checks such as CAT II or CAT III qualifications provided the Check Airman is qualified in that activity; and,

D. to provide ground instruction if authorized by the operator.

30.3.2 Proficiency Check Pilot – Simulator:

This category authorizes a Check Airman to:

A. conduct pilot proficiency or PPC in an approved flight simulator or flight training device;

B. to provide flight instruction in a flight simulator or flight training device;

C. supervise the re-establishment of landing currency, when authorized in a flight simulator;

D. conduct special checks such as CAT II and CAT III in a simulator, provided that the Check Airman is qualified in the activity for which the special check is being conducted; and,

E. when authorized by the operator, provide ground instruction for airmen and certification of the satisfactory completion of a ground training curriculum segment

30.3.3 Line Check Pilot:

This category permits the Check Airman to:

A. conduct annual pilot line checks from either pilot seat or the jump seat;

B. to act as a supervisory pilot from either seat for route training/qualification of new line pilots and to conduct training and checks in special operations;

C. provided the Check Airman is qualified in the activity being conducted; and,

D. when authorized by the operator, to conduct ground instruction for airmen and certification of the satisfactory completion of a ground training course.

30.3.4 CHECK PILOT - ALL CHECKS:

This category permits the Check Pilot to conduct all checks and training.

30.3.5 CHECK FLIGHT ENGINEER - AIRPLANE ONLY:

This designation is intended for those operators who do not use simulators or training devices in their flight engineer training programs. This category of Check Airman authorizes the person to conduct flight engineer proficiency checks and instruction to flight engineers in flight in an airplane and, when authorized by the operator, to provide ground instruction for airmen and certification of the satisfactory completion of a ground training curriculum segment.

30.3.6 CHECK FLIGHT ENGINEER - ALL CHECKS:

This category of Check Airman is intended for those operators who use flight simulators or training devices in all or part of their flight engineer training program. A person so designated may conduct flight engineer proficiency checks in an approved flight training device, an engineer simulator, a flight simulator, or an airplane. He may also provide instruction to flight engineers in a flight simulator, an engineer simulator, a flight training device, or an airplane; and, when authorized by the operator, provide ground instruction for airmen and certification of the satisfactory completion of a ground training course or portion thereof.

30.4 CHECK AIRMAN APPROVAL PROCESS

The following sequence of events will be followed for CAAB approval of Check Airman:

30.4.1 The operator will submit a letter requesting a specific Check Airman designation for the proposed Check Airman. This letter will include a brief resume of the airman's background and experience and copies of his license(s) and medical certificate. Copies of training records which document that the prospective Check Airman has completed the operator's approved courses of training for instructor and Check Airman duties must also be included.

30.4.2 The CAAB inspectors will review the letter of request and attached documentation to ensure that the prospective Check Airman meets all applicable requirements. Following this review, the applicant will be interviewed by the inspector to ensure that he has a firm understanding of the duties of a Check Airman and the proper attitude to carry out those duties.

30.4.3 Following a successful document review and interview, the prospective Check Airman will be observed conducting the entire type of check or checks for which he seeks approval.

30.4.4 Provided that steps 30.4.1 through 30.4.3 above are satisfactorily accomplished, the airman will be issued an approval letter which contains the following information:

A. Check Airman name and applicable CAAB and/or foreign license numbers.

B. Specified Check Airman designation

C. Specified aircraft

D. Operator or operators the Check Airman may serve

E. Effective date of designation

30.4.5 In the event that the prospective Check Airman is not found to be satisfactory during any of steps A through C above, CAAB will write a letter to the operator explaining the reason for the disapproval.

30.5. CONDUCT OF A CHECK AIRMAN EVALUATION: The purpose of the Check Airman evaluation is to ensure that the candidate has achieved the required skills for briefing, evaluating, and debriefing an airman being checked. Except for an initial cadre designation, a Check Airman evaluation does not entail an evaluation of the candidate's proficiency in the basic crew position. An operator should not request designation of an individual as a Check Airman when there is any question about the airman's skills in the basic crew position. Should the CAAB inspector have reason to question the airman's basic qualifications, the Check Airman evaluation shall not be conducted until the candidate's qualifications are definitely and thoroughly verified and accepted. An acceptable means of establishing the airman's basic qualifications is for an inspector to conduct a proficiency, competency, or line check of the Check Airman candidate on a separate occasion before the Check Airman evaluation. Such checks, however, are not routinely required. The following general guidance applies to all Check Airman evaluations:

30.5.1 Inspectors assigned to conduct Check Airman evaluations must become thoroughly familiar with the operator's methods and procedures. Inspectors should also become familiar with the regulatory requirements for the check to be conducted by the Check Airman candidate. This familiarity is necessary if the inspector is to make a determination as to whether or not the Check Airman has the ability to conduct a check consistent with the operator's approved procedures and regulatory requirements.

30.5.2 An inspector conducting a Check Airman evaluation must arrange to meet with the Check Airman candidate in sufficient time for a pre-evaluation briefing. The inspector shall inform the candidate of the purpose of the evaluation and that the check should be conducted as if the candidate was fully qualified for the requested Check Airman designation. During the briefing, the inspector should also ask questions of the candidate to determine if the candidate has a thorough knowledge and understanding of applicable CAAB regulations, operator policies, methods and procedures, and of the actions to be taken when acceptable standards are not met. Inspectors should not ask questions of this nature while the check is actually being conducted.

30.5.3 While the check is in progress, the inspector must observe, but should not interrupt or interfere with the techniques and actions taken by the Check Airman candidate. The inspector must determine if all required events were accomplished and if each event was properly conducted. The candidate's evaluation of the airman's performance must be accurate. The candidate's debriefing of the airman must be accurate, complete, and constructive.

30.5.4 If the inspector determines that a Check Airman candidate does qualify for the requested Check Airman designation, the inspector shall inform the candidate that a recommendation of approval will be reported to the CAAB. In this case, the Check Airman candidate shall certify to the proficiency of the airman being given the check and complete the necessary records. As a matter of policy, the new Check Airman may be scheduled immediately by the operator to perform checks, even though processing of the designation letter has not been completed.

30.5.5 If the inspector determines a candidate does not qualify for the requested Check Airman designation, the inspector shall inform the candidate of the unsatisfactory performance and of not being approved as a Check Airman. In this case, the inspector must determine whether the airman that received the check performed satisfactorily, and must certify to the proficiency of the airman who was checked for the purpose of Check Airman evaluation (satisfactory or otherwise), and complete the necessary records. Inspectors shall sign operator forms indicating success or failure of the airman and make a statement of the circumstances on the operator's forms. The company shall be informed by letter of the reason for the disapproval.

30.5.6 The failure of a Check Airman candidate is unusual and usually ends a candidate's eligibility for Check Airman status. In rare circumstances, however, the CAAB may allow a re-evaluation. In such a case, the operator must conduct sufficient additional training, recertify the candidate's proficiency, and then arrange to have another evaluation conducted by a CAAB inspector.

30.6. PERIODIC RENEWAL OF CHECK AIRMAN DESIGNATIONS: All Check Airman designations expire one year from the last day of the month on which they were effective. The following procedures will be followed for renewal:

30.6.1 At least one month prior to the expiration date of a particular designation, the operator must submit to the CAAB a letter requesting renewal of that designation, if so desired. Attached to the renewal request will be a record of all of the checks that the Check Airman has conducted during the preceding 12 months, along with a copy of the Check Airman's current license(s) and medical certificate. The letter should also advise the CAAB as to when the Check Airman will be available for observation during the next 30 days in the course of conducting a check. At least one primary and alternative date should be provided.

30.6.2 The CAAB will review the letter and attached documentation, giving particular attention to the number of checks which the Check Airman has conducted within the designation sought over the previous year. This is to ensure that he is being well-utilized by the operator so as to justify his continued designation.

30.6.3 Following a satisfactory review of the documents, the CAAB will schedule an inspector to observe the Check Airman conducts the type of check for which renewal is sought.

30.6.4 Provided that the evaluation of the Check Airman's performance was found to continue to be satisfactory, an updated Check Airman letter of approval will be sent to the operator.

30.6.5 If the renewal evaluation of the Check Airman 's performance is found to be unsatisfactory for any reason, the Check Airman shall be informed immediately and the company provided with a letter stating the reason(s) for the disapproval. In this case, as with the original Check Airman designation, the CAAB inspector must then approve or disapprove the actual check which was in progress for the purpose of evaluating the Check Airman.

30.7 FLIGHT AND GROUND INSTRUCTOR: An instructor is a person employed by an operator or training center for the purpose of training flight crewmembers in an operator's approved training curriculum. These instructors provide the required training for flight crewmembers to ensure that the acceptable standards of knowledge and the necessary skills to complete a particular curriculum segment are met. When designated by the employer, an air transportation instructor is responsible for certifying to the knowledge and proficiency of each crewmember upon completion of a training curriculum or curriculum segment. An ideal Instructor must possess the following qualities:

A. Knowledgeable in the applicable CAAB requirements and in the operator's required policies and procedures applicable to each designated area of expertise;

B. Have effective communicative skills.

C. A manner that should reflect honesty and professionalism; and,

D. Must exhibit a positive attitude toward safe aviation practices.

30.7.1 FLIGHT INSTRUCTORS (FI):

CAAB should have specific qualification criteria laid down for flight instructors. But CAAB does not necessarily formally approve FIs. The operator may designate any person to serve as a FI in either a simulator or aircraft provided that the following basic qualifications are met as assessed by CAAB inspectors:

A. Pilot instructors must hold and ATPL and the ratings required to serve as a pilot in command on a specific aircraft in revenue service. Flight Engineer instructors must hold a flight engineer license and the necessary endorsements to serve as a flight engineer in revenue service;

B. Pilot instructors and flight engineer instructors must have a valid Class 1 medical certificate;

C. Pilot instructors must meet all training and currency requirements to serve as PIC for the operator including ground and flight training, proficiency or PPC, and the 90-day landing currency. Similarly, flight engineer instructors must meet all training and currency requirements to serve as a flight engineer for the operator;

D. For pilots, must complete an annual line check or line observation recurrent qualification;

E. The instructor must have received the FI qualification training of the operator's approved training program for this designation;

F. The instructor must maintain line currency as a crewmember; and,

G. During training programme inspections, the CAAB will ensure that all of the operator's assigned FIs continue to meet the above qualifications.

30.7.2 GROUND INSTRUCTORS:

CAAB should have specific qualification criteria laid down for ground instructors. Through periodic inspections of operator training programmes the CAAB will ensure ground instructor competency, uniform methods of presentation, and compliance with approved training syllabi.

30.8 CHECK AIRMAN LETTER OF APPROVAL

A sample Check Airman letter of approval has been shown in Part-II, Section-68, Appendix-08.

CHAPTER-31

AIR OPERATOR ADMINISTRATION (AIR TRANSPORT PILOT PROFICIENCY CHECKS)

REQUIRED MANEUVERS AND PERFORMANCE STANDARDS FOR AIR TRANSPORT PILOT PROFICIENCY CHECKS (PPCs)

31.1 GENERAL: Flight crew proficiency checks are required twice each year for an air transport pilot-in command and co-pilot/second-in command. This chapter describes the maneuvers and procedures which must be performed by all pilots during such an air transport PPC, along with performance standards for evaluating the performance of those maneuvers and procedures. All maneuvers and procedures must be performed inflight in an airplane or in a CAAB approved appropriate level flight simulator.

31.2 This chapter provides guidance on the conduct and evaluation of an AOC holder's programme of proficiency checks, including the on-going evaluation of the check pilots.

31.3 OBJECTIVES OF PROFICIENCY & COMPETENCY CHECK INSPECTIONS

A. The surveillance of an operator's proficiency and competency checks provides the CAAB with information about the effectiveness of the operator's training and qualification programmes.

B. The objectives of a POI or an inspector conducting a proficiency or competency check inspection are as follows:

1. To evaluate individual airmen performing their duties and responsibilities
2. To evaluate individual check pilots performing their duties and responsibilities
3. To assess the effectiveness of the operator's training programme
4. To identify operational procedures, manuals, or checklists which are deficient
5. To assess the effectiveness of the operator's simulators and equipment
6. To evaluate the effectiveness of the operator's trend analysis, standardization, and quality control programme

31.4 CHECK PILOT PROGRAMMES

A. AOC holders are required to establish a check pilot programme for conducting the proficiency and competency checks required by CAAB. Principal operations inspectors (POIs) or any other inspector on his behalf, as appropriate, shall have the surveillance responsibility for an operator's check pilot programme.

B. This function can be accomplished directly for small operators and indirectly through coordination with other inspectors for large, complex operators. POIs or their representatives are authorized to observe these checks at any time as a check pilot surveillance job function and if aircraft qualified to administer proficiency and competency checks.

31.5 PROFICIENCY & COMPETENCY CHECK INSPECTION PROCEDURES

Before conducting a proficiency and competency check inspection, inspectors must become thoroughly familiar with the operator's manuals. Inspectors may also be required to qualify in the operation of the aircraft, simulators, or training devices.

31.6 AREAS OF FAMILIARIZATION

Inspectors must be familiar with the following areas before conducting proficiency and competency check inspections:

A. Inspector, safety pilot, and crew qualification for simulators, flight training devices, and aircraft

B. Acceptable methods for presenting the maneuvers and events of the check in simulators, flight training devices, and aircraft

C. Acceptable standards of performance for proficiency and competency checks

31.7 INSPECTION AREAS

Inspectors should use the following guidance pertaining to specific inspection areas during a proficiency or competency inspection:

31.8 PILOT COMPETENCY

A. This inspection area applies to the knowledge, ability and proficiency of the pilot receiving the check.

B. A pilot must perform specific events in an aircraft, an aircraft simulator, a flight training device, or a combination thereof, during a proficiency or competency check.

C. Through observation of the check ride, the inspector can determine if the pilot has an acceptable level of aircraft systems knowledge and is competent in the performance of normal, abnormal, and emergency flight procedures.

D. In addition, the inspector can observe whether the pilot complies with company policy, possesses current manuals, and possesses appropriate certificates and ratings.

E. The check pilot must use the CAAB AOC Proficiency Check Form to record the check, unless the CAAB has approved a different form for the company.

31.9 CHECK PILOT COMPETENCY

A. The POI or a qualified representative must periodically observe company check pilot conducting proficiency or competency checks.

B. These observations enable the POI to evaluate both the individual check pilot performing check pilot duties and the company's entire check pilot programme.

C. This inspection area applies to the manner in which a check pilot conducts the check, the accuracy and completeness of the check pilot's observations, and the validity of the outcome.

31.10 EVALUATION OF CHECK PILOT

Inspectors should evaluate the following areas when determining a check pilot's competency:

31.11 RESPONSIBILITIES

A. The check pilot is responsible for: ensuring that all required flight test events are completed in a realistic flight scenario; providing adequate preflight and post flight briefings for the pilot being checked, and objectively evaluating the pilot's performance.

B. An evaluation of the check pilot's ability to actually perform the flight events of the proficiency or competency check is not normally part of a check pilot inspection.

C. POIs must place emphasis on the competence of each check pilot as an examiner.

31.12 QUALIFICATION

A. A check pilot must maintain basic qualification in the duty position in accordance with CAR ’84.

B. Should a question concerning the check pilot's basic pilot or flight engineer qualifications arise, a separate inspection must be conducted to evaluate the pilot's basic skills.

31.13 TRACKING

A. POIs or appropriate inspector must track and manage check pilot inspections. Before designation, each check pilot must be observed performing those duties which will be authorized after designation.

B. After approval, and when resources permit, each check pilot shall be observed annually. When resources do not permit annual observations, observations shall be conducted as frequently as possible.

C. Priority should be placed on observing those check pilots who have not been observed for the longest period of time.

D. POIs should work closely with the aircraft-specific qualified inspectors to ensure the organization database contains current information. It is the POIs responsibility to ensure that the check pilot's organization database file is current.

31.14 EVALUATION OF THE OPERATOR'S TRAINING PROGRAMME

A. The analysis of proficiency or competency check inspection results is an excellent means for a POI to ensure the continued effectiveness of an operator's training programme.

B. The Action report provides a standardized way for POIs to collect and retrieve inspection results.

C. When deficient areas are identified through the Safety Issue Resolution system, the areas should be rectified by changes in the operator's training programme. For example, if inspection comments repeatedly indicate deficiencies in the area of non-precision approaches, the POI should require the operator to emphasize that event in the operator's flight training curriculum segments.

31.15 INSPECTOR RESPONSIBILITIES DURING CHECK PILOT OBSERVATIONS

A. When a proficiency check or competency check is conducted by a company check pilot and observed by an inspector, the inspector should evaluate both the pilot being checked and the competency of the check pilot administering the check.

B. The check pilot is responsible for completing all required checking events, for providing suitable briefings before and after the session, and for fairly and objectively evaluating the pilot being checked.

C. After the check is completed, the inspector is responsible for debriefing the check pilot and the pilot being checked (should the check pilot's debriefing be inadequate).

D. The inspector's primary responsibility is to observe and evaluate the overall conduct of the check.

E. The inspector must refrain from asking questions of the pilot being checked, attempting to control the type or sequence of checking events, and from interfering in any way with the manner in which the check pilot conducts the check.

F. It is the check pilot's responsibility to conduct a complete and proper check. The inspector's responsibility is to evaluate the performance of both the pilot being checked and the check pilot and to properly record the inspection results.

G. Should the check pilot's performance be unsatisfactory, the inspector shall inform the POI using the most expeditious means available.

H. Should the check pilot fail to complete all required items on a check (which has been satisfactory to that point), the inspector shall bring this fact to the attention of the check pilot and ensure that all events are completed.

31.16 DEFICIENCIES

A. While certain training benefits are gained during proficiency or competency checks, the purpose of a check is to have the pilot's state of proficiency evaluated and to ensure that the last training conducted was sufficient to ensure the pilot's proficiency throughout the interim period.

B. If the check pilot conducting the check observes minor deficiencies (and believes that minor instruction may correct the situation) the check pilot may suspend the check temporarily, conduct remedial training, and then resume the check.

31.17 REPEATING EVENTS

Check pilot are authorized to repeat an event if the pilot’s first performance is questionable.

A. In this case, only one repeat of an questionable event is authorized during the check.

B. Problems have occurred in instances where check pilots have merely repeated events until the pilot performed those events within tolerances. This practice is not acceptable and is an abuse of the authority to repeat.

C. All satisfactory maneuvers must occur during the single check. It is contrary to CAR ’84 to continue checks for several sessions.

D. A record must be made of the pilot's unsatisfactory performance. This provides important data about the effectiveness of the training programme and the need for additional training was lost.

E. When conducting training-to-proficiency each event must be satisfactory during the training period.

31.18 UNSATISFACTORY PERFORMANCE

A. Inspectors shall not conduct pilot training during proficiency or competency checks.

B. If an event is unsuccessful, the inspector should complete as much of the remaining flight events as possible or terminate the check. The check must be recorded as unsatisfactory.

31.19 REQUIRED MANEUVERS.

31.19.1 Throughout the maneuvers prescribed in this paragraph, good judgment commensurate with a high level of safety must be demonstrated. In determining whether such judgment has been shown, the person conducting the check considers adherence to approved procedures, actions based on analysis of situations for which there is no prescribed procedure or recommended practice, and qualities of prudence and care in selecting a course of action.

The procedures and maneuvers set forth in this chapter must be performed in a manner that satisfactorily demonstrates knowledge and skill with respect to:

A. The airplane, its systems and components;

B. Proper control of airspeed, configuration, direction, altitude, and attitude in accordance with procedures and limitations contained in the approved Airplane Flight Manual, the certificate holder's operations Manual, check lists, or other approved material appropriate to the airplane type; and

C. Compliance with approach, ATC, or other applicable procedures.

31.19.2PREFLIGHT:

Equipment knowledge should include:

A. Subjects requiring a practical knowledge of the airplane, its power plants, systems, components, operational, and performance factors;

B. Normal, abnormal, and emergency procedures, and the operations and limitations relating thereto; and,

C. The appropriate provisions of the approved Airplane Flight Manual.

Preflight inspection, the pilot must:

A. Conduct an actual visual inspection of the exterior and interior of the airplane, locating each item and explaining briefly the purpose for inspecting it; and

B. Demonstrate the use of the prestart check list, appropriate control system checks, starting procedures, radio and electronic equipment checks, and the selection of proper navigation and communications radio facilities and frequencies prior to flight.

Taxiing:

This maneuver includes taxiing (in the case of a second in command proficiency check to the extent practical from the second in command crew position), sailing, or docking procedures in compliance with instructions issued

by the appropriate traffic control authority or by the person conducting the checks.

Power plant checks:

As appropriate to the airplane type.

31.19.3TAKEOFF:

Normal:

One normal takeoff which, for the purpose of this maneuver, begins when the airplane is taxied into position on the runway to be used.

Instrument:

One takeoff with instrument conditions simulated at or before reaching an altitude of 100 feet above the airport elevation.

Crosswind:

One crosswind takeoff, if practicable, under the existing meteorological, airport, and traffic conditions.

Power plant failure:

One takeoff with a simulated failure of the most critical power plant. (1) At a point after V1 and before V2 that in the judgment of the person conducting the check is appropriate to the airplane type under the prevailing conditions; (2) At a point as close as possible after V1 when V1 and V2 or V2 and Vr are identical;

Rejected Take off:

A rejected takeoff may be performed in an airplane during a normal takeoff run after reaching a reasonable speed determined by giving due consideration to aircraft characteristics, runway length, surface conditions, wind direction and velocity, brake heat energy, and any other pertinent factors that may adversely affect safety or the airplane.

31.19.4INSTRUMENT PROCEDURES.

Area departure and area arrival:

(1) Adhere to actual or simulated ATC clearances (including assigned radials); and (2) Properly use available navigation facilities.

Holding:

This maneuver includes entering, maintaining, and leaving holding patterns. It may be performed in connection with either area departure or area arrival.

ILS and other instrument approaches:

(1) At least one normal ILS approach, (2) At least one manually controlled ILS approach with a simulated failure of one power plant. The simulated failure should occur before initiating the final approach course and must continue to touchdown or through the missed approach procedure. (3) At least one non-precision approach procedure that is representative of the non-precision approach procedures that the certificate holder is likely to use and (4) Demonstration of at least one non-precision approach procedure on a letdown aid other than the approach procedure performed under subparagraph (3) of this paragraph that the certificate holder is approved to use.

Note:

Each instrument approach must be performed according to any procedures and limitations approved for the approach facility used. The instrument approach begins when the airplane is over the initial approach fix for the approach procedure being used (or turned over to the final approach controller in the case of CA approach) and ends when the airplane touches down on the runway or when transition to a missed approach configuration is completed. Instrument conditions need not be simulated below 100 feet above touchdown zone elevation.

Circling approaches:

If the certificate holder is approved for circling minimums below 1000ft/3sm, at least one circling approach must be made under the following conditions:

A. The portion of the approach to the authorized minimum circling approach altitude must be made under simulated instrument conditions.

B. The approach must be made to the authorized minimum circling approach altitude followed by a change in heading and the necessary maneuvering (by visual reference) to maintain a flight path that permits a normal landing on a runway at least 90 from the final approach course of the simulated instrument portion of the approach.

C. The circling approach must be performed without excessive maneuvering, and without exceeding the normal operating limits of the airplane. The angle of bank should not exceed 30□.

D. If local conditions beyond the control of the pilot prohibit the maneuver or prevent it from being performed as required, it may be waived. However, the maneuver may not be waived under this provision for two successive proficiency checks. The circling approach maneuver is not required for a second in command if the certificate holder's manual prohibits a second in command from performing a circling approach.

Missed approach:

A. Each pilot must perform at least one missed approach from an ILS approach.

B. Each pilot in command must perform at least one additional missed approach.

A complete approved missed approach procedure, to a holding fix or other point as required by ATC, must be accomplished at least once. At the discretion of the person conducting the check a simulated power plant failure may be required during any of the missed approaches. These maneuvers may be performed either independently or in conjunction with other maneuvers. At least one missed approach must be performed in flight.

31.19.5INFLIGHT MANEUVERS (MAY BE PERFORMED DURING TRAINING)

Steep turns:

At least one steep turn in each direction must be performed. Each steep turn must involve a bank angle of 45□ with a heading change of at least 180 degrees but not more than 360 degrees.

Approaches to stalls:

For the purpose of this maneuver the required approach to a stall is reached when there is a perceptible buffet or other response to the initial stall entry. Except as provided below there must be at least three approaches to stalls as follows:

A. One must be in the takeoff configuration (except where the airplane uses only a zero flap takeoff configuration);

B. One in a clean configuration; and,

C. One in a landing configuration.

At the discretion of the person conducting the check, one approach to a stall must be performed in one of the above configurations while in a turn with the bank angle between 15 degrees and 30 degrees.

Specific flight characteristics:

Recovery from specific flight characteristics that are peculiar to the airplane type.

Power plant failures:

In addition to specific requirements for maneuvers with simulated power plant failures, the person conducting the check may require a simulated power plant failure at any time during the check.

31.19.6LANDINGS AND APPROACHES TO LANDINGS

Notwithstanding the authorizations for combining maneuvers, at least two actual landings (one to a full stop) must be accomplished. Landings and approaches to landings must include the following, but more than one type may be combined where appropriate:

Normal landing:

Landing in sequence from an ILS instrument approach:

except that if circumstances beyond the control of the pilot prevent an actual landing, the person conducting the check may accept an approach to a point where in his judgment a landing to a full stop could have been made. (RS).

Crosswind landing:

if practical under existing meteorological, airport, and traffic conditions.

Maneuvering to a landing with simulated power plant failure:

A. In the case of 3 engine airplanes, maneuvering to a landing with an approved procedure that approximates the loss of two power plants (center and one outboard engine).

B. In the case of other multiengine airplanes, maneuvering to a landing with a simulated failure of 50 percent of available powerplants, with the simulated loss of power on one side of the airplane.

Landing from a circling approach;

If the certificate holder is approved for circling minimums below 1000, a landing under simulated circling approach conditions. However, when performed in an airplane, if circumstances beyond the control of the pilot prevent a landing, the person conducting the check may accept an approach to a point where, in his judgment, a landing to a full stop could have been made.

Rejected landing:

A rejected landing, including a normal missed approach procedure, that is rejected approximately 50 feet over the runway and approximately over the runway threshold. This maneuver may be combined with instrument, circling, or missed approach procedures, but instrument conditions need not be simulated below 100 feet above the runway.

31.19.7NORMAL AND ABNORMAL PROCEDURES

Each applicant must demonstrate the proper use of as many of the systems and devices listed below as the person conducting the check finds are necessary to determine that the person being checked has a practical knowledge of the use of the systems and devices appropriate to the airplane type:

A. Anti-icing and deicing systems.

B. Autopilot systems.

C. Automatic or other approach aid systems.

D. Stall warning devices, stall avoidance devices, and stability augmentation devices.

E. Airborne radar devices.

F. Any other systems, devices, or aids available.

G. Hydraulic and electrical system failures and malfunctions. Landing gear and flap systems failure or malfunction.

H. Failure of navigation or communications equipment.

31.19.8EMERGENCY PROCEDURES

Each applicant must demonstrate the proper emergency procedures for as many of the emergency situations listed below as the person conducting the check finds are necessary to determine that the person being checked has an adequate knowledge of, and ability to perform, such procedure:

A. Fire in flight.

B. Smoke control.

C. Rapid decompression.

D. Emergency descent.

E. Any other emergency procedures outlined in the appropriate approved.

F. Airplane Flight Manual.

31.19.9 SPECIFIC GUIDANCE FOR THE CONDUCT OF PROFICIENCY CHECKS IN AIRCRAFT

Pilots shall be observed performing interior, exterior, and emergency equipment inspections and performing engine start, taxi, and powerplant checks in accordance with the operator's aircraft operating manual.

A. EXTERIOR INSPECTION.

The exterior inspection is not an extension of the oral phase in which systems knowledge is examined but rather a demonstration of an applicant's ability to perform appropriate safety checks. Inspectors and examiners shall limit questions to only those necessary for determining if an applicant can recognize when a component is in an unsafe condition. The exterior inspection may be conducted before or after the flight test at the inspector's or examiner's discretion.

B. CABIN INSPECTION.

Pilots shall be evaluated on the ability to perform a cabin inspection when this inspection is specified as a pilot responsibility by the operator's aircraft operating manual. Inspectors and examiners should occasionally sample an pilot's knowledge of the location and use of emergency equipment in the cabin, and the operation of cabin doors, even when the cabin inspection is not designated as a flight crewmember responsibility.

C. COCKPIT PREFLIGHT INSPECTION.

A pilot shall be required to complete the cockpit preflight checks using the procedures specified in the operator's aircraft operating manual and using the appropriate checklists. The proper challenges and responses to the checklist must be used. When the flight test is conducted in a flight simulator, it is appropriate for the inspectors or examiners to present minor malfunctions to determine if the pilot is accurately performing the specified checks.

D. ENGINE START PROCEDURES.

A pilot shall be required to perform an engine start using the correct procedures. When the flight test is conducted in a flight simulator, it is appropriate for inspectors and examiners to present an abnormal condition such as a hot-start or malfunctioning air or start valve. The abnormal condition should be carried through to the expected conclusion in line operations, for the purpose of evaluating crew coordination and the pilot's proficiency.

E. TAXIING OR SAILING.

Inspectors and examiners shall evaluate the pilot's ability to safely maneuver the airplane on the surface and to manage outside vigilance while accomplishing cockpit procedures. The pilot must ensure the taxi path is clear of obstructions, comply with local taxi rules and control tower instructions, make proper use of checklists, and maintain control of the crew and airplane.

F. POWERPLANT CHECKS.

Powerplant checks must be accomplished in accordance with the appropriate checklist and procedures before takeoff. In a flight simulator, inspectors and examiners should present appropriate instrument or system malfunctions to determine if the pilot is accurately performing these checks.

31.19.10 TAKEOFF EVENTS.

A pilot shall be required to accomplish each of the following takeoff events. These events may be combined when convenient and practical.

A. NORMAL TAKEOFF.

A normal takeoff is defined as a takeoff beginning from a standing or rolling start (not from a touch and go) with all engines operating normally during the takeoff and initial climb phase.

B. INSTRUMENT TAKEOFF.

An instrument takeoff is defined as one in which instrument conditions are encountered or simulated at or before reaching an altitude of 100 feet above airport elevation. In a flight simulator, the visibility value should be set to the minimum authorized by the operator's operations specifications or for the runway in use. A pilot shall be evaluated on the ability to control the airplane,

including making the transition to instruments as visual cues deteriorate. A pilot must also be evaluated on the planning of the transition to an instrument navigation environment. This event may be conveniently combined with an area departure.

C. ENGINE FAILURE ON TAKEOFF (FOR MULTIENGINE AIRPLANES).

A pilot must demonstrate the ability to maintain control of the airplane and to continue a takeoff with the failure of the most critical powerplant. When the flight test is conducted in an airplane, the failure shall be simulated. The takeoff configuration, airspeeds, and operational procedures must be in accordance with the operator's aircraft operating manual. When the flight test is conducted in two segments (simulator and airplane), this event shall be conducted in the simulator segment of the flight test. This event should not be repeated in the airplane portion of the flight test unless an unusual situation occurs. The engine failure shall be introduced at a speed after V_1 and before V_2, and appropriate to the airplane and the prevailing conditions. When either V_1 and V_2 or V_1 and V_R are identical, the failure shall be introduced as soon as possible after V_1 is passed.

D. REJECTED TAKEOFF.

A rejected takeoff is a potentially hazardous situation that flightcrews must be trained to handle correctly. As a testing event it must be presented in a realistic and meaningful manner. The event is a test of a pilot's ability to correctly respond to a critical situation and to correctly manage the actions necessary for safeguarding the airplane and passengers once the airplane is brought to a stop.

1. When a flight test is conducted in a flight simulator, performance parameters should be adjusted to make the takeoff critical. For example, the temperature and airplane weight can be adjusted so that takeoff performance is runway-limited. Another technique is to lower the visibility and make the runway wet, presenting the pilot with a tracking problem. Inspectors and examiners should take care in selecting the malfunction used to induce the reject response. The malfunction should be one that clearly and unequivocally requires rejection of the takeoff. The malfunction should be introduced at a speed which is as close to V_1 as possible yet still allowing the pilot enough time to perceive and respond to the problem before reaching V_1. It is appropriate for inspectors and examiners to occasionally introduce a problem in a way that leads to an evacuation of the aircraft. This event shall not be waived in a flight simulator.

2. When a flight test is conducted in an airplane, a rejected takeoff at approximately V_1 can be unsafe and can cause damage to the airplane. Inspectors and examiners are expected to use caution when inducing a rejected takeoff in an airplane for flight test purposes. For this event to be

meaningful, it should be introduced at a speed close to V_1. Therefore, inspectors and examiners are authorized to waive this event and should do so when the airplane weight, ambient temperature, and tire limits preclude the event from being conducted in a realistic manner.

3. A pilot must be able to recognize the need to initiate a rejected takeoff, perform the correct procedures in a timely manner, and to bring the airplane to stop on the runway. Once the airplane or flight simulator is brought to a stop, appropriate procedures must be initiated. Consideration must be given to the possibility of overheated brakes and fire.

E. CROSSWIND TAKEOFFS.

A crosswind takeoff from a standing or rolling start (not a touch and go) must be evaluated to the extent practical. When appropriate, a crosswind takeoff may be evaluated simultaneously with other types of takeoffs.

1. When the flight test is conducted in an airplane, inspectors and examiners will usually have very little control over existing meteorological, airport, and traffic conditions. Inspectors and examiners are expected to make a reasonable attempt to evaluate a takeoff on a runway not favorably aligned with the prevailing wind. It will frequently be necessary, however, to evaluate this event with the crosswind component that exists on the active runway.

2. Flight simulators are capable of realistically duplicating crosswinds. Crosswind takeoffs shall be evaluated on all flight tests conducted in a flight simulator. The crosswind component entered in the simulator computer shall be between 10 and 15 knots. Occasionally, however, the crosswind components should be in excess of 15 knots, but must not exceed the crosswind component allowed by the operator's aircraft operating manual (or the maximum demonstrated value given in the AFM). The purpose of testing at such higher crosswind components is to determine whether pilots are being trained throughout the range of the flight envelope.

31.19.11 CLIMB, EN-ROUTE, AND DESCENT.

A. AREA DEPARTURES AND ARRIVALS.

The area departure and arrival events should include intercepting radials, tracking, and climbs or descents with restrictions. Whenever practical, a standard instrument departure or standard arrival should be used. Many of the standard procedures, however, are not suitable for the purpose of testing a pilot's abilities. For example, common radar departures are essentially initial climb instructions for a radar hand-off and provide little opportunity to test a pilot's ability to set up and use the navigation equipment normally used on an area departure. If a suitable published procedure is not available and

circumstances allow, the inspector or examiner should give a clearance that presents the desired tests. Inspectors and examiners should allow pilots to use all installed equipment. The autopilot may or may not be used at the inspector's or examiner's discretion. The pilot's use of navigation equipment, and other crewmembers, and the pilot's ability to adhere to ATC clearances and restrictions shall be evaluated.

B. HOLDING.

Inspectors and examiners should give holding clearances with adequate time available for the pilot to identify the holding fix, select the appropriate speed, and plan the entry. Pilots should be allowed the use of all aids normally available in the cockpit (such as wind drift readouts). At least the initial entry and one complete turn in the holding pattern should be completed before another clearance is issued. The pilot's performance shall be evaluated on the basis of compliance with the holding procedures outlined in the operator's aircraft operating manual, compliance with instructions issued by ATC, and the published holding pattern criteria. Holding airspeed must be as specified by the operator's aircraft operating manual, however it must not be allowed to exceed the regulatory limit. If the operator's manual requires a speed higher than that allowed by regulation, the pilot must resolve the conflict by requesting an amended ATC clearance or by selecting an aircraft configuration in which it is safe to comply with the regulatory speed.

C. STEEP TURNS.

This event consists of a level turn in each direction with a bank of 45 degrees, continuing for at least 180 degrees, but not more than 360 degrees. Airspeed, altitude, and bank angle must be controlled within the tolerances specified in paragraph 7.4 of this chapter. Inspectors and examiners shall direct special attention to a pilot's smoothness, coordination, and orientation.

D. APPROACHES TO STALLS.

Inspectors and examiners shall evaluate the pilot's ability to recognize and recover from an approach to a stall in three separate airplane configurations. The three configurations are the clean configuration, the takeoff configuration, and the landing configuration. When the airplane uses only a zero-flap takeoff configuration, the takeoff configuration and the clean configuration stall are combined and only two stalls are required. At least one stall must be performed while in a turn with a bank angle between 15 and 30 degrees.

1. Approaches to stalls should be entered by increasing the angle of attack smoothly, so that the airspeed decreases at a uniform rate. The use of power during approach to and recovery from stalls should be as specified in the operator's aircraft operating manual.

2. When stalls are performed in an airplane, the operator's minimum entry and recovery altitudes must be observed. When stalls are performed in

a flight simulator or training device, the operator's minimum entry and recovery altitudes need not be observed and an altitude that is realistic from a performance standpoint and convenient (in terms of the sequence of events) may be used.

3. When the flight test is conducted in a flight simulator or training device, inspectors and examiners shall occasionally require a pilot to recover from a high altitude stall. Evaluation of stalls in various flight regimes should be accomplished to determine whether the operator's training program has adequately prepared pilots for flight in those regimes.

4. A pilot must recognize the first indication of the approaching stall and immediately initiate recovery with a minimal loss of altitude. An actual stall should not be allowed to develop. Procedures used must be in accordance with the operator's aircraft operating manual.

E. SPECIFIC FLIGHT CHARACTERISTICS.

This event consists of recovery from flight characteristics specific to the airplane type, such as dutch-roll or a high rate of descent. Inspectors and examiners shall evaluate a pilot on recognition and recovery from these specific flight characteristics, when applicable. The procedures used for recovery must be those specified in the operator's aircraft operating manual.

31.19.12 APPROACHES

The approaches described in this paragraph are required on all proficiency checks. They may be combined when appropriate.

A. ILS APPROACHES.

Inspectors and examiners shall require pilots to fly a minimum of one normal (all engines operative) ILS. In addition, when multiengine airplanes are used, one manually-controlled ILS with a powerplant failure is also required. When the flight test is conducted as a two-segment flight test, a manually-controlled, normal ILS must be flown in the airplane segment of the flight test.

1. When the operator's aircraft operating manual prohibits raw data approaches, the flight directors must be used during the manually-controlled ILS or non-precision approaches. In this case, a raw data approach is not required to complete the flight test.

2. If the operator's aircraft operating manual permits raw data ILS approaches to be conducted, the operator must provide training in the use of raw data for controlling an aircraft during ILS approaches. If the operator's aircraft are equipped with a flight director system, the flight director must be used on at least one manually-controlled ILS approach. While raw data approach is not required to complete a flight test, inspectors and examiners should occasionally require a raw data approach to

determine whether the operator's training program is adequately preparing pilots.

3. The pilot must be able to track the localizer and glideslope smoothly and without significant excursion during the final approach segment. For all raw data and flight director ILS approaches flown in a flight simulator or training device, inspectors and examiners shall require pilots to use a DH of 200 feet above the touchdown zone. The localizer and glideslope indication shall not exceed 1/4 scale deflection at DH. When the ILS indicator is calibrated with the first dot at the 1/2 scale deflection point and a second dot at the full-scale point, the deflection at DH must not exceed half the distance to the first dot. When raw data is used on ILS approaches in an airplane, inspectors and examiners shall require pilots to use a DH of 200 feet above the touchdown zone. When the flight director is used on ILS approaches in an airplane, inspectors and examiners shall require pilots to use a DH of 100 feet above the touchdown zone. However, if the pilot has accomplished an ILS using a 200 foot HAT in the simulator segment of the flight test, the published DH shall be used in the airplane portion of the test. The DH shall be determined by barometric altimeter. The localizer shall not exceed 1/4 scale deviation (1/2 dot) at decision height. The glideslope shall not exceed 1/2 scale deviation (one dot) at decision height. Inspectors and examiners shall inform pilots that this DH is for flight test purposes only and does not correlate to any minimums used in actual operations. If the flight test is being conducted in actual weather conditions, the DH shall be the published decision height.

4. When the operator's airplanes are equipped with autopilot couplers, at least one coupled autopilot ILS approach must be flown. If the autopilot has the capability and the operator is authorized by operations specifications to conduct automatic landings, the coupled approach shall terminate in either an autolanding or a coupled missed approach. When an autoland is conducted, it *shall not* be credited as one of the three required manually-controlled landings. When the flight test is conducted entirely in an aircraft or entirely in a flight simulator, the autopilot coupled approach may be combined with the normal ILS (all-engines operative) approach. This combination is permitted because the pilot's ability to manually control an ILS approach is evaluated on the ILS with an engine out.

5. Qualification check requirements for CAT II and CAT III operations, including the required number and types of approaches are established by the operator's approved training program. If a pilot is simultaneously qualifying for these authorizations during the proficiency check, the approaches discussed in subparagraphs 1, 2, and 3 may be credited toward these requirements when the approach requirements are compatible.

6. Inspectors and examiners shall use a crosswind component of 8 to 10 knots (not to exceed 10 knots) on at least one of the ILS approaches conducted in a flight simulator. The use of this crosswind is to evaluate the pilot's ability to track the localizer and not his ability to accomplish a crosswind landing.

7. When the flight test is conducted in a flight simulator or flight training device, the runway visual range should be set to the minimum value specified for the approach. If the inspector or examiner plans for the pilot to acquire the runway and to continue below DH, the ceiling should be set to a value not more than 50 feet above HAT (the exact value depending on the characteristics of the specific simulator). When the flight test is conducted in an airplane, the vision restriction device must remain in use until just before the airplane arrives at the DH used for the flight test.

8. Flight crew procedures, airplane configuration, and airspeeds must be as specified in the operator's aircraft operating manual. During each phase of the approach, the airspeed must not deviate from the target speed by more than the tolerances. Turbojet airplanes must be stabilized before descending below 1,000 feet above the touchdown zone.

B. NON-PRECISION APPROACHES.

Inspectors and examiners shall require pilots to demonstrate two non-precision instrument approaches that are authorized in the operator's operations specifications. The second approach must be based on a different type of NAVAID than the first approach.

1. Inspectors and examiners shall allow the pilot to use any aid normally available in the cockpit, such as the flight director and drift and ground speed readouts. Many operators train their pilots to perform nonprecision approaches using the autopilot. While this training should be encouraged, at least one non-precision approach must be manually flown on the flight test.

2. When non-precision approaches are conducted in a flight simulator, a crosswind component of 10 to 15 knots shall be used on at least one of the non-precision approaches. The purpose of the crosswind component is to test a pilot's ability to track the approach course, not to evaluate crosswind landings. Crosswind landings, however, may be combined with a non-precision approach.

3. In an airplane, the vision restriction device shall remain in use until the airplane arrives at MDA and a distance from the runway approximating the required visibility for the approach. In a flight simulator or flight training device, inspectors and examiners shall enter a ceiling of not more than 50 feet higher than the published MDA. A visibility value of not more than 1/4 mile greater than the published minimums value

shall be used, depending on the characteristics of the particular flight simulator or training device.

4. Pilots must remain within 5 degrees of the approach course. The reason for this tolerance is terrain clearance. When tracking is accomplished by means of a bearing pointer only, the tolerance is ± 5 degrees of the final approach course. When tracking a localizer signal, the tolerance is less than a full-scale deviation on the course deviation indicator. When tracking a VOR signal, the tolerance is a 1/2 scale deviation of the course deviation indicator. Also, at the visual descent point or its equivalent, the aircraft must be in a position that it can be aligned with the runway without excessive maneuvering. Turbojet airplanes must be stabilized before descending below the MDA or 500 feet, whichever is lower.

C. CIRCLING APPROACH MANEUVER.

Operators are not required to train flight crewmembers in circling approach maneuvers, if the operator's manual prohibits such maneuvers with a ceiling below 1000 feet and a visibility of less than 3 miles. Inspectors and examiners shall waive this event if the operator does not train flight crewmembers for the maneuver.

1. For the purpose of flight testing, the visual maneuvering portion of a circling maneuver begins at the circling MDA of a non-precision approach and requires a change in heading from the final approach course to the runway heading of at least 90 degrees. The inspector or examiner, however, may use his authority to modify this event. For example, when traffic conditions preclude a circling approach, if tower approval is attained, the visual portion of the event can be entered from a modified VFR traffic pattern at a point downwind and abeam the touchdown point.

2. The angle of bank for a circling maneuver should not exceed 30 degrees. Altitude and airspeed must not exceed the tolerance limits. The airplane must not descend below MDA until the runway environment is clearly visible to the pilot, and the airplane is in a position for a normal descent to the touchdown point. Turbojet airplanes must be stabilized in the landing configuration before descending below the MDA or 500 feet above touchdown zone elevation, whichever is lower.

D. MANEUVER TO A LANDING WITH 50% OF POWERPLANTS INOPERATIVE.

Inspectors and examiners shall require a pilot to demonstrate an approach and landing with 50% of powerplants inoperative.

1. Inspectors and examiners should introduce this event in a realistic manner. Consideration should be given to the airplane weight, atmospheric conditions, and airplane position. The airplane position, when the engine failure is introduced (second engine in a three- or four-engine airplane) should provide enough room for the pilot to maneuver the aircraft. In the simulator, the weight should be adjusted to simulate realistic conditions but still allow the pilot enough time to exercise judgment. In a three-engine airplane, this event must be performed with the center and an outboard engine failed. In a four-engine airplane, both powerplant failures must be on the same side.

2. In two-engine airplanes, the engine-out ILS may be credited simultaneously with this event. In three- and four-engine aircraft, this event should be conducted in visual conditions. A visual pattern should be used rather than a vector to the final approach, so that the pilot's judgment with respect to maneuvering the airplane can be evaluated. When this event is conducted in a flight simulator, the electronic glideslope or VASI shall not be made available for the pilot's use. In the airplane, it may not be possible to have the VASI's turned off. In daylight conditions, however, inspectors and examiners should request that the VASI be turned off. In an airplane at night, an electronic glideslope or VASI must be available and used.

Note: *An approach with a simulated failure of the most critical powerplant must always be performed in the airplane segment of a two-segment flight test. That event is required in the airplane segment, even when a maneuver and landing with 50% of powerplants inoperative has already been previously accomplished in a flight simulator.*

E. NO-FLAP OR PARTIAL-FLAP APPROACH.

Inspectors and examiners shall require a pilot to perform a no-flap approach in all airplanes except those airplanes which have alternate flap extension procedures and for which it has been determined that no-flap approaches are not required. If a no-flap approach is not required, a partial-flap approach will be accomplished. In this case, inspectors and examiners are only required to evaluate a pilot's demonstration of a partial-flap approach. However, inspectors and examiners may evaluate pilots conducting partial-flap or no-flap approaches anytime procedures for such approaches are published in the operator's aircraft operating manual.

1. For either a partial or no-flap approach, the limitations specified for the use of VASI and electronic glideslope guidance in the 50%

engine failure maneuver apply. The approach shall be flown from a visual pattern from at least a downwind position, so that the pilot may be evaluated on planning for the approach. The approach should be presented in a realistic manner. In a flight simulator, inspectors and examiners shall adjust the landing weight to require a pilot to exercise judgment in matters such as approach speed and runway limitations.

2. A touchdown from a no-flap or partial-flap approach is not required and shall not be attempted in an airplane. The approach must be flown to the point that the inspector or examiner can determine whether the landing would or would not occur in the touchdown zone. In a flight simulator, the landing must be completed to a full stop so that the pilot's ability to control the airplane and to use correct procedures may be evaluated.

Note: *The events required in subparagraphs d and e should be conducted in a flight simulator whenever practical. These events should not be repeated in the airplane segment of the flight test, unless an unusual situation occurs*.

F. ACCEPTABLE PERFORMANCE FOR APPROACH EVENTS.

The airspeed and altitude on downwind and base leg, or on an intercept to final approach must be controlled within the tolerance limits. The airspeed on final approach must be adjusted for wind and gusts in accordance with the operator's aircraft flight manual. The airspeed must be controlled at the adjusted value. The approach angle must be controlled and be appropriate to the airplane and approach being flown. If a windshear or a ground proximity warning should occur, a pilot must respond in a prompt and positive manner. For turbojets, the approach must be stabilized, the airplane in the landing configuration, with a sink rate of less than 1,000 FPM, not later than the following heights:

1. For all straight-in instrument approaches, the approach must be stabilized before descending below 1,000 feet above the airport or touchdown zone.

2. For visual approaches and landings, the approach shall be stabilized before descending below 500 feet above the airport elevation.

3. For the final segment of a circling approach maneuver, the approach must be stabilized 500 feet above the airport elevation or, at the MDA, whichever is lower.

Note: *Use of the stabilized concept is mandatory for all turbojet aircraft operations. It is recommended for all propeller-driven*

aircraft and rotorcraft when conducting operations in IFR weather conditions.

31.19.13 LANDING EVENTS.

A total of three manually-controlled landings must be accomplished on all proficiency checks. When a two-segment, flight simulator and airplane flight test is conducted, a minimum of three manually-controlled landings must be performed in the airplane. If the flight test is conducted in an amphibious airplane, one landing must be on water. The required events are as follows:

A. NORMAL LANDINGS.

A normal landing is defined as a manually-controlled landing in the normal landing configuration (as specified in the operator's aircraft operating manual), with normal power available, and without reference to an electronic glideslope. A normal landing can be accomplished from either a visual pattern or from a non-precision approach.

B. CROSSWIND LANDINGS.

A manually-controlled landing with a crosswind must be accomplished on all flight tests. The crosswind landing may be combined with any other landing event.

1. When the flight test is conducted in an airplane, inspectors and examiners usually have little control over existing meteorological, airport, and traffic conditions. As such, an inspector or examiner is expected to make a reasonable attempt to evaluate a landing on a runway not favorably aligned with the prevailing wind. It will frequently be necessary, however, to evaluate this event with the crosswind component currently existing on the active runway.

2. Flight simulators are capable of realistically duplicating a crosswind for landing. Crosswind landings must be evaluated on all flight tests conducted in flight simulators. The crosswind component entered in the simulator computer shall be between 10 to 15 knots. Occasionally, however, the crosswind components should be in excess of 15 knots, but must not exceed the crosswind component allowed by the operator's aircraft operating manual (or the maximum demonstrated value given in the AFM). The purpose of testing at such higher crosswind components is to determine whether pilots are being trained throughout the range of the flight envelope. Crosswind landings should normally be performed from a VFR traffic pattern, but may be accomplished from a non-precision approach.

C. LANDING IN SEQUENCE FROM AN ILS APPROACH.

On the landing from an ILS approach, the runway environment should become visible to the pilot as close as possible to the DH being used for the flight test. The pilot must complete the landing without excessive maneuvering and within the touchdown zone. The approach angle must not be erratic, excessively steep, or shallow in the visual segment.

D. REJECTED LANDING.

The rejected landing shall be initiated from a point approximately 50 feet above the runway. This event may be combined with an instrument missed approach.

E. ENGINE-OUT LANDING.

One landing with the most critical powerplant inoperative must be evaluated. When a two-segment flight test is conducted, this event must be performed in the airplane. When conducted in an airplane, the engine failure shall be simulated.

F. LANDING WITH 50% OF POWERPLANTS INOPERATIVE.

A landing with 50% of powerplants inoperative must be evaluated. In a three-engine airplane, the event must be performed with the center and one outboard engine inoperative. In a four-engine airplane both powerplant failures must be on the same side. When this event is conducted in an airplane, the engine failures shall be simulated.

G. NO-FLAP OR PARTIAL-FLAP LANDINGS.

No-flap or partial-flap landings are not required to complete the check. When the proficiency check is accomplished in an airplane i actual flight, a touchdown from a no-flap or partial-flap approach is not required and shall not be attempted. The approach must be flown to the point that the inspector or examiner can determine whether the landing would or would not occur in the touchdown zone. In a flight simulator, the landing should be completed to a full stop so that the pilot's abilities to control the aircraft and use correct procedures under abnormal circumstances may be evaluated. For example, the aircraft might have a pitch-up tendency with spoiler extension in the no-flap or partial-flap landing configuration.

H. ACCEPTABLE PERFORMANCE FOR LANDING EVENTS.

Landings must be in the touchdown zone, at the correct speed for the airplane, without excessive float, and on runway center line. The rate of descent at touchdown must be controlled to an acceptable rate for the airplane involved. Side load on the landing gear must not be excessive, and positive directional control must be maintained through the rollout. Management of spoilers and thrust reversers must be in accordance with the operator's aircraft operating manual.

31.19.14 MISSED APPROACH EVENTS.

Missed approaches from two separate instrument approaches are required to complete the flight test. At least one missed approach must be flown through the entire missed approach procedure, unless traffic or ATC restrictions prevent completing the entire procedure. One missed approach is required from an ILS. When the flight test is conducted in a multiengine airplane that has a single-engine climb capability, one missed approach should be accomplished with the most critical powerplant inoperative. The engine-out and ILS missed approaches may be combined, however to complete the flight test, at least two missed approaches are required. When the flight test is a two-segment flight test, the engine-out missed approach should be accomplished in the simulator segment.

1. A missed approach from an approach with 50% of powerplants inoperative is not required to complete the flight test for three- and four-engine airplanes. However, when procedures for 50% of powerplant-inoperative missed approaches are published in the operator's aircraft operating manual, inspectors and examiners may evaluate the event to determine if pilots are being trained to proficiency in the event. When this event is conducted in a three-engine airplane, the center and one outboard engine must be inoperative. When this event is conducted in a four-engine airplane, two engines on the same side must be inoperative. When the missed approach event is conducted in an airplane, the engine failures shall be simulated.

2. When a flight test is conducted in a flight simulator or flight training device, inspectors and examiners should make use of the "trouble buttons," as well as weather, to induce the missed approach decision. For example, many flight simulators have provisions to off-set the localizer so that the airplane is not in a position to continue the approach below DH.

3. Pilots must promptly execute the missed approach procedure if the runway environment is not acquired at DH on an ILS approach. If the runway environment is not in sight on a nonprecision approach, or if the aircraft is not in a position to land at the missed approach point, the pilot must initiate a missed approach. Should conditions prevent continuation of any type of approach at any point, the pilot must initiate a missed approach. For example, a missed approach above DH might be required when an instrument failure flag appears. A missed approach is required if the aircraft is below DH or MDA and cannot be properly aligned with the runway or if the pilot loses sight of the runway environment. A pilot must adhere to the published missed approach or the instructions given by ATC and observe the procedures and limitations in the operator's aircraft operating manual. A pilot must properly use the available aids and other

crewmembers when making the transition back to the instrument navigation environment.

31.19.15 NORMAL AND ABNORMAL PROCEDURES

Inspectors and examiners shall require a pilot to demonstrate the proper use of as many of the airplanes systems and devices as necessary to determine if the pilot has a practical knowledge of the use of these systems. Evaluation of normal and abnormal procedures can usually be accomplished in conjunction with other events and does not normally require a specific event to test the pilot's use of the airplane's systems and devices. A pilot's performance must be evaluated on the maintenance of aircraft control, the ability to recognize and analyze abnormal indications, and the ability to apply corrective procedures in a timely manner. Systems to be evaluated include, but are not limited to, the following:

a. Anti-icing and deicing systems

b. Autopilot systems

c. Automatic or other approach system aids

d. Stall warning devices, stall avoidance devices, and stability augmentation devices

e. Airborne radar devices

f. Any other available systems, devices, or aids (such as flight management systems)

31.19.16 EMERGENCY PROCEDURE EVENTS.

A pilot must be able to competently operate all installed emergency equipment and to correctly apply the procedures specified in the operator's aircraft operating manual.

A. POWERPLANT FAILURES.

Inspectors and examiners may introduce malfunctions requiring an engine shutdown at any time during the flight test. This provision is not intended as authority to require an unrealistic number of failures, but to permit such failures at times when they are most appropriate. Powerplant failures should be limited to those necessary for determining a pilot's proficiency. A pilot must promptly identify the inoperative engine and initiate correct action while maneuvering the airplane safely. If the airplane is not capable of maintaining altitude with an engine inoperative, the pilot is expected to maintain the best

engine-out climb speed while descending. Smooth application of flight controls and proper trim are required.

B. OTHER EMERGENCY PROCEDURES.

Inspectors and examiners should sample as many of the following events as necessary for determining whether a pilot is proficient in identifying and responding to emergency situations:

1. Fire in flight
2. Smoke control
3. Rapid decompression
4. Emergency descent (with and without structural damage)
5. Hydraulic and electrical system failure or malfunctions (if safe and appropriate)
6. Landing gear and flap systems failure or malfunctions
7. Navigation or communications equipment failure
8. Any other emergency procedures outlined in the operator's aircraft operating manual or training program

31.19.17 STANDARDS OF ACCEPTABLE PERFORMANCE

An air transport pilot must possess the highest degree of piloting skills, and must be the master of the airplane, the crew, and the situation throughout the aircraft's operational envelope. Inspectors and examiners shall sample a pilot's ability to safely and practically operate the aircraft throughout the range of the approved operational envelope. The determination of whether a pilot's performance is acceptable or not is derived from the experience and judgment of the inspector or examiner. It is imperative that inspectors and examiners be fair and consistent when making these determinations. The airspeed, altitude, and heading standards which are listed below will be used in making their determinations. These standards must be applied with consideration for the prevailing conditions. Weather, aircraft responsiveness, traffic, and other factors beyond a pilot's control may cause the pilot to briefly deviate from a standard. For example, the airspeed tolerances for a final approach should be read as the tolerance allowed solely for control manipulation errors. In smooth air the pilot should be able to remain within these tolerances once stabilized on the approach. If atmospheric conditions are causing airspeed fluctuations, it may be physically impossible for the speed to be controlled within the tolerances specified. The pilot is expected to adhere to the procedures for adjusting the target speed as specified in the

operator's aircraft operating manual. In such situations, a pilot who makes determined efforts, and is generally successful in remaining within prescribed standards, and who does not deviate to the extent safety is compromised, should be considered to have met the standards. The pilot's ability to remain within the prescribed standard limits, however, is not the only criteria for acceptable performance. The pilot's performance must be such that the inspector or examiner is never seriously in doubt of the successful outcome of each event of the flight test.

Heading, Altitude, and Airspeed parameters other than during Approaches

While maneuvering in all flight regimes other than during approach and landing, the following standards will be observed:

1. *Heading:* Within 10 degrees of assigned or intended heading.
2. *Altitude:* Within 100' of assigned or intended altitude.
3. *Airspeed:* Within 10 knots of assigned or intended airspeed.

31.20 ADDITIONAL INFORMATION ON PROFICIENCY & COMPETENCY CHECKS

31.20.1 OBJECTIVES OF PROFICIENCY & COMPETENCY CHECK INSPECTIONS

A. The surveillance of an operator's proficiency and competency checks provides the CAAB with information about the effectiveness of the operator's training and qualification programmes.

B. The objectives of a POI or an inspector conducting a proficiency or competency check inspection are as follows:

1. To evaluate individual airmen performing their duties and responsibilities
2. To evaluate individual check pilots performing their duties and responsibilities
3. To assess the effectiveness of the operator's training programme
4. To identify operational procedures, manuals, or checklists which are deficient
5. To assess the effectiveness of the operator's simulators and equipment
6. To evaluate the effectiveness of the operator's trend analysis, standardization, and quality control programme

31.20.2 CHECK PILOT PROGRAMMES

A. AOC holders are required to establish a check pilot programme for conducting the proficiency and competency checks required by the CAR ’84.
Part 14. Principal operations inspectors (POIs) have the surveillance responsibility for an operator's check pilot programme.

B. This function can be accomplished directly for small operators and indirectly through coordination with other inspectors for large, complex operators. POIs or their representatives are authorised to observe these checks at any time as a check pilot surveillance job function and if aircraft qualified to administer proficiency and competency checks.

31.20.3PROFICIENCY & COMPETENCY CHECK INSPECTION PROCEDURES

Before conducting a proficiency and competency check inspection, inspectors must become thoroughly familiar with the operator's manuals. Inspectors may also be required to qualify in the operation of the aircraft, simulators, or training devices.

31.20.3.1 AREAS OF FAMILIARIZATION

Inspectors must be familiar with the following areas before conducting proficiency and competency check inspections:

A. Inspector, safety pilot, and crew qualification for simulators, flight training devices, and aircraft

B. Acceptable methods for presenting the maneuvers and events of the check in simulators, flight training devices, and aircraft

C. Acceptable standards of performance for proficiency and competency checks

31.20.3.2 INSPECTION AREAS

Inspectors should use the following guidance pertaining to specific inspection areas during a proficiency or competency inspection:

31.20.3.2.1 PILOT COMPETENCY

A. This inspection area applies to the knowledge, ability and proficiency of the pilot receiving the check.

B. A pilot must perform specific events in an aircraft, an aircraft simulator, a flight training device, or a

combination thereof, during a proficiency or competency check.

C. Through observation of the check ride, the inspector can determine if the pilot has an acceptable level of aircraft systems knowledge and is competent in the performance of normal, abnormal, and emergency flight procedures.

D. In addition, the inspector can observe whether the pilot complies with company policy, possesses current manuals, and possesses appropriate certificates and ratings.

E. The check pilot must use the CAAB Proficiency Check Form to record the check, unless the CAAB has approved a different form for the company.

31.20.3.2.2 CHECK PILOT COMPETENCY

A. The POI or a qualified representative must periodically observe company check pilot conducting proficiency or competency checks.

B. These observations enable the POI to evaluate both the individual check pilot performing check pilot duties and the company's entire check pilot programme.

C. This inspection area applies to the manner in which a check pilot conducts the check, the accuracy and completeness of the check pilot's observations, and the validity of the outcome.

31.20.4 EVALUATION OF CHECK PILOT

Inspectors should evaluate the following areas when determining a check pilot's competency:

31.20.4.1 RESPONSIBILITIES

A. The check pilot is responsible for: ensuring that all required flight test events are completed in a realistic flight scenario; providing adequate preflight and

postflight briefings for the pilot being checked, and objectively evaluating the pilot's performance.

B. An evaluation of the check pilot's ability to actually perform the flight events of the proficiency or competency check is not normally part of a check pilot inspection.

C. POIs must place emphasis on the competence of each check pilot as an examiner.

31.20.4.2 QUALIFICATION

A. A check pilot must maintain basic qualification in the duty position in accordance with CAR '84.

B. Should a question concerning the check pilot's basic pilot or flight engineer qualifications arise, a separate inspection under CAR '84 must be conducted to evaluate the pilot's basic skills.

31.20.4.3 TRACKING

A. Through the Action system, POIs must track and manage check pilot inspections. Before designation, each check pilot must be observed performing those duties which will be authorized after designation.

B. After approval, and when resources permit, each check pilot shall be observed annually. When resources do not permit annual observations, observations shall be conducted as frequently as possible.

C. Priority should be placed on observing those check pilots who have not been observed for the longest period of time.

D. POIs should work closely with the aircraft-specific qualified inspectors to ensure the organization database contains current information. It is the POIs responsibility to ensure that the check pilot's organization database file is current.

31.20.5 EVALUATION OF THE OPERATOR'S TRAINING PROGRAMME

A. The analysis of proficiency or competency check inspection results is an excellent means for a POI to ensure the continued effectiveness of an operator's training programme.

B. The Action report provides a standardized way for POIs to collect and retrieve inspection results.

C. When deficient areas are identified through the Safety Issue Resolution system, the areas should be rectified by changes in the operator's training programme.

1. For example, if inspection comments repeatedly indicate deficiencies in the area of non-precision approaches, the POI should require the operator to emphasize that event in the operator's flight training curriculum segments.

31.20.6 MANUALS, PROCEDURES, AND CHECKLISTS

A. Inspectors can use the data from proficiency or competency checks, combined with data from other inspections (such as cockpit, en-route, and ramp inspections), to identify deficiencies in manuals, procedures, or checklists previously approved or accepted by the CAAB.

B. Checklist procedures, MEL/CDL procedures, and specific flight maneuvers and procedures are operational areas that may require change to ensure compliance with the CAR ‘84 or safe operating practices.

31.20.6.1 EQUIPMENT

This inspection area refers to the condition of the aircraft, simulators, or training devices used during the check. When evaluating the equipment, inspectors should determine the following:

A. Whether the required inspections have been conducted

B. Whether the observed discrepancies were recorded on maintenance logs

C. Whether the equipment is in an adequate state of repair

D. Whether the equipment operates properly

31.20.6.2 EFFECTIVENESS OF SAFETY AUDIT PROGRAMME

A. POIs must evaluate the effectiveness of an operator's trend analysis, standardization, and quality control programme.

B. Operators should collect, record, and analyze the results from proficiency and competency checks to detect and correct deficiencies in training programmes, procedures, and checklists.

C. POIs shall encourage operators with more than 10 crewmembers in any duty position to establish trend analysis.

D. Inspectors conducting a series of proficiency and competency checks will, over time, observe changes being made by the operator.

31.20.7 INSPECTOR RESPONSIBILITIES DURING CHECK PILOT OBSERVATIONS

A. When a proficiency check or competency check is conducted by a company check pilot and observed by an inspector, the inspector should evaluate both the pilot being checked and the competency of the check pilot administering the check.

B. The check pilot is responsible for completing all required checking events, for providing suitable briefings before and after the session, and for fairly and objectively evaluating the pilot being checked.

C. After the check is completed, the inspector is responsible for debriefing the check pilot and the pilot being checked (should the check pilot's debriefing be inadequate).

D. The inspector's primary responsibility is to observe and evaluate the overall conduct of the check.

E. The inspector must refrain from asking questions of the pilot being checked, attempting to control the type or sequence of checking events, and from interfering in any way with the manner in which the check pilot conducts the check.

F. It is the check pilot's responsibility to conduct a complete and proper check. The inspector's responsibility is to evaluate the performance of both the pilot being checked and the check pilot and to properly record the inspection results.

1. Should the check pilot's performance be unsatisfactory, the inspector shall inform the POI using the most expeditious means available.

2. Should the check pilot fail to complete all required items on a check (which has been satisfactory to that point), the inspector shall bring this fact to the attention of the check pilot and ensure that all events are completed.

31.20.8 DEFICIENCIES

A. While certain training benefits are gained during proficiency or competency checks, the purpose of a check is to have the pilot's state of proficiency evaluated and to ensure that the last training conducted was sufficient to ensure the pilot's proficiency throughout the interim period.

B. If the check pilot conducting the check observes minor deficiencies (and believes that minor instruction may correct the situation) the check pilot may suspend the check temporarily, conduct remedial training, and then resume the check.

31.20.8.1 REPEATING EVENTS

Check pilot are authorized to repeat an event if the pilot's first performance is questionable.

A. In this case, only one repeat of an questionable event is authorised during the check.

B. Problems have occurred in instances where check pilots have merely repeated events until the pilot performed those events within tolerances. This practice is not acceptable and is an
C. abuse of the authority to repeat.

D. All satisfactory maneuvers must occur during the single check. It is contrary to CAR '84 to continue checks for several sessions.

E. A record must be made of the pilot's unsatisfactory performance. This provides important data about the effectiveness of the training programme and the need for additional training was lost.

F. When conducting training-to-proficiency each event must be satisfactory during the training period.

31.20.8.2 UNSATISFACTORY PERFORMANCE

A. Inspectors shall not conduct pilot training during proficiency or competency checks.

B. If an event is unsuccessful, the inspector should complete as much of the remaining flight events as possible or terminate the check. The check must be recorded as unsatisfactory.

31.21 MULTI-PILOT/CREW PROFICIENCY CHECK GUIDE

For Multi-Pilot/Crew Proficiency Check Guide, Operations Inspectors of CAAB shall refer to Part-II, Chapter-68, Appendix-35.

CHAPTER-32

AIR OPERATOR ADMINISTRATION (EVALUATING AND APPROVING TRAINING PROGRAMMES AND CURRICULUMS)

32.1 GENERAL

A. Training curriculum approvals follow the five phase general process for approval or acceptance.

B. The basic steps of this process must be followed:

1. Each phase, however, may be adjusted to accommodate existing circumstances. Depending on the complexity of the operator's request and the availability of CAAB resources, the approval process may be accomplished in only a few days, or the process may last many months.

2. The approval process applies to each operator requesting approval of a new curriculum or a revision to a currently approved curriculum. Inherent in the approval process is the CAAB's responsibility to deny approval of any training which does not meet regulatory requirements or which has been found deficient.

3. Training curriculums which have been granted approval and later found either to be in conflict with regulatory requirements or to be ineffective, must be appropriately modified by the operator, or DFSR's approval must be withdrawn.

4. This evaluation aid establishes procedures for granting approval or withdrawing approval of all or part of a training curriculum.

C. The training approval process discussed in this section applies AOC holders' training approved under CAR '84.

32.2 INITIATING THE APPROVAL PROCESS - PHASE ONE

32.2.1 The training approval process can be initiated by either the operator or the CAAB as follows:

A. Operator Initiated: The operator informs the CAAB that it is planning to establish a new training curriculum or to change an existing curriculum.

B. CAAB Initiated: The CAAB informs an operator that revisions to its training programme are required based on recently acquired information relative to training techniques, aviation technology, aircraft operational history, operator performance, or regulatory changes.

32.2.2 When a proposal is initiated by the operator, one of the first steps the POI or certification project manager (CPM) should take is to obtain the following basic information:

A. Type of operation

B. Type of equipment to be operated

C. Geographic areas of operation

D. Proposed training schedules

E. Proposed date of revenue operations

F. Training Programme

G. Training Org-Facilities-Equipment

H. Training Curricula & Checks

I. Proposed contract training, if any

J. Type of simulator to be used, if any

K. Facilities to be used

32.2.3 Early in the process, the CAAB and the operator should establish, through discussion, a common understanding of both the regulatory training requirements and the direction and guidance provided in the CAR ’84 and associated ANOs.

A. The POI or CPM and the operator must examine the entire operation to ensure that any training necessitated by operational requirements, authorizations, or limitations (such as those in the operations specifications, minimum equipment lists, deviations, and exemptions), is included in the operator's training curriculums.

B. The training programme is the area most affected by operational changes. The POI should review all general requirements in the regulations and in this manual; that apply to the proposed operation.

C. The POI should be aware of changes to the information initially provided by the operator. The POI should discuss with the operator the sequence and timing of events which occur in the development and the granting of initial and final approval of a training curriculum.

D. If the operator's proposal involves complex operations (such as long range navigation or polar navigation operations), the POI must consult appropriate relevant documents and be prepared to advise the operator during this phase. In such a case, the POI should also determine whether assistance from an a qualified specialist is necessary.

32.2.4 A CAAB inspector should be prepared to provide advice to an operator during training curriculum development. During phase one, the operator must be informed of the procedure for requesting initial approval and of the types of additional supporting information which the POI will require the operator to submit.

32.2.5 An inspector should be prepared to provide advice and guidance to the operator on the following:

A. The general format and content of curriculums, curriculum segments, training modules, and flight;

B. maneuvers and procedures documents;

C. Courseware;

D. Facilities;

E. Qualifications of instructor personnel; and,

F. Other areas of the operator's proposed training programme.

32.2.6 Early CAAB involvement is also important for the following reasons:

A. Inspector advice and guidance during development of training may provide a useful service to the operator. This advice may save the operator and the CAAB from unnecessary use of resources. It may also prevent the operator from submitting a training curriculum proposal which would not be approved by the CAAB.

B. The POI can become familiar with the material the operator intends to submit. This facilitates review of the proposal before the granting of initial approval.

C. The POI can begin planning long range needs, such as qualification of inspectors on the operator's aircraft, and evaluation of the programme's overall effectiveness.

32.2.7 The operator should be aware of the potential for delays in approval. Such delays may be caused by any of the following reasons:

A. The applicant for a certificate not meeting the schedule of events;

B. The operator failing to expeditiously transmit information to the CAAB;

C. A change in plans, for example, changing either the training locations or the type of aircraft;

D. Inadequate, insufficient, or unclear material submitted in phase two;

E. Deficiencies in the training discovered during phases two, three, or four;

F. Delays in obtaining equipment (such as simulators) or simulator approval; and,

G. Higher priority work (such as accidents) assigned to the POI or other inspectors associated with the training approval process.

32.3 REQUESTS FOR INITIAL APPROVAL - PHASE TWO

A. Phase two begins when the operator submits its training proposal in writing, for initial approval, to the CAAB.

1. The operator is required to submit to the CAAB an outline of each curriculum or curriculum segment and any additional relevant supporting information requested by the POI.

2. These outlines, any additional supporting information, and a letter must be submitted to the CAAB.

3. This letter should request CAAB approval of the training curriculum.

4. Two copies of each curriculum or curriculum segment outline should be forwarded along with the letter of request to the CAAB.

B. Each operator must submit its own specific curriculum segment outlines appropriate for its type of aircraft and kinds of operations.

1. These outlines may differ from one operator to another and from one category of training to another in terms of format, detail, and presentation.

2. Each curriculum should be easy to revise and should contain a method for controlling revisions, such as a revision numbering system.

a. As the operator's proposals solidify, any significant requirements which may affect CAAB inspector resources should be discussed with the DFSR;

b. A CAAB inspector may need training on an operator's aircraft type; and,

c. Requests for consultant inspectors or the appointment of Designated Certification Representatives to assist in the training approval process may be necessary.

3. Curriculums for different duty positions may be combined in one document, provided the positions are specifically identified and any differences in instruction are specified for each duty position.

4. Each curriculum and curriculum segment outline must include the following information:

   a. Operator's name

   b. Type of aircraft

   c. Duty position

   d. Title of curriculum and/or curriculum segment including the category of training

   e. Consecutive page numbers

   f. Page revision control dates and revision numbers

C. Each curriculum and curriculum segment must also include the following items, as appropriate:

1. Prerequisites prescribed by CAR '84 or required by the operator for enrollment in the curriculum

2. Statements of objectives of the entire curriculum and a statement of the objective of each curriculum segment

3. A list of each training device, mockup, system trainer, procedures trainer, simulator, and other training aids which require CAAB approval (The curriculum may contain references to other documents in which the approved devices, simulators, and aids, are listed.)

4. Descriptions or pictorial displays of normal, abnormal, and emergency maneuvers and procedures which are intended for use in the curriculum, when appropriate (These descriptions or pictorial displays, when grouped together, are commonly referred to as the flight maneuvers and procedures document. The operator may choose to present detailed descriptions and pictorial displays of flight maneuvers and procedures in other manuals. For example, the flight maneuvers and procedures document may be described in an aircraft operating manual. However, as a required part of the training curriculum, it must either be submitted as part of the curriculum or be appropriately referenced in the curriculum.)

5. An outline of each training module within each curriculum segment (Each module should contain sufficient detail to ensure that the main features of the principal elements or events will be addressed during instruction.)

6. Training hours which will be applied to each curriculum segment and the total curriculum hours.

7. The checking and qualification modules of the qualification curriculum segment used to determine successful course completion, including any qualification requirements for crewmembers or dispatchers to serve in commercial air transport operations (such as initial operating experience, line checks, operating familiarization).

32.3.1 ADDITIONAL RELEVANT SUPPORTING INFORMATION - PHASE TWO

A. An operator must submit any additional relevant supporting information requested by the POI.

B. This information is that additional information the POI finds necessary for determining whether the proposed training programme is feasible and adequately supported. It is information which would be difficult to include in a curriculum outline format.

C. The type and amount of supporting information needed will vary depending on the type of training, aircraft types to be operated, and kinds of operations.

D. The POI must determine the appropriate types of supporting information to be required.

E. This should be limited to only that information critical to the determination of the proposed training programme's acceptability.

F. The following list of types of relevant supporting information is not all-inclusive, but includes information that is typical:

1. A description of facilities is appropriate if the POI is unfamiliar with the facilities, or if the facilities are not readily available for examination.

2. A list of ground and flight instructors and their qualifications may be requested. This information is particularly important if the operator intends to use contract instructors.

3. The POI should determine whether the proposed instructors meet regulatory requirements and if they are qualified to conduct training.

4. A detailed description of each flight simulator and training device is appropriate when the simulator or training device is not readily available for the POI's examination.

5. This detailed description is particularly important when the operator intends to contract for a specific flight simulator or training device. This

description should provide sufficiently detailed information to enable the POI to determine whether the training and checking to be conducted is appropriate for the level of the flight simulator or training device to be used.

6. A detailed description of minimum student qualifications and enrollment prerequisites is appropriate when such prerequisites are not described in detail in the curriculum. Examples of these prerequisites which may need to be detailed as supporting information include: type of airman license, aircraft type qualifications, previous training programmes, minimum flight

7. hours, experience with other AOC holders, and recency of experience. This description may be useful to the POI when determining whether the proposed amount of detail outlined in training modules and the proposed training hours are adequate.

8. Copies of training forms and records to be used for recording student progress and the completion of training may be required. This ensures the operator has planned for the record keeping requirements. This type of supporting information shall be required of applicants for an air operator certificate. It may also be required of operators with any significant revision to existing training programmes. These forms, records, or computer transmittal worksheets must be designed so that attendance and course completion information is recorded and retrievable for verifying regulatory compliance.

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

32.3.2 INITIAL REVIEW OF REQUESTS FOR APPROVAL - PHASE TWO

A. In phase two the POI must review the submitted training curriculum and supporting information for completeness, general content, and overall quality.

B. A detailed examination of the documents is not required during phase two. If after initial review, the submission appears to be complete and of acceptable quality, or if the deficiencies are immediately brought to the operator's attention and can be quickly resolved, the POI may begin the phase three in-depth review.

C. If the submission is determined to be incomplete or obviously unacceptable, the approval process is terminated and the POI must immediately return the documents (preferably within 15 working days) with an explanation of the deficiencies.

D. The documents must be immediately returned, so the operator will not erroneously assume the POI is continuing the process to the next phase. The approval process can be resumed when the revised training curriculum or curriculum segment is resubmitted.

32.3.3 TRAINING CURRICULUMS SUBMITTED WITH AOC APPLICATIONS

A. An applicant for a certificate in the early stages of certification, may be unable to provide all information required for its training programme. For example, the applicant may not yet know what training facilities or devices it intends to use.

B. The lack of such information in the formal application does not necessarily indicate that the training curriculum attachment be returned. There should be an understanding between the applicant and the Certification Project Manager (CPM) that such portions are missing.

C. The CPM may initiate the phase three in-depth review without this type of information. Initial approval, however, of a curriculum segment must be withheld until all portions pertinent to the curriculum segment have been examined. For example, it may be appropriate to initially approve a ground training curriculum segment even though the simulator has not yet been evaluated and approved for flight training.

D. However, effective evaluation of training curriculums can be hampered when an excessive number of incomplete curriculum segments are permitted.

E. The CPM shall either delay initial approval of training curriculums or return them to the applicant when an excessive number of incomplete curriculum segments have been submitted with the formal application.

32.4 IN-DEPTH REVIEW OF SUBMITTED CURRICULUMS - PHASE THREE

A. Phase three is initiated when the CAAB begins a detailed analysis and evaluation of a training curriculum or curriculum segment. The purpose of this phase is to determine the acceptability of training curriculums for initial approval. This phase ends either with the initial approval or with the rejection of all or part of the training curriculum. To

complete an evaluation in a timely manner the POI may need to involve other CAAB personnel early in this phase. Certain specialists or offices may be required to participate in the approval process as follows:

1. The principal security inspector (PSI) should be involved in security and hazardous materials training issues.

2. Various aviation safety inspector specialists should be involved when appropriate. For example, navigation specialists should be involved with evaluating special navigation operations.

3. The CPM/POI may need to contact the Manufacturer's State of Design for information on training recommendations and minimum equipment list procedures.

4. The DFSR may need to be involved with locating and directing additional CAAB resources to accomplish the approval process.

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

1. A side by side examination of the curriculum outline with the appropriate regulations and the direction provided in this handbook must be performed. This examination is to ensure that training will be given in at least the required subjects and in-flight training

2. For the remainder of this chapter, all references to POI should be assumed to be POI/ CPM as appropriate to the process. maneuvers. It should also ensure that appropriate training will be given on safe operating practices.

3. An examination of the courseware developed or being developed by the operator must be performed. This review should include a sampling of available courseware such as lesson plans, audiovisual programmes, flight maneuvers and procedures documents, and student handouts. The courseware must be consistent with each curriculum and curriculum segment outline. From this review, the POI should be able to determine whether the operator is capable of developing and producing effective training courseware.

4. An inspection of training facilities, training devices, and instructional aids (which will be used to support the training) must be performed if the POI is not familiar with the operator's training programme capabilities. The training hours specified in each curriculum segment outline must be evaluated. An inspector should not attempt to measure the quality or sufficiency of training by the number of training hours alone. This can only be determined by direct observation of training and testing (or checking) in progress, or by examination of surveillance and investigation reports.

5. The specified training hours must be realistic, however, in terms of the amount of time it will take to accomplish the training outlined in the curriculum segment so as to achieve the stated training objectives. During the examination of courseware, an inspector should note the times allotted by the operator for each training module. These times should be realistic in terms of the complexity of the individual training modules. The number of training hours for any particular curriculum segment depends upon many factors. Some of the primary factors are as follows:

    a. The aircraft family in which the specific aircraft belongs

    b. Complexity of the specific aircraft

    c. Complexity of the type of operation

    d. Amount of detail that needs to be covered

    e. The experience and knowledge level of the students

    f. Efficiency and sophistication of the operator's entire training programme (including items such as instructor proficiency, training aids, facilities, courseware, and the operator's experience with the aircraft)

C. If after completing these evaluations, the POI determines that the curriculum or curriculum segment is satisfactory and adequately supported, and that the training hours are realistic, initial approval should be granted.

D. Sometimes a portion of the submittal may appear to be satisfactory. However, if that portion is dependent upon another undeveloped portion or another unsatisfactory portion, initial approval must be withheld.

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

32.4.1 EXPIRATION DATES FOR INITIAL APPROVALS

A. When the POI determines that a training curriculum or curriculum segment should be initially approved, the POI must also determine an appropriate expiration date for the initial approval.

B. The expiration date is important throughout phase four of the approval process. CAR ‘84 requires the operator to obtain final approval of training curriculums.

C. The expiration date provides an incentive to the operator for refining all aspects of the programme to assure that this regulatory requirement is met.

D. The expiration date also provides the POI with a time frame with which to plan evaluation activities for determining the effectiveness of the training.

E. The expiration date assigned to an initially approved training curriculum must not exceed 24 months from the date of initial approval. The expiration date of initial approval may be reduced by the POI if it is apparent that a 24 month time frame will unnecessarily delay final approval.

F. The POI should be aware that shortening the initial approval expiration date will commit him to completing the final approval phase within the shorter time period.

G. The POI may grant final approval any time before the expiration date.

H. Except when unforeseen circumstances preclude an adequate evaluation of training effectiveness, an extension to the initial approval expiration date should not be permitted.

I. A new expiration date, however, may be established for a curriculum segment when there are significant revisions to an initially approved curriculum segment.

32.4.2 METHOD OF GRANTING INITIAL APPROVAL

A. The initial approval letter must include at least the following information:

1. Specific identification of the curriculums and/or curriculum segments initially approved, including page numbers and revision control dates

2. A statement that initial approval is granted, including the effective and expiration dates Any specific conditions affecting the initial approval, if applicable

3. A reminder of the necessity for advance notice of training schedules as required by CAR ‘84.

4. If the POI is authorizing a reduction in the programmed hours as provided in CAR ’84.

B. An initial approval letter serves as the primary record of curriculum or curriculum segment pages that are currently effective.

1. The initial approval may stamped on each page as the method to account for revisions to training documents.

2. If this method is used, the stamp must clearly indicate initial approval and the expiration date.

3. Other acceptable methods include a list of effective curriculum or curriculum segment pages, or pages with a preprinted signature and date blocks.

C. The original pages of the curriculum or curriculum segment shall be returned to the operator with the transmittal letter:

1. These documents should be retained by the operator as an official record.

2. A copy of the training curriculum or curriculum segment, with a copy of the transmittal letter granting initial approval attached, shall be maintained on file in the CAAB by the POI during the period that the initial approval is valid.

3. The POI shall also maintain on file with the curriculum all additional relevant supporting information.

32.4.3 METHOD OF DENYING INITIAL APPROVAL

A. If the POI determines that initial approval of a proposed training curriculum or curriculum segment must be denied, the operator shall be notified in writing of the reasons for denial.

B. This letter must contain an identification of the deficient areas of the training curriculum and a statement that initial approval is denied.

C. It is not necessary that each minor deficiency which resulted in the denial be identified, however the major deficiencies should be outlined in the letter.

D. It is the operator's responsibility to redevelop or correct the deficient area before resubmission to the CAAB. A copy of the denial letter and a copy of the proposed training curriculum or curriculum segment shall be kept on file in the CAAB.

32.5 EVALUATING INITIALLY APPROVED TRAINING CURRICULUMS - PHASE FOUR

A. Phase four begins when the operator starts training under the initially approved curriculum. This phase should provide the operator with adequate time to test the programme and the flexibility to adjust the programme during CAAB evaluation.

1. The POI must require an operator to provide ongoing schedules of all training and checking to be accomplished under an initially approved training curriculum. The POI must closely monitor training conducted under initial approval.

2. Whenever possible, the first session of training conducted under initial approval should be monitored by the POI or a qualified operations inspector.

3. An CAAB inspector does not need to observe every training session. A sufficient sampling of the training sessions, however, should be observed as a basis for a realistic evaluation.

4. Inspectors qualified in the type aircraft, and other individuals knowledgeable of the curriculum subject matter, should assist in evaluating the training.

5. During training under initial approval, the operator is expected to evaluate and appropriately adjust training methods as needed.

6. Often adjustments can be made by changing courseware and instructional delivery without (or with only minor) revisions to the initially approved curriculum.

7. Conversely, it may be necessary for the operator to substantially change the curriculum which may require another initial approval action by the POI before the changes can be put into effect.

8. Sometimes proposed revisions may be transmitted to the POI just before the initial approval expiration date.

9. If the change is significant, the POI may need to establish a different expiration date for the curriculum segment, or for the revised portions, to allow adequate time for a proper evaluation.

B. During phase four, the operator must demonstrate the ability to effectively train crewmembers and dispatchers:

1. Each deficiency identified during the evaluation of training conducted under an initially approved curriculum must be discussed with the operator.

2. If the deficiencies are significant, they must be documented and kept on file. In most cases, when the cause of a deficiency has been accurately identified, the operator will make the necessary changes to correct the deficiency to obtain final approval.

3. Each significant deficiency which has been accurately identified must be immediately corrected. If an operator does not take appropriate corrective action, the POI shall advise the operator in writing that initial approval is withdrawn.

32.5.1 ELEMENTS AVAILABLE FOR EVALUATING TRAINING - PHASE FOUR

A. The POI must develop a plan for systematically evaluating training given under the initially approved training curriculum. This plan should remain in effect throughout the initial approval period.

B. There are five elements which can be evaluated when assessing the overall effectiveness of training programmes. These five elements are:

1. Curriculum segment outlines,

2. Courseware,

3. Instructional delivery methods and training environment,

4. Testing and checking, and

5. Surveillance and investigation of operator activities.

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

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

E. Direct observation of instructional delivery includes surveillance of training methods, such as instructor lectures, computer based instruction presentations, and inflight instruction.

1. Effective learning can only occur when an instructor is organized, prepared, and properly uses the courseware and various training aids.

2. The inspector must determine that the instructional delivery is consistent with the

3. courseware. For example, the inspector should note whether the instructor teaches the topics specified in the lesson plan.

4. These five elements are interrelated, however, each can be separately evaluated.

5. Training aids and devices should function as intended during the instructional delivery.

6. In addition, during training, the inspector should be sensitive to the type of questions being asked by students and should identify the reasons for any excessive repetition.

7. These conditions may indicate ineffective instructional delivery or courseware. The inspector must also determine if the instructional environment is conducive to learning.

8. Distractions which adversely affect instructional delivery, such as excessive temperatures, extraneous noises, poor lighting, cramped classrooms or workspaces, are deficiencies because they interfere with learning.

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

G. Direct observation of training and checking in progress is an effective method of evaluating training. Sometimes the opportunity for direct observation, however, will be limited:

1. In such cases, the POI will have to rely more on his evaluation of other sources of information such as reports of surveillance and investigations.

2. Results of inspection reports, incident or accident reports, enforcement actions, and other relevant information about the operator's performance should be reviewed by the POI for indications of training effectiveness.

3. The POI must establish methods to evaluate these sources of information for trends which may develop while training is being conducted under initial approval. For example, repeated reports of deficiencies such as excessive taxi speed, navigation deviations, incomplete briefings, or incorrect use of the checklists, may be traceable to a lack of specific training or ineffective training.

4. Such information may provide indications that revisions or refinements are needed for a curriculum segment and/or training modules.

   a. CURRICULUM SEGMENT OUTLINES - Curriculum segment outlines contain the specific training modules and the amount of time allocated for the curriculum segment. The modules must be consistent with regulatory requirements and safe operating practices. This element requires direct examination.

   b. COURSEWARE - Courseware converts curriculum outline information into usable instructional material. Courseware must be consistent with the curriculum outline and be organized to permit effective

instructional delivery. It is readily adaptable to adjustments and refinement by the operator. This element usually requires direct examination.

c. INSTRUCTIONAL DELIVERY METHODS AND TRAINING ENVIRONMENT - Instructional delivery methods are used to convey information to the student. Effective learning is maximized if the instructional delivery adheres to and properly uses the courseware. The training environment should be conducive to effective learning. This element requires direct observation.

d. TESTING AND CHECKING - Testing and checking is method for determining whether learning has occurred. Testing and checking standards are used to determine that a desired level of knowledge and skill has been acquired. Testing and checking also measures the effectiveness of courseware and instructional deliver. This element requires direct observation. It can be supplemented by examining operator records of test and checks.

e. SURVEILLANCE AND INVESTIGATION OF OPERATOR ACTIVITIES - Surveillance and investigations produce information about an operator's overall performance. A high rate of satisfactory performance usually indicates a strong, effective training programme. Repeated unsatisfactory performances can often be traced to deficiencies in a training programme. This element requires the examination and analysis of surveillance and investigative reports.

32.5.2 METHOD FOR GRANTING FINAL APPROVAL - PHASE FIVE

A. This phase involves the granting of final approval of an operator's training curriculum. Based on the results of the evaluation, the POI must determine whether to grant or deny final approval of a training curriculum. This determination must be made before, the expiration date of the initial approval.

1. If the POI decides not to grant final approval, the procedures outlined below shall be followed.

2. If the POI decides that final approval should be granted, the following procedures apply:

32.5.3 REVISIONS TO TRAINING CURRICULUMS

A. Revisions to initially approved training curriculums shall be processed as described in this section. To incorporate significant revisions into a training

curriculum with final approval usually requires the full training approval process.

B. Final approval, however, may be directly granted to a proposed revision, if the revision involves any of the following situations:

1. Correction of administrative errors such as typographical or printing errors

2. A reorganization of training, or any changes in the sequence of training that does not affect the quality or quantity of training

3. An improvement to the quality, or an increase in the quantity, of training

C. Other proposed revisions, including any proposal to reduce the approved number of training hours, are subject to the training programme approval process. Although each step in the process must be completed, the process may be abbreviated in proportion to the complexity and extent of the proposal.

D. There are many factors that could require revisions to training curriculums. Such factors include the following:

1. The effects and interrelationships of changes in the kind of operations

2. The size and complexity of an operation

3. The type of aircraft being used

4. Any special authorizations through operations specifications

5. A revised MEL

6. Any exemptions or deviations

32.5.4 WITHDRAWING APPROVAL OF TRAINING CURRICULUMS

A. Before withdrawing approval of an operator's training curriculum or curriculum segment, the POI shall make reasonable efforts to convince the operator to make the necessary revisions.

B. It is important to understand that withdrawing approval could be detrimental to the operator's business.

C. The operator's ability to continue to hold a certificate may be in question if a new curriculum is not submitted for initial approval within a reasonable period of time.

D. A decision to withdraw approval must be based on sound judgment and justifiable safety reasons.

E. When sufficient reasons are established, it is mandatory for the POI to take immediate action to remove CAAB approval from an ineffective or noncompliant training curriculum. When an approval is withdrawn, the POI must ensure that the operator clearly understands that any further training conducted under an unapproved curriculum is contrary to CAR '84.

F. Enforcement action must be taken if any company employee who received unapproved training is used in commercial air transport operations.

G. The three methods for withdrawing approval of a training curriculum are as follows:

1. Allowing an initially approved training curriculum to expire without granting final approval

2. Withdrawing approval of an initially approved training curriculum before the expiration date)

3. Withdrawing approval of a training curriculum which has already received final approval.

32.5.5 EXPIRED TRAINING CURRICULUMS

A. A training curriculum granted initial approval has an expiration date. Usually, this date shall not be later than 24 months after the initial approval date.

B. If the POI does not grant final approval before the expiration date, training under that curriculum must terminate as of that date.

C. Therefore, the POI shall not allow an initially approved curriculum to expire due to the DFSR's inability to administratively grant final approval.

D. Final approval may not be granted to an operator's training curriculum for several reasons:

1. One reason, for example, may be the operator's inability to achieve an acceptable level of training effectiveness during phase four of the approval process.

2. Another example of a reason for not granting final approval is the discontinued use of the initially approved curriculum.

E. When the POI decides not to grant final approval before the expiration date, he must notify the operator of this decision in writing, at least 30 days before the expiration date of the initially approved curriculum.

1. An operator not so notified may mistakenly assume that the initial approval will continue in effect until receipt of notification of either final approval or termination.

2. The notification letter should contain the reasons for allowing the curriculum to expire and should state that any further training under the expired curriculum will not be in compliance with regulatory requirements.

3. A POI who fails to provide this 30 day notification must establish a new expiration date so that appropriate notification can then be given to the operator.

32.5.6 WITHDRAWAL OF INITIAL APPROVAL OF TRAINING CURRICULUMS

A. A POI may decide to withdraw initial approval any time during phase four of the approval process.

B. This action may be necessary if the training is not in regulatory compliance, does not provide for safe operating practices, or is ineffective in meeting training objectives.

C. An operator who has received a letter withdrawing approval must revise or refine the training curriculum and resubmit it for initial approval.

D. The POI must ensure that the operator understands that it is his responsibility to correct each deficiency in the training programme. The POI withdraws initial approval of training curriculums by letter.

E. This letter must contain both a statement informing the operator that initial approval is withdrawn and the effective date of the withdrawal.

F. This letter must include the reasons for withdrawal of approval and a precaution concerning the use of persons trained under a curriculum which is not CAAB approved.

32.5.7 WITHDRAWAL OF FINAL APPROVAL OF TRAINING CURRICULUMS

A. Each operator is responsible for ensuring that its training curriculums, once they have been granted final approval, continue to provide training in accordance with the conditions under which final approval was granted.

B. Whenever CAAB determines revisions to a curriculum that has been granted final approval are necessary, the operator shall, after notification, make the necessary changes to ensure the effectiveness and acceptability of its training.

C. Such notification by the CAAB effectively withdraws final approval.

D. These regulations also provide the operator with certain appeal rights. Therefore, the following procedures will be applied when a decision is made to withdraw final approval of a training curriculum:

E. The POI shall inform the DFSR of the impending action to withdraw final approval. Following that action the POI must notify the operator in writing that revisions are required.

F. The notification letter must contain the following:

1. A statement that CAAB approval of the training curriculum is withdrawn
2. A list of the revisions which must be made
3. A brief description of the reasons necessitating the revisions
4. A precautionary statement concerning the use of personnel trained under a curriculum which is not
5. CAAB approved
6. A statement that the actions specified in the letter may be appealed
7. Instructions on how to make an appeal

G. If the operator chooses to revise the training programme in response to the notification letter, the proposed revision will be processed in the same manner as a request for initial approval. The POI must re initiate the five phase approval process previously described.

H. If an operator decides to appeal the POI's action, it must, within 30 days after receiving notification, petition the DFSR for reconsideration of the withdrawal of final approval.

1. The petition must be in writing and contain a detailed explanation on why the operator believes the revisions described in the withdrawal notice are unnecessary. If upon receipt of a petition, the DFSR believes that an emergency exists which directly impacts aviation safety, he must immediately inform the operator in writing, of his decision.
2. The DFSR’s letter must include a statement that an emergency exists, a brief description of the revisions which must be made, and the reasons the revisions are necessary. In this case, the DFSR's letter upholds the POI's decision to withdraw final approval. The operator must revise its training programme if CAAB approval is to be obtained.

3. If the DFSR does not believe an emergency exists, careful consideration must be given to both the operator's petition and the POI's reasons for withdrawal of approval.

4. The operator's petition stays the POI's withdrawal of final approval and the operator may continue to train under the training curriculum, pending the DFSR's decision.

5. The DFSR may need to conduct additional evaluations of the operator's training programme. It may be appropriate for the DFSR to obtain additional facts from other sources.

6. The DFSR must make a decision within 60 days after receipt of an operator's petition.

7. If the DFSR accepts the operator's explanations, he will direct the POI to rescind the letter that withdrew final approval, either partially or fully.

8. If the decision is to uphold the POI's action, the DFSR must respond to the operator's petition in writing.

    a. The letter denying the petition should indicate that careful consideration was given to the petition.

    b. The letter must also contain the reasons for denying the petition and a statement that confirms the withdrawal of final approval.

    c. The letter must also contain a statement that any training conducted under the unapproved training curriculum is contrary to the CARs.

32.6 ORGANIZATION OF CAAB TRAINING PROGRAMME FILES

A. The POI shall maintain a separate training programme file for each operator at the CAAB. Each operator's training programme file will be organized and maintained to keep each major curriculum type and any revisions together.

B. Superseded training curriculum pages must be kept on file for 2 years. All correspondence and additional relevant supporting information associated with each training curriculum will be filed with the curriculum or curriculum segment.

32.7 EVALUATION OF TRAINING & PROCEDURES MANUAL GUIDE

Inspectors shall follow the guidelines appended in Part-II, Chapter-68, Appendix-17 for Training Program and approval of the Training Manual of an air operator.

CHAPTER-33

AIR OPERATOR SURVEILLANCE (GENERAL INFORMATION, POLICY, AND PROCEDURES)

330 GENERAL

The purpose of this Chapter is to clearly define the responsibilities, goals, and methods for surveillance of airline flight operations by the CAAB.

33.1 REGULATORY OBLIGATION

Section 4.2.1.3 of Part 1 to Annex 6 of ICAO as well as Rule 112 (4) of CAR '84 requires that member states, CAAB in this case, shall issue AOCs to its air operators and the issue of an air operator certificate by the State of the Operator/CAAB shall be dependent upon the operator demonstrating an adequate organization, method of control and supervision of flight operations, training programme as well as ground handling and maintenance arrangements consistent with the nature and extent of the operations specified which it demonstrated upon original issuance of the certificate. Hence, CAAB must perform surveillance of certificated operators in order to insure that operators continue to meet certification requirements. To implement this, CAAB stands as responsible regulatory authority for maintenance of aviation safety through conduct of inspections of air operators of Bangladesh.

33.2 It is important to make a clear distinction between surveillance and certification activities. Both are important aspects of an inspector's duties, and one should not take precedence over the other. Certification activities are required to license, certificate, or otherwise qualify an airmen or an airline to operate in a prescribed manner. Surveillance, on the other hand, is aimed at ensuring that the airmen or airline continue to adhere to the standards by which they were certificated or approved, through regular inspections of various aspects of an airline's operation.

33.3. OBJECTIVES OF THE REGULATORY SURVEILLANCE PROGRAMME.

The primary objective of surveillance is to provide the CAAB, by means of a variety of inspections, with an accurate, real-time, and comprehensive evaluation of the safety status of the air transportation system. This surveillance program objective is accomplished by inspectors performing the following:

a. Determining each airline/operator's compliance with regulatory requirements and safe operating practices

b. Detecting changes as they occur in the operational environment

c. Detecting the need for regulatory, managerial, and operational changes

d. Measuring the effectiveness of previous corrective actions

33.4. PLANNING AND EXECUTING SURVEILLANCE PROGRAMMES.

Surveillance is an important duty and responsibility of all aviation safety inspectors assigned to CAAB. Surveillance programs provide a method for the continual evaluation of operator

compliance with government regulations and safe operating practices. Information generated from surveillance programs permits the CAAB to identify deficiencies within air operators which affect or have a potential effect on aviation safety. For surveillance programs to be effective, they must be carefully planned and executed. Inspections are specific work activities within a surveillance program which should exhibit the following characteristics:

a. A specific work activity title

b. A definite beginning and a definite end

c. Defined procedures

d. Specific objectives

e. A requirement for a report of findings (either positive, negative, or both)

33.4.1 Planning and executing any type of surveillance program may reasonably be broken down into four phases:

a. *Phase One* - Developing a surveillance plan by determining the types of inspections necessary and the frequency of those inspections

b. *Phase Two* - Accomplishing the surveillance plan by conducting the inspections

c. *Phase Three* - Analyzing surveillance data gathered from inspection reports and related information from other sources

d. *Phase Four* - Determining appropriate course of action

33.4.1.1 *Phase One: Developing a Surveillance Plan:* Responsibility for the development of the annual operations surveillance program rests with the DFSR. The surveillance program should recognize the need to conduct routine and ongoing surveillance, and should anticipate the possibility of special emphasis surveillance as a result of certain events such as accidents, incidents, repeated violations of CAR '84, and evidence of financial problems. When planning a surveillance program, the CFOI must identify the program objectives, evaluate the resources available, and determine the specific types and numbers of inspections to be conducted in support of that program. Numbers of inspections should be established taking into consideration the current operating environment which CAAB oversees (such as number of airplanes and variety of airplane types, number of crewmembers, routes, number and geographic location of transit stations, and the volume of training being conducted). Previous inspection reports, accident/incident information, compliance and enforcement information, and public complaints should also be used to determine both the types and frequency of inspections to be accomplished during a given time frame. History of compliance with regulations and

cooperation with the inspectorate may also be considered when developing a surveillance program for a specific airline.

33.4.1.2 *Phase Two: Conducting Surveillance Plan Inspections:* During the conduct of the surveillance plan inspections, accurate and qualitative inspection reporting is essential. High quality inspection reporting is necessary for the effective accomplishment of the third and fourth phases of a surveillance program. The quality and standardization of inspection reporting will be enhanced through the use of the inspection checklists and report forms contained in this manual.

33.4.1.3 *Phase Three: Analyzing Surveillance Data:* After the inspection data has been reported, an evaluation of the information obtained from inspection reports and related sources must be conducted. The purpose of this evaluation is to identify the areas of concern and note areas such as the following:

a. Non-compliance with regulations or safe operating practices

b. Both positive and negative trends

c. Isolated deficiencies or incidents

d. Causes of noncompliance, trends, or Isolated Deficiencies

Evaluation of inspection results is a key phase of any surveillance program. The primary purpose of evaluating surveillance data is to identify both negative and positive trends as well as deficiencies which are not associated with an apparent trend. This evaluation of inspection results is also important in terms of redefining and implementing subsequent surveillance objectives and inspection activity. The CFOI must adopt systematic methods that permit accurate and effective evaluation of inspection results. Additionally, other related information from incidents, accidents, enforcement actions and other sources may provide valuable trend information which may relate to the operator's safety and compliance status. For example, if in a series of ramp inspection reports a trend of deficiencies in the use of the MEL is identified, but the cause of these deficiencies cannot be identified, the CFOI may need to adjust the emphasis on the types of inspections conducted. In this case, additional training program inspections, manual inspections, or flight control inspections (flight release procedures) may be more effective in determining the cause of these deficiencies.

33.4.1.4 *Phase Four: Determining Appropriate Course of action:* The DFSR and the CFOI must use good judgment when determining the most effective course of action to be taken as a result of unsatisfactory inspection findings. The appropriate course of action often depends on many factors, many of which may be quite subjective. Various options which may be considered are: informal discussion with the operator and/or airman;

formal written request for corrective action; withdrawal of CAAB approval for a program, manual, or document; and initiation of an investigation leading to formal enforcement/disciplinary action. Corrective action which an operator or airman takes independently of the CAAB should be taken into account. The CAAB must also decide whether or not the results of a specific inspection should result in a modification of their current surveillance program. As previously mentioned, the CAAB may elect to conduct further inspections to determine if the unsatisfactory finding was an isolated incident or part of a trend.

33.5. GUIDELINES FOR FREQUENCY OF OPERATIONAL INSPECTIONS.

The minimum numbers of the various types of inspections contained in this manual which must be accomplished are as follows:

A. *Manual Inspections* - All operations manuals, instructions, and procedures currently in use with airlines will be reviewed within two years of adoption of this manual. Thereafter, all changes to manuals should be routed by the operator through the CFOI for concurrence. A complete review of each manual (AOM, AFM, MEL, Cabin Crew, etc., should be accomplished once every three years).

B. *Operations Control Inspections* - One inspection annually for each airline.

C. *Trip Records Inspections* - One inspection annually for each airline.

D. *Flight Time and Duty Records Inspections* - One inspection annually for each airline.

E. *Training Program Inspections* - Approved training manuals covering all types of training conducted by each airline - ground, simulator, and flight - should be reviewed for content and currency within two years after adoption of this manual. Thereafter, all proposed modifications or additions to training programs must be routed through the CAAB for concurrence. One ground training course, two simulator training periods, and two flight training periods should be observed annually for each aircraft type operated by the carrier, to ensure compliance with the approved training manual and with company procedures and policies.

F. *Training Records Inspections* - One inspection annually for each airline.

G. *Cockpit En-route Inspections* - Four random inspections annually on each aircraft type operated by each airline.

H. *Cabin En-route Inspections* - Four random inspections annually on each aircraft type operated by each airline.

I. *Station Facility Inspections* - One inspection every two years at each transit base used by each airline.

K. *Ramp Inspections* - Three inspections annually on each aircraft type operated by each airline.

L. *Pilot Proficiency Check Inspections* - A sufficient number of inspections so that each examiner and Check Pilot is observed at least once annually in the performance of his duties on at least one type of check which he is qualified to conduct.

Note: It must be emphasized that the preceding are the minimum numbers which must be accomplished to fulfill the CAAB's surveillance responsibilities. Whenever possible, taking into account inspector resources and the demand for certification activities, the Inspectors of CAAB will schedule a significantly larger number of inspections of cockpit crews, cabin crews, Check Pilots, and training events.

33.6. SPECIFIC INSPECTION PRACTICES.

To conduct and report various types of surveillance inspections is an ICAO requirement. CAAB should establish a surveillance program which includes all of the types of inspections to ensure that CAAB is adhering to the surveillance guidelines provided in the ICAO *Manual of Procedures for Operations Certification and Inspection (Doc 8335-AN/879)*.

33.7 ADDITIONAL INSPECTOR GUIDANCE ON INSPECTION AND SURVEILLANCE

This guidance applies to all aviation safety inspectors who conduct inspections of AOC holders.

33.7.1 OBJECTIVE OF AN INSPECTION

A. The primary objective of any inspection is to determine that a person, an item, or a certain segment of an operation associated with commercial air transport meets at least the same standards that were required for initial certification or approval by CAAB.

B. For inspectors to make these determinations, inspections must conduct inspections in an orderly and standardized manner.

C. To accomplish this, each type of inspection must have individual objectives and be conducted each time in generally the same manner, according to the direction and guidance in this manual and with appropriate job aids.

33.7.2 GENERAL CHARACTERISTICS

A. Inspection is a specific event (work activity) which has the following characteristics:

1. A specific work activity title and Action activity code

2. A definite beginning and a definite end

3. Specific objectives to be met

4. General procedures to be followed

5. A report of findings

B. Each type of inspection is identified with a specific title. Also, each type of inspection is assigned a specific Action code for the purpose of computer recording and tracking and for reference in the planning and tracking of inspection activities.

33.7.3 DEFINITE BEGINNING AND END

A. Inspections have a definite beginning and end. They may be scheduled by an inspector for the observation and evaluation of a specific activity, such as a proficiency check, or they may be scheduled for the evaluation of operator documents, manuals, or approved programmes.

B. A specific inspection activity occurs and is completed during one day. This policy applies whether only one inspection element or all possible elements of that inspection are completed in one day. The inspector must generate an inspection report, with any identified safety issues, for that inspection on that day.

C. If the inspector does not complete all inspection items, he may return over a series of days to fully complete all elements of that inspection. A separate inspection report shall be entered for each day that the specific type of inspection was conducted. Any safety issues shall be entered in the report on the day those issues were identified.

33.7.4 STANDARDISED APPROACH

A. Inspections have general procedures that inspectors should follow for standardization purposes. These general procedures are outlined in this chapter.

B. In many cases, there are job aids for the type of inspection which contains lists of specific items or areas which should be observed and evaluated, when applicable, during the inspection.

33.7.5 DETERMINATION OF COMPLIANCE

A. The primary objective of any inspection is to determine that a person, item, or segment of an operation complies or continues to comply with regulations, safe operating practices, and other established standards.

B. Each inspection type, however, has specific objectives, which are discussed in respective sections of this chapter.

33.7.6 INSPECTION REPORT REQUIRED

A. An inspection is not complete until a report on the results of the inspection has been recorded.

1. This report of inspection results is usually recorded on the Action report.

2. The inspection report is the key element of any inspection.

B. Inspectors must be concise, factual, and objective in reporting inspection results.

33.8 CONDUCTING AN INSPECTION

A. Due to the complexity of the air transportation industry there are various types of inspections, each type with specific objectives.

B. When deciding which type of inspection to conduct, inspectors should consider the objectives of each type of inspection and determine the type most appropriate and effective for a particular situation.

1. An inspector's decision to conduct a particular type of inspection may be based on an isolated situation, such as a complaint or an incident, or on some other information that raises a question about compliance with a regulation or safe operating practice.

2. In most situations, however, the types of inspections that need to be conducted are determined by the manager and principal inspectors during the development of the inspection programs.

a. These determinations are based on the analyses of previously collected surveillance data and other related information.

33.9 PREPARING FOR AN INSPECTION

A. Before conducting an inspection, inspectors should to the extent possible, familiarize themselves with an operator's systems, methods, and procedures.

B. To obtain this familiarization, inspectors can review those sections of the operator's manuals pertinent to the type of inspection to be conducted.

1. Additional familiarization can be obtained by an inspector questioning and discussing the operator's systems, methods and procedures with principal inspectors and with other inspectors already acquainted with the operator.

2. When possible, inspectors should become aware of any previous deficiencies or negative trends by reviewing previous surveillance data pertinent to the type of inspection to be conducted.

3. Inspectors must be acquainted with the applicable direction and guidance in this
4. manual for the type of inspection to be conducted.

33.10 ADVANCE NOTICE OF AN INSPECTION

Most inspections will cause some disruptions to routine operations. Responsible operators engaged in commercial air transport understand the legal basis for CAAB surveillance and are generally cooperative in responding to the needs of inspectors during the conduct of inspections.

A. Operators are required to afford inspectors the opportunity to conduct inspections in a manner that effectively accomplishes the objectives of the inspections.

B. Inspectors should, however, arrange their inspection activities so they will result in a minimum amount of disruption to routine operations.

C. Advance notice should be given for inspections which take operator personnel away from their normal duties, such as records inspections.

D. Such advance notice is usually unnecessary for those inspections which result in only a minimal involvement of operator personnel. Examples of inspections in which advance notice serves little purpose include ramp inspections.

33.11 LIMITING THE SCOPE OF AN INSPECTION

A. Each type of inspection has a set of items or areas that inspectors should observe and evaluate during the inspection.

B. Sufficient time should be allotted for effective evaluation of all the items or areas.

C. The circumstances under which inspections are conducted however, vary considerably. Often inspectors will not be able to evaluate all the specified items or areas.

1. The more important consideration is to thoroughly and qualitatively evaluate those items or areas in which the inspector has the time and opportunity to observe.

a. In some circumstances, it may be preferable for an inspector to limit the scope of a particular inspection type to ensure the quality of the inspection.

2. When an inspection is limited in scope, the inspector should provide a comment on how it was limited, and indicate it by either recording the number and types of records or manuals evaluated, recording the general areas evaluated, or by recording the general areas not evaluated.

3. In general, it is better to schedule sufficient time to evaluate all the items or areas specified for an inspection type. Inspections that are limited in scope, however, do serve a useful purpose and can still provide valuable information. Inspectors can review the appropriate job aid as a reminder of the areas to be evaluated. In general, it is appropriate and helpful to both the operator and inspectors to provide advance notice that an inspection is to be conducted.

33.12 INSPECTOR CONDUCT

The actions and conduct of an aviation safety inspector are subject to close scrutiny by the personnel they encounter during the performance of an inspection. Inspectors must conduct themselves as aviation professionals at all times when conducting inspections.

A. When initiating an inspection, inspectors shall properly identify themselves and ensure that the appropriate operator personnel are fully aware of the type and purpose of the inspection being conducted.

B. Inspectors shall wear name tags or other appropriate identification in plain view during the conduct of the inspections.

C. When observing or evaluating operator personnel during the performance of their assigned duties, inspectors shall not intervene in a manner that could adversely hinder or preclude them from effectively performing their duties.

33.13 CONCLUDING AN INSPECTION

A. At the conclusion of an inspection, inspectors should usually debrief appropriate operator personnel of the inspection results.

1. Persons, items, or areas that were found to meet or exceed standards should also be commented on during the debriefing.

2. Post inspection debriefing must include an explanation of any deficiencies that were found during the inspection.

3. Appropriate operator personnel must be informed of any areas that will require some form of follow up action.

4. If it appears that a regulation has been violated, inspectors must inform responsible operator personnel that an investigation into the apparent violation will be initiated.

B. When an inspector is unable to debrief the appropriate operator employees on any deficiencies because those employees are not available, the inspector should indicate in the inspection report that the operator was not briefed on the deficiencies.

C. Isolated types of deficiencies found during an inspection can often be corrected by operator personnel while the inspection is being conducted.

1. Such deficiencies can be adequately resolved and closed out during the post inspection debriefing.
2. In these cases, however, inspectors should record information about the deficiency and how it was corrected on the inspection report because such information is useful for trend evaluations.

D. The preparation of the inspection report is the final action that must be taken by inspectors to conclude an inspection. All reports on specific types of inspections shall be recorded by Action report entry. If, however, an inspector observes a condition that is obviously unsafe or that could potentially become unsafe, the inspector shall immediately inform the appropriate operator personnel of the condition. When appropriate to the type of inspection conducted, the debriefing should include:

1. A summary of the areas inspected and
2. The inspector's opinion concerning the compliance status of each area.

33.14 PROCEDURES FOR CONDUCTING AN AIR OPERATOR RECORDS INSPECTION

33.14.1LOCATION OF INSPECTION

A. Inspectors normally conduct a records inspection at the place where the operator maintains the records.

B. The inspection process does not require that the operator surrender records, even temporarily, and records may not be removed from the operator's premises without the operator's permission.

C. Should an agreement be reached for inspectors to remove records, the operator must be given an itemized receipt for all records.

33.14.2 PREPARATION AND INITIAL BRIEFING

Normally, advance notice, to the operator, of a planned records inspection is given:

A. An introduction and initial briefing should be given to the operator. The briefing should describe the purpose of the inspection, what records will be required, and that a debriefing will take place at the conclusion of the inspection.

B. Prior to conducting any records inspections, inspectors must become familiar with the operator's system of record keeping and become familiar with which specific records are available at the facility. This familiarization is particularly important when the operator is using a computer based record keeping system.

C. Prior to their arrival, inspectors should prepare a list of records to be inspected since a records inspection uses the operator's work space and usually takes time away from an employee's assigned duties.

1. Preplanning and preparation for a records inspection reflect positively on the professionalism of the CAAB and should result in as little disruption to the operator's work routine as possible.

33.14.3 RECORDS SELECTION

Before conducting a records inspection, inspectors must determine the number of records to be examined, which categories of the records that will be inspected, and to what depth records will be scrutinized.

33.14.4 RECORDS HANDLING

A. Care should be taken to keep records as intact as the operator presents them.

B. The preferred procedure is for inspectors to take only a few records at a time, examine them, then return that batch to the operator before starting on another batch.

C. If it is necessary or desirable to obtain a copy of a record, the operator may not be willing or able to provide it. In this case, inspectors must make arrangements for copies.

33.14.5 ERRORS OR OMISSIONS IN RECORDS

A. A records inspection is not an investigation, yet inspectors may find errors or omissions in an operator's records.

1. Minor errors and omissions may not constitute a lack of compliance on the part of the operator and may not require the inspector to initiate enforcement action.

2. Some errors or omissions, though, may require further action. Information from previous records inspections that are contained in the Action database should be accessed to aid the inspector in determining the strategy and scope of the inspection.

    a. For example, a crewmember training record may be found that does not indicate that required recurrent training was accomplished.

3. Further investigation may produce evidence that the training actually was completed.

4. This omission may easily be corrected on the spot by the operator and may preclude the need for the inspector to initiate enforcement action.

5. In this case, the inspector should record in the Action database that the problem occurred, was brought to the operator's attention, and was corrected on the spot by the operator.

6. The inspector should discuss, with the operator, methods for preventing a repetition of the problem and should record, in the Action database, the operator's intended fix.

7. If the operator cannot produce evidence that the training was conducted, the inspector shall record the facts so that an enforcement investigation can later be opened.

    a. The inspector who discovers the discrepancy is responsible for recording the finding in the Action database and initiating an investigation.

33.15 PRIOR NOTICE: SUMMARY OF ACTIONS

A. Give the operator notice of your intention to conduct an inspection of their operational records, so that the required documents and management representatives will be made available for the inspection. (Under some circumstances, you can make a spot check of operational records, without prior notification.)

B. Organize a discreet area to ensure minimal disruption to both yourself and the operator.

C. Remain on the operator's premises during the inspection, observe the appropriate level of confidentiality and refrain from marking or defacing any records.

D. Carry out the inspection, using the appropriate job aid, if available.

E. In your assessment of the operator's record-keeping system, consider the following—

1. Practicality
2. Accuracy and completeness
3. Accessibility
4. Security
5. Control.

F. Comment on the adequacy and effectiveness of the operator's record-keeping system.

33.16 SHORT NOTICE: SUMMARY OF ACTIONS

A. The general steps of any inspection are:

1. Give a management representative short notice of the inspection.
2. Carry out the inspection, in a way that causes a minimum of disruption to the operator, using the appropriate job aids.
3. Follow appropriate job aids and procedures when carrying out specific separate inspections. e.g. flight simulators.
4. Conduct a short exit meeting with the a management representative.:
5. Briefly report the findings of the inspection. If you have discovered discrepancies during the inspection, bring these to the attention of the operator.
6. Make arrangements for any follow-up action.

B. This evaluation guidance provides direction to operations inspectors for the inspection of crew and dispatcher qualification, training, and currency records of AOC holders.

CHAPTER-34

AIR OPERATOR SURVEILLANCE (COCKPIT EN-ROUTE INSPECTION)

34.1 GENERAL

A. The primary objective of cockpit en-route inspections is for an inspector to observe and evaluate the inflight operations of a certificate holder within the total operational environment of the air transportation system.

B. En-route inspections are one of the CAAB's most effective methods of accomplishing its air transportation surveillance objectives and responsibilities.

C. These inspections provide the CAAB with an opportunity to assess elements of the aviation system that are both internal and external to an AOC holder.

34.2 FLIGHT DECK EN-ROUTE INSPECTIONS AREAS

A. Inspectors should consider all inspection areas, both internal and external to the AOC holder, to be of equal importance. Four general inspection areas have been identified for observation and evaluation by inspectors during en-route inspections.

B. The "crewmember" inspection area applies to both flight crewmembers and cabin crewmembers. Inspectors should evaluate such items as crewmember knowledge, ability, and proficiency by directly observing crewmembers performing their respective duties and functions. The checklist contains a list of reminder items that should be observed in the crewmember inspection area. These items are not all-inclusive but represent the types of items inspectors should evaluate during a flight deck en-route inspection.

C. The "flight conduct" inspection area relates to 10 specific phases of flight that can be observed during an en-route inspection. The checklist contains a list of the items that should be evaluated by inspectors during these phases of flight. These items are not all-inclusive and in some cases (such as "powerback") may not be applicable to the flight conducted. Inspectors are, however, encouraged to observe, evaluate, and report on as many of these items as possible.

Note 1: Inspectors that are unfamiliar with the AOC holder's specific procedures for operating the aircraft, should comment in their inspection reports on any item they believe should be brought to the POIs attention.

Note 2: Inspectors must use good judgment concerning whether to comment on these items when debriefing crewmembers

D. The "airport/heliport" inspection area pertains to the various elements of airports or heliports that are passed through during the flight such as runways, taxiways, ramps, and aircraft ground movements. Inspectors should observe and evaluate as many of these elements as possible during an en-route inspection.

E. The "ATC/airspace" inspection area pertains to the various elements of Air Traffic Control and national or international airspace systems. These elements should be observed and evaluated by inspectors during en-route inspections. From an operational standpoint, these evaluations are a valuable information source which can be used not only to enhance safety with respect to air traffic control and the airspace system, but also to enhance the effectiveness of en-route and terminal facilities and procedures.

F. Although these four general inspection areas cover a wide range of items, they are not the only areas that can be observed and evaluated during flight deck en-route inspections. Inspectors may have the opportunity to evaluate many other areas, such as line station operations, flight control procedures, and cabin crews in the performance of their duties. These types of inspection areas can often be observed before a flight begins, at en-route stops, or at the termination of a flight.

G. Elements of the aviation system which are internal to the AOC holder and that can be observed during en-route inspections, are items such as the following:

1. Crewmembers
2. AOC holder manuals and checklists
3. Use of MELs and CDLs
4. Operational control functions (dispatch, flight following, flight locating)
5. Use of checklists, approved procedures, and safe operating practices
6. Crew coordination/flight deck resource management
7. Cabin safety
8. Aircraft condition and servicing
9. Training programme effectiveness

H. Elements of the aviation system which are external to the AOC holder and that can be observed during en-route inspections, are items such as the following:

1. Airport/heliport surface areas
2. Ramp/gate activities
3. Airport construction and condition
4. Aircraft movements
5. ATC and airway facilities
6. ATC and airspace procedures

7. IAPs, SIDs, and STARs

8. Navigational aids

9. Communications

I. A Flight Operations Inspection is the inspection and surveillance of an aircraft and its technical crew on a revenue-earning line operation conducted according to normal company procedures. The purpose of this inspection is to ensure that operations are conducted in accordance with regulatory requirements and to assess:

1. The operational effectiveness of the operating crew

2. The effectiveness of company procedures

3. The effectiveness of other interrelated systems and procedures — for example, airspace, ATC, FAC, etc.

34.3 EN-ROUTE INSPECTION: GENERAL

34.3.1 BEGINNING THE INSPECTION.

The Inspector should:

a. Display an ID card and issue an CAAB authorization form.

b. Introduce yourself to the aircraft captain, stating your name and the purpose of the inspection.

c. Occupy an observer's seat on the flight deck or, when the aircraft requires a single pilot, the vacant control seat.

Note: If the captain objects to your presence on the flight deck, ask the captain to provide a written statement setting out reasons for his or her objection.

34.3.2 CONDUCTING THE INSPECTION

A. The inspector should carry out the inspection on a non-interference basis, using the proper checklist.

1. Do not distract the crew from their primary task of operating the aircraft

2. Be familiar with the relevant section of the AOC holder's Operations Manual concerning the carriage of staff in the jump seat

3. Be aware of any sterile flight deck provisions

4. Monitor the radio and be aware of the need for checklist calls, when conversing with the crew

5. Regard the crew as a sample product of the AOC holder's training and checking organization

6. Regard the aircraft airworthiness status as a sample product of the AOC holder's maintenance planning and control organization.

B. The inspector should not intervene in the conduct of the flight unless he or she is of the opinion that failing to intervene would jeopardize the safety of the aircraft. The inspector must alert the crew to a condition that they have failed to note which may result in an unsafe situation, compromise compliance with the regulations or aircraft structural limitations.

34.3.3 CONCLUDING THE INSPECTION

At the conclusion of the inspection:

1. Do not debrief the crew on the results of the inspection, unless you have an immediate safety of flight issue, such as an aircraft unable or unsafe to fly or questions concerning crew competency to operate safely. These types of situations are rare.

2. Complete the appropriate checklist and notes.

3. Complete the safety issue resolution form(s); and

4. Make the necessary notifications for safety issue resolution with the affected post holders.

34.3.4 NOT QUALIFIED ON AIRCRAFT

If the inspector is not pilot-qualified on the aircraft, it is not necessary to do any debriefing. A simple "*thank you for the flight*" is an acceptable verbiage for departing the aircraft.

34.3.5 NO DEBRIEFING ISSUES

If the inspector is pilot-qualified and has no debriefing issues, the proper phraseology to use is "*I have no de-briefing items, thank you for a safe flight.*"

34.3.6 PROPER APPROACH TO DEBRIEFING ISSUES

A. If the inspector, regardless of technical qualification, believes that it is necessary to cover any debriefing issues with the flight crew, it is better to use an non-confrontation approach. The best method is to ask a clarifying question to discuss the issues and give the crew members the opportunity to explain. For example, where the flight crew failed to make a takeoff profile callout, a question, such as *"Is the 80 knot callout and crosscheck still a*

company takeoff callout?" This brings the issue to their attention, but is not accusatory.

B. The next step is crucial. After their explanation, politely close the discussion with the words, "Thank you for your explanation." Do not engage in further discussion or attempt to correct any apparent misconceptions. You should at this point have the necessary information to discuss this issue with the appropriate company post holder.

34.4 EN-ROUTE INSPECTIONS: LIMIT ON THE NUMBER OF INSPECTORS

A. As a general guideline, only one inspector should conduct a flight deck en-route inspection of a given aircraft on a particular flight unless special circumstances exist.

B. Except for the conduct of demonstration flights, the only time two Inspectors would occupy the flight deck at the same time is during inspector training. This requires company consent. There may be occasions when one Inspector conducts a flight deck inspection while another conducts a cabin safety inspection, or, on a large aircraft, more than one inspector may be in the cabin to observe different components. These situations should be infrequent once an AOC holder has achieved a satisfactory standard of operations.

34.5 PREPARATION FOR EN-ROUTE INSPECTION

34.5.1 COMPANY OPERATING PROCEDURES

A. Before conducting en-route inspections, it is important that inspectors become familiar with the operating procedures and facilities used by the AOC holder.

B. Inspectors can obtain such familiarization by reviewing pertinent sections of the AOC holder's manuals and by asking questions of, and obtaining briefings from, the POI or other inspectors who are acquainted with the AOC holder's procedures and facilities.

C. The inspector is encouraged to comment on any procedure believed to be deficient or unsafe in the inspection report.

D. However, the inspector must use good judgment when debriefing crewmembers about procedures that may be specifically approved for that AOC holder.

34.5.2 SCHEDULING THE JUMPSEAT

A. The AOC holder is to ensure that there are established procedures to be used by inspectors for scheduling the observer's seat (jumpseat).

B. These procedures allow inspectors to have free, uninterrupted access to the jumpseat. Inspectors should, however, make jumpseat arrangements as far in advance as possible. Since inspectors may have sudden changes in schedule, and may not always be able to provide the appropriate advance notice, the AOC holder's procedures are flexible and permit use of an available jumpseat on short notice.

C. Whenever possible, inspectors should plan flight deck en-route inspections in a manner that will avoid disruption of AOC holder scheduled line checks and line flying under supervision flights. Should an inspector arrive for a flight and find a line check or line flying under supervision in progress, the inspector must determine whether or not it is essential that the flight deck en-route inspection be conducted on that flight. If it is essential, the AOC holder must be so advised by the inspector and must make the jumpseat available to the inspector. If the flight deck en-route inspection can be rescheduled and the objectives of the inspection can still be met, the inspector should make arrangements to conduct the inspection on another flight.

D. When a required checkride is being conducted by a training captain from the forward jumpseat and the en-route inspection is essential, the inspector should occupy the second jumpseat, if one exists. On line flying under supervision flights, the training captain should normally occupy one of the pilot seats and the inspector should occupy the forward jumpseat. When it is essential that the en-route inspection be conducted on an aircraft that does not have two jumpseats, the training captain must occupy a pilot seat and the inspector should occupy the jumpseat. In such a case, the flight crewmember not being checked must either be seated in the cabin or not accompany the flight.

34.5.3 AMPLIFIED INSPECTOR REPORTING INSTRUCTIONS

A. An inspector should begin a flight deck en-route inspection a reasonable amount of time before the flight (approximately 1 hour) by reporting at the operations area or at the gate. There the inspector must first complete the necessary jumpseat paperwork for inclusion in the AOC holder's passenger manifest and weight and balance documents. The flightcrew should then be located by the inspector.

B. After the inspector gives a personal introduction to the flightcrew which includes presentation of CAAB authorization, the inspector must inform the PIC of the intention to conduct an en-route inspection.

C. The inspector should then request that, at a time convenient for the flightcrew, the flightcrew present both their airman and medical certificates to the inspector for examination. Also, the inspector should request that, at a convenient time, the flightcrew present flight information such as weather documents, NOTAMs, planned route of flight, dispatch or flight release

documents, and other documents with information about the airworthiness of the aircraft to the inspector for examination.

34.5.4 LATE BOARDING SITUATIONS

A. Sometimes an inspector cannot meet and inform the PIC of the intention to conduct an en-route inspection before boarding the aircraft.

B. In such a case, when boarding the aircraft, the inspector should make appropriate introductions, present CAAB Authorization for the PIC's inspection at the earliest convenient opportunity, and inform the flightcrew of an intention to conduct a flight deck inspection.

C. In this situation a cabin crew member will usually be at the main cabin entrance door. One of the cabin crew's primary duties is to ensure that only authorized persons enter the aircraft such as ticketed passengers, caterers, and authorized company personnel.

D. Therefore, an inspector should be prepared to present CAAB Authorization and any applicable jumpseat paperwork to the cabin crew as identification before entering the flight deck.

E. When boarding the aircraft, an inspector should also avoid unnecessarily impeding passenger flow or interrupting cabin crews during the performance of their duties. Also, during this time an inspector usually has ample opportunity to observe and evaluate the AOC holder's carry-on baggage procedures and the gate agent's or cabin crew's actions concerning oversized items. Once inside the flight deck, the inspector should request an inspection of each flight crewmembers airman and medical certificates, if not previously accomplished. When the flightcrew has completed reviewing the aircraft logbooks (or equivalent documents), the inspector should inspect the logbooks to determine the airworthiness status of the aircraft.

34.5.5 INFLIGHT

A. The inspector should wear a headset during the flight. During flight deck en-route inspections, inspectors must try to avoid diverting the attention of flight crewmembers performing their duties during "critical phases of flight."

B. Inspectors must be alert and point out to the flightcrew any apparent hazards such as conflicting traffic.

C. If during an en-route inspection, an inspector becomes aware of a potential violation or that the flightcrew is violating a regulation or an ATC clearance, the inspector must immediately inform the PIC of the situation.

34.5.6 CHECKLIST

A. Inspectors should use the Flight deck En-route Inspection job aid while conducting these inspections.

B. This checklist contains a list of reminder items for the specific inspection areas that should be observed and evaluated. Items may be evaluated during an en-route inspection which are not listed on the checklist.

C. For such items, inspectors should use the remarks section to record these comments and notes during the inspection which can later be transferred to a Safety Issue Resolution Report.

34.6 SPECIFIC FLIGHT DECK CONDUCT

A. Once situated in the flight deck, the inspector should check the jumpseat oxygen and emergency equipment (if applicable) and connect the headset to the appropriate interphone system. The PIC or a designated crewmember should offer to give the inspector a safety briefing. If the PIC does not make such an offer, the inspector should request a briefing. It is important that the inspector monitor all radio frequencies being used by the flightcrew to properly evaluate ATC procedures, flightcrew compliance, transmission clarity, and radio phraseology. The monitoring of these frequencies also ensures that the inspector does not inadvertently interfere with any flightcrew communications. Inspectors should continuously monitor these frequencies to remain aware of the progress of the flight.

B. Inspectors should observe and evaluate the crew during each phase of flight. This should include an evaluation of crewmember adherence to approved procedures and a proper use of all checklists. The inspector should also observe the PIC's crew management techniques, delegation of duties, and overall conduct. All crewmembers must follow sterile flight deck procedures. Some of the areas that should be observed and evaluated during each flight phase are as follows:

34.6.1 PREFLIGHT

A. Inspectors should determine that the flightcrew has all the necessary flight information including the appropriate weather, dispatch, or flight release information; flight plan; NOTAMs; and weight and balance information.

B. MEL items should be resolved in accordance with the AOC holder's MEL and appropriate maintenance procedures. Inspectors should observe the flightcrew performing appropriate exterior and interior preflight duties in accordance with the AOC holder's procedures.

34.6.2 PREDEPARTURE

Inspectors should observe the flightcrew accomplishing all pre-departure checklists, takeoff performance calculations, and required ATC communications. The flightcrew should use coordinated communications (via hand signals or the aircraft interphone) with ground personnel. Often pushback or powerback clearance must be obtained from the appropriate ATC or ramp control facility. When weight and balance information is transmitted to the aircraft by company radio during the outbound taxi, the flightcrew should follow the AOC holder's procedures as to which crewmember receives the information and completes the final takeoff performance calculations and which crewmember monitors the ATC frequency. The inspector should observe the following:

1. Accomplishment of checklists during taxi;
2. Adherence to taxi clearances;
3. Control of taxi speed;
4. Compliance with hold lines;
5. Flightcrew conduct of a pre-takeoff briefing in accordance with the AOC holder's procedures.

34.6.3 FOI EVALUATION: TAKEOFF

A. The takeoff procedure should be accomplished as outlined in the AOC holder's approved maneuvers and procedures document.

1. Inspectors should observe and evaluate the following items or activities during the takeoff phase:
2. Aircraft centerline alignment;
3. Use of crosswind control techniques;
4. Application of power to all engines;
5. Takeoff power settings;
6. Flightcrew callouts and coordination;
7. Adherence to appropriate takeoff or V speeds;
8. Rate and degree of initial rotation;
9. Use of flight director, autopilot, and auto throttles;
10. Gear and flap retraction schedules and limiting airspeeds;
11. Compliance with the ATC departure clearance or with the appropriate published departure.

34.6.4 FOI EVALUATION: CLIMB

The climb procedure should be conducted according to the outline in the AOC holder's approved maneuvers and procedures document. Inspectors should observe and evaluate the following items and activities during the climb phase of flight:

A. Climb profile/area departure;

B. Airspeed control;

C. Navigational tracking/heading control;

D. Powerplant control;

E. Use, of radar, if applicable;

F. Use of autoflight systems;

G. Pressurization procedures, if applicable;

H. Sterile flight deck procedures;

I. Vigilance;

J. Compliance with ATC clearances and instructions;

K. After takeoff checklist.

34.6.5 FOI EVALUATION: CRUISE

Procedures used during cruise flight should conform to the AOC holder's procedures. Inspectors should observe and evaluate the following areas during the cruise phase of flight:

A. Cruise mach/airspeed control;

B. Navigational tracking/heading control;

C. Use of radar, if applicable;

D. Use of turbulence procedures, if applicable;

E. Monitoring fuel used compared to fuel planning;

F. Awareness of mach buffet and maximum performance ceilings;

G. Coordination with cabin crew;

H. Compliance with oxygen requirements, if applicable;

I. Vigilance;

J. Compliance with ATC clearances and instructions.

34.6.6 FOI EVALUATION: DESCENT

A. Procedures used during descents should conform to the AOC holder's procedures. Inspectors should observe and evaluate the following areas during the descent phase of flight:

1. Descent planning;
2. Crossing restriction requirements;
3. Navigational tracking/heading control;
4. Use of radar, if applicable;
5. Awareness of Vmo/Mmo speeds and other speed restrictions;
6. Compliance with ATC clearance and instructions;
7. Use of autoflight systems;
8. Pressurization control, if applicable;
9. Area/situational awareness;
10. Altimeter settings;
11. Briefings, as appropriate;
12. Coordination with cabin crew;
13. Sterile flight deck procedures;;
14. Completion of appropriate checklist;
15. Vigilance.

34.6.7 FOI EVALUATION: APPROACH

Procedures used during the selected approach (instrument or visual) should be accomplished as outlined in the AOC holder's maneuvers and procedures document. Inspectors should observe and evaluate the following areas during the approach phase of flight:

A. Approach checklists;

B. Approach briefings, as appropriate;

C. Compliance with ATC clearances and instructions;

D. Navigational tracking/heading and pitch control;

E. Airspeed control, VREF speeds;

F. Flap and gear configuration schedule;

G. Use of flight director, autopilot, auto throttles;

H. Compliance with approach procedure;

I. Sinkrates;

J. Stabilized approach in the full landing configuration;

K. Flightcrew callouts and coordination;

L. Transition to visual segment, if applicable.

34.6.8 FOI EVALUATION: LANDING

Procedures used during the landing maneuver should conform to those outlined in the AOC holder's maneuvers and procedures document. Inspectors should observe and evaluate the following areas during the landing phase of flight:

A. Before landing checklist;

B. Threshold crossing height (TCH);

C. Aircraft centerline alignment;

D. Use of crosswind control techniques;

E. Sinkrates to touchdown;

F. Engine spool up considerations;

G. Touchdown and rollout;

H. Thrust reversing and speedbrake procedures;

I. Use of autobrakes, if applicable;

J. Braking techniques;

K. Diverting attention inside the flight deck while still on the runway;

L. After landing checklist.

34.6.9 ALL INSPECTORS: PRE-ARRIVAL

Pre-arrival and parking procedures should conform to the AOC holder's procedures as outlined in the appropriate manual. Inspectors should evaluate crew accomplishment of after landing checklists, groundcrew parking, and passenger deplaning procedures.

34.6.10 ALL INSPECTORS: ARRIVAL

Inspectors should observe and evaluate the flightcrew complete postflight duties such as postflight checks, aircraft logbook entries, and flight trip paperwork completion and disposition.

34.7 OTHER INSPECTION AREAS

A. During the en-route inspection, inspectors should observe and evaluate other inspection areas, such as ATC and airspace procedures and airports or heliports the flight transits during the flight deck en-route inspection.

B. When evaluating airports or heliports, inspectors should observe the condition of surface areas, such as ramp and gate areas, runways, and taxiways. The following list contains other areas which may be observed and evaluated by inspectors during flight deck en-route inspections:

1. Taxiway signs, markers, sterile areas, and hold lines;
2. Ramp vehicles, equipment, movement control;
3. Aircraft servicing, parking, and operations;
4. Obstructions, construction, and surface contaminants (such as ice, slush, snow, fuel spills, rubber deposits);
5. Snow control, if applicable;
6. Security and public safety.

C. During flight deck en-route inspections, inspectors have the opportunity to observe and evaluate ATC operations and airspace procedures from the vantage point of the aircraft flight deck. Inspectors may observe and evaluate the following areas from the flight deck:

1. Radio frequency congestion, overlap, or blackout areas;

2. Controller phraseology, clarity, and transmission rate;
3. ATIS;
4. Use of full call signs;
5. Simultaneous runway use operations;
6. Clearance deliveries;
7. Acceptable and safe clearances;
8. Aircraft separation standards;
9. Acceptability of instrument approach procedures, departure procedures, and feeder routings.

34.8 AIR OPERATOR COCKPIT EN-ROUTE INSPECTION REPORT

The Inspector's 'Air Operator Cockpit En-Route Inspection Report' is in Part-II, Section-68, Appendix-09.

34.9 AIR OPERATOR FLIGHT DECK EN-ROUTE INSPECTION GUIDE

The Inspector's 'Air Operator Flight Deck En-Route Inspection Guide' is in Part-II, Section-68, Appendix-43.

34.10 AIR OPERATOR FLIGHT DECK RAMP INSPECTION GUIDE

The Inspector's 'Air Operator Flight Deck Ramp Inspection Guide' is in Part-II, Section-68, Appendix-45.

34.11 GUIDANCE ON THE CONDUCT OF RAMP INSPECTION

The Air Operator Ramp Inspection Guide has been placed in Part-II, Section-68, Appendix-03.

CHAPTER-35

AIR OPERATOR SURVEILLANCE (CABIN EN-ROUTE INSPECTION)

35.1 GENERAL

This chapter provides guidance for conducting a cabin en-route inspection to ensure that an operator's cabin safety procedures adhere to the safety regulations and safe operating practices.

35.1.1 CONSIDERATIONS FOR CABIN EN-ROUTE INSPECTIONS

A. Cabin en-route inspections provide the CAAB with information concerning cabin crew training programmes, operator procedures, and the condition and maintenance of aircraft emergency equipment and furnishings.

B. Follow the guidelines for beginning a flight deck en-route, but:

1. Advise the crew that you plan to occupy a spare cabin seat on an opportunity basis.

2. Introduce yourself to the senior cabin crew member, stating your name and the purpose of the inspection.

3. If a seat is available, remove your ID before proceeding to the specific seat.

4. If there is adequate time before boarding request the cabin crew documents for review.

5. Otherwise, take the seat and observe the cabin crew action without comment.

C. A general guideline is if passengers have been boarded or are in the process of emplaning or deplaning, you should not act so as to not distract the cabin staff from carrying out their duties. At other times and at your discretion, you may request information or ask individual cabin crew members to locate and/or describe the use of items of safety equipment.

D. Do not delay members of the cabin staff who are required to connect with another flight or cause the aircraft to be delayed as a result of your inspection, unless you believe that essential safety items are not on board.

E. If you have sufficient time when passengers are not on board, before or after the flight, conduct a cabin interior ramp inspection using the appropriate job aid.

35.2. CABIN EN-ROUTE INSPECTION AREAS

Three general areas have been identified for inspectors to observe and evaluate during cabin en-route inspections. Each area should be considered to be of equal importance. The three inspection areas are as follows—

A. Cabin (Interior). The interior inspection area applies to the airworthiness of the aircraft cabin and the condition and availability of aircraft cabin emergency equipment and furnishings.

B. Crewmember. The crewmember inspection area applies to Cabin Crew Member (CCM) who perform assigned safety duties during the flight. Inspectors should evaluate such items as crewmember knowledge ability, and proficiency by directly observing CCMs performing their assigned safety duties and functions.

C. Flight Conduct. The flight conduct inspection area relates to the specific phases of the flight that can be observed during the cabin en-route inspection. This includes a wide range of items, including CCM and flight crewmember coordination of the performance of duties. These types of areas can often be observed before beginning a flight, at en-route stops, or at the termination of a flight.

35.3 INITIATION AND PLANNING

A. Inspectors conducting cabin en-route inspections should make arrangements for the inspection as far in advance of the flight as possible.

B. Inspectors who have not provided the operator with the appropriate advance notice should not insist on a seat if the flight is full.

C. AOC holders should not attempt to displace the inspector in favor of a passenger when notification has been provided. However, bumping a revenue passenger should only be done when there is no acceptable, alternative means of accomplishing the inspection. Inspectors are expected to exercise sound judgment in these matters.

1. When it is necessary to board a flight at an intermediate stop, the inspector will make every effort to advise the pilot in command (PIC), prior to boarding the flight, that a cabin en-route inspection will be conducted.

2. The inspector must conform to the operator's approved carry-on baggage programme. If there is any concern that the inspector's carry-on baggage will exceed operator limitations, the baggage should be checked.

35.4 PERFORMING THE CABIN EN-ROUTE INSPECTION

The attention of the CCMs must not be diverted from assigned duties including passenger boarding, deplaning, and inflight service. Surveillance of CCM awareness and the following of safety related procedures should continue during the flight.

35.4.1 INTERIOR INSPECTION

A. This inspection should be performed without disturbing the boarding or deplaning of the passengers. Any discrepancies noted should be brought immediately to the attention of the lead CCM or the PIC.

B. Crewmembers should initially be briefed to continue their assigned duties as if the inspector were not present. The inspector should then request that a crewmember provide a CCM manual and be available for a discussion relating to the crewmember's duties, at the crewmember's earliest convenience.

C. Some operators require CCMs to accomplish a preflight inspection of at least some of the emergency and safety equipment in the cabin. In such a case, the inspector should observe the FA inspect the equipment and then perform an additional inspection of selected equipment.

D. When a CCM preflight equipment inspection is not required by the operator or has already been performed, the inspector should inspect the equipment. If there is not enough time to inspect the emergency equipment before the flight, the inspector may choose to inspect it after the flight.

E. Inspectors should avoid impeding the flow of passenger traffic or in any way interfering with crewmembers conducting their respective duties. Since passengers are naturally curious about an inspector's activities, it is recommended that reasonable passenger inquiries be answered in a brief, factual, and courteous manner.

35.4.2 INFLIGHT MONITORING

This phase of the inspection includes the activities associated with boarding, pre-departure, inflight, and landing. During this part of the inspection, the inspector will have the opportunity to do the following:

A. Evaluate operator procedures

B. Determine adherence to company policy, safety regulations, and safe operating practices

C. Monitor passenger safety

35.4.3 REQUIRED CABIN CREWS

A. When regulations require cabin crews for the operation of a flight, the number of cabin crew members required is based on the number of passenger seats and/or the emergency evacuation demonstration.

B. The number of required CCMs for each make, model and series aircraft used by the operator is listed in the operations specifications (Ops Specs).

1. There must always be a full complement of CCMs at originating and terminating points when passengers are on board. AOC holders may at intermediate stops, may reduce the number of required CCMs by dividing the number of CCMs by two and rounding down. Regulations permit an operator to substitute personnel, qualified in emergency evacuation procedures for that specific aircraft, at intermediate stops. Substitute personnel must be easily identified.

2. Additional, non-required, CCMs may be used by the operator.

35.6 COORDINATE WITH THE OPERATOR

The inspector should coordinate with the operator at least 1 hour prior to the flight. While coordinating, the inspector should do the following:

A. Identify himself or herself to the operator representative, and state that he or she is performing a cabin en-route inspection on a specific flight.

B. Present CAAB identification and authorization to the operator representative.

C. Obtain applicable operator boarding authorization per the airline procedures.

D. Request access to the aircraft as soon as practical (for example, after passengers have deplaned) to meet the flight and cabin crews and perform the interior predeparture inspection, as time permits.

E. If aircraft access is denied, the following steps should be taken by the inspector:

1. Apprise the operator representative of the regulation authorizing inspector access to aircraft

2. Request to see the appropriate supervisor if the representative still refuses access

3. Make it very clear to the operator that the denial of access is contrary to regulations and that enforcement action may be initiated

4. Report the occurrence to the immediate supervisor upon return to the office, if access was not granted

35.7 COORDINATE WITH THE CREW

34.7.1 PREDEPARTURE

The inspector should perform the following during pre-departure:

A. Ensure that each CCM has an operable flashlight readily available and has the appropriate up-to-date parts of a manual accessible when performing assigned duties.

B. Ensure that any discrepancies noted during pre-departure are addressed per the operator's manual.

C. Ensure that the required number of CCMs are aboard.

D. Observe the CCMs and ground personnel coordinating and supervising the boarding of passengers and properly stowing carryon baggage.

E. Ensure that items such as carry-on baggage and galley supplies do not cover or in any way interfere with aircraft emergency equipment in the overhead compartments.

F. Ensure that a required crewmember verifies that passengers seated at the emergency exit seats meet the regulatory requirements.

G. Ensure that all passengers are seated prior to any ground movements.

H. Ensure that the CCMs have sufficient time to take their assigned positions and to secure their restraint systems after giving the passenger briefing.

35.7.2 PRE-DEPARTURE BRIEFING

Ensure that the CCM pre-departure briefing is audible to all passengers and covers the following subjects:

A. Smoking: When, where, and under what conditions smoking is prohibited, including a statement that federal law prohibits tampering with, disabling, or destroying any smoke detector in an airplane lavatory.

B. Exit Locations: The preferred method is to physically point out exits.

C. Seatbelt Use: Instructions on how to fasten, unfasten, and adjust seatbelts.

D. Flotation Devices: Instructions on the location and use of required individual flotation devices.

E. Oxygen Use: Instructions on the location of and a demonstration on the use of the oxygen mask. For non-turbojet aircraft, this briefing item must only be conducted when the flight will exceed 12,000 feet mean sea level (MSL). When this occurs, the briefing must be given prior to takeoff. For large turbojet operations, the briefing must be given prior to exceeding 25,000 feet MSL.

F. Extended Overwater Operations: Instructions on the location, donning, and use of life preservers, life rafts (or slide rafts) and other means of flotation including a demonstration of the methods of donning and inflating a life preserver.

G. Special Passenger Briefings (when applicable): For persons who are handicapped or warrant some other special kind of attention, and for the individuals assisting them.

35.8 MOVEMENT ON THE SURFACE

A. During movement on the surface, the inspector should do the following—

1. Ensure that all CCMs remain seated during the taxi unless performing safety related functions. Safety related activities can include the following—

   a. Passenger preparedness

   b. Baggage/cargo/galley stowage

   c. Exit readiness

2. Ensure that each exit is closed and locked with the girt bars properly attached (if applicable).

B. Ensure that the following items or activities are accomplished prior to takeoff:

1. All stowage compartments are properly secured and latched.

2. The galley is prepared as follows:

   a. Loose items are secured

   b. All serving carts are properly restrained

3. The cockpit door is closed in accordance with the operator's manual.

4. Passenger seatbelts are secured.

5. Any unoccupied CCM seat restraint is properly secured for takeoff.

6. Any other equipment is properly stowed and secured.

   a. Ensure that crewmembers observe the sterile cockpit rules.

C. Monitor the crewmembers' performance during inflight operations, to ensure the following:

1. That during takeoff each CCM remains seated with restraint systems properly fastened.

2. That after takeoff, before or immediately after the seatbelt illumination is shut off, an announcement is made that passengers should keep their seatbelts fastened, even when the seatbelt sign is turned off.

3. That, if the flight is to be a smoking flight, an announcement is made that smoking is only permitted in specific rows and prohibited in the aisles and lavatories when the no smoking sign is turned off.

D. Ensure that the following are accomplished, as applicable:

1. Passenger compliance with seatbelt and no smoking signs.

2. Effective crew coordination for flightcrew and cabin crewmember communications – routine and/or emergency.

3. Turbulent air procedures are followed, including the proper restraint of serving carts, galley equipment, and compliance with instructions from the cockpit and coordination with flight crewmembers.

4. Crewmember handling of the passengers, to include the following:

a. Intoxicated passengers (not serving alcoholic beverages to them)

b. Abusive or disruptive passengers

c. Handicapped or ill passengers

d. Passengers requiring special attention

C. Ensure that crewmembers, during the approach and landing phases of flight, prepare the cabin for arrival by performing at least the following actions:

1. Ensuring that carry-on baggage is stowed and that all seatbacks and tray tables are upright and stowed, respectively.

2. Removing all food, beverages, and galley service items from each passenger seat location.

3. Ensuring that all stowage compartments are latched and secured.

4. Ensuring that the galley is prepared as follows:

a. Loose items are secured;
b. All serving carts are properly restrained.

5. Ensuring that the cockpit door is closed and locked in accordance with the operator's manual.

6. Verifying that passenger seatbelts and shoulder harnesses, if installed, are secured.

7. Properly stowing and securing any other equipment.

8. Ensure that crewmembers observe sterile cockpit rules.

9. Ensure that crewmembers are seated in assigned seats before landing, with appropriate restraint systems fastened.

35.9 FLIGHT ARRIVAL

During flight arrival the inspector should do the following:

A. Ensure that after landing, the CCMs prepare the aircraft for arrival by performing the following duties:

1. Before the captain has turned off the seatbelt sign, ensuring that passengers remain in their seats with seatbelts fastened

2. Upon arrival at the gate and after the seatbelt sign has been turned off, preparing the exits for deplaning Ensure that the appropriate complement of cabin crew members remain on board the aircraft at en-route stops (when passengers remain on board the aircraft to proceed to another destination).

3. Debrief the captain and lead CCM of any procedural problems or discrepancies/malfunctions noted during the flight.

35.10 AIR OPERATOR CABIN EN-ROUTE INSPECTION REPORT

The Inspector's 'Air Operator Cabin En-Route Inspection Report' is in Part-II, Section-68, Appendix-10.

35.11 AIR OPERATOR CABIN EN-ROUTE INSPECTION GUIDE

The Inspector's 'Air Operator Cabin En-Route Inspection Guide' is in Part-II, Section-68, Appendix-44.

35.12 AIR OPERATOR CABIN RAMP INSPECTION GUIDE

The Inspector's 'Air Operator Cabin En-Route Inspection Guide' is in Part-II, Section-68, Appendix-46.

CHAPTER-36

AIR OPERATOR SURVEILLANCE (COCKPIT RAMP INSPECTION)

36.0 GENERAL

This Chapter provides guidance regarding ramp inspections in general and specific guidance for the cockpit ramp inspections.

36.1 OBJECTIVES OF RAMP INSPECTIONS

A. The primary objective of a ramp inspection is to provide inspectors with the opportunity to evaluate an air carrier operation while the crewmembers and aircraft are on the ground. A ramp inspection is an effective method for evaluating an operator's ability to prepare both the aircraft and crew for a flight to be conducted.

B. Also, when a ramp inspection is conducted after the completion of a flight, it is an effective method for determining whether the aircraft and crew were adequately prepared for the flight, as well as for evaluating the operator's post-flight and/or turnaround procedures and crewmember and ground personnel compliance with these procedures.

C. Ramp inspections allow inspectors to observe and evaluate the routine methods and procedures used by an operator's personnel during the period immediately before or after a flight, to determine compliance with regulations and safe operating practices.

36.2 RAMP INSPECTION AREAS

A. There are five general inspection areas that can be observed and evaluated during ramp inspections. These inspection areas are as follows—

1. Crewmember;
2. Line station operations;
3. Aircraft;
4. Servicing and maintenance;
5. Ramp and gate condition and activity.

B. The "crewmember" inspection area refers to the evaluation of crewmember preparation for flight and compliance with postflight procedures. This area includes evaluations of crewmember manuals and any required flight equipment, flightcrew flight planning, flightcrew airman and medical certificates, crewmember disposition of trip paperwork, and other items that relate to crewmember responsibilities.

C. The "line station operations" inspection area refers to the various methods and procedures used by the operator to support the flight, such as distribution of dispatch, flight release, and flight locating paperwork; distribution of weather reports, PIREPs and other flight planning material; passenger handling; boarding procedures; and carry-on baggage screening.

D. The "aircraft" inspection area refers to the aircraft's general airworthiness, logbook entries, MEL compliance, carry overs, and required items of emergency and cabin safety equipment.

E. The "servicing and maintenance" inspection area applies to any ongoing maintenance and servicing, such as fueling, deicing, or catering. This area is usually evaluated in detail by airworthiness inspectors when performing their ramp inspections. Operations inspectors should, however, observe this area and comment on obvious deficiencies for airworthiness inspector follow up.

F. The "ramp and gate condition and activity" inspection area refers to taxi and marshaling operations, ramp or parking area surfaces, any apparent contamination or debris, vehicle operations, and the condition and use of support equipment.

36.3 GENERAL RAMP INSPECTION PRACTICES & PROCEDURES

36.3.1 WHEN TO CONDUCT

A. Ramp inspections may be conducted before a particular flight, at en-route stops, or at the termination of a flight.

B. A ramp inspection may be conducted any time an aircraft is at a gate or a fixed ramp location, provided the inspection is conducted when the crew and ground personnel are performing:

1. The necessary preparations for a flight, or

2. Post flight tasks and procedures.

36.3.2 AVOID UNNECESSARY DELAYS

A. Inspectors must, however, conduct inspections in a manner that does not unnecessarily delay crewmembers and/or ground personnel in the performance of their duties.

B. The following areas of conduct should be observed by inspectors during ramp inspection activities:

1. Inspectors should not interrupt crew or ground personnel when they are performing a particular phase of their duties.

2. When inspection activities require inspectors to interact directly with the crew or ground personnel, the activities should be timed to be accomplished when the crew or ground personnel are waiting to begin another phase of their duties or after they have completed one phase of their duties and before they begin another phase.

3. Inspection activities must be timed so that they do not delay or interfere with passenger enplaning or deplaning.

4. Inspection activities should not adversely impede aircraft servicing or catering.

36.3.3 LIMITED IN SCOPE

A. Because of the wide range of inspection areas involved, ramp inspections are usually limited in scope.

B. There are many preparatory or post flight actions that occur simultaneously and one inspector cannot physically observe all of these actions for a particular flight.

C. As a result, the inspector should vary the areas of emphasis for an inspection:

1. For example, on one ramp inspection the inspector may decide to observe and evaluate the PIC accomplishing flight planning and the operator's methods for providing the flightcrew with appropriate flight planning support.

2. On another ramp inspection, the inspector may decide to observe the Copilot accomplish the aircraft exterior preflight and then evaluate the aircraft's interior equipment and furnishings

3. As an example of a ramp inspection conducted at the termination of a flight, the inspector may decide to inspect the aircraft's interior equipment, furnishings, and aircraft logbooks, and then evaluate the trip paperwork turned in by the crew. In this example, the inspector may not have an opportunity to interact directly with the crew, therefore the "crewmember" inspection area would not be accomplished.

4. Inspectors should vary both the sequence and the emphasis of the inspection areas during a ramp inspection.

36.3.4 USING A JOB AID/INSPECTION GUIDE

A. Inspectors should use the ramp inspection job/inspection guide aid when conducting ramp inspections. This job aid contains a listing of items that should be observed and evaluated by the inspector during the inspection.

B. There may be items evaluated during a ramp inspection that are not listed on the job aid. The job aid can be used to help describe how the inspection was

limited in scope. The job aid can also be used to make notes during the inspection which can be entered in the CAA Action database.

36.4 SPECIFIC RAMP INSPECTION PRACTICES & PROCEDURES

36.4.1 CREWMEMBER INSPECTION AREAS

A. When an inspector makes direct contact with a crewmember, the inspector should provide an official but courteous introduction, offer appropriate identification for the crewmember to inspect, and inform the crewmember that a ramp inspection is being conducted.

B. If the direct contact is with a flight crewmember, the inspector should request to see the crewmember's airman and medical certificates. The inspector should review the certificates to see that they meet the appropriate requirements for both the duty position and for the aircraft for the flight to be conducted or that was just terminated.

C. When the direct contact is with flight crewmembers or cabin crew members, the inspector should also request to examine the crewmember's professional equipment.

1. Crewmember professional equipment includes any equipment that crewmembers are required to have according to regulation or operator policies, either on their person or that which will be available during the flight.

2. Examples of professional equipment include aeronautical charts, appropriate operator manuals, and operable flashlights.

3. Inspectors should determine whether the charts and manuals carried by crewmembers are current.

D. The following is a list of other items and activities that, depending on the scope of the ramp inspection, should be observed and evaluated:

1. Flightcrew flight planning activities, such as review of weather, flight plans, anticipated takeoff weight and performance data, flight control requirements (dispatch, flight release, flight locating, ATC flight plans);

2. Flightcrew aircraft preflight activities, such as exterior walk around, logbook reviews, and cockpit setup procedures, including stowage of flightcrew baggage and professional equipment;

3. Cabin crew inspection of cabin emergency equipment and cabin setup procedures, including stowage of cabin crew baggage and professional equipment;

4. Flightcrew and cabin crew post flight logbook entries and proper use of MELs and placards;

5. Completed trip paperwork and the appropriate disposition of such paperwork.

36.4.2 LINE STATION OPERATIONS AREA

A. This area of a ramp inspection usually involves a facility (or designated area of a facility) including related ground personnel, and is commonly referred to as "line station operations."

1. Line station operations include a designated location where crewmembers go to review and pick up required flight paperwork or to deposit flight reports, to send or receive communications with the operator's flight control system, and to join up with other crewmembers assigned to the flight.

2. Line station operations also includes gates and ramp areas where passengers and cargo are enplaned and deplaned.

B. The following is a list of items and activities that, depending on the scope of the inspection, should be observed and evaluated in this inspection area:

1. Preflight and post flight trip paperwork, such as load manifests, flight plans, weather reports and forecasts, NOTAMs, dispatch or flight release messages and operator bulletins

2. Methods used by the operator to comply with MEL and CDL requirements, particularly the preflight information provided to the crew

3. Adequacy of facility with respect to crewmember and ground personnel use for completing preflight and post flight responsibilities, including work areas and administrative support (such as forms, charts, and copy machines when required by company procedures)

4. Usability and currency of operator manuals and aircraft performance information maintained at the line station operations area for crew and ground personnel use

5. Company communication capabilities and procedures

6. Passenger enplaning and deplaning including public protection procedures and carry-on baggage screening

7. Cargo and baggage loading and stowage procedures and unloading procedures

36.4.3 AIRCRAFT INSPECTION AREA

A. Ramp inspections must include at least an examination of the aircraft's registration, airworthiness certificate, and maintenance logbook.

B. Inspectors should plan their ramp inspection activities so that any inspection of the aircraft's interior equipment and furnishings would be conducted either before passengers are enplaned or after they are deplaned.

C. The following is a list of items that should be observed in this inspection area:

1. Aircraft registration and airworthiness certificates;

2. Aircraft and cabin logbooks (or equivalent) (open discrepancies, carryover items, and cabin equipment items needing repair or replacement);

3. Appropriate placarding;

4. Fire extinguishers (correct types, numbers and locations; properly serviced, safe-tied, tagged, and stowed);

5. Portable oxygen bottles (correct numbers and locations; properly serviced, tagged, and stowed; condition of mask, tubing, and connectors);

6. Protective breathing equipment (properly located, stowed, and sealed);

7. First aid kits and emergency medical kits (correct numbers and locations; properly sealed, tagged, and stowed);

8. Megaphones (correct numbers and locations; in operable condition, and properly stowed);

9. Crash axe (properly located and stowed);

10. Passenger briefing cards (one at each seat position; appropriate to aircraft; required information including emergency exit operation, slides, oxygen use, seatbelt use, brace positions, flotation devices; appropriate pictorials for extended overwater operations, including ditching exits, life preserver, and life or slide raft inflight location);

11. Passenger seats (not blocking emergency exits; TSO label on flotation cushions; cushion intact; latching mechanism on tray tables; armrests have self-contained and removable ashtrays; seatbelts properly installed, operational, and not frayed or twisted);

12. Passenger oxygen service units (closed and latched with no extended red service indicators or pins);

13. Cabin crew stations (operable seat retraction and restraint systems; properly secured; harnesses not frayed or twisted; seat cushions intact; headrests in correct position; PA system and interphone);

14. Galleys (latching mechanisms - primary and secondary; tiedowns; condition of restraints, padding; proper fit of cover and lining of trash receptacles; hot liquid restraint systems; accessibility and identification of circuit breakers and water shutoff valves; nonskid floor; girt bar corroded or blocked by debris; clean stationary cart tiedowns (mushrooms); galley carts in good condition and properly stowed; lower lobe galley emergency cabin floor exits passable and not blocked by carpeting, if applicable);

15. personnel lift, if applicable (no movement up or down with doors open; safety interlock system; proper operation of activation switches);

16. Lavatories (smoke alarms; no smoking placards; ashtrays; proper fit of cover and lining of trash receptacles; automatic fire extinguisher systems);

17. Stowage compartments (weight restriction placards; restraints and latching mechanisms; compliance with stowage requirements; accessibility to emergency equipment; carry-on baggage provisions);

18. Required placards and signs (seatbelt, flotation equipment placards at seats; emergency/safety equipment placards; weight restriction placards; no smoking/seatbelt signs; no smoking placards; exit signs and placards, including door opening instructions);

19. Emergency lighting system (operation independent of main system; floor proximity escape path system; controllability from cockpit);

20. Exits (general condition; door seals; girt bars and brackets; handle mechanisms; signs; placards; slide or slide raft connections and pressure indications; lights and switches);

21. Main landing gear viewing ports, if applicable (cleanliness and usability).

36.4.4 SERVICING AND MAINTENANCE INSPECTION AREA

A. The servicing and maintenance of the aircraft may be observed at any time during the ramp inspection.

B. The following is a list of some areas that may be observed and evaluated in this inspection area:

1. Fueling procedures (ground wires in place; fuel slip properly completed; fueler trained in the operator's specific procedures);

2. Routine maintenance (qualifications of mechanics, repairmen or service agents; appropriate logbook entries);

3. Deicing procedures (compliance with company procedures; proper glycol/water ratios and temperatures; avoidance of engine/APU inlets; removal of all snow and ice; trailing and leading edges free of snow and ice and covered completely with deicing fluid);

4. Correct procedures used by service contractors (caterers; cleaners; lavatory and water servicing personnel; correct use of switches and controls);

5. Vehicle operation near aircraft (general condition and proper servicing of vehicles and equipment).

36.4.5 RAMP AND GATE CONDITION AND ACTIVITY INSPECTION AREA

A. During ramp inspections, inspectors should observe and evaluate the ramp and gate surface condition as well as any support activities being conducted during an inspection.

B. Inspectors should observe vehicular operations on the ramp and around gate areas and other aircraft operations during marshaling, taxiing, or towing operations. Inspectors should report any condition that appears to be unsafe or could potentially be unsafe.

C. The following is a list of some items that should be observed and evaluated in this inspection area:

1. Ramp, apron, and taxiway surfaces (general condition; cracks; holes; uneven surfaces);

2. Contamination debris (FOD; fuel, oil, or hydraulic spills; snow and ice accumulations; taxi lines; gate markings; signs; signals);

3. Construction (appropriate barriers; signs; markings; flags);

4. Vehicular operations (conducted safely around aircraft and gate areas by qualified personnel).

CHAPTER-37

AIR OPERATOR SURVEILLANCE (CABIN RAMP INSPECTION)

37.0 GENERAL

This inspection is to determine the condition of the passenger cabin with respect to applicable safety regulations.

37.1 START OF INSPECTION

Before boarding the aircraft or performing any inspection, the inspector should coordinate with the crew as follows:

(i) Identify himself or herself to the captain and to the lead CCM as a CAAB inspector

(ii) State the purpose of the inspection

37.2 INSPECT EQUIPMENT ITEMS

The inspector should inspect the following, as applicable:

Cabin placarding, markings, and signs (for example, exits, no smoking signs, and emergency equipment), to ensure marking legibility and the correct location.

A. Fire extinguishers for the following:

1. To verify the quantity and location;

2. To ensure that they are properly serviced, tagged, and stowed.

B. Portable oxygen bottles for the following:

1. To verify the quantity and location;

2. To ensure that they are properly serviced, tagged, and stowed;

3. To determine the condition of the mask, tubing, and connectors.

C. Protective breathing equipment (PBE) for correct location, proper number of units, and proper stowage.

D. First aid kits and emergency medical kits for correct number, location, and stowage.

E. Megaphones for correct number, location, general condition, and proper stowage.

F. Overwater equipment as applicable.

37.3 INSPECT PASSENGER-RELATED ITEMS

Passenger briefing cards, to ensure the following:

A. That they are available for each passenger;

B. That they are appropriate to the aircraft.

C. That they contain the required information, to include the following:

1. Emergency exit location and operation;
2. Slide use and location;
3. Oxygen use;
4. Seatbelt use;
5. Flotation device use and location;
6. Appropriate pictorials for extended overwater operations, including ditching exits, life preservers, and life raft or slide raft inflight location;
7. Exit seating information.

D. Passenger seats, to ensure the following:

1. That a reclined seat does not block emergency exits;
2. That the seat cushions are intact;
3. That the tray table latching mechanisms are operable;
4. That the self-contained and removable ashtrays are in serviceable condition and are available when smoking is authorized;
5. That each seat has a complete restraint system;
6. That seatbelts are operational and not frayed or twisted;

E. Passenger oxygen service units to ensure that they are closed and latched, without any extended red service indicators or pins.

37.4 INSPECT CABIN CREW ITEMS

Inspect CCM station, to ensure the following:

A. That the seat retraction/restraint system is operational and is properly secured;

B. That the seatbelts are operational and not frayed or twisted;

C. That the seat cushions are intact;

D. That the seat headrest is in the correct position;

E. That the public address (PA) system and interphone are operable;

F. That aircraft installed flashlight holders are indeed installed.

37.5 INSPECT GALLEY ITEMS

A. Inspect galleys, to ensure that the following items are operable:

1. The latching mechanisms (primary and secondary);
2. The tiedowns;
3. Other galley restraints;
4. That the hot liquid restraint system is operable;
5. That the circuit breakers and water shutoff valves are accessible and properly identified;
6. That the cover and lining of trash receptacles fit properly;
7. That the nonskid floor is serviceable;
8. That the girt bar is clean and serviceable;
9. That the stationary cart tiedowns (mushrooms) are clean;
10. That the galley carts are in serviceable condition and properly stowed;
11. That, if applicable, the lower lobe galley emergency cabin floor exits are passable and not covered by carpeting.

B. Galley personnel lift (if applicable) to ensure that it does not move up or down with the doors open and that the activation switches operate properly.

37.6 For 'Air Operator Ramp Inspection Report', refer to Part-II, Section 68/Appendix-04.

CHAPTER-38

AIR OPERATOR SURVEILLANCE (FLIGHT CREW QUALIFICATION RECORDS INSPECTION)

38.0 GENERAL

This evaluation aid provides guidelines for the acceptance of crew record keeping guidance and forms. It also provides a basis for the conduct of the validation inspections that must be accomplished on a regular basis.

38.1 CONDUCT OF INSPECTION

A. Follow the general inspection guidance for the conduct of the inspection, *select specific named files and record those names,* then:

B. Using a tablet, lay out columns for the training and qualification requirements.

C. Enter the crew name in the left column and began historically through the file to determine if the crewmember is historically and/or currently qualified to conduct commercial air transport operations.

D. Pay particular attention to any breaks in qualifications that are outside of the eligibility periods.

E. Crosscheck dates of training or checking with other records, such as the crew flight time records, aircraft tech log, simulator log, etc., to verify the accuracy of the records.

F. Resolve any apparent discrepancies on the spot if possible.

G. Make copies of any documents that may be necessary to further investigation.

H. Complete an Action report.

I. Follow the Guide as in Para 38.2.

38.2 FLIGHT CREW QUALIFICATION RECORDS INSPECTION GUIDE

For flight crew qualification records inspection, Operations Inspectors of CAAB shall refer to Part-II, Chapter-68, Appendix-18.

38.3 INITIAL ROUTE CHECK MONITORING REPORT

For Initial Route Check Monitoring Report Operations Inspectors of CAAB shall refer to Part-II, Chapter-68, Appendix-11.

CHAPTER-39

AIR OPERATOR SURVEILLANCE (CABIN CREW QUALIFICATION RECORDS INSPECTION)

39.0 GENERAL

This inspection is to ensure that the AOC holder is qualifying the cabin crew as outlined in their approved training programme and recording the qualification in a timely manner.

39.1 CONDUCT OF INSPECTION

Following the general inspection guidance in the conduct of the inspection, *select specific named files and record those names,* then:

A. Using a tablet, lay out columns for the training and qualification requirements.

B. Enter the crew name in the left column and began historically through the file to determine if the crewmember is historically and/or currently qualified to conduct commercial air transport operations.

C. Pay particular attention to any breaks in qualifications that are outside of the eligibility periods.

D. Crosscheck dates of training or checking with other records, such as the crew flight time records, aircraft tech log, simulator log, etc., to verify the

E. resolve any apparent discrepancies on the spot if possible.

F. make copies of any documents that may be necessary to further investigation.

G. complete an Action report.

H. Follow the guide as in Para 39.2.

39.2 CABIN CREW QUALIFICATION RECORDS INSPECTION GUIDE

For cabin crew qualification records inspection, Operations Inspectors of CAAB shall refer to Part-II, Chapter-68, Appendix-19.

39.3 AIR OPERATOR CABIN CREWMEMBER CONFORMANCE GUIDE

For cabin crew qualification records inspection, Operations Inspectors of CAAB shall refer to Part-II, Chapter-68, Appendix-20.

39.4 CABIN CREW MANUAL INSPECTION GUIDE

For Cabin Crew Manual Inspection Guide, Operations Inspectors of CAAB shall refer to Part-II, Chapter-68, Appendix-48.

39.5 AIRCRAFT-SPECIFIC CCM MANUAL CONFORMANCE GUIDE

For Aircraft-Specific CCM Manual Conformance Guide, Operations Inspectors of CAAB shall refer to Part-II, Chapter-68, Appendix-21.

CHAPTER-40

AIR OPERATOR SURVEILLANCE (CREW FLIGHT TIME RECORDS)

40.0 GENARAL

This chapter provides guidance that can be used to evaluate the proposed records, then to ensure that the AOC holder is qualifying the cabin crew as outlined in their approved training programme and recording the qualification in a timely manner.

40.1 EVALUATION REFERENCES

An evaluation will determine whether the “flight time” polices, procedures and records of the AOC holder:

A. correctly presented in the respective operations manuals for specific requirements;

B. Conform to any specific Operations Specifications issued to the AOC holder; and,

C. The specific entries in the individual files demonstrate conformance with all requirements.

40.2 CONDUCT OF INSPECTION

A. Following the general inspection guidance in the conduct of the inspection, *select specific named files and record those names,* then:

B. Using a tablet, lay out columns for the training and qualification requirements. Use the job aid as necessary to label the columns.

C. Enter the crew name in the left column and began historically through the file to determine if the crewmember is historically and/or currently qualified to conduct commercial air transport operations.

D. Pay particular attention to any breaks in qualifications that are outside of the eligibility periods.

E. Crosscheck dates of training or checking with other records, such as the crew flight time records, aircraft tech log, simulator log, etc., to verify the

F. Resolve any apparent discrepancies on the spot if possible.

G. Make copies of any documents that may be necessary to further investigation.

H. Complete an Action report.

I. Follow Crew Flight Time Record guide as in Para 40.3.

40.3 CREW FLIGHT TIME RECORD GUIDE

For Crew Flight Time Record Guide, Operations Inspectors of CAAB shall refer to Part-II, Chapter-68, Appendix-22.

CHAPTER-41

AIR OPERATOR SURVEILLANCE (FLIGHT PREPARATION & TRIP RECORDS)

41.0 GENERAL

This chapter provides guidance for the evaluating proposed flight preparation records and conducting subsequent inspections of these records.

41.1 GENERAL

A. The primary objective of flight preparation (trip) records inspections is for inspectors to ensure that operators meet the regulatory requirements of CAR ‘84 for the proper use, documentation, and retention of operational trip records.

B. Inspectors can evaluate trip records to reconstruct a particular flight or a series of flights by examining flight plans, dispatch or flight releases, loading and weight documents, weather documents, and other related flight information retained by the operator.

C. Trip record surveillance includes an evaluation of the quality of the recorded data, a check of the calculations for accuracy, and a check of the operator's compliance with the CAR ‘84 and company procedures. This guidance to be used by inspectors when evaluating and conducting an inspection of an operator's trip records.

41.2 FLIGHT PREPARATION RECORDS REQUIREMENTS

Inspectors should ensure that, in the subject areas that follow, AOC holders meet the following requirements:

41.2.1 RETENTION OF FLIGHT PREPARATION RECORDS

AOC holders are required by CAR ‘84 to retain for at least 3 months the originals, copies, or electronic versions of the completed load manifest (or information from it, except information concerning cargo and passenger distribution); the dispatch release; and the flight plan.

41.2.2 LOAD MANIFESTS

Inspectors should ensure that the operator's load manifest contains the requirements of CAR ‘84, with emphasis on the following information:

A. Individual weights of the aircraft, fuel and oil, cargo and baggage, passengers, and crewmembers

B. Maximum allowable takeoff weight: runway to be used, runway limit, and climb limit, en-route performance limits, destination landing weight limits, and destination or alternate landing distance limits

C. Total aircraft takeoff weight (as computed under approved procedures)

D. Documentation that the aircraft is properly loaded with the center of gravity within approved limits

E. Passenger names (unless such information is maintained elsewhere by the operator)

41.2.3 OPERATIONAL FLIGHT PLAN AND FLIGHT RELEASE

Inspectors should ensure that the operator's operational flight plan and flight release meets the requirements of CAR '84, with emphasis on the following information:

A. Aircraft identification number

B. Trip number

C. Departure airport, intermediate stops, destination airports, and alternate airports

D. A statement of the type of operation (IFR or VFR)

E. Minimum fuel required

F. Weather reports and forecasts for the destination airport, each intermediate stop, and any alternate airport that is the latest information available at the time the release is signed

41.2.4 FLIGHT PLAN

Inspectors must ensure that the operator's flight plan contains at least the following information:

A. Aircraft identification number)

B. Type of aircraft

C. Flight number

D. Name of the pilot in command (PIC) (usually found on the flight release)

E. Point and proposed time of departure

F. Proposed route, cruising altitude (or flight level), and true airspeed at the cruising altitude

G. Point of first intended landing and the estimated elapsed time until over that point

H. Amount of fuel on board (in hours)

I. An alternate airport - if the first point of intended landing does not have a prescribed standard instrument approach procedure, or the weather at that airport for at least 1 hour before and 1 hour after the estimated time of arrival (ETA)

indicates the ceiling will be at least 2000 feet above the airport elevation and the visibility will be at least 3 miles

J. Number of persons in the aircraft, except where that information is otherwise readily available to the CAAB.

K. Any other information that either air traffic control (ATC) or the PIC finds necessary for ATC purposes

41.2.5 JOURNEY LOG/TECHNICAL LOG

A. Inspectors conducting a trip records inspection should also review and compare this log to the other flight preparation records for validation.

B. Particular attention should be given to the airworthiness release. Inspectors must ensure that the airworthiness release has been prepared in accordance with the procedures set forth in the operator's manual. The release must also include a statement of certification that the following conditions have been met:

1. Any work performed on the aircraft was performed in accordance with the requirements of the operator's manual

2. All items required to be inspected were inspected by an authorized person who determined that the work was satisfactorily completed

3. No known condition exists that would make the aircraft not airworthy

4. Concerning the work performed, the aircraft is in condition for safe operation

41.3 FLIGHTS REQUIRING OPERATIONAL FLIGHT PLAN & FLIGHT RELEASE

For all flights involving commercial air transport of passengers or cargo, a flight release must be signed and an operational flight plan must be executed by the PIC and the flight dispatcher for the following types of flights:

A. All scheduled flights

B. All extra section (unscheduled) flights

C. All charter flights

D. All demonstration flights

41.4 PILOT ROUTE CERTIFICATION

A. Inspectors must ensure that the PIC has certified to having examined all applicable en-route and destination information as required by CAR '84. This information includes such items as: weather information, navigation facilities, communication procedures, terrain and obstructions, minimum flight levels, instrument approach procedures, airport diagrams, and NOTAMs.

B. If the flight is to be conducted through an area or to an airport, either of which is designated as a "special airport" or a "special area" by the CAAB, the PIC must be qualified to conduct the flight.

C. To meet the "special airport" qualification requirements, the PIC must have accomplished, within the preceding 12 calendar months, the following—

1. Made an entry to that airport (including a takeoff and landing) while serving as a pilot crewmember (PIC or second in command (SIC))

2. Qualified by using pictorial means acceptable to the CAAB for the airport

D. To meet the "special area" qualification requirements, the PIC must have, within the preceding 12 months, become or remained qualified for the route to be flown by adequately demonstrating one of the following methods:

1. Flying over the route or area as PIC using the applicable navigation system

2. Flying over the route or area as PIC under the supervision of a check pilot, using the applicable navigation system

3. Completing an approved Class II navigation training programme

41.5 TRIP RECORDS INSPECTION AREAS

During a trip records inspection, the inspector should not consider any one inspection area to be more important than any other inspection area. Five general inspection areas have been identified as areas to be evaluated during trip records inspections.

41.5.1 GENERAL INSPECTION AREA

This inspection area refers to those inspection elements that are common to all trip records. Inspectors should evaluate such items as record availability, legibility, currency, and content, as they relate to regulatory record keeping requirements.

41.5.2 FLIGHT PLAN INSPECTION AREA

A. This inspection area refers to the flight planning requirements for AOC holders. Inspector should evaluate such items as flight plan content, listing of alternate airports, and fuel loads.

B. Many AOC holders incorporate the flight plan and the flight release into one document. This is acceptable and reduces the duplication of information that may be required by both documents.

41.5.3 FLIGHT RELEASE INSPECTION AREA

This inspection area refers to all AOC holders.

41.5.4 LOAD MANIFEST INSPECTION AREA

This inspection area refers to the regulatory requirements of CAR '84. Inspectors must inspect and validate the operator's loading documents to ensure accuracy and compliance with the CAR '84.

41.5.5 OTHER REQUIRED DOCUMENTS INSPECTION AREA

This inspection area refers to such items as pertinent weather forecasts, NOTAMs, fuel slips, and other documents that are issued to flight crewmembers before each flight.

41.6 GENERAL INSPECTION PRACTICES AND PROCEDURES.

A. Trip records inspections are usually conducted at the operator's principal base of operations.

B. Some operators have established a system where line stations forward all trip record information to one central location where the information is retained for the required time period.

C. Some operators have most of their trip record information stored in a computerized format.

D. Inspectors should use the following general, procedural guidelines when conducting an inspection of an operator's trip records.

41.6.1 PREPLANNING INSPECTION

A. Before conducting the actual inspection, inspectors should familiarize themselves with the operator's trip records procedures, formats, and means of disseminating information to flight crews.

B. Inspectors should preplan the inspection by deciding which specific areas should be concentrated upon, such as listing alternate airports, accurate fuel loads, flight release time versus actual block-out time, and accurate and timely weather information.

41.6.2 INITIAL CONTACT WITH OPERATOR

A. Inspectors should contact the operator's personnel responsible for maintaining trip record files and advise them that an inspection shall be conducted.

B. Upon arriving at the record keeping location, the inspector should properly identify one's self and request records for a specific series of trips.

C. This ensures that the operator has an effective means of storing record information and is capable of retrieving specific trip information at the DFSR's request.

D. Inspectors should also request space at the operator's facility to conduct the inspection.

41.6.3 EXAMINATION OF DOCUMENTS

A. During the conduct of the actual inspection, inspectors should examine all of the available documents for each flight and cross check the information between the trip records.

B. For example, the fuel load on a dispatch release for a AOC holder should be the same as the fuel load on the load manifest, the flight plan, and the fuel slip within the operator's specified tolerance.

41.7 SPECIFIC INSPECTION PRACTICES AND PROCEDURES

For all trip records inspections, the inspector should, as a minimum, evaluate the operator's records for the following:

41.7.1 ACCURACY AND COMPLETENESS

A. Inspectors should ensure that each trip record package they examine contains all of the required information and also pertaining to the actual flight it represents.

B. Each document should have a flight number or a trip number and an aircraft identification number which clearly identifies the applicable flight.

41.7.2 AIRCRAFT WEIGHT INFORMATION

A. Each trip records package, regardless of the type of operator, must contain aircraft weight, balance (CG), and loading information.

B. Passenger and cargo weight information must be accurately reflected on the load manifest.

C. When evaluating this information, inspectors should take into account the following:

1. Many operators have approved systems which result in weight and balance "finals" being transmitted to the flightcrew via air ground passive

communication systems (ACARS) or company radio frequencies after the aircraft has departed the gate or ramp area.

2. This information, which normally consists of adjusted takeoff gross weight and trim settings, is critical to the crewmembers for the accurate determination of the takeoff data.

3. Load manifests must contain, as a minimum, two weight and balance notations:

   a. The maximum allowable takeoff weight

   b. The actual takeoff gross weight for the particular flight

41.7.3 MINIMUM FUEL REQUIRED

Inspectors should examine AOC holder trip records to ensure that they include an annotation of the minimum fuel required to conduct the flight.

A. Operators will provide a breakdown of fuel loads, such as trip fuel, alternate fuel, reserve fuel, and holding fuel.

B. When examining fuel figures, inspectors should cross check the dispatch or flight release fuel quantity (or weight in pounds) with the load manifest fuel quantity (or weight in pounds) to ensure that the figures are the same.

C. Additionally, inspectors must ensure that the operator's flight plan includes the amount of fuel on board (in hours), and that this figure matches, within the operator's allowable tolerance, the fuel figures shown on the flight release and the load manifest.

41.7.4 FLIGHT RELEASE INFORMATION

CAR '84 requires a domestic operator to issue a release if the flight is delayed from the intermediate airport:

A. To ensure that the operator is re-releasing flights as required, inspectors should determine the actual departure times from company logs, ATC tower logs, or some other means, and then compare those times with the dispatch or flight release times (as applicable).

B. The best time to review this requirement is during operations in adverse weather conditions.

41.8 FLIGHT PREPARATION & TRIP RECORDS GUIDE

For Flight Preparation & Trip Records Guide, Operations Inspectors of CAAB shall refer to Part-II, Chapter-68, Appendix-23.

CHAPTER-42

AIR OPERATOR SURVEILLANCE (OPERATIONS BASE SUPPORT STRUCTURE)

42.1 GENERAL

A. This section also contains direction and guidance to be used by principal operations inspectors (POIs) for conducting operations structure inspections.

B. A operations structure inspection is conducted for all AOC holders.

C. These AOC holders must meet the same minimum requirements during a operations structure inspection as they do for original certification.

42.1.1 DEFINITION

A operations structure inspection is an important surveillance function which provides the CAAB with a comprehensive review of all of an operator's activities. It can encompass, in a single inspection, some or all of the specific inspection areas for an AOC holder.

42.1.2 LOCATION OF INSPECTION

A operations structure inspection is usually conducted at the operator's main base of operations or place of business. In some cases, operators may elect to retain selected records at different locations, such as at an office located in a residence, at an office building, or in portable files. The locations may differ as widely as the operators' activities differ.

42.2 PLANNING AN OPERATIONS STRUCTURE INSPECTION

The method used to conduct a operations structure inspection depends on the organizational structure of the operator at a specific location as identified in the organization Database.

42.2.1 SURVEILLANCE ACTIVITIES

A. The size and complexity of the operations at a particular location will dictate which surveillance items are to be examined during a operations structure inspection.

B. A operations structure inspection may be completed over several days or during a single visit and may often be conducted in conjunction with a proficiency or competency check.

C. When possible, airworthiness and operations inspectors should jointly conduct operations structure inspections.

42.2.2 FREQUENCY

The frequency of operations structure inspections for an operator is determined by the number of aircraft and personnel employed by the operator and by the complexity of the operation.

A. Operations structure inspections are usually conducted as part of routine work programme.

B. Additional inspections may be initiated by CAAB in response to complaints or special emphasis items.

42.3 INSPECTION PREPARATION

42.3.1 REVIEW FILES

Prior to conducting an operations structure inspection, the inspector should review the AOC holder's file to refresh his memory with the following information:

A. Current and appropriate AOC

B. Current and appropriate operations specifications (Ops Specs)

C. General correspondence with the operator

D. Previous inspections and proficiency check records for possible problem areas, accident history, violation history

E. Any applicable manuals

42.3.2 NOTIFICATION OF INSPECTION

A. The inspector should notify the operator to arrange a time when the appropriate personnel and aircraft will be available for the inspection.

B. Notification is important if the inspector plans to interview company personnel.

C. In some cases, notification may be necessary for the inspector to locate some operators, such as single operators or other small operators.

42.4 CONDUCT OF INSPECTION

A. The strategy used by an inspector for accomplishing a operations structure inspection depends on the size and complexity of the operator.

B. Because operators conduct business in a variety of ways, it is not necessary to identify each item that must be examined during a operations structure inspection.

C. To complete an operations structure inspection, inspectors should examine, as a minimum, the items that follow.

42.4.1 AIR OPERATOR CERTIFICATE

A. The inspector should examine the operator's original Air Operator's Certificate, particularly the date and certificate number, and determine whether or not it matches the office copy.

B. If the original operating certificate is not available, the inspector should determine its location and schedule a time to inspect it.

42.4.2 OPERATIONS SPECIFICATIONS

A. The inspector should review the operator's current Ops Specs and ensure that the issue date is the same as that of the CAAB's copy.

B. If the original Ops Specs are not available, the inspector should determine their location and schedule a time to inspect them.

42.4.3 OPERATIONS MANUAL

If the operator has either partial or full manuals that provide guidance for flight or ground personnel, the inspector should complete an inspection of the manuals, as applicable.

A. When the operator does not have a manual, or when there is only a part of a manual, the inspector should determine whether or not the operator has deviation authority by Ops Specs.

B. The inspector should determine whether or not manual procedures are being followed by interviewing operator personnel or by observing employees in the performance of their duties.

42.4.4 RECORDS

The inspector should conduct the following records inspections by using the applicable guidance provided in this volume:

A. Flight Preparation records;

B. Flight and duty time records;

C. Training records;

D. Operations records.

42.4.5 AIRCRAFT

If practical, the inspector should examine, during a operations structure inspection, the aircraft used by the operator. In addition to inspecting the aircraft to determine whether or not it is in airworthy condition, the inspector should examine the following items for compliance:

A. Airworthiness certificate and registration

B. Airplane limitations and required placards

C. Approved aircraft flight manual (AFM) or company flight manual (CFM) carried on board

D. Empty weight and center of gravity (CG)

E. calculated

F. Instruments and equipment

G. Operable required equipment (unless an airworthiness directive provides otherwise)

H. The approved minimum equipment list (MEL) and its use as authorized by the Ops Specs (if applicable)

I. Aircraft records available for inspection

42.5 DEBRIEFING

A. The inspector should plan to debrief the operator as part of the operations structure inspection. Quite often the operator may have participated directly in the inspection and may have the capability to make corrections quickly.

B. The following debriefing points apply:

1. The debriefing should include both compliance and noncompliance areas. If a potential violation is involved, the inspector should advise the operator that a a safety resolution will be raised and a letter of investigation (LOI) may follow.

2. The inspector must be clear when indicating any areas which the operator must correct before further operations can be conducted.

3. The inspector should advise the operator that a formal letter containing a listing of the discrepancies will be sent to the operator and made part of the permanent file.

42.6 FUTURE ACTIVITIES

A. By conducting operations structure inspections, the CAAB is able to maintain a comprehensive review of an operator's business conduct and its compliance with CAR '84.

B. These inspections often result in findings which generate follow up action. If the findings warrant such action, the inspector should implement the following corrective measures:

1. Surveillance to verify the operator's correction of discrepancies

2. An adjustment of the operator's planned work programme

3. The initiation of an enforcement investigation report, if applicable.

42.7 AIR OPERATOR OPERATIONS BASE SUPPORT STRUCTURE GUIDE

For Air Operator Operations Base Support Structure Guide, Operations Inspectors of CAAB shall refer to Part-II, Chapter-68, Appendix-24.

42.8 AIR OPERATOR MAIN BASE INSPECTION GUIDE

For Air Operator Main Base Inspection Guide, Operations Inspectors of CAAB shall refer to Part-II, Chapter-68, Appendix-25.

CHAPTER-43

AIR OPERATOR SURVEILLANCE (OPERATIONS CONTROL)

This chapter provides detailed guidance for the evaluation of an AOC holder's proposed operational control structure and methodology and inspection of the on-going processes.

43.1 GENERAL POLICY

A. The information in this chapter should be used by operations inspectors when planning, conducting, and reporting on operational control inspections.

B. Operational control inspections are applicable to all AOC holders, with specific emphasis on those operating large and/or commuter flights.

1. AOC holders. The inspection of the operational control function of these AOC holders is accomplished during a operations structure inspection.

2. Inspection of Operational Control Functions at Line Stations. An operational control inspection is conducted at the facility where the operator authorizes or releases flights. Operators commonly perform limited operational control functions at line stations, but they may not authorize or release flights at these locations. The line station portion of operational control functions is inspected during station facilities inspections.

43.2 OBJECTIVES

A. An operational control inspection has two primary objectives.

1. The first objective is for the inspector or team to ensure that the operator is in compliance with the minimum requirements of the CAR '84 and the operations specifications (Ops Specs).

2. The second objective is to ensure that the operator's system of control provides positive assurance of public safety. The operator must meet both objectives to obtain and retain an operating certificate.

B. To make this determination, the inspector or team must evaluate the operator to ensure that the following criteria are met:

1. Responsibility for operational control is clearly defined

2. An adequate number of operational control personnel are provided

3. Applicable manuals contain adequate policy and guidance to allow operational control personnel and flight crews to carry out their duties efficiently, effectively, and with a high degree of safety

4. Operational control personnel are adequately trained, knowledgeable, and competent in the performance of their duties

5. Flight control personnel and flight crews have been provided with the necessary information for the safe planning, control, and conduct of all flights

6. The operator provides adequate facilities

7. The operator performs all operational control functions required by the regulations

8. The operator performs all functions necessary to provide adequate operational control in the environment in which the operations are conducted

9. Adequate emergency procedures and contingency plans have been formulated

43.3 PRACTICES AND PROCEDURES

Inspectors conduct operational control inspections through systematic manual reviews, records inspections, observations, and interviews.

43.3.1 INSPECTOR PREPARATION AND MANUAL REVIEW

A. Inspectors should become familiar with the operational control sections of the operator's Ops Manual, Part A.

B. This manual review is both the first step in the inspection process and preparation for subsequent steps.

43.3.2 RECORDS CHECKS, INTERVIEWS, AND OBSERVATIONS

A. The inspector should establish with the operator a mutually convenient time for conducting the records checks and interviews.

B. Inspectors must conduct interviews with both management and working level personnel to meet inspection objectives. Inspectors should plan these interviews so that the required information can be obtained without distracting personnel from their duties and responsibilities. To prevent intruding into actual operations, the inspector should, if possible, conduct these interviews privately and away from the flight control center.

C. Inspectors must observe actual flight release operations. Before beginning these observations, an inspector should request a tour of the operator's facility for orientation, during which the inspector should observe a number of different people at work. The inspector should ask questions; however, care must be taken not to distract or interfere with the individuals in the performance of their assigned duties. An effort should be made by the inspector to make observations during periods of peak activity, adverse weather, or during non-routine operations. POIs

of large operators should arrange to have these observations conducted at random times throughout the year, preferably in periods of inclement weather.

D. Inspectors should observe competency checks being conducted to evaluate the knowledge level of persons involved in operational control and the performance of the supervisor.

43.4 OPERATIONAL CONTROL REVIEW AREAS

In addition to the job aid at the end of this evaluation guidance, the following guidance is provided for training and consideration:

43.4.1 AUTHORIZED OPERATIONS

A. Are the operations that may and may not be conducted according to the Ops Specs (including areas of operation) clearly specified?

B. Are there clear definitions of types of operations authorized? Are there clear definitions of the rules under which each of these operations is conducted?

C. Are the applicable CAR ‘84 Parts identified and the operator's policies applicable to each type of operation clearly stated?

D. Are the topics listed on this job aid adequately covered?

E. Is the applicable section of the Ops Manual, Part A readily available to operational control persons and flight crews while they perform their duties?

F. Is the copy of the operator's Ops Manual, Part A that is available to operational control persons or flight crews current?

43.4.2 ORIGINAL RELEASE

A. Are the conditions clearly stated under which a flight may and may not be dispatched?

B. Are the conditions stated under which a flight must be rerouted, delayed, or canceled?

C. Does the flight release contain all the required elements?

D. Are limitations required in the remarks of the release?

E. Is a written copy of weather reports and forecasts (including PIREPs) and NOTAMs attached to the release and provided to the flightcrew?

43.4.3 RESPONSIBILITY FOR PREDEPARTURE FUNCTIONS

A. Are the responsibility and procedures for accomplishing the following functions clearly specified?

1. Crew assignment;
2. Load planning;
3. Aircraft routing;
4. Flight planning;
5. Release of the aircraft from maintenance;
6. Control of MEL and CDL limitations;
7. Weight and balance.

B. Have adequate procedures for cross checking and verifying these activities been established?

C. Is each of these procedures effective?

D. What means has the operator established for the PIC and operational control person to ensure that each of these functions has been satisfactorily accomplished before the aircraft departs?

43.4.4 PILOT BRIEFING

A. How do the operator's procedures provide for briefing of the PIC by the operational control person?

B. Is the minimum content of the briefing specified and adequate?

C. How are the signatures of both the PIC and the operational control person on the dispatch release accomplished?

D. Is the PICs obligation to operate the flight according to the release, or to obtain an amended release, clearly stated?

43.4.5 FLIGHT FOLLOWING

A. Are the operational control person's flight following requirements and procedures clearly stated?

B. Is policy and guidance provided to flight crews and operational control persons for monitoring fuel en-route?

C. Are flight crew reporting requirements and procedures clearly stated?

D. Are there specified procedures for operational control persons to follow when a required report is not received?

E. Is a record of communications made and retained?

43.4.6 INABILITY TO PROCEED AS RELEASED

A. Is a policy stated concerning the PICs latitude to deviate from a dispatch release without obtaining a new release?

B. Is there specific and adequate direction and guidance to PICs and operational control persons for the actions to take when a flight cannot be completed as planned (such as destinations or alternates below minimums, runways closed or restricted)?

C. Are procedures to follow specifically and clearly stated in case of diversion or holding?

43.4.7 WEATHER

A. Does the operator obtain weather reports from an approved source?

B. Are forecasts based on approved weather reports?

C. Does the operator have a weather forecasting?

D. Are procedures for making flight movement forecasts clearly specified?

E. Are those individuals authorized to make a flight movement forecast clearly specified?

F. Are other individuals specifically prohibited from making flight movement forecasts?

G. Does the operator have an adverse weather system?

H. Does the operator have adequate procedures for providing the latest available weather reports and forecasts to flight crews while the flight is en-route?

I. Does the operator have adequate procedures for updating weather information when the aircraft is delayed on the ground?

43.4.8 WEATHER MINIMUMS

A. Is release under VFR authorized by the Ops Specs?

B. If so, has the forecast and actual weather allowed VFR flight to destination on those flights so released?

C. Have turbojet aircraft been released under VFR?

D. What IFR departure minimums are authorized by the Ops Specs?

E. When flights are released with the departure airport below landing minimums, are takeoff alternates named on the dispatch release?

F. What destination weather minimums are authorized?

G. What weather minimums are authorized for "high minimums" captains?

H. How does the operator ensure compliance with the Ops Specs (operable centerline lighting and 15% additional runway for turbojet operations for operations below 300 and 3/4)?

I. When a flight is released to a destination below CAT I minimums, is that airplane type authorized at CAT II or CAT III operations at that location according to the Ops Specs?

J. When destination alternates are required, are they named on the dispatch release?

K. Is the weather at the named alternate airport equal or better than that required by the Ops Specs?

L. Is "marginal" defined for the designation of two alternates on the dispatch release?

M. Are two alternates designated when required?

N. How does the operator ensure that operational control persons are aware of these limitations before dispatching a flight?

O. Do weather forecasts from the trip records show that these limits have been complied with for dispatch?

43.4.9 SELECTION OF ALTERNATES

A. Is policy, direction, and guidance provided for the selection of alternates?

B. Is terrain and engine-out performance (drift-down) considered in the alternate selection?

43.4.10 NOTAMS

A. Is the required NOTAM information provided (Class I, Class II, and Local)?

43.4.11 INFORMATION

A. What provisions does the operator make for supplying airport and navigation information?

B. What means does the operator use to comply with the requirement for an airport data system? Is it adequate?

C. Are flight crews provided with written flight plans for monitoring flight progress and fuel burn?

D. How does the operator provide data to operational control persons on takeoff and landing minimums at each airport?

E. Do operational control persons have immediate access to such data?

F. Are provisions made for nonstandard operations, such as inoperative centerline lighting?

43.4.12 FUEL

A. Are all the required increments of fuel provided (start and taxi, takeoff to arrival at destination, approach and landing, missed approach, alternate fuel, 45 minutes of reserve, and contingency fuel)?

B. Are the operator's policies concerning contingency fuel adequate for the environment in which operations are conducted?

C. Are there minimum fuel procedures specified for both operational control persons and PICs?

D. When aircraft are dispatched without an alternate, is adequate contingency fuel carried for un-forecast winds, terminal area delays, runway closures, and contingencies?

43.4.13 EMERGENCY PROCEDURES.

A. Are emergency action procedures and checklists published and readily available for the following emergencies?

1. Inflight Emergency

2. Crash

3. Overdue or missing aircraft

4. Bomb threat

5. Hijacking

43.4.14 CHANGEOVER PROCEDURES

A. Is an adequate overlap provided for the operational control person being released to brief the oncoming operational control person on the situation?

43.4.15 TRIP RECORDS

A. Are the required trip records carried to destination?

B. Are trip records retained for 30 days?

43.5 OPERATIONAL CONTROL PERSONS

43.5.1 QUALIFICATION

A. Are all operational control persons certified?

B. Have all operational control persons successfully completed a competency check within the eligibility period?

C. Have all operational control persons completed route familiarization within the preceding 12 calendar months? How does the operator ensure that operational control persons are currently familiar with the areas in which they work?

43.5.2 KNOWLEDGE OF WEATHER

A. Are operational control persons knowledgeable about the following weather conditions?

1. Surface (fronts, fog, low ceilings, etc.)

2. Upper Air (tropopause, jet streams)

3. Turbulence (pressure and temperature gradients)

4. Severe (low level windshear, microburst, icing, thunderstorms)

B. Can operational control persons read a terminal report, forecast accurately and interpret the meanings?

C. Can operational control persons read various weather depiction charts and interpret the meanings?

D. Can operational control persons read upper air charts and interpret the meanings?

43.5.3 KNOWLEDGE OF THE AREA

A. Do operational control persons immediately recognize the airport identifiers for the airports in the area in which they are working?

B. Are operational control persons generally familiar with the airports in the area in which they are working (number and length of runways, available approaches, general location, elevation, surface temperature limitations)?

C. Are operational control persons aware of which airports, in the areas in which they are working, are special airports, and why?

D. Are operational control persons aware of the terrain surrounding the airports in the areas in which they are working?

E. Are operational control persons aware of dominant weather patterns and seasonal CAR ‘84iations of weather in the area?

F. Are operational control persons aware of route segments limited by drift down?

43.5.4 KNOWLEDGE OF AIRCRAFT AND FLIGHT PLANNING

A. Are operational control persons aware of the general performance characteristics of each airplane with which they are working (such as average hourly fuel burn, holding fuel, engineout, drift down height, effect of an additional 50 knots of wind, effect of a 4,000 foot lower altitude, crosswind limits, maximum takeoff and landing weights, required runway lengths)?

B. Can operational control persons read and explain all the items on the operator's flight plan?

43.5.5 KNOWLEDGE OF POLICY

A. Are operational control persons knowledgeable of the Ops Specs, particularly such items as authorized minimums?

B. Are operational control persons aware of the policies and provisions of the operator's manual as discussed under policies and procedures?

43.5.6 KNOWLEDGE OF RESPONSIBILITIES

A. Are operational control persons knowledgeable of their responsibilities under the CAR '84 Part (such as briefing PIC; canceling, rescheduling, or diverting for safety; inflight monitoring; inflight notification of PIC)?

B. Are operational control persons knowledgeable of their responsibilities under the operator's manual?

C. Are operational control persons aware of their obligation to declare emergencies?

43.5.7 PROFICIENCY

A. Are operational control persons competent in the performance of their assigned duties?

B. Are operational control persons alert for potential hazards?

43.5.8 DUTY TIME

A. Are the regulatory duty time requirements being complied with?

43.5.9 SUPERVISORS

A. Qualification - Are supervisors qualified and current as operational control persons?

B. Conduct of Checks - Are competency checks appropriate, thorough, and rigorous?

43.5.10 FACILITIES AND STAFF

A. Physical

B. Is enough space provided for the number of people working in the dispatch center?

C. Are the temperature, lighting, and noise levels conducive to effective human performance?

D. Is the access to the facility controlled?

43.5.11 INFORMATION

A. Are operational control persons supplied with all the information they require (such as flight status, maintenance status, load, weather, facilities)?

B. Is the information effectively disseminated and displayed?

C. Can information be quickly and accurately located without overloading the operational control person?

D. Are real time weather displays available for adverse weather avoidance?

43.5.12 COMMUNICATIONS

A. Can an operational control person establish rapid and reliable radio communications (voice or ACARS) with a captain when a flight is parked at the gate?

B. How much time does it take to deliver a message to an en-route flight and get a response?

C. Are direct voice radio communications available at all locations?

D. Are they reliable? If communications facilities are shared with other airlines, does traffic congestion preclude rapid contact with a flight?

E. If hub and spoke operations are conducted, are there adequate communication facilities available to contact and deliver a message to all arriving flights within a 15 minute period?

F. Are backup communications links available in case of a failure of the primary links?

43.5.13 MANAGEMENT

A. Has overall responsibility for operations in progress been assigned to one individual who can coordinate the activities of all of the operational control persons?

B. Have procedures been established for coordinating with central flow control?

C. Have adequate internal communications links been established?

43.5.14 WORKLOAD

A. What method does the operator use to show compliance with the requirement to assign enough operational control persons during periods of normal operations and periods of non-routine operations?

B. Are the operator's methods adequate?

C. Do operational control persons have enough time to perform both dispatch and flight following duties in a reasonable manner?

43.6 POLICIES AND PROCEDURES.

43.6.1 AUTHORIZED OPERATIONS

A. Are the operations that may and may not be conducted according to the Ops Specs, including areas of operation, clearly specified?

43.6.2 MANUALS

A. Is there a section of the Ops Manual, Part A in which the policy and guidance for operational control has been collected for the guidance of flight crews and flight followers?

B. Are the topics listed on this job aid adequately covered?

C. Is the applicable section of the Ops Manual, Part A readily available to flight followers and flight crews while they perform their duties?

D. Is the operator's Ops Manual, Part A current?

43.6.3 ORIGINAL RELEASE

A. Are the conditions clearly stated under which a flight may and may not be released?

B. Are the conditions stated under which a flight must be rerouted, delayed, or canceled?

C. Does the flight release contain all of the required elements?

D. Are limitations placed in the remarks?

E. What provisions are made for PICs and flight followers to obtain weather reports and forecasts (including PIREPs and NOTAMs)?

43.6.4 RESPONSIBILITY FOR PREDEPARTURE FUNCTIONS

A. Are the responsibilities and procedures clearly specified for accomplishing the following functions?

1. Crew assignment
2. Load planning
3. Aircraft routing
4. Flight planning
5. Release of the aircraft from maintenance
6. Control of MEL and CDL limitations
7. Weight and balance

B. Have adequate procedures been established for cross checking and verifying these activities?

C. Is each of these procedures effective?

D. What means has the operator established for the PIC and flight follower to ensure that each of these functions has been accomplished satisfactorily before the aircraft departs?

43.6.5 DUAL RESPONSIBILITY

A. How is the concurrence of the flight follower obtained before the PIC signs the release?

B. Is the PICs obligation to operate the flight according to the release or to obtain concurrence of the flight follower for an amended release clearly stated?

43.6.6 FLIGHT FOLLOWING

A. Are the flight follower's duties and procedures clearly stated?

B. Is policy and guidance provided to flight followers for monitoring flight movements?

C. Are flight following procedures effective?

43.6.7 INABILITY TO PROCEED AS RELEASED

A. Is a policy stated concerning the PICs latitude to deviate from the flight release without obtaining a new release?

B. Is there specific and adequate direction and guidance to PICs and flight followers for the actions to take when a flight cannot be completed as planned (such as destinations or alternates below minimums, runways closed or restricted)?

C. Are procedures to follow specifically and clearly stated in case of a diversion or holding?

43.6.8 WEATHER

A. Does the operator obtain weather reports from an approved source?

B. Are forecasts based on approved weather reports?

C. Does the operator have an weather forecasting system? Are procedures for making flight movement forecasts clearly specified? Is the privilege of making a flight movement forecast limited to meteorologists and specifically trained operational control persons? Are other individuals specifically prohibited from making flight movement forecasts? As part of the requirements for this system, does the flight follower have the capability to contact flights while they are en-route?

D. Does the operator have an adverse weather system?

E. Does the operator have adequate procedures for the flight crews to obtain the latest available weather report while the flight is en-route?

F. Does the operator have adequate procedures for updating weather information when the aircraft is delayed on the ground?

43.6.9 WEATHER MINIMUMS

A. Is release under VFR authorized by the Ops Specs?

B. If so, have the forecast and actual weather report allowed VFR flight to proceed to destination on those flights so released?

C. Have turbojet aircraft been released under VFR?

D. What IFR departure minimums are authorized by the Ops Specs?

E. When flights are released with the departure airport below landing minimums, are takeoff alternates named on the flight release?

F. What destination weather minimums are authorized?

G. What weather minimums are authorized for "high minimums" captains?

H. How does the operator ensure compliance with the Ops Specs (operable centerline lighting and 15% additional runway for turbojet operations for operations below 300 and 3/4)?

I. When a flight is released to a destination below CAT I minimums, is that airplane type authorized for CAT II or CAT III operations at that location, according to the Ops Specs?

J. When destination alternates are required, are they named on the flight release?

K. Is the weather at the named alternate airport equal to or better than that required by the Ops Specs?

L. Is "marginal" defined for the designation of two alternates on the dispatch release?

M. Are two alternates designated when required?

N. How does the operator ensure that flight followers are aware of these limitations before concurring with the release of a flight?

O. Do weather forecasts from the trip records show that these limits have been complied with for dispatch?

43.6.10 SELECTION OF ALTERNATES

A. Are policy, direction, and guidance provided for the selection of alternates?

B. Are terrain and engine-out performance considered in alternate selection?

C. Is an alternate airport always designated?

43.6.11 NOTAMS

A. Is the required NOTAM information provided (Class I, Class II, and Local)?

43.6.12 INFORMATION

A. What provisions does the operator make for supplying airport and navigation information?

B. What means does the operator use to comply with the requirement for an airport data system? Is it adequate?

C. Are flight crews provided with written flight plans for monitoring flight progress and fuel burn?

D. How does the operator provide data to flight followers on takeoff and landing minimums at each airport?

E. Do flight followers have immediate access to such data?

F. Are provisions made for nonstandard operations such as inoperative centerline lighting?

43.6.13 FUEL

A. Are all of the required increments of fuel provided (such as start and taxi, takeoff to arrival at destination, approach and landing, missed approach, alternate fuel, 30 minutes of reserve, and contingency fuel)?

B. Are there minimum fuel procedures specified for both operational control persons and PICs?

C. Are the operator's policies concerning contingency fuel adequate for the environment in which operations are conducted?

43.6.14 EMERGENCY PROCEDURES

A. Are emergency action procedures and checklists published and readily available?

1. Inflight Emergency
2. Crash
3. Overdue or missing aircraft
4. Bomb threat
5. Hijacking

43.6.15 CHANGEOVER PROCEDURES

A. Is an adequate overlap provided for the flight follower being released to brief the oncoming flight follower on the situation?

43.6.16 TRIP RECORDS

A. Are the required trip records carried to destination?

B. Are trip records retained for 30 days?

43.7 FLIGHT FOLLOWERS

43.7.1 QUALIFICATION

A. What means does the operator use to comply with the requirement that flight followers are competent? Is the operator's method effective?

B. How does the operator ensure that flight followers are currently familiar with the areas in which they work?

43.7.2 KNOWLEDGE OF WEATHER

A. Are flight followers knowledgeable of the following weather conditions?

1. Surface (fronts, fog, low ceilings)

2. Upper Air (tropopause, jet streams)

3. Turbulence (pressure and temperature gradients)

4. Severe (low level windshear, microburst, icing, thunderstorms)

B. Can flight followers read a terminal report, forecast accurately, and interpret the meanings?

C. Can flight followers read weather depiction charts and interpret the meanings?

D. Can flight followers read upper air charts and interpret the meanings?

43.7.3 KNOWLEDGE OF THE AREA

A. Do flight followers immediately recognize the airport identifiers for the airports in the area in which they are working?

B. Are flight followers generally familiar with the airports in the area in which they are working (number and length of runways, available approaches, general location, elevation, surface temperature limitations)?

C. Are flight followers aware of which airports, in the areas in which they are working, are special airports and why?

D. Are flight followers aware of the terrain surrounding the airports in the areas in which they are working?

E. Are flight followers aware of dominant weather patterns and seasonal CAR ‘84iations of weather in the area?

F. Are flight followers aware of route segments limited by drift down?

43.7.4 KNOWLEDGE OF AIRCRAFT AND FLIGHT PLANNING

A. Are flight followers aware of the general performance characteristics of each airplane with which they are working (such as average hourly fuel burn, holding fuel, engine-out drift down height, effect of an additional 50 knots of wind, effect of a 4,000 foot lower altitude, crosswind limits, maximum takeoff and landing weights, required runway lengths)?

B. Can flight followers read and explain all the items on the operator's flight plan?

43.7.5 KNOWLEDGE OF POLICY

A. Are flight followers knowledgeable of the Ops Specs, particularly authorized minimums?

B. Are flight followers aware of the policies and provisions of the operator's manual as discussed under policies and procedures?

43.7.6 KNOWLEDGE OF RESPONSIBILITIES

A. Are flight followers knowledgeable of their responsibilities under the CAR ‘84 Part?

B. Are flight followers knowledgeable of their responsibilities under the operator's manual?

43.7.7 PROFICIENCY

A. Are flight followers competent in the performance of their assigned duties?

B. Are flight followers alert for potential hazards?

43.8 FACILITIES AND STAFF

43.8.1 PHYSICAL

A. Is enough space provided for the number of people working in the flight following center?

B. Are the temperature, lighting, and noise levels conducive to effective human performance?

C. Is access to the facilities controlled?

43.8.2 INFORMATION.

A. Are flight followers supplied with all the information they require (flight status, maintenance status, load, weather, facilities)?

B. Is information effectively disseminated and displayed? Can information be quickly and accurately located without overloading the flight follower?

C. Are real time weather displays available for adverse weather avoidance?

43.8.3 COMMUNICATIONS

A. Can a flight follower establish reliable communications with a PIC before release?

43.8.4 MANAGEMENT

A. Has overall responsibility for operations in progress been assigned to one individual who can coordinate the activities of all flight followers?

B. Have procedures been established for coordinating with central flow control?

C. Have adequate internal communications links been established?

43.8.5 WORKLOAD

A. What methods does the operator use to show compliance with the requirement to assign enough flight followers during periods of normal operations and periods of non-routine operations?

B. Are the operator's methods adequate?

C. Do flight followers have enough time to perform both release and flight following duties in a reasonable manner?

43.9 AIR OPERATOR OPERATIONS CONTROL INSPECTION GUIDE

For Air Operator Operations Control Inspection Guide, Operations Inspectors of CAAB shall refer to Part-II, Chapter-68, Appendix-26.

43.10 AIR OPERATOR DISPATCH MANUAL INSPECTION GUIDE

For Air Operator Dispatch Manual Inspection Guide, Operations Inspectors of CAAB shall refer to Part-II, Chapter-68, Appendix-27.

43.11 DISPATCHER QUALIFICATION INSPECTION GUIDE

For Dispatcher Qualification Inspection Guide, Operations Inspectors of CAAB shall refer to Part-II, Chapter-68, Appendix-28.

43.12 DISPATCH FACILITIES AND SUPPORT INSPECTION GUIDE

For Dispatch Facilities and Support Inspection Guide, Operations Inspectors of CAAB shall refer to Part-II, Chapter-68, Appendix-29.

43.13 OPERATION CONTROL SYSTEM DIAGRAM

For Operation Control System Diagram, Operations Inspectors of CAAB shall refer to Part-II, Chapter-68, Appendix-30.

CHAPTER-44

OPERATIONS MANUAL (PART A)

44.1 GENERAL

A. This section contains information, direction, and guidance to be used by principal operations inspectors (POI) in the evaluation of an operator's general Operations Manual, Part A. The operator's Ops Manual, Part A is a segment of the operator's general manual system.

B. CAR '84 as well as ANO (OPS) B-1 require that each operator prepare and keep current an Operations Manual containing guidance for flight, ground, and management personnel during the conduct of the operator's operations.

C. Operators generally choose to have more than one "OPS" manual specifically oriented to the user. The operations manual is intended to contain the general policy and procedures for the wide spectrum of operations employees.

D. The operations manual developed in line with the ANO (OPS) B-1 enables the operator to establish an ideal flight safety document system within the organization.

E. Operations inspectors of CAAB must ensure that the operators operations manuals have been developed in accordance with Rule 124 of CAR '84 and the ANO (OPS) B-1.

44.2 CONTENT OF OPERATIONS MANUAL - PART A

A. The contents and guidance of ANO (OPS) B-1 must be addressed in an operator's Ops Manual, Part A. The operator's Ops Manual, Part A must contain the duties and responsibilities for each category of employee.

B. This manual must also provide sufficient policy, direction, and guidance to its employees for the safe and efficient performance of their duties.

C. In addition, an operator's Ops Manual, Part A must address the policies, systems, and procedures necessary to comply with the operations specifications (Ops Specs) provisions and safe operating practices.

D. This ops evaluation contains discussions of selected topics that POIs should look for when evaluating an operator's Ops Manual, Part A, and which may be required by the operator's initial and final conformance checklists.

44.3 OPERATOR MANAGEMENT STRUCTURE

When evaluating an operator's Ops Manual, Part A, POIs must ensure that the operator's management structure is included in the Ops Manual, Part A, and that it meets the following guidelines:

44.3.1 MANAGEMENT STRUCTURE

A. The Ops Manual, Part A must contain a description of the operator's management structure as it pertains to flight operation activities.

B. Organizational entities, areas of responsibility, and titles of key management positions must all be identified in the management structure.

C. This description should contain information on how the flight operation management structure interfaces with the airworthiness management structure and the responsibilities of both.

D. Organizational charts and diagrams may also be useful in showing the relationship between operational units within the company.

44.3.2 NAMES OF MANAGEMENT PERSONNEL

A. The names of the individuals filling required management positions must be listed in the Ops Manual, Part A. An acceptable way for the operator to meet this requirement is to include a copy of its Ops Specs in the manual.

B. The DFSR may approve management structures and titles different from those specified in CAR ‘84, by granting a deviation to these CAR ‘84 requirements.

C. When such a deviation is granted, it must be listed in the Ops Specs along with the names and titles of the approved management positions listed in the Ops Specs.

44.4 AUTHORIZED OPERATIONS

When evaluating an operator's Ops Manual, Part A, POIs must ensure that the operator's authorized operations are included in the operator's Ops Manual, Part A, and that they meet the following guidelines:

44.4.1 CLEAR DESCRIPTIONS OF AUTHORISED OPERATIONS

A. The Ops Manual, Part A must contain clear descriptions of the types and kinds of operations that the operator is authorized to conduct.

B. The Ops Manual, Part A must prohibit those operations which a flightcrew could possibly conduct but which the operator is specifically prohibited from conducting by the Ops Specs.

C. The Ops Manual, Part A must contain information on the authorized areas of en-route operation in which flights may be conducted, including the types of aircraft

authorized, crewmember complements, and any special en-route and instrument approach procedure authorizations or requirements. One way an operator may describe the types and kinds of authorized and prohibited operations is to include a copy of the operator's Ops Specs in the Ops Manual, Part A. Since the Ops Specs is designed to address a variety of situations and is not easily understandable as it applies to specific operational circumstances, POIs should encourage operators to extract the applicable information and incorporate it in the Ops Manual, Part-A.

D. Clearly written direction and guidance on how to comply with authorizations and limitations should also be included.

E. It is acceptable for operators to contract a charting and publishing service (such as Jeppesen/Sanderson) to prepare manual material concerning these authorizations and limitations. In these cases, the charting and publishing service's product is considered to be a part of the operator's Ops Manual, Part A. POIs must review this portion of the operator's Ops Manual, Part A as well as all other portions.

44.4.2 FLIGHT OPERATIONS POLICIES, METHODS, AND PROCEDURES

A. Flight operations policies, methods, and procedures may be located in either the Ops Manual, Part A, in a section of the Ops Manual, Part A such as a flight operations policy manual, or in a company flight manual (AOM).

B. When an operator operates a variety of aircraft, it may be preferable for the flight operations policies, methods, and procedures that are common to all aircraft to be published in the Ops Manual, Part A instead of each AOM.

C. Crewmembers are required to comply with the flight operations policies, methods, and procedures, regardless of whether they are published in the Ops Manual, Part A or the AOM. Therefore flight operations policies, methods, and procedures should be written in directive language, and provide specific operational criteria.

1. An example of a flight operations policy statement that does not provide a clear directive or specific operational criteria is as follows: "Use caution when arriving or departing a terminal area when thunderstorms are present."

2. An example of a flight operations policy statement that is clearly directive and that provides specific operational criteria is as follows: "Takeoffs and landings shall not be attempted when thunderstorms are within 3 miles of the airport or the takeoff or arrival path."

44.5 OPERATIONAL CONTROL

A. When evaluating an operator's Ops Manual, Part A, POIs must ensure that an operator's operational control procedures are included. The procedures, duties, and responsibilities of flightcrew, operational control, and management personnel must also be described.

B. Furthermore, the Ops Manual, Part A must contain staffing requirements for operational control personnel during periods of time that flights are operational.

C. When training and operational control requirements for operational control personnel are not contained in a training and qualification document, they must be listed in the Ops Manual, Part A.

D. The POI must ensure that the following requirements are met:

44.5.1 FLIGHT PROGRESS (WATCH) SYSTEMS – LARGE AIRCRAFT

The description of the operational control system used by AOC holders conducting schedule flights of more than two hours duration, ETOPS, or MNPS operations must be comprehensive.

A. The Ops Manual, Part A must contain flight dispatch procedures as well as flight watch procedures.

B. The interrelation of flight dispatch, crew scheduling, and airworthiness control must be outlined in detail.

C. The communication facilities to be used for operational control purposes, procedures to be used with ATC, and methods for handling delayed flights, must all be addressed.

D. Procedures to be used during adverse weather conditions and for discontinuing flight in unsafe conditions must also be covered in the Ops Manual, Part- A.

E. The procedures to be used to operate unscheduled flights under supplemental regulations must be outlined if the operator conducts these kinds of flights.

44.5.2 FLIGHT FOLLOWING SYSTEMS

The description of the operational control system used by for AOC holders for scheduled or unscheduled flights of less than two hours duration must contain the flight release and flight watch procedures to be used by flightcrew, operational control, and management personnel.

A. The interrelation of flight crews, persons authorized to release flights, and airworthiness control personnel must be outlined.

B. The communication facilities to be used and the procedures for using these facilities must also be covered in the Ops Manual, Part A.

C. GOMs must contain procedures to be used during adverse weather conditions and for discontinuing flight in unsafe conditions.

D. The Ops Specs are required to specify the flight following system and the location of the flight following centers. The Ops Specs is allocated to authorize this type of operational control system.

E. If the Ops Manual, Part A contains a comprehensive description of the system, only a reference to that Ops Manual, Part A section needs to be placed in the Ops Specs.

44.5.3 AIR TAXI OPERATIONS

The description of the operational control system used by air taxi operators must, as a minimum, contain a list of the names and titles of the personnel who are authorized by the operator to exercise operational control.

A. If the operator does not establish a flight watch system, the Ops Manual, Part A must contain directions to flight crews for filing an ATC flight plan for each flight conducted.

B. If a flight watch system is established, the Ops Manual, Part A must contain an outline of the procedures which provide the operator with at least the information included in a VFR flight plan for each flight operated.

C. The Ops Manual, Part A must also contain an outline of the procedures which provide the operator with information on the location, date, and estimated time for reestablishing radio or telephone contact if flights are conducted in areas where such communications cannot be maintained with the operator.

D. The flight locating system must also be provided for timely notification to CAAB facility or a search and rescue facility when an aircraft is overdue or missing.

E. The Ops Manual, Part A shall also contain a description of the procedures for retaining flight location information until a flight has been completed.

F. If an air taxi operator uses a flight control system more sophisticated than the basic requirements of the regulation, the Ops Manual, Part A shall contain a description of the system and procedures actually used.

44.6 FLIGHT PLANNING

A. When evaluating an operator's Ops Manual, Part A, POIs shall ensure that an operator's flight planning procedures are included.

B. The direction and guidance for flight planning must be comprehensive and address the responsibilities of both flight control and flightcrew personnel.

C. The Ops Manual, Part A must contain a discussion of weather minimums, special airports, and other special requirements such as driftdown, re-release, and diversion contingencies.

D. Some operators may elect to place the flight planning procedures in the AOM and the operational control procedures in a dispatch or flight control user manual.

44.6.1 NOTICES TO AIRMEN (NOTAM) AND PILOT REPORTS (PIREP).

When evaluating an operator's Ops Manual, Part A, POIs shall ensure that procedures for the acquisition of NOTAMs and PIREPs and for the distribution of these NOTAMs and PIREPs to applicable personnel are included. The Ops Manual, Part A should also contain a description of the procedures for obtaining applicable NOTAMs that are only distributed to a local area.

44.6.2 RESTRICTED OR SUSPENDED OPERATIONS.

The regulations require operators who know of conditions that preclude safe operations (including hazardous airport and runway conditions), to restrict or suspend operations until those conditions change. POIs must evaluate an operator's Ops Manual, Part A to ensure that it contains a description of the procedures for employees to follow should they become aware of such conditions.

44.6.3 INTERNATIONAL OPERATIONS.

A. For an operator that conducts international operations, POIs must evaluate the operator's Ops Manual, Part A to ensure that it includes pertinent and necessary flight control information.

B. In the Ops Manual, Part A, particular emphasis should be placed on fuel and performance requirements, communications, weather reports and forecasts, flight planning, and any specialized means of navigation.

44.7 OBSERVER'S SEATS

A. POIs should ensure that the operator's Ops Manual, Part A includes the requirement that the operator must provide an observer's seat (jumpseat or passenger seat) to DFSR inspectors and other specified personnel.

B. Usually operators assign the authority to control the use of these forward observer's seats to a flight control department.

C. Gate agents and passenger handling personnel must also be aware of these requirements.

D. Crewmembers must also be aware of the procedures to be used for observer seat assignments.

E. Information to comply with CAR '84 inspection and surveillance requirements must be included in the Ops Manual, Part A, such as the following:

1. Priorities of operations inspectors, crewmembers, manufacturer's technical representatives, and other personnel.

2. Methods for ensuring that no more than one person is assigned to a forward observers position at any particular time

3. Procedures for disseminating forward observer position assignments to other stations

44.8 LINE STATION OPERATIONS

A. Line station operations are those activities performed by the operator's personnel (or by other personnel for the operator) to originate, turn around, or terminate flights conducted by the operator. For an operator that conducts line station operations,

B. POIs must evaluate the operator's Ops Manual, Part A to ensure that it includes the necessary information on the various topics that follow.

C. Line station operations should include the use of the following types of facilities and equipment:

1. Ramp areas including markings, signs, signaling devices, lighting, and blast fences

2. Ramp facilities and equipment, such as passenger and cargo deplaning and enplaning equipment (towing, refueling, catering, and ground power equipment)

3. Crewmember meeting areas, facilities for crewmember flight planning (preparation for flight), and postflight activities

4. Ground station personnel work areas and facilities, communications equipment, and administrative support

D. Inspectors must ensure that an operator's Ops Manual, Part A contains the policies, procedures, and guidance to be used by the personnel who support the operator's flight operations at line stations.

1. This manual material must include those situations in which the operator maintains line stations as well as situations in which the operator contracts or purchases line station support.

2. This type of material is usually located throughout CAR various user manuals, such as ground station operations and maintenance manuals, passenger service manuals, facilities and equipment manuals, fueling manuals, and other special types of manuals.

3. An operator may format and organise this type of manual material in a manner which is most consistent and usable for the operator's kind and type of operation.

4. Regardless of the format and organization, however, this type of manual information is considered to be Ops Manual, Part A material.

E. The following are examples of the types of information that should be addressed in manual material concerning line stations operations.

44.8.1 DUTIES AND RESPONSIBILITIES

The Ops Manual, Part A must contain an outline of the duties and responsibilities of line station supervisory personnel.

A. The types of positions that should be addressed include: ground station operations personnel, passenger handling agents, cargo and baggage handling personnel, and aircraft servicing personnel (when not addressed in the MCM).

B. When an operator contracts for, or purchases, line station support, the Ops Manual, Part A or MCM, as appropriate, must contain outlines of the procedures to be used by the personnel providing the support.

44.8.2 PASSENGER HANDLING AND PROTECTION

A. The Ops Manual, Part A must contain procedures and guidance for ensuring the safety of passengers during line station operations.

B. The following are examples of passenger handling and protection subjects that must be addressed in the Ops Manual, Part A:

1. Passenger enplaning and deplaning procedures

2. Procedures for use of jetways, passenger boarding stairs, air stairs and other types of passenger boarding equipment

3. Procedures to ensure the safety of passengers on the ramp including restricting of ground equipment and vehicle operation on ramps; and

directing passengers to and from aircraft, around equipment, and to painted pathway lines on the ramp

4. Procedures and guidance for protecting passengers from jet intake and blast, rotating and static propellers and rotors, ice on the ramp and boarding equipment, and tripping hazards

5. Procedures for prohibiting smoking in no smoking areas

6. Procedures for assisting and ensuring safety of handicapped persons

7. Procedures for handling intoxicated, hostile, or unruly persons

8. Procedures for handling and controlling carry-on baggage

9. Procedures for exit seating.

10. Procedures for identifying and handling hazardous materials.

44.8.3 AIRCRAFT SERVICING AND RAMP OPERATIONS

A. The Ops Manual, Part A and MCM must contain detailed procedures and guidance on servicing and maintaining aircraft during line station operations.

B. These manuals should also contain instructions on the maintenance and use of ramp areas.

C. The following are examples of procedures for aircraft servicing and ramp operations that should be addressed in the Ops Manual, Part A:

1. Procedures for the safety and protection of personnel working on the ramp

2. Procedures and/or guidance for the maintenance and catering of aircraft, with or without passengers on board

3. Procedures for fueling aircraft with or without passengers on board, including any requirements for crewmembers to be on board during fueling or prohibitions against positioning fuel trucks next to open exits with passengers on board

4. Procedures for operating ground equipment including the capabilities and limitations of the equipment and the training and qualification of persons before using the equipment

5. Procedures and guidance for properly locating and stowing ground equipment

6. Procedures for the operation of aircraft cargo doors, baggage and cargo loading, closing and checking the security of doors

7. Procedures for foreign object damage (FOD) control and periodically inspecting ramp areas

8. Procedures to be used during adverse weather conditions such as thunderstorms, high winds, low visibility

9. Procedures for the inspection and removal of frost, ice, snow, or standing water

44.8.4 HOT AND COLD WEATHER OPERATIONS

POIs should evaluate an operator's Ops Manual, Part A to ensure that it (as well as the MCM) contains detailed procedures and guidance on hot and cold weather operations, including:

A. Procedures for the inspection of ramps for accumulation of frost, ice, snow, or standing water

B. Precautions for the operation of vehicles and equipment

C. Restrictions and cautions on aircraft movements

D. Restrictions and cautions for the protection of passengers and ramp personnel

44.8.5 DEICING PROCEDURES

A. Aircraft ground deicing procedures should be clearly delineated by the operator.

B. While such procedures are usually in the MCM, the operator's Ops Manual, Part A must contain the following types of information concerning deicing for crewmembers, ground operations, and management personnel—

1. Assignment of responsibility for ensuring that aircraft is clear of frost, ice, and snow accumulation

2. Conditions that require aircraft ground deicing

3. Procedures to ensure the effectiveness of deicing, including the frequency of applications, proper fluid mixtures, and tactile or close visual checks of selected portions of critical surfaces

4. Parts of the aircraft to deice, including a description of the critical surfaces of the aircraft used by the operator

5. Locations on the ramps or airports where deicing will be conducted

6. Engine auxiliary power unit (APU) and ground equipment operation during deicing

7. Passenger and ramp personnel protection during deicing

8. Procedures to be used by contract personnel when the operator contracts for deicing services

9. If applicable, a complete description of the elements of the operator's ground deicing/anti-icing programme and the procedures required to operate under that programme

10. If applicable, a complete description of the ground deicing/anti-icing operational procedures that the operator uses to comply with CAR '84 Parts 10 and 12 requirements.

44.8.6 AIRCRAFT MOVEMENT IN THE RAMP AREA

POIs must ensure that the operator's procedures and guidance for the movement of aircraft in the ramp area is carefully coordinated between the operator's Ops Manual, Part A:

A. The definitions of signaling devices, signs, and ramp markings (such as taxi lines, stop lines, boundary and clearance lines) must be the same and be mutually understood by both crewmembers and ground handling personnel.

B. Specific procedures for engine start, pretaxi pushback, powerback (if approved), taxi out, taxi in, and parking while in the ramp area must be provided in the Ops Manual, Part A (or in an applicable user manual).

C. Communication procedures for ground handling personnel and crewmembers must be thoroughly coordinated.

D. POIs must ensure that the interphone terminology and hand signals used by ground handling personnel and crewmembers have the same meaning. The need for common terminology and hand signals is also important for crewmembers and passenger handling agents. Illustrations of standard hand signals and their meanings should be provided in the Ops Manual, Part A.

E. The training and qualification requirements of personnel authorised to move aircraft on the ramp or on the airport must be described in the appropriate manuals. For example, when an operator is approved to powerback, the Ops Manual, Part A must contain specific procedures for those operations for each airport and gate where authorised. Powerback communications and hand signals must be thoroughly coordinated between crewmembers and ground handling personnel.

44.8.7 LINE STATION EMERGENCY PROCEDURES

A. POIs must ensure that the operator's Ops Manual, Part A and MCM contain procedures to be used by crewmembers or ground personnel in case of emergency situations during line station operations.

1. Line station emergency procedures must contain the specific duties and actions of appropriate personnel. This type of manual material must also include notification procedures and requirements.

2. The notification procedures and requirements should contain specifications as to who will be notified, who will make the notification, how the notification should be made, and when it will be made for the CAR various types of emergency situations that could occur at line stations.

3. Usually this type of manual material should also include a quick reference telephone listing for obtaining fire fighting and medical assistance, and for notifying appropriate company management, law enforcement officials, and other government investigation officials.

4. Line station emergency procedures should be published in a distinct section of the Ops Manual, Part A or MCM so that they are easily accessible.

5. For large, complex operators, line station emergency procedures are usually published as a manual under separate cover to assure rapid accessibility.

B. Operators may publish a line station emergency procedures manual for each station because of the uniqueness of each line station. POIs should encourage this as a preferred practice. The types of situations that should be covered in line station emergency procedures include the following:

1. Aircraft accidents and incidents (POIs should encourage operators to develop guidance for ground personnel providing passenger lists to aid in handling passengers and accounting for all passengers immediately after a survivable type accident. Handling passengers includes actions such as providing suitable transportation for injured passengers to locations where medical assistance can be obtained.)

2. Bomb threats, hijack procedures, and other types of security incidents

3. Fuel spills and hazardous materials mishaps

4. Procedures for post flight handling of passenger injury, illness, or incidents involving passenger altercations and interference with crewmembers

5. Employee/passenger accidents and injuries

6. Adverse weather conditions such as tornadoes and hurricanes or other adverse conditions such as earthquakes (if such conditions are likely to occur at the operator's line stations)

7. Emergency evacuation of aircraft while parked (This should include procedures for both the flightcrew and cabin crews (CCM's) to activate the aircraft emergency lighting systems during an emergency evacuation, regardless of the perceived ease with which an evacuation can be accomplished; and passenger egress procedures for crewmembers and other

operations personnel. These procedures should include the requirement that whenever passengers are on board the aircraft prior to airplane movement on the surface, that at least one floor-level exit must be usable for the egress of passengers through normal or emergency means.)

8. Aircraft rescue and fire fighting (ARFF) emergency notification procedures while parked (POI's shall encourage their assigned operators to develop explicit ARFF emergency notification procedures for crewmembers and other operations personnel to employ in the event of an emergency occurrence on their aircraft while they are parked.)

9. For passenger-carrying operations, if the operator's ARFF procedures require its crewmembers to implement these procedures, then the following guidance should be included:

10. In the event of an aircraft fire or other emergency scenario involving aircraft evacuation, the first actions of crewmembers and/or other personnel qualified in accordance with CAR '84 should be to initiate the evacuation of the aircraft occupants. Once the crew has determined that all aircraft occupants have been evacuated, then the crewmember(s) designated by the operator should initiate the ARFF emergency notification procedures.

44.8.8 CONTRACT SERVICES

POIs must ensure that the Ops Manual, Part A and MCM, as appropriate, contain policy and guidance concerning the interrelationship between the operator's personnel and the personnel of organizations who provide contract services at line stations.

A. Contractor personnel are required to be trained on operator specific procedures.

B. The appropriate manual must contain the specifications for: the types of training to be given to contractor personnel; who is responsible for providing the training; and who is responsible for keeping records of the training.

C. Although the contractor may be delegated this responsibility, the operator has final responsibility.

44.8.9 FLIGHT PREPARATION (TRIP) RECORDS

POIs must ensure that the operator's Ops Manual, Part A contains policies, procedures, and guidance concerning the preparation and disposition of trip records at line stations.

A. Trip records include documents such as dispatch and flight releases, flight plans, weather NOTAMs, oceanic plotting charts, load manifests, and weight and balance documents.

B. The manual material must specify who is responsible for preparing the trip records, the coordination activities that must be accomplished during the trip

record preparation process, and the intermediate and final disposition of the trip records.

C. The POI must ensure that the policies, procedures, and guidance in this manual material consistently contain accurate information for crewmembers and flight operational control personnel.

44.8.10 LOCAL CONDITIONS AT LINE STATIONS

Personnel at line stations have immediate access to and knowledge of various conditions and activities that could affect flight operations at those line stations.

A. Examples of local conditions and activities include the following: weather conditions, runway and taxiway conditions, airport construction activities, and new obstacles observed in the airport takeoff flight paths.

B. As such, inspectors must ensure that an operator's Ops Manual, Part A contains instructions and procedures so that line station personnel can provide the operator with local condition reports.

C. This manual material must contain clear instructions about the circumstances in which line station personnel are authorised to suspend or delay flight operations.

44.9 PASSENGER BRIEFING PROCEDURES.

A. POIs must ensure that the operator's Ops Manual, Part A or flight manual, as appropriate, specifies the procedures to be used for pre-takeoff, en-route, and postlanding briefings of passengers.

B. Operators who use CCM's may publish CCM user manuals as sections in their Ops Manual, Part A's. The Ops Manual, Part A or CCM user manual must contain the briefings to be given.

C. Passenger briefing cards must be used to supplement the oral briefings. These passenger briefing cards must depict the required items that are addressed during the oral briefings.

D. The AOC Certification Manual contains technical source references regarding passenger safety information and briefing cards.

44.10 EXIT SEATING PROGRAMME

A. CAR ‘84 requirements regulate exit seating in aircraft operated by AOC holders. These regulations prescribe requirements relating to the seating of airline passengers near emergency exits.

B. POIs must ensure that AOC holders' manuals, as appropriate, contain the applicable portions of the operators' approved exit seating programme.

44.10.1 USE OF PORTABLE ELECTRONIC DEVICES

A. POI's and principal avionics inspectors (PAI) shall review the provisions contained in the CAR '84 and technical sources references with their assigned operators.

B. POI's and PAI's shall ensure that their operators have adequate procedures in place to determine whether or not portable electronic devices are acceptable for passenger use on board their aircraft.

C. POI's shall ensure that their operators specify in their operations manuals those portable electronic devices that may not be operated on board their aircraft.

D. POI's should encourage their assigned operators to include information regarding the operation of portable electronic devices in their operators' pre-takeoff passenger safety briefings. These briefings should include any specific restrictions that apply to passenger use of portable electronic devices.

44.11 WEIGHT AND BALANCE PROCEDURES

When evaluating an operator's Ops Manual, Part A, POIs shall ensure that an operator's weight and balance procedures are included in the operator's Ops Manual, Part A, and that they meet the following guidelines:

44.11.1 PLACEMENT OF WEIGHT AND BALANCE PROCEDURES

A. Each type of airplane used by the operator may require a separate weight and balance procedure.

B. In such cases, it may be appropriate for the operator to place the weight and balance procedure to be used by flight crews in the AOM and the procedures to be used by other flight operations personnel in sections of the Ops Manual, Part A.

C. If the operator develops a single weight and balance procedure for all aircraft operated, it may be appropriate for the operator to place the procedure to be

used by flight crews and other flight operations personnel in the Ops Manual, Part A.

D. Operators may develop their own weight and balance procedures or use the procedures furnished by aircraft manufacturers.

E. POIs should recommend the following advisory circulars to the operator:

1. "Acceptable Methods, Techniques, and Practices - Aircraft Inspection and Repair"
2. "Pilot's Weight and Balance Handbook"
3. "Aircraft Weight and Balance Control"

F. The approval of weight and balance procedures is granted in Section H of the Ops Specs.

1. Reference to the Ops Specs may be made in the Ops Manual, Part A, however the reference may not be used instead of a detailed description of the procedures to be used by flight operations, ground handling, and flightcrew personnel.
2. POIs must ensure that the information and guidance in the operator's Ops Manual, Part A is consistent with that in the MCM.
3. The weight and balance procedures described in the operator's manuals should normally address the following topics:

a. Procedures for complying with weight and balance limitations for each type of aircraft

b. For AOC holders procedures for ensure that the empty weight and center of gravity of each aircraft is determined by actually weighing the aircraft within the preceding 36 months

c. Procedures for determining the weight of passengers, crew, cargo, and baggage

d. Procedures for making the center of gravity calculations including loading schedules or other approved methods, if applicable

e. Procedures for the completion and disposition of load manifests and weight and balance records

f. Procedures for loading the aircraft

44.12 OPERATIONS MANUAL INITIAL EVALUATION GUIDE

For Operations Manual Initial Evaluation Guide, Operations Inspectors of CAAB shall refer to

Part-II, Chapter-68, Appendix-42.

CHAPTER-45

CABIN CREW MANUALS

45.1 GENERAL

A. This chapter provides guidance on the evaluation of cabin crew member manuals.

B. These evaluation guidelines are intended for principal operations inspectors (POI) when approving or accepting an operator's manuals and checklists.

45.2 GUIDANCE

A. 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.

B. These policies, methods, procedures, and checklists, however, must comply with the CAR ‘84 and be consistent with safe operating practices.

C. POIs should encourage operators to be innovative and progressive in developing such policies, methods, procedures, and checklists.

D. The POI must ensure that the operator's material complies with CAR ‘84 requirements, is consistent with safe operating practices, and is based on sound rationale or demonstrated effectiveness.

45.3 METHOD OF EVALUATION

A. POIs should use the job aid for this evaluation to assist them in the acceptance of manuals required for cabin crew members (CCM) engaged in operations. The job aid should be used as follows:

1. Make a copy.
2. Make recommendations.
3. Give the copy to the appropriate representative of the carrier, and ask that person to document the pertinent page number for each item.
4. When satisfactory, initial each item.
5. Make appropriate remarks.
6. When the entire manual is satisfactory, initial the LEP pages.

B. POIs should ensure that the information and procedures contained in the CCM manual are consistent with the information and procedures throughout all of the operator's manuals.

C. A review may be accomplished by comparing information and procedures (such as the operator's carry -on baggage programme, exit seating programme, and

emergency procedures) in the CCM manual with those contained in the operator's aircraft/operations and passenger service manuals.

1. POIs should use a List of Effective Pages or some other method to determine currency and completion of the CCM manual.

2. POIs should coordinate with the operator's assigned principal security inspector to review the security and hazardous materials procedures that are described in the operator's manuals.

CHAPTER-46

AIRCRAFT OPERATIONS MANUALS

46.1 GENERAL

This chapter provides guidelines to be used by POIs in the evaluation of aircraft operating manuals for AOC holders.

A. The Company Flight Manual (CFM) referenced here refers to manual approved by the CAAB for pilot operations and may be titled as

1. Pilot Operating Handbook
2. Approved Flight Manual
3. Manufacturer's Flight Crew Operating Manual, or
4. AOC holder's tailored Flight Crew Operating Manual.

B. CAR ‘84 requires that AOC holders maintain a current flight manual for each aircraft used in their commercial air transport operations.

C. CAR ‘84 requires that a flight manual (or the equivalent information for aircraft certified without a flight manual) be available in the aircraft for flightcrew personnel use and guidance during flight operations.

D. To satisfy the CAR ‘84 requirements, operators may use either the approved airplane flight manual (AFM) or the approved rotorcraft flight manual (RFM), as applicable, or they may develop, obtain approval for, and use a company flight manual (AOM). AFMs or RFMs (as applicable) are acceptable for satisfying the CAR ‘84 in cases of small, simple aircraft.

E. The CAAB-preferred practice for all other aircraft, however, is for operators to develop a company flight manual (AOM) which includes procedures specifically tailored to the operator's operations.

F. Operators who operate multiple aircraft types usually find it efficient to collect policies, procedures, and guidance common to all aircraft in a single manual such as a Standard Operating Procedures Manual (SOP).

G. In this case, the AOM contains only those policies, procedures, and guidance that apply to the operation of the specific aircraft. POIs shall use this section as guidance when evaluating an operator's AFMs, RFMs, or AOMs.

46.2 APPROVED FLIGHT MANUALS (AFMS)

A. CAR '84 requires that operators have on-board the aircraft an approved airplane flight manual (AFM) or an approved rotorcraft flight manual (RFM) with each aircraft certified.

B. Prior to this date, approved flight manuals were only required for transport category airplanes.

46.3 APPROVED SECTIONS OF AFMS AND RFMS

A. AFMs of transport category airplanes contain three sections which are reviewed by the FMRB and approved by the ACO. These are the procedures, performance data, and limitation sections. Weight and balance limits for transport category airplanes are given in the limitations section.

B. AFMs of airplanes generally contain four approved sections: procedures, performance data, limitations, and weight and balance.

46.3.1 PROCEDURES SECTION OF AFMS FOR COMPLEX AIRCRAFT

The procedures section of an AFM of complex aircraft is typically not suitable for flightcrew use in air transportation operations.

A. The certification regulations only require that the procedures section of an AFM or RFM contain specific and detailed procedural information related to the unique characteristics of the aircraft.

B. These manuals are not required to contain each and every procedure necessary to operate the aircraft.

C. Most manufacturers of complex aircraft develop and have approved only those procedures necessary to certify the aircraft.

D. The certification regulations do not require that procedural information be expressed in sequential, step by step format suitable for publication in a checklist.

E. AFM procedural information may be supplied in narrative format.

46.3.2 PERFORMANCE DATA SECTION OF AFMS FOR COMPLEX AIRCRAFT

AFMs for complex aircraft contain extensive performance data sections. All performance information necessary to operate the aircraft in revenue operations is in this section. The AFM performance data section of a complex aircraft is typically not suitable for flightcrew use. This section is suitable for use by performance engineers.

46.3.3 PROCEDURES & PERFORMANCE DATA SECTIONS FOR TRANSPORT AIRCRAFT

AFMs and RFMs of smaller, less complex aircraft and helicopters typically contain performance data and procedures sections that are suitable for flightcrew use. POIs of operators using these aircraft shall review the applicable manual to ensure that these sections are appropriate for flightcrew use in the operation being conducted.

46.3.4 UNAPPROVED SECTIONS OF AFMS AND RFMS

In addition to the approved sections of AFMs and RFMs, aircraft manufacturers often include other information which does not require approval under the certification regulations in an AFM and RFM.

46.3.5 USE OF AFMS OR RFMS AS FLIGHT MANUALS

A. When an operator proposes to use an AFM or RFM as the required flight manual, the POI must review both the approved and unapproved sections of the manual.

B. The POI must determine that the information in the AFM is presented in a manner that is suitable for use by the flightcrew, that it is compatible with the type of operation conducted by the operator, and that it contains all of the required information and procedures.

46.3.6 CERTIFICATION REGULATIONS VERSUS OPERATIONAL REQUIREMENTS

Aircraft currently used in air transportation operations have been certified under the provisions of wide spectrum of regulations.

A. The assumptions, limitations, and requirements of these aircraft certification regulations may differ from the operational requirements of the CAR ‘84s.

B. The direction and guidance concerning procedures and performance which operators must provide to flight crews for aircraft operations under CAR ‘84 and/or the associated ANOs is normally more comprehensive than that published in an AFM or RFM. For example, basic crew coordination procedures such as standard altitude awareness callouts during departures and approaches are not usually in an AFM or RFM.

46.3.7 SUPPLEMENTARY INFORMATION

When a POI finds that the procedures or performance information published in an AFM or RFM is insufficient for the operation to be conducted, the POI shall require the operator to develop supplementary information and make it available to flight crewmembers.

46.3.8 AIRCRAFT CERTIFIED WITHOUT AN AFM OR RFM

An AFM or RFM may not have been prepared for an airplane or rotorcraft certificated before 01 March 1979. But CAR ‘84 requires that the same information required to be in an AFM or RFM be available aboard these aircraft.

A. The only practical method for meeting this requirement for aircraft of 6,000 pounds maximum take weight (MTOW) or more is for the operator to prepare a AOM which contains performance, procedures, and limitations.

B. Some smaller aircraft may be operated satisfactorily with the information presented by placards in the aircraft.

46.4 COMPANY FLIGHT MANUALS (AOMS)

An AOM containing the required information and approved by the POI under the provisions of this handbook is an approved flight manual for the purposes of CAR '84. An approved AOM is the only flight manual that needs to be carried aboard an aircraft. POIs must evaluate an operator's AOMs using the guidance that follows.

46.4.1 IDENTIFICATION AS A FLIGHT MANUAL

POIs must ensure that a AOM is clearly marked as an approved flight manual for a specific operator. Sections of a AOM which contain approved information must also be clearly identified.

46.4.2 APPROVED SECTIONS OF A AOM

A. POIs must ensure that the approved sections of a AOM contain all of the information that is required by the flightcrew to operate the aircraft.

B. POIs should evaluate the approved sections of a AOM for the following:

1. The procedures section of a AOM must contain all procedures required by the AFM or RFM and for each operation the operator conducts. As a minimum, the operator must include sufficient detail to allow a trained crew to safely and effectively operate the aircraft. The procedures section of the manual may be divided into subsections such as normal, non-normal, and emergency procedures.

2. The operator's performance data in a AOM must contain the data from the AFM or RFM and instructions on how to use that data.

3. Operators may assign the responsibility for performing takeoff and landing data computations to flightcrew or ground personnel.

4. The flightcrew must have access to adequate data in the cockpit, (including information for the specific airport and runway to be used) to perform the computations for which they are responsible.

5. When takeoff and landing data is presented in tabular format for specific runways, it is often referred to as an airport analysis.

6. Performance data may be published under separate cover and be given titles such as performance manual or airport analysis.
7. When performance data is published under separate cover, it must be identified as a portion of the AOM.

8. Takeoff and landing performance data may be stored in an on board or ground based computer.

9. The limitations section of a AOM must be clearly identified as CAAB approved. The limitations section of a AOM must contain each limitation which is contained in the AFM or RFM.

46.4.3 ACCEPTED SECTIONS OF AN AOM

Accepted sections of a AOM may contain supplementary information such as aircraft and systems descriptions, an expanded explanation of procedures, special policies and procedures, and other selected topics pertinent to operation of the aircraft type.

A. The accepted sections of a AOM must conform to the regulations and safe operating practices but do not need to conform to corresponding sections of the AFM or RFM, either in format or content.

B. POIs should ensure that the AOM developed by or for the operator contains sufficient explanation and guidance for flightcrew use in the safe operation of the particular aircraft type.

C. Background information or information that is not specific to the operation of the particular aircraft should be placed in a section of the Ops Manual, Part A, rather than in a supplementary section of the AOM.

46.5 AIRCRAFT SYSTEMS DESCRIPTION

A. Operators must provide crewmembers with a systems description of an aircraft's systems and components that contains sufficient detail to allow flight crewmembers to adequately understand and perform all procedures in the flight manual.

B. AFMs, RFMs, and AOMs may or may not contain a systems description section.

C. The aircraft systems description section of a manual is "accepted" as opposed to "approved."

D. Operators may choose to place the systems description information in an accepted section of a AOM or in a section of the Ops Manual, Part A, such as a training manual.

46.6 PROCEDURES

A. POIs should not construe procedures published in an AFM or RFM to be the only or best means of accomplishing a specific objective. Because AFM or RFM procedures are

formulated primarily for aircraft certification purposes, POIs should encourage operators to develop procedures appropriate to revenue operations for inclusion in a AOM.

B. Procedures incorporated in a AOM should be tailored by the operator to accommodate the operator's type of operation, fleet standardization objectives, and cockpit management objectives. As an operator's operations become more complex, it is progressively more important to include detailed guidance in the flight manual, which is specifically tailored to the operator's operations.

C. Aircraft which have been modified by supplemental type certificate (STC) or by field approval (DFSR Form) may require different procedures than unmodified aircraft. POIs must coordinate approval of procedures with PMIs to ensure modifications are accounted for in the operator's procedures.

D. Procedural information included in a AOM must be presented in a step by step format. A procedural step in an AFM or RFM procedure must be included in the equivalent AOM procedure, unless the POI approves the deletion through the process described in subparagraph I that follows.

E. Operators are responsible for developing effective standard operating procedures. The development process for standard operating procedures consists of the operator or other qualified party (such as the manufacturer) conducting a painstaking task analysis of the man machine environment relationship. Although this analysis is time consuming and expensive, it is necessary to meet the required level of safety in air transport operations.

1. General guidelines for POIs to use when evaluating these procedures are contained in following paragraph. Specific guidelines for developing aircraft operating procedures are almost nonexistent.
2. POIs should encourage those operators that do not have extensive experience in developing their own procedures to follow the manufacturer's recommendations.

F. POIs should ensure that operators standardize their operating procedures both within and across aircraft types to the greatest extent possible. POIs should make operators aware of the following information concerning procedures for standardization.

1. Standardized procedures promote understanding and effective communications between crewmembers. Research has shown that standardized procedures and effective communications are significant factors in reducing error in the cockpit and in enhancing safety.

2. Crewmembers of most large operators operate numerous different aircraft during their career. Standardized procedures enhance a crewmembers transfer of learning and minimize negative transfer when the crewmember transitions from one aircraft to another.

3. A complete standardization of procedures is not possible when there are significant differences between manufacturers and installed equipment. A high degree of standardization, however, is possible.

4. For example, the flight procedures for: engine failure after V1, engine fire after V1, and a missed approach with an engine out, can be designed to be identical. Each procedure might include the aircraft climbing at a reference speed to an identical clean up height, then accelerating, then retracting the flaps, and then continuing the climb at specified engine-out climb speed.

5. The reference speeds might change depending on the aircraft weight, but the procedure could otherwise be identical. If the operator designed these procedures carefully, they could be used on all aircraft in the operator's fleet.

G. POIs may approve combined procedural steps.

1. For example, an AFM or RFM procedure specifies a two step procedure such as the following: Step 1 - Smoke Goggles On, and Step 2 - O2 Mask On. The POI could approve a one step procedure such as the following: Step 1. Smoke Goggles and O2 Mask - On.

2. If there is a specific reason, however, for not combining the steps, the POI must not approve such combinations. For instance, if in the previous example, for some reason the smoke goggle has to be put in place before the O2 mask can be put into place, the two step procedure should be retained.

H. POIs may approve an arrangement of procedural steps in a different sequence from the sequence in the AFM or RFM. The operator must demonstrate to the POIs satisfaction that the change in sequence is safe and effective through validation testing. The POI shall ensure adverse effects are not introduced. For example, with many aircraft the flaps are required to be extended or the trim to be set to specific settings before an adequate control check can be accomplished. If this sequence is reversed, the control check is invalid.

I. POIs may approve the combination of similar procedures into a single procedure. For example, it may be desirable for an operator to combine engine fire, engine failure, and severe engine damage procedures into a single procedure. POIs may approve the resulting procedure when validation testing shows the procedure to be clear, easy to use, and if it retains the safeguards of the individual procedures it replaces. If the combined procedure results in a complex and error prone procedure, the POI shall not approve it.

J. The POI shall require the operator to present evidence that newly developed procedures are effective. This may be done by analysis, documentation, or validation tests. Tests may be conducted by the manufacturer, the operator, or another competent party (such as a contractor). The POI or a designated inspector qualified in the aircraft must evaluate the effectiveness of such tests.

46.7 NORMAL PROCEDURES

A. The normal procedures section of a AOM must contain procedures for each normal operation that flight crewmembers are required to perform. Each normal procedure should be amplified by the operator with sufficient instruction to ensure that the procedure is properly accomplished. POIs must ensure that this instruction is thorough enough to provide the least experienced flight crewmember with sufficient information to perform the procedures.

B. Many operators include normal operating checklists and an explanation of how to accomplish each step of the checklists in the normal procedures section of the AOM. This is an acceptable practice, however, it is important to understand that an explanation of how to perform the normal checklist is not the only material required in the normal procedures section of a AOM.

C. Guidance for operational procedures for which there are no checklists (such as the takeoff procedure), must also be addressed.

D. Procedures for crew coordination and for the use of checklists must be included.

E. The procedures section of a AOM must contain clearly specified crew duties. For example, the procedures section should contain a specific assignment for the crewmember that is responsible for setting power and maintaining directional control when the SIC is conducting a takeoff.

F. POIs may require the operator to develop and publish normal procedures in a AOM which are not in the AFM or RFM, when the procedures are necessary to ensure an adequate level of safety. Instrument approach procedures, adverse weather operations, long range navigation, and special procedures for CAT II and CAT III operations are all examples of required normal procedures which may not be in an AFM or RFM.

G. Operators may need to develop extensive procedures for operating computer based systems in the cockpit. A description of computer displays and controls does not normally provide a crewmember with adequate information to operate such systems. Procedures for computer operations should be keyed to menus and display prompts. Procedures should be written in an interactive format rather than as a rote listing of key strokes.

46.8 MANOEUVRES AND PROCEDURES DOCUMENT

A. CAR ‘84 requires that operators publish "detailed descriptions or pictorial displays of the approved normal, abnormal, and emergency maneuvers, procedures and functions that will be performed during each flight training phase or flight check, indicating those maneuvers, procedures and functions that are to be performed during the inflight portions of flight training and flight checks." Operators must obtain approval of the maneuvers and procedures descriptions before they may be published.

B. Before approving the operator's "maneuvers and procedures document," POIs shall ensure that it contains the tolerances which must be maintained in training and checking.

C. POIs shall ensure that the operator's standards are appropriate for the aircraft being flown and for the operation being conducted.

D. Operators should use the Skill Test Standards (STS), and the manufacturer's recommendations and this handbook to establish these standards.

E. POIs should use the guidance that follows when evaluating the standards used in an operator's maneuvers and procedures document.

1. The standards in use the Skill Test Standards are particularly appropriate for pilots of single engine and multiengine, general purpose families of airplanes and helicopters. There are many cases, however, in which the STS standards are inappropriate. For example, many large aircraft have speed command systems in which the correct final approach speed CAR '84ies according to the CG and flight conditions.

2. When the operator conducts special operations, such as lower than standard minimum takeoffs, the POI shall ensure that the tolerances the operator chooses are appropriate to that operation. For example, on an RVR 600 takeoff with an engine loss, the applicant must be able to continue to track the runway centerline lights until the aircraft is rotated to the takeoff attitude.

F. Operators may choose to publish the maneuvers and procedures description in a section of the Ops Manual, Part A for reference by flight crewmembers. The CAAB recommends, however, that this description be placed in a section of the flight manual where it is available for inflight reference.

46.9 NON-NORMAL AND EMERGENCY PROCEDURES

A. Non-normal (or abnormal) and emergency procedures in an AFM or RFM are usually presented in more detail than are normal procedures.

1. The steps and the order of steps in these procedures are often critical. POIs must exercise caution in approving the modification of non-normal and emergency procedures.
2. The effect of most procedural steps on the airworthiness of the aircraft are obvious but the effects of some are not. For example, it may be necessary to depressurize a hydraulic system to successfully perform a manual landing gear extension.
3. Deleting a step or a change in the sequence steps of such a procedure could make the procedure ineffective.

A. There have been instances in which operators have erroneously proposed modifying an AFM or RFM procedure, and POIs have unintentionally approved the modification which invalidated the certification basis of the aircraft.

B. POIs should use the guidance that follows when evaluating an operator's non-normal or emergency procedures in AFMs, RFMs, or AOMs.

1. When an operator proposes to modify a non-normal or emergency procedure, the operator must show that the modified procedure does not adversely affect the airworthiness of the aircraft. The operator may establish the safety and effectiveness of proposed procedures by analysis, documentation, or validation tests.

2. POIs shall contact the applicable manufacturer and obtain concurrence before approving deletion of an item or the rearrangement of items on these checklists. This concurrence may be expressed informally (by telephone). This concurrence is not required if the operator provides evidence that the manufacturer has already concurred with the identical procedure
3. for another party (such as another operator or manufacturer).

46.10 IMMEDIATE ACTIONS

A. An immediate action is an action that must be accomplished so expeditiously (in order to avoid or stabilize a hazardous situation) that time is not available for a crewmember to refer to a manual or checklist.

B. Crewmembers must be so familiar with these actions that they can perform them correctly and reliably from memory.

C. POIs must ensure that immediate action situations are included in an operator's AFM, RFM, or AOM, as appropriate. Situations that require immediate action include, but are not limited to the following:

1. Crewmember incapacitation

2. Imminent threat of loss of aircraft control

3. Imminent threat of destruction of a system or component which makes continued safety of the flight and subsequent landing improbable

D. Under this criteria, a flightcrew donning oxygen masks in response to a depressurization or turning off the fuel and ignition in case of a hot start, are situations requiring mandatory immediate action items. The loss of thrust on a jet engine during cruise, however, would not normally require an immediate action item according to this criteria.

E. POIs must ensure that immediate action items are explicitly identified as such in an operator's AOM. It is not acceptable for immediate action items to be hidden (not specifically identified as an immediate action) in procedures or checklists.

F. Certain situations that either require or appear to require immediate action have proven to be a stimulus for evoking incorrect and inappropriate flightcrew actions. Therefore, immediate action items must be strictly limited to only those actions necessary to stabilize

the situation. POIs must ensure that all remaining actions are accomplished by "Challenge Do Verify" (CDV) checklists.

G. POIs may approve an operator's proposal to replace immediate action items in an AFM or RFM procedure with challenge do verify (CDV) checklist procedures in a AOM, provided the operator shows compliance with the criteria in this paragraph and also demonstrates an equivalent level of safety through validation tests.

46.10.1 MANDATORY CONFIRMATION ITEMS

A. There are certain critical procedural steps that shall be confirmed by a second crewmember before the step may be taken. POIs must ensure that an operator's procedures which contain such critical procedural actions must clearly identify the critical actions and the crewmember who is responsible for giving the confirmation.

B. The types of procedural actions that require this confirmation include the following:

1. Actions resulting in the shutting down of an engine

2. Actions resulting in the deactivation of flight controls

3. Actions that if performed incorrectly, in the wrong sequence, or at the wrong time produce a catastrophic result, even if the incorrect action is not highly likely

4. Actions where past experience or analysis has shown that there is a high probability for error or incorrect action and which creates a hazardous situation

46.10.2 CREWMEMBER ROLES

The AOM must clearly define the various crewmember roles and responsibilities. POIs should use the following guidance when ensuring that the operator clearly states policy and guidance for cockpit management in the AFM, RFM, or AOM, as applicable.

46.10.2.1 PIC RESPONSIBILITIES

The operator's policy and guidance should make it clear that the PIC's primary responsibility is to manage the actions of the crew and the conduct of the flight. While the PIC may delegate the management of the flight and manipulation of the controls to the SIC, the AOM must not indicate that the PIC can delegate the responsibility for safe conduct of the flight.

46.10.2.2 RESPONSIBILITIES OF FLIGHT CREWMEMBERS NOT IN COMMAND

The operator's flight manual should contain policy and guidance to those flight crewmembers not in command, as to their responsibilities to the PIC and their responsibilities for the safe conduct of the flight.

46.10.2.3 SIC RESPONSIBILITIES

A. The AOM must contain guidance for the PIC concerning the conditions and circumstances in which an SIC may operate the aircraft.

B. The operator's policies must delineate the limits of authority delegated to the SIC when the SIC is the pilot flying (P-F).

C. The operator's policies should address crew management in critical situations.

1. For example, there may be certain situations in which the SIC should be the pilot flying (P-F) so that the PIC can concentrate on managing those situations, particularly ensuring that required actions and appropriate checklists are properly accomplished.
2. Procedures for transfer of control must be clearly addressed in the AOM.

46.10.2.4 COMMUNICATIONS

In general, proper cockpit management requires effective communication and cooperative action between crewmembers which form consecutive closed loops.

46.10.2.5 COORDINATION

Research has shown that effective flight crews coordinate their actions before any action is required. POIs shall ensure that AOMs contain a requirement for briefings and also adequate guidance for the content of those briefings.

46.11 OPERATIONS NOT EVALUATED IN AIRCRAFT CERTIFICATION

A. If the operator proposes to conduct operations which have not been evaluated during aircraft certification, the POI must ensure that the operator has developed and obtained approval of procedures for the conduct of the proposed operation.

B. Such operations are often indicated by the absence of a procedure for the operation in the AFM or RFM. Examples of such operations could include powerback and taxi with engine shutdown.

C. POIs should use the following guidance when evaluating those operations not evaluated during aircraft certification.

D. POIs must ensure that each operation conducted must be specifically addressed by a procedure. For example, it should not be assumed that a procedure for shutting down and then restarting an engine during a taxi delay is equivalent to a procedure for delaying an engine start on initial taxi out.

E. The same procedure may not be used for more than one operation unless analysis shows that more than one operation may be safely conducted using the same procedure.

F. POIs must ensure that an operational procedure is thoroughly coordinated with airworthiness inspectors. Since adverse effects that a procedure could cause to the airworthiness of an aircraft or its systems may not be immediately apparent, the POI must ensure that coordination with airworthiness is required. For example, a procedure for taxiing with engine shutdown could have a detrimental effect on the landing gear system if high asymmetrical engine thrust is used during sharp turns.

G. If there is any question concerning the effects a procedure may have on the airworthiness of the aircraft, the POI must research this further with aircraft type experts before granting approval of the procedures.

46.11.1 LIMITATIONS

A. POIs must ensure that when operating limitations are incorporated in a AOM, that each limitation was transferred from the AFM or RFM. POIs should use the following guidance when evaluating the limitations of an operator's AOM.

B. POIs should evaluate the operator's AOM to ensure that all AFM or RFM operating limitations are published in the AOM and are clearly identified as AFM or RFM limitations.

C. The limitations section of a AOM must contain every limitation from the AFM or RFM.

D. Operators may add limitations to AOMs which were not in an AFM or RFM limitation.

E. One method of accomplishing this is for the operator to express all operator imposed limitations as policy statements in applicable procedures.

F. When the operator chooses to blend AFM or RFM and operator imposed limitations in the limitations section of a AOM, the POI must ensure that the operator used a method for clearly distinguishing each AFM or RFM limitation from the operator imposed limitations.

G. The operator is responsible for informing crewmembers of all AFM or RFM operating limitations. Crewmembers are responsible for observing all AFM or RFM limitations. The POI must ensure that the AOM contains a statement that crewmembers are responsible for being aware of and for observing all limitations.

46.12 OPERATIONS MANUAL INITIAL EVALUATION GUIDE

For Operations Manual Initial Evaluation Guide, Operations Inspectors of CAAB shall refer to Part-II, Chapter-68, Appendix-42.

CHAPTER-47

STANDARD OPERATING PROCEDURES, CHECKLISTS, CREW BRIEFINGS

This Chapter contains direction and guidance to operations inspectors for the evaluation of:

A. Standard operating procedures

B. Aircraft checklists; and

C. Crew briefings.

47.1 SUMMARY OF REQUIREMENTS

47.1.1 BASIC REQUIREMENT

The AOC holder is required by regulations to shall establish, and keep current, standard operating procedures (SOPs) appropriate to the type and CAR '84iant of aircraft provide guidance to flight operational personnel for the safe operation of the aircraft.

47.1.2 THE EXTENT OF THE SOPS

As an integral part of its SOPs, the AOC holder is required establish, and keep current:

A. Aircraft-specific expanded checklists;

B. Aircraft-specific condensed checklists

C. Aircraft-specific operational profiles for maneuvers;

D. Standard crew briefings; and

E. Standard call-outs and responses.

47.1.3 CONTENT & DESIGN

A. AOC holders are required to ensure that approved SOPs and checklist procedures include each item necessary for flight crew members to check for safety:

1. Before starting engines,

2. Taking off,

3. Landing, and

4. For engine and systems abnormalities and emergencies.

B. AOC holders are required ensure that the SOPs and checklist procedures are designed so that a flight crew member will not need to rely upon their memory for items to be checked.

C. The design and utilization of the SOPs and checklists is required to observe relevant human factors principles.

47.1.4 USE DURING TRAINING

The AOC holder shall ensure that its flight crews complete training for the use of the SOPs and checklists, including:

A. Initial aircraft-specific training;

B. Recurrent aircraft-specific training; and

C. Aircraft specific differences training for variants of aircraft types.

47.1.5 AVAILABLE & COMPLIANCE

A. The AOC holder shall ensure that the SOPs and checklists are readily usable in the cockpit of each aircraft in sufficient quantity for ground and flight operations

B. The AOC holder shall require the flight crew to comply with the SOPs and checklists when operating the aircraft.

47.1.6 FLIGHT CREW STANDARDIZATION PROGRAM

A. AOC holders are required to establish and maintain a comprehensive flight crew standardization program to ensure continuous conformance with the SOPs and checklists.

B. That program will consist of annual training, bi-annual proficiency checks, annual line checks and random line checks by designated check airman and flight operations inspectors.

47.2 OBJECTIVES OF STANDARD OPERATING PROCEDURES

A. Operators are required establish standard operating procedures (SOPs), including checklists and crew briefings, that provide guidance to flight operations personnel to ensure safe, efficient, logical and predictable means of carrying out flight procedures.

B. SOPs specify a sequence of tasks and actions to ensure that flight procedures can be carried out in standardized manner. To achieve these objectives, SOPs should unambiguously express:

1. What the task is;
2. When the task is to be conducted (time and sequence);
3. By whom the task is to be conducted;
4. How the task is to be done (actions);
5. What the sequence of actions consists of; and
6. What type of feedback is to be provided as a result of the actions (verbal call-out, instrument indication, switch position, etc.).

47.2.1 SOP DESIGN

A. To ensure compatibility with specific operational environments and compliance by flight operations personnel, SOPs design should take into consideration:

1. The nature of the operator's environment and type of operation;
2. The operational philosophy, including crew coordination;
3. The training philosophy, including human performance training;
4. The operator's corporate culture, including the degree of flexibility to be built into SOPs design;
5. The levels of experience of different user groups, such as flight crews, aircraft maintenance engineers and cabin attendants;
6. Resource conservation policies, such as fuel conservation or wear on power plants and systems;
7. Flight deck automation, including flight deck and systems layout and supporting documentation;
8. The compatibility between SOPs and operational documentation; and
9. Procedural deviation during abnormal/unforeseen situations.

B. Flight operations personnel should be involved in the development of SOPs.

47.2.2 SOP IMPLEMENTATION & USE

Operators must establish a formal process of feedback from flight operations personnel to ensure standardization, compliance and evaluation of reasons for non-compliance during SOPs implementation and use.

47.3 CHECKLISTS

47.3.1 GENERAL

A. Operators are required to establish checklists as an integral part of standard operating procedures (SOPs). Checklists should describe the actions relevant to specific phases of operations (engine start, taxi, take-off, etc.) that flight crews must perform or verify and which relate to flight safety.

B. Checklists should also provide a framework for verifying aircraft and systems configuration that guards against vulnerabilities in human performance.

47.3.2 CHECKLIST OBJECTIVES

A. Normal checklists should aid flight crews in the process of configuring the aircraft and its systems by:

1. Providing logical sequences of coverage of the flight deck panels;
2. Providing logical sequences of actions to meet both internal and external flight deck operational requirements;
3. Allowing mutual monitoring among flight crew members to keep all flight crew members in the information loop; and
4. Facilitating crew coordination to assure a logical distribution of flight deck tasks.

B. Checklists for use in abnormal situations and those for emergency situations should aid flight crews in coping with malfunctions of aircraft systems and/or emergency situations.

C. They should also guard against vulnerabilities in human performance during high workload situations by fulfilling the objectives of checklists and, in addition, by:

1. Ensuring a clear allocation of duties to be performed by each flight crew member;

2. Acting as a guide to flight crews for diagnosis, decision making and problem solving, (prescribing sequences of steps and/or actions); and

3. Ensuring that critical actions are taken in a timely and sequential manner.

47.3.3 CHECKLIST DESIGN

47.3.3.1 ORDER OF CHECKLIST ITEMS

A. The following factors should be considered when deciding the order of the items in checklists:

1. The operational sequence of aircraft systems so that items are sequenced in the order of the steps for activation and operation of these systems;

2. The physical flight deck location of items so that they are sequenced following a flow pattern;

3. The operational environment so that the sequence of checklists considers the duties of other operational personnel such as cabin crew and flight operations officers;

4. Operator policies (for example, resource conservation policies such as single-engine taxi)

5. that may impinge on the operational logic of checklists;

6. Verification and duplication of critical configuration-related items so that they are checked in the normal sequence and again immediately before the phase of flight for which they are critical; and

7. Sequencing of critical items in abnormal and emergency checklists so that items most critical are completed first.

B. Critical items should appear no more than twice on a given checklist. Critical items should be verified by more than one flight crew member.

47.3.3.2 Number of Checklist Items

The number of items in checklists should be restricted to those critical to flight safety.

47.3.3.3 Checklist Interruptions

SOPs should include techniques to ensure a step-by-step, uninterrupted sequence of completing checklists. SOPs should unambiguously indicate the actions by flight crews in case of checklist interruptions.

47.3.3.4 CHECKLIST AMBIGUITY

Checklist responses should portray the actual status or the value of the item (switches, levers, lights, quantities, etc.). Checklists should avoid non-specific responses such as “set”, “checked” or “completed”.

47.3.3.5 CHECKLIST COUPLING

A. Checklists should be coupled to specific phases of flight (engine start, taxi, take-off, etc.). SOPs should avoid tight coupling of checklists with the critical part of a phase of flight (for example, completing the take-off checklist on the active runway).

B. SOPs should dictate a use of checklists that allows buffers for detection and recovery from incorrect configurations.

47.3.3.6 TYPOGRAPHY

A. Checklist layout and graphical design should observe basic principles of typography, including at least legibility of print (discriminatively) and readability under all flight deck lighting conditions.

B. If color coding is used, standard industry color coding should be observed in checklist graphical design. Normal checklists should be identified by green headings, system malfunctions by yellow headings, and emergency checklists by red headings.

C. Color coding should not be the only means of identifying normal, abnormal and emergency checklists.

47.4 CREW BRIEFINGS

47.4.1 GENERAL

A. Operators shall establish crew briefings as an integral part of standard operating procedures (SOPs). Crew briefings communicate duties, standardize activities, ensure that a plan of action is shared by crew members and enhance crew situational awareness.

B. Operators shall establish both individual and combined crew briefings for flight crew and cabin crew.

47.4.2 CREW BRIEFING OBJECTIVES

Crew briefings should aid crews in performing safety-critical actions relevant to specific phases of flight by—

A. Refreshing prior knowledge to make it more readily accessible in real-time during flight;

B. Constructing a shared mental picture of the situation to support situational awareness;

C. Building a plan of action and transmitting it to crew members to promote effective error detection and management; and

D. Preparing crew members for responses to foreseeable hazards to enable prompt and effective reaction.

47.4.3 CREW BRIEFING PRINCIPLES

The following principles should be considered when establishing crew briefings:

A. Crew briefings should be short and should not include more than ten items. If more than ten items are necessary, consideration should be given to splitting the briefing into sequential phases of the flight;

B. Crew briefings should be simple and succinct, yet sufficiently comprehensive to promote understanding of the plan of action among all crew members;

C. Crew briefings should be interactive and where possible should use a question-and-answer format;

D. Crew briefings should be scheduled so as not to interfere with, and to provide adequate time for, the performance of operational tasks; and

E. Crew briefings should achieve a balance between effectiveness and continual repetition of recurring items.

F. Any intended deviation from SOPs required by operational circumstances should be included as a specific briefing item.

47.4.4 CREW BRIEFING APPLICATION

A. Operators shall implement flight and cabin crew briefings for specific phases of operations to include actual conditions and circumstances, as well as special aspects of operations.

B. Flight crew briefings shall be conducted for, but not be limited to, the following phases of operations:

1. Pre-flight;
2. Departure; and
3. Arrival.

C. Cabin crew briefings shall be conducted for, but not be limited to, the following phases of operations:

1. Pre-flight; and
2. First departure of the day.

D. Cabin crew briefings should be conducted following changes of aircraft type or crew and before flights involving a stop of more than two hours.

47.4.5 CREW BRIEFING SCOPE

A. Pre-flight briefings shall include both flight crew and cabin crew.

B. Pre-flight briefings should focus on crew coordination as well as aircraft operational issues. They should include, but not be limited to:

1. Any information necessary for the flight, including unserviceable equipment or abnormalities that may affect operational or passenger safety requirements;

2. Essential communications, and emergency and safety procedures; and

3. Weather conditions.

C. Flight crew departure briefings should prioritize all relevant conditions that exist for the take-off and climb. They should include, but not be limited to

1. Runway in use, aircraft configuration and take-off speeds;
2. Taxi-out route and relevant hot spots;
3. Departure procedures;
4. Departure routes;
5. Navigation and communications equipment set-up;
6. Aerodrome, terrain and performance restrictions, including noise abatement procedures (if applicable);
7. Take-off alternates (if applicable);
8. Any item(s) included in the minimum equipment list (if applicable);
9. Review of applicable emergency procedures; and
10. Applicable standard call-outs.

D. Flight crew arrival briefings should prioritize all relevant conditions that exist for the descent, approach and landing. They should include, but not be limited to:

1. Terrain restrictions and minimum safe altitudes during descent;
2. Arrival routes;
3. Instrument or visual approach procedures and runway in use;
4. Operational minima, aircraft configuration, and landing speeds;
5. Navigation and communications equipment set-up;
6. Taxi-in route and relevant hot spots;
7. Missed approach procedures;
8. Alternate aerodromes and fuel considerations;
9. Review of applicable emergency procedures;
10. Applicable standard call-outs; and
11. Cold temperature correction.

E. Cabin crew briefings should prioritize all relevant conditions that exist for the departure. They should include, but not be limited to—

1. Assignment of take-off/landing positions;
2. Review of emergency equipment;
3. Passengers requiring special attention;
4. The silent review process;
5. Review of applicable emergencies;
6. Security or service-related topics that may impact on passenger or crew safety; and
7. Any additional information provided by the operator, including review of new procedures, equipment and systems.

47.5 AMPLIFIED INSTRUCTIONS: CHECKLISTS DESIGN & USE

All AOC holders must provide aircraft checklists to their flight crewmembers. Flight crewmembers are required to use these aircraft checklists in commercial air transport operations. For AOC holders, aircraft checklists must be approved by the DFSR.

47.5.1 DEFINITION

A. A checklist is a formal list used to identify, schedule, compare, or verify a group of elements or actions.

B. A checklist is used as a visual or oral aid that enables the user to overcome the limitations of short term human memory.

C. Although a checklist may be published in a manual, it is designed for independent use so that the user does not have to reference a manual.

D. Checklists are used to ensure that a particular series of specified actions or procedures are accomplished in correct sequence.

E. Aircraft checklists, in particular, are used to verify that the correct aircraft configuration has been established in specified phases of flight.

47.5.2 STANDARDIZATION

A. Aircraft checklists and the AOC holder's policies for the use of checklists are one means by which AOC holders structure and define flight crewmember roles.

B. POIs must review the AOC holder's policies and procedures for checklist use as an integral part of the checklist review process.

C. POIs shall ensure that checklists and the AOC holder's procedures for checklist use are standardized (to the extent allowed by individual aircraft differences) for all aircraft in the AOC holder's fleet.

47.5.3 CHECKLIST APPROVAL BY CAAB

A. POIs and AOC holders must understand that aircraft checklists published in AFMs or RFMs are not approved for AOC holders.

1. When a AOC holder proposes to use an AFM checklist, the POI must review and approve that checklist for that AOC holder.

2. When an AOC holder proposes to use an AFM or RFM checklist, the POI must review the checklist and determine that it is acceptable for that AOC holder's use.

47.6 CHECKLIST CONTENT

Aircraft checklists have traditionally been divided into three categories. For the purpose of this handbook, these categories are referred to as normal, non-normal, and emergency.

A. AOC holders may use other titles for these categories such as abnormal instead of non-normal.

B. AOC holders may also further divide these categories into subcategories such as alternate and supplemental. POIs shall use the following guidance when evaluating the content of an AOC holder's checklists.

47.6.1 CONTENT

A. POIs shall ensure aircraft checklists are limited to action items or verification items. The aircraft checklist should not contain elaboration or explanation.

B. POIs must ensure that the required actions and decisions for flight crews when performing a checklist are thoroughly described in the AOC holder's manual and training programme.

C. POIs should consider the following when evaluating aircraft checklist content:

1. Non-normal and emergency checklists must contain each sequential step of a procedure.

2. A normal checklist is typically a listing of action items to be performed and verified at a particular point in flight.

    a. Normal checklist items do not necessarily represent a procedural step and may even represent completion of an entire procedure. For example, the item "Gear - Up and Locked" could indicate the gear handle had been raised, the gear indications checked, the gear handle had been placed in the neutral position to check the up locks, and that the handle had then been returned to the up position.

    b. Most normal procedures do not require itemization or incorporation into a checklist.

    c. For example, the procedures for making normal takeoffs and landings are not itemized in a checklist format but described in a narrative format.

47.6.2 CRITICALITY OF CHECKLIST ITEMS

Checklist items can be ranked in criticality according to the potential effect of the crewmember failing to perform the action.

A. Critical items are those items which, if not correctly performed, have a direct, adverse effect on safety.

B. Noncritical items are "housekeeping" items or systems management items, which for operating practices must be routinely accomplished during a specific phase of flight, but if omitted would have a minimal effect on safety.

C. An item may be considered to be critical on one checklist but noncritical on another checklist. For example, a flight crews failure to set the flaps while accomplishing the before takeoff checklist has had extremely adverse consequences. A flight crews failure to retract the flaps while performing the after landing checklist, however, has had little effect on safety.

47.6.3 DIVERSION OF THE FLIGHT CREWS ATTENTION

A. The flight crews attention is diverted from other tasks when performing a checklist.

B. Checklists must be kept as short as practical to minimize "heads down" time and diversion of the crew's attention while performing the checklist.

1. Each additional item that is added to a checklist increases the potential for: interruption when the checklist is accomplished, diversion of the crew's attention at a critical point, and the missing of critical items.

2. Items not associated with aircraft operations (such as calls to the company) shall not be placed on the checklist.

47.6.4 AIRCRAFT SOPHISTICATION & CHECKLIST DESIGN

The degree of technological sophistication in the design of the aircraft directly affects checklist items.

A. In older aircraft, the flightcrew must manually select and monitor most items.

B. In technologically advanced aircraft the same items are accomplished and monitored by automatic systems which relieve the flightcrew of these tasks.

C. Checklists for technologically advanced aircraft tend to be shorter and simpler than those for older aircraft.

47.6.5 FLEET STANDARDIZATION

A. Checklists for technologically sophisticated aircraft are typically shorter and simpler than those for older aircraft. The items on checklists for technologically advanced aircraft, however, are normally present on checklists for aircraft with older technology.

B. POIs shall require AOC holders to evaluate the feasibility of placing common checklist items on checklists with standard titles for all aircraft (such as before start, before takeoff, or before landing checklists). Items should appear in a standard sequence to the degree possible.

C. POIs should not normally approve placing an item on a checklist which is not required for that specific aircraft solely because the item is required in other aircraft of the fleet. POIs may make exceptions, however, when the AOC holder provides adequate justification.

47.7 METHODS OF CHECKLIST DESIGN

A. AOC holders may choose from at least two accepted methods of checklist design: the "challenge do verify" (CDV) method and the "do verify" (DV) method.

B. Available evidence suggests that safety is enhanced when the AOC holder adopts and applies a consistent checklist design policy.

C. POIs should use the following informative guidance when reviewing the design of an AOC holder's aircraft checklists.

47.7.1 CHALLENGE–DO–VERIFY (CDV)

The challenge do verify (CDV) method consists of a crewmember making a challenge before an action is initiated, taking the action, and then verifying that the action item has been accomplished.

A. The CDV method is most effective when one crewmember issues the challenge and the second crewmember takes the action and responds to the first crewmember, verifying that the action was taken. This method requires that the checklist be accomplished methodically, one item at a time, in an unCAR '84ying sequence.

B. The primary advantage of the CDV method is the deliberate and systematic manner in which each action item must be accomplished. The CDV method keeps all crewmembers involved (in the loop), provides for concurrence from a second crewmember before an action is taken, and provides positive confirmation that the action was accomplished.

C. The disadvantages of the CDV method are that it is rigid and inflexible and that crewmembers cannot accomplish different tasks at the same time.

47.7.2 DO–VERIFY (DV)

The "do verify" (DV) method (or "clean up" method) consists of the checklist being accomplished in a variable sequence without a preliminary challenge. After all of the action items on the checklist have been completed, the checklist is then read again while each item is verified.

A. The DV method allows the flightcrew to use flow patterns from memory to accomplish a series of actions quickly and efficiently.

B. Each individual crewmember can work independently which helps balance the workload between crewmembers.

C. The DV method has a higher inherent risk of an item on the checklist being missed than does the CDV method.

47.7.3 SELECTION OF DESIGN METHOD

A. Both the CDV and the DV methods of checklist design are currently being successfully used for normal checklists.

B. Traditionally, AOC holders have preferred the DV method for normal checklists and the CDV method for non-normal and emergency checklists.

C. AOC holders have, however, successfully used the CDV method for all checklists. POIs may approve either method for normal checklists.

1. In most circumstances non-normal and emergency checklists are more effective when the CDV method is used.

a. The correct accomplishment of the actions and procedures incorporated in the non-normal and emergency checklist categories is critical and warrants a methodical approach.
b. Since these checklists are seldom used, however, crewmembers are usually not as familiar with the procedures incorporated into these checklists as they are with the procedures in normal checklists.

2. In addition, many non-normal and emergency checklists do not lend themselves to developing flow patterns which crewmembers can readily recall.

3. The CDV method also enforces crew coordination, cross-checking, and verification, all of which aid the crewmember in overcoming the adverse effects of stress.

47.7.4 MECHANICAL OR ELECTRONIC CHECKLISTS

Mechanical or electronic devices differ in format from paper, hand-held checklists, but not in the design method or use.

A. The actions these checklists contain and their sequencing shall be consistent with the paper version (when required) available to the flightcrew.

B. Some electronic checklists will have an ability to automatically detect the completion of an action based on switch position, system state, or both.

C. In electronic checklists, the verification in the CDV or DV methods may be a matter of observing that the items are complete via the display method used (for example, completed items turn green).

D. The CDV or DV methods can be applied to any type of checklist.

47.7.5 VERIFICATION

POIs should keep in mind that all checklist designs are subject to human error.

A. Crewmembers may omit and skip checklist items.

B. Crewmembers may erroneously respond to a checklist at times believing that an item or task was accomplished when it was not.

C. At times, crewmembers may see what they expect to see rather than what has actually been accomplished.

D. Both the CDV and the DV methods are subject to such human errors.

47.8 CHECKLIST PHILOSOPHY

A. POIs must ensure that the appropriate sections of the AOC holder's manuals contain the specific crewmember responsibilities for monitoring, verifying, and managing the accomplishment of checklists.

B. These responsibilities should appear either as policy statements or as specific directives. POIs should use the guidance that follows when evaluating an AOC holder's policies for the accomplishment of checklists.

47.8.1 OBJECTIVE OF POLICY STATEMENTS & DIRECTIVES

A. The primary objective of the AOC holder's policy statements or directives is to standardize crewmember interaction.

B. These statements should include, but not be limited to, the following items—

1. Flightcrew responsibilities for maintaining aircraft control, analyzing situations, and for requesting the appropriate checklist in non-normal and emergency situations
2. The specified crewmember responsible for initiating each checklist
3. The specified time when each checklist is to be initiated
4. The specified crewmember responsible for accomplishing each item on the checklist
5. The specified crewmember responsible for ensuring that each checklist is completed and for reporting that completion to the crew
6. Crewmember responsibilities for bringing to the attention of the PIC and the rest of the crew any observed deviation from prescribed procedures

47.8.2 METHODS FOR MANAGING CHECKLIST ACCOMPLISHMENT

A. The following subparagraphs each contain a discussion of recommended methods an AOC holder may use for managing checklist accomplishment. These methods are not all-inclusive and may not meet all of the AOC holder's needs. POIs shall not interpret these methods as the only ones which are acceptable—

1. For single pilot aircraft, the DFSR recommends that AOC holders mount the before takeoff checklist and the before landing checklist on the instrument panel by means of a placard. When aircraft characteristics allow, the AOC holder should develop touch verification procedures which contain a requirement that the pilot touch each control to verify it is in the correct position.

2. For two pilot aircraft in which only the PIC has ground steering control, the recommended method for accomplishing checklists is for the SIC to read all checklists when the aircraft is in motion on the ground. The recommended method for those aircraft in which either pilot can steer on the ground is for the pilot not flying (P-N-F) to read all checklists. In all two pilot aircraft, the P-N-F should read all checklists when the aircraft is airborne.

3. For three crewmember aircraft:

    a. The recommended method is for the SIC to read the flight engineer (FE) portion of the before engine start checklist, so that the PIC can observe and verify the configuration of the flight engineer panel as the FE responds to each item on the checklist.

    b. Since the P-N-F is the crewmember most subject to interruptions from radio communications, it is recommended that the FE should read all normal

    c. Checklists and verify that each pilot action has been taken when the aircraft is in motion.

    d. The FE should have the explicit task of verifying that critical items have been performed by the pilots, whether or not the FE has verbal responses for those items.

    e. In those non-normal or emergency situations which involve significant activity by the FE, it is recommended that the P-N-F read the checklist and verify FE actions while the FE performs and responds to the items.

4. For all aircraft, the crewmember responsible for reading the checklist should be responsible for ensuring that the checklist is completed systematically and expeditiously. This crewmember should be responsible for managing interruptions, cross-checking controls and indicators to ensure that the required actions have been accomplished, and for reporting that the checklist has been completed.

5. The pilot flying (P-F) should not be distracted from controlling the aircraft to perform a checklist item which another crewmember can accomplish. The P-F should activate only those switches or controls (other than the manual or automatic flight controls, throttles, and nosewheel steering) which are not

within practical reach of another crewmember. Only one pilot should be "heads down" at any time.

6. In the prestart phase, flight guidance and navigation checklist items have proven to be critical items. A response should be required from both pilots (and FE, if applicable) when the same setting is required for more than one device (such as computers, flight instruments, and altimeters). Inertial platform alignment and computer programming should be accomplished by one crewmember and independently confirmed by another crewmember. As many of these checklist items as possible should be accomplished and verified before the aircraft is moved.

7. In the taxi and pre-takeoff phases, aircraft configuration (such as flaps, trim, and speed brakes) and flight guidance items (such as heading, flight director, altitude select panel settings, and airspeed bugs) have proven to be critical. All flight crewmembers should confirm these items and at least two crewmembers should respond to applicable checklist items.

8. On approach, flight guidance checklist items have proven to be critical items. At least two crewmembers should confirm and respond to these items. A response should be required from each pilot when the same setting is required on two separate devices (such as computers, flight instruments, or altimeters).

9. All checklist items which are critical in the before landing phase CAR '84y with the type of airplane involved. In the operation of small airplanes, the landing gear has proven to be a critical checklist item and both pilots should confirm and respond to this item. Although the landing gear and flaps are critical items for large, transport category airplanes, the multiple warning devices and systems which are associated with these systems make the need for a response and confirmation by both pilots less critical.

10. All checklists, except the after takeoff and after landing checklists, should be accomplished by one crewmember reading the checklist items and a second crewmember confirming and responding to each item. POIs shall ensure that critical items on the before takeoff and before landing checklists are confirmed and responded to by at least two crewmembers.

11. All checklists must be designed so that the flightcrew can maintain an adequate visual scan and monitor ATC communications while simultaneously controlling the aircraft.

    a. The recommended method is for the AOC holder to group the systems management checklist items after the configuration, thrust, and flight guidance items for each phase of flight.

b. When systems management checklist items must be accomplished in a high workload environment, it is recommended they be accomplished by a single crewmember.

c. Usually the after takeoff and after landing checklists items can be accomplished silently as these items have not proven to be critical.

12. AOC holders should direct crewmembers to refrain from accomplishing action items assigned to other crewmembers. Crewmembers should be directed that when they observe that another crewmember is not taking or has not taken a required action they must inform the crewmember, the PIC, or the whole crew, as appropriate.

13. Checklists should not be depended on to initiate changes in aircraft configuration.

    a. AOC holders should key aircraft configuration changes to specific operational events. For example,

    b. the AOC holder may direct the landing gear to be extended at glideslope intercept.

    c. For any adjustment of thrust, or configuration, a command from the PF and an acknowledgement from the crewmember taking the action is required.

14. Flight crewmembers frequently cannot complete a checklist when initiated either because of an interruption or because an item on the checklist has not yet been accomplished. POIs shall ensure that each AOC holder has developed policies for the management of these situations.

    a. For short delays, the recommended policy is for the flightcrew to hold the checklist until the interruption is over and the item can be completed.

    b. When the checklist item is completed, the challenge should be repeated, the proper response given, and the checklist continued.

47.8.2.1 CHECKLIST INTERRUPTIONS

AOC holders must establish procedures to ensure that the correct checklist sequence is reestablished when unusual events interrupt the normal sequence of a flight.

A. For example, crewmember actions during normal sequences of flights are interrupted when long delays are encountered on taxi-out or when crewmembers vacate the flight deck.

47.8.2.2 VACATING FLIGHT DECK WITH VISITORS IN COCKPIT

A. AOC holders must establish additional checklist management procedures for checklist interruptions that occur when any flight crewmember who is assigned to a flight deck duty station vacates the cockpit to perform other duties, leaving persons who are occupying cockpit observer seats or who visit the cockpit during such absence with unsupervised access to unmanned flight deck duty stations.

B. If any checklist interruption of this kind occurs and any person has access to an unmanned flight deck, then each checklist item in all of the checklists prior to engine start must be re accomplished.

47.8.2.3 VERIFICATION OF ITEMS ACCOMPLISHED

The flightcrew must verify the accomplishment of all items on checklists that have been accomplished up to the point where the current checklist was interrupted.

A. Minimum Requirement. As each checklist item is re accomplished, the minimum that is required is a verification that switches, control handles, knobs, or levers are in the positions prescribed and that the associated indicator lights and instrument readings confirm the proper positioning of the applicable switches, control handles, knobs, or levers.

B. Additional Requirements:

1. If the verification check reveals that any switch, control handle, knob, or lever is not in the position prescribed, then the full procedure, including any associated checks for the particular checklist item(s), must be re accomplished.

2. If the indicator lights or instrument readings associated with the proper positioning of particular switches, control handles, knobs, or levers are not in agreement with the prescribed positions of these control means and re accomplishment of the full procedure, including any associated checks for the particular checklist item(s), does not correct the disagreement, then the flightcrew must log the discrepancy in the aircraft maintenance log.

47.8.2.4 POI RESPONSIBILITIES

A. POIs of turbojet and large aircraft operators shall ensure that their assigned certificate holders conform to the policies described in this subparagraph.

B. POIs of small aircraft operators shall encourage their assigned certificate holders to conform to these policies.

47.9 DEVELOPMENT AND SEQUENCING OF CHECKLIST ITEMS

A. POIs must ensure that checklists are developed from a careful task analysis and are consistent with the procedures section of the AOC holder's flight manual. Phase checklist items must be in an appropriate and logical sequence.

B. When a checklist represents an abbreviated procedure, that checklist must follow the procedural sequence. POIs should use the following additional guidelines concerning individual topics of checklist design.

C. AOC holders should standardize the sequence of checklist items as much as possible across aircraft types.

1. When the AOC holder has a choice as to where an item should be placed on a checklist, it should be placed at a point where the crew workload is lowest.

D. AOC holders should keep checklists as short as possible in order to minimize interruptions. When an AOC holder is using an electronic checklist with the ability to automatically detect the completion of an action, the POI shall encourage the use of that ability to the maximum extent possible.

1. AOC holders should sequence checklist items to minimize interruptions of checklist accomplishment. For example, sequencing the "INS NAV MODE" as the first item on the engine start checklist may allow the flightcrew to call for and complete the before engine start checklist at a convenient time even though INS alignment is not complete.

2. Two short checklists may be preferable to a single long one. AOC holders may place a line or otherwise mark a checklist where the checklist can be held until a specific event occurs. This practice is acceptable because in essence, it creates two separate checklists.

E. AOC holders must include required preflight tests on checklists but should design checklists to preclude the unnecessary testing of systems.

1. Warning systems with built-in test and automatic monitor circuits do not need to be checked or included on checklists unless required by the AFM or RFM.

2. Many test switches in the cockpit are designed for use by maintenance personnel. AOC holders should not require flight crewmembers to perform these tests as a normal procedure.

3. POIs may approve the AOC holder grouping required functional checks on a specific checklist which is performed before the first flight of the day (or at some other logical interval) and not repeated on subsequent flights.

F. AOC holders must clearly identify decision points and indicate the correct alternative action or alternative sequence of actions to be taken after each decision point. If the effect of adverse weather requires an alternate action, the AOC holder should design the checklist to account for that alternate action. For example, if the autothrottles are normally engaged for takeoff except when engine anti-ice is being used, the checklist should contain a requirement that the autothrottles cannot be engaged with the engine anti-ice on.

47.10 IMMEDIATE ACTION ITEMS

A. A flight crew's failure to correctly accomplish all immediate action items can result in a threat to continued safe flight. For example, should a flight crew fail to close the fuel valve during an engine fire procedure, leaking fuel in the engine pylon may be ignited. In such cases, the first items on the corresponding checklist must be a verification that each immediate action item has been accomplished.

B. In some cases, an immediate action procedure may not be incorporated in a checklist. For example, there is no point in verifying that each item of an aborted takeoff procedure has been accomplished after the aircraft has been brought to a stop. In most cases, however, there should be a "follow on" or "clean up" checklist to be accomplished after the situation has been brought under control.

C. Immediate actions may be stated as policies rather than as checklist items when appropriate. An example of an immediate action item that can be stated as a policy rather than as a checklist item is the following statement: "All flight crewmembers shall immediately don Oxygen masks and report to the captain on interphone in the event of loss of cabin pressure." In this example the loss of cabin pressure checklist would contain subsequent items based on the assumption that the flightcrew is on oxygen and has established interphone contact.

47.11 CHECKLIST TERMINOLOGY

The following recommendations should be considered by POIs when reviewing checklists—

A. The challenges and responses on the checklist should be consistent with the labeling on the switches and controls in the cockpit.

B. Terms such as "tested," "checked," and "set" are acceptable terms only when they are clearly defined and consistently used.

C. AOC holders should have a consistent policy concerning responses to items with CAR '84iable settings. "As required" is not be an authorized response. A response that gives the actual setting is normally appropriate. For example: ON (or OFF). Items which require CAR '84iable responses should be carefully evaluated. Such items may not actually be

required on the checklist or may be more appropriately included in the system management portion of a checklist.

D. Responses to checklist items concerning liquid or gas quantities should be made in terms of the actual quantities on board compared to the specific quantity required, for example: "10,000 pounds required, 10,400 on board." When specific quantities are required, a response of "checked" is not acceptable. A response of "checked" is acceptable when a range of quantity is permitted and the range is marked on an indicator, such as a green arc on an oil quantity gauge.

E. Excess verbiage on checklists should be discouraged. For example, a checklist item of "Reduce airspeed to 130 KIAS for best glide" can be abbreviated as "BEST GLIDE - 130 KIAS."

F. Ambiguous verbiage on checklists is not acceptable. For example, "takeoff power" can mean either to advance the power or to retard the power.

47.12 AIRCRAFT DIFFERENCES

POIs shall ensure that AOC holders account in the aircraft checklists for differences in various series of aircraft or in installed equipment.

A. When there are only a few minor differences, this may be accomplished by using symbols to designate those checklist items that apply to only one series of airplanes or that apply only when the equipment is installed.

B. When there are a significant number of differences, AOC holders should prepare separate checklists for each series of aircraft.

C. Policies and procedures should be established to account for differences in checklist responses when operations are conducted with equipment removed or inoperative, in accordance with MELs and CDLs.

47.13 SEQUENCING NORMAL CHECKLISTS & OTHER CHECKLISTS

Normal checklist items may be incorporated in non-normal or emergency checklists to simplify cockpit management. An acceptable alternative method is to require both the normal and abnormal or emergency checklists to be accomplished in a specified sequence.

A. This method has the advantage of allowing the normal checklist to be requested and accomplished at the time that it would normally be accomplished.

B. Checklists should be designed so that two checklists are not in progress simultaneously.

C. The method may depend on the degree of sophistication of the airplane involved. In technologically advanced aircraft with short, simple checklists, it is usually preferable to keep the normal and the non-normal checklists separate.

D. Some non-normal checklist actions may be deferred until initiation of the appropriate normal checklist.

E. In airplanes with electronic checklists, checklists may be combined based on the priority of any one action, and/or the deferred non-normal checklist items may be automatically inserted in the appropriate normal checklist.

F. In older airplanes, however, it may be necessary to add the normal checklist items to the non-normal or emergency checklist simply to keep the checklist manageable.

CHAPTER-48

GROUND HANDLING ARRANGEMENTS

This chapter provides guidance for evaluation of the ground handling arrangements of AOC holders and the nominated managers.

48.1 BACKGROUND

48.1.1 FUNCTIONS OF GROUND HANDLING

For the purpose of this chapter, "ground handling" will include the facilities, equipment, personnel, policies and procedures for:

1. Ticketing of passengers and baggage;
2. Acceptance and processing of cargo, including dangerous goods
3. Cleaning the aircraft interior
4. Servicing of rest room supplies
5. Servicing of galley supplies
6. Servicing of blankets, pillows and magazines
7. Servicing of the aircraft;
8. Fueling of the aircraft;
9. Loading of the cargo, including dangerous goods;
10. Computation and provision of mass and balance data;
11. Computation and provision of performance data;
12. Correction or deferring of maintenance irregularities;
13. Provision of flight planning information;
14. Provision of operational flight plan;
15. Security screening of passengers and carry-on baggage;
16. Enplaning the passengers and their carry-on baggage;
17. Marshalling, towing or assisting the aircraft in departing the gate;
18. Deicing of the aircraft;
19. Preparation of parking area for arrival of the aircraft
20. Marshalling and parking of the aircraft after landing;

21. Deplaning the passengers and their carry-on baggage;

22. Off-loading of cargo and baggage;

23. Provision of the baggage to the deplaned passengers;

24. Security for the aircraft while parked;

25. Communications as necessary associated with flight handling, departure and arrival;

26. Retention of required records associated with flight handling, departure and arrival;

27. Implementation of emergency procedures associated with an incident or accident; and

28. Auditing of service providers to ensure that associated policies and procedures are being implemented by qualified persons.

48.1.2 COMPLEXITY OF GROUND HANDLING

A. The ground handling functions and responsibilities for their accomplishment exist even for small operators. For small operators though, the complexities of the events that must happen are masked by the fact that the pilot is routinely responsible for and accomplishes the majority of these functions.

B. But the safe and efficient ground handling of the arrival and departure of a large aircraft with greater passenger and cargo capacity requires an orchestrated division of responsibilities and events between qualified persons.

C. This orchestration of the ground handling of a large aircraft should be controlled by a nucleus of operator personnel under the direction of a manager as envisioned by the regulations.

D. Where the operator chooses to provide most of these functions through ground handling service providers, the operator must incorporate into its procedures n the responsibility for its own qualified personnel to monitoring and verification of critical points of those functions.

    1. For example, the securing of cargo nets, access ports, panels and doors used during the ground handling.

48.2 ASSIGNMENT OF RESPONSIBILITIES

It is critical that the operator provide specific assignment of responsibility for ground handling functions, especially those that are aircraft type-specific. Acceptable assignment of responsibility includes:

48.2.1 CREW RESPONSIBLE

The simplest form of discharging the ground handling responsibilities is to have the crew either do or continuously monitor the accomplish these function. Examples include:

A. Crew member reviews the passengers' documents, determines their weight and their baggage weight, checks for possibility of dangerous goods or weapons or other unacceptable items and tickets them.
B. Crew member determines and assigns seats based on the weight and size of the passengers
C. Crew member either load the baggage and cargo or continuously monitors the loading process to ensure the items are properly loaded and secured with all exterior doors locked.
D. Crew member either fuels the aircraft or continuously monitors the fueler to ensure proper grounding of aircraft, correct type of fuel, fuel upload, and the securing of the fuel caps and closing of any panels
E. Crew member obtains and consolidates all flight information, completes and executes the flight preparation documents and ensures that copies of the documentation are securely left at the aerodrome.

48.2.2 OTHER QUALIFIED COMPANY PERSONNEL

A. As the ground handling situation becomes more complex, the operator may elect to have properly trained and qualified company personnel, in lieu of the crew, to accomplish or monitor the accomplishment most of the ground handling functions. Examples include:

    1. Ticket agents review the passengers' documents, determine their weight and baggage weight, checks for the possibility of unacceptable items and tickets them;
    2. Gate agents (or cabin crew) determine and assign seats based on the weight and size of the passengers and their carry-on baggage or a prescribed loading schedule.
    3. A load controller either loads the baggage and cargo or continuously monitors the loading process to ensure the items are properly loaded and secured with all exterior doors locked.
    4. A qualified company agent either fuels the aircraft or continuously monitors the fueler to ensure proper grounding of aircraft, correct type of fuel, fuel upload, and the securing of the fuel caps and closing of any panels, with crew members verifying the load;
    5. Flight dispatchers obtain and consolidates all flight information the flight preparation documents and provide copies to the flight crew.

B. For most of these functions, the operator should consider having verification steps (by the crew) incorporated in the processes to ensure that all items critical to flight safety have been correctly accomplished.

C. Larger operators should conduct selective audits of the aerodromes and employees to ensure the ground handling processes are delivering a predictably correct result.

48.2.3 INTEGRATING SERVICE PROVIDERS INTO THE PROCESS

A. As the operator expands its schedule to more aerodromes, it may become more cost-efficient to use service providers that are located at the aerodrome and provide similar services for other operators. Examples include one or more of the following:

1. A service provider's agents review the personal travel documents, determine their weight and baggage weight, checks for the possibility of unacceptable items and tickets the passengers;
2. Gate agents determine and assign seats based on the weight and size of the passengers and their carry-on baggage or a loading schedule provided by a service provider.
3. A service provider's load controller and loading personnel loads and secures the baggage and cargo ensuring all exterior doors locked, and provides the completed load manifest.
4. A fueling service provider ensures proper grounding of aircraft, correct type of fuel, fuel upload, fuels and secures the fuel caps and closing of any panels;
5. Service providers provide the flight preparation information, including the operational flight plan the flight preparation documents and provide copies to the flight crew.

B. The operator may not abdicate its responsibility for the correct accomplishment of the functions. With these arrangements the operator should have:

1. Pre-audits to ensure the service provider and its personnel have the capability;

2. Verification steps by company employees incorporated in the ground handling processes; and

3. Subsequent auditing that is external to the processes to determine that a predictably correct product has been occurring.

48.3 GROUND HANDLING ORGANIZATION

A. The regulations requires the AOC holder to have adequate organizational structure to manage all ground handling functions, including:

1. Ramp operations;
2. Passenger services;
3. Baggage services;
4. Cabin services;
5. Weight and balance control;
6. Ground support equipment; and
7. Fuel services.

B. The regulations also require the assignment of responsibility and authority to manage this part of the AOC holder's organization. The operators of large aircraft, especially for scheduled passenger operations, must have a discernible part of the organization that is assigned the responsibility and authority to manage these functions. The small air taxi operators may be issued waiver from these requirements if they do not conduct those operations from the terminal gates.

C. Depending on the extent to which the operator uses company personnel and service providers the actual number of persons required to manage the ground handling functions in an airline can CAR '84y from a large organization made up of company personnel or a smaller organization using managers to oversee a variety of service providers.

1. AOC holders at their hub may choose to provide most of the ground handling functions, but rely on service providers to fuel and galley services.

2. AOC holders providing scheduled codeshare or on-demand operations primarily for large airlines may choose to rely on their larger partner to provide most of the ground handling services.

3. AOC holders may choose to have a "virtual" presence on the ramp by using service providers for all ground handling functions identified by the regulations and this chapter.

D. By regulation the ground handling organization must be acceptable to CAAB. Given all of the variations that an AOC holder may choose to use to provide ground handling, the evaluation of "acceptability" is somewhat subjective. An operator's ground handling organization may be determined to be acceptable, if:

1. There is a ground handling organization with an overall manager;

2. This organization has sufficient infrastructure (facilities, equipment and personnel) to discharge its responsibilities;

3. The pertinent ground handling policies and procedures are provided in company manuals;
4. There is an adequate training program to ensure that company and service provider personnel are qualified,
5. There is discernible delegation and supervision of all ground handling functions as they are being accomplished;
6. There are adequate facilities and equipment available to provide ground handling support for the necessary ground handling of the aircraft;
7. The ground handling processes are subject to periodic audits to ensure that the delivered results are compatible with the established policies and standard of performance;

48.4 MANAGER OF GROUND OPERATIONS

48.4.1 REGULATORY REQUIREMENTS

A. Bangladesh aviation regulations require that an AOC holder will have an assigned person acceptable to CAAB, who is responsible for the management and supervision of ground handling operations.

B. While the Bangladesh regulations list this position as one of the five key managers of an AOC holder, CAAB recognizes that the complexity of the AOC holder's operations could result in a:

1. Director of ground handling with numerous supervisors (large organization), or
2. Single individual having multiple supervisory roles (a single-pilot air taxi), or
3. Variations between the large organization and the single individual.

C. The regulations give CAAB the authority to grant waivers to this particular requirement if the operator can provide logical justification for such a waiver that will not conflict with the safety intent of the regulation.

48.4.2 EVALUATION OF GROUND OPERATIONS MANAGER NOMINATION

48.4.2.1 PROVEN COMPETENCY

A. The regulations require that the manager for ground handling must have "proven competency in civil aviation." The regulations do not,

however, provide specific requirements as are provided in the Director of Operations or Chief Pilot.

B. The CAAB evaluation of the nominated manager will be primarily that he or she:

1. Was not previously a required manager of an AOC holder whose certificate was revoked;
2. Has experience as a manager or supervisor in an aviation organization;
3. Has experience in one or more functions of ground handling;
4. Is able to describe in detail the company policies and processes for ground handling and locate pertinent portions of these in the company manuals;
5. Is able to describe the describe the timing and interaction of the ground handling functions in during the departure and arrival of the aircraft;
6. Is able to describe the purpose of the ground handling audit processes and the resolution of identified issues.

48.4.2.2 ACCEPT OR REJECT NOMINATION

A. A decision to reject the nomination of the manager of a ground handling organization should be made in a formal letter stating the reasons for the rejection.

B. A decision to accept the nomination of the manager of ground handling organization will also be made by formal letter.

48.4.2.3 GRANT OF WAIVER

A. If a company requests that the duties and responsibilities of the Manager of Ground Operations be assigned to a person who already has other critical aviation duties and responsibilities, the assigned operations inspector will evaluate the extent to which the operator could function without a dedicated Manager of Ground Operations.

B. That evaluation will be based on the complexity of the company operations being conducted.

C. The following factors are routine justification for the waiver—

1. Aircraft with 19 passengers or less;
2. That will not be using the terminal gates;
3. That will be receiving support from another entity for their ground handling functions; and/or
4. Will not be operating on a schedule that includes gate turnarounds of less than 1 hour from arrival to departure.

48.5 AIRCRAFT HANDLING MANUAL

48.5.1 GENERAL MANUAL GUIDANCE

A. The regulations require that an AOC holder shall have an "Aircraft Handling Manual" acceptable to the Authority which includes, for all ground handling operations:

1. Handling processes, procedures and practices;
2. Training programme requirements; and
3. Subcontracting policies.

B. This manual will be in addition to the required aircraft type-specific manual(s) that provide the specific requirements for:

1. Fueling;
2. Servicing;
3. Loading;
4. Mass and balance;
5. Dangerous Goods

48.5.2 SCOPE OF THE GROUND OPERATIONS DOCUMENTATION

A. Each manual or publication submitted will be evaluation to ensure that it includes that information and guidance necessary to allow personnel to perform their duties and responsibilities effectively and safely.

B. Depending on the complexity of ground operations conducted at a station, the scope of the required submissions of manual(s) and documentation may include:

1. Operation of ground service equipment/procedures

2. Security training and procedures
3. Ticketing and gate procedures
4. Passenger handling procedures
5. Carry-on baggage procedures
6. General aircraft movement procedures, including marshalling and parking requirements
7. Company and aircraft-specific towing procedures
8. Company and aircraft-specific refueling procedures
9. Company and aircraft-specific servicing procedures
10. Company and aircraft-specific loading procedures
11. Company and aircraft-specific mass and balance calculation procedures
12. Company and aircraft-specific takeoff, en-route and landing computation
13. Approved Flight Manual (AFM) for company aircraft
14. Company and service provider training programs
15. Company and service provider emergency response procedures, including current emergency telephone listing
16. Company and service provides accident/incident telephone listing
17. Severe weather notification procedures
18. General and aircraft-specific deicing procedures
19. Identification or handling of hazardous materials/procedures
20. Instructions and procedures for NOTOC when there are hazardous materials aboard
21. Procedures for passenger operation of electronic devices
22. Listing of approved service providers and their contracted functions
23. Company (if applicable, service provider) procedures for disposition and retention of official records.

48.5.3 OTHER DOCUMENTS THAT SHOULD BE EVALUATED

48.5.3.1 PROPOSED RECORDS

A. The applicant should provide copies of the proposed records relative to ground handling and station operations,

B. These records should include all records proposed to be generated during ground operations, including those addressing communications, fueling, servicing, loading, flight preparation and personnel training records.

48.5.3.2 PROPOSED TRAINING PROGRAMS

A. The inspector should evaluate the training curriculums provided for the CAR various groupings of ground handling and station personnel.

B. While the regulations do not specify training requirements either by subject or frequency for ground handling personnel, the curriculums, curriculum segments and training elements should be logical for the technical functions and supported by the technical manuals.

C. This training may be both formal classroom training or on the job training. Specific areas of training include the following for each function:

1. Duties and responsibilities
2. Safety practices
3. Dangerous goods
4. Passenger handling and protection
5. Load planning and weight and balance procedures
6. Communications procedures
7. First aid and emergency actions

48.5.3.3 CONTINGENCY PLANS

A. Emergency response contingency plans should be submitted for the possible emergencies that may be encountered by the station and ground handling personnel.

B. These may be submitted as manual(s) or checklists, and should include:

1. Accidents
2. Injuries

3. Illness
4. Fuel spills
5. Bomb threats
6. Hijacking
7. Severe weather
8. Dangerous goods leakage/spills

48.6 GROUND HANDLING SERVICE PROVIDERS

48.6.1 BACKGROUND

A. In today's aviation environment, even large carriers are no longer self-sufficient in their operations. The use of service providers for many different tasks has become the norm, rather than the oddity. This is especially true in ground handling because of the aerodrome-specific advantages.

B. Even the most independent operators routinely use service providers for fueling, kitchen and galley serving, and water and lavatory servicing of aircraft. But the use of service providers for ticketing and gate services, baggage handling, ramp services and aircraft cleaning and loading. And, if these tasks are performed correctly, efficiently and safely, can allow the operator to remain more flexible in their operations.

C. By regulation, the AOC holder shall have processes for continuously ensuring the proper and adequate ground handling for their aircraft when all or part of the functions and tasks related to ground handling services have been contracted to a service provider.

D. By regulation, the AOC holder is required to provide to CAAB a current and acceptable list of the service providers and the functions they have been contracted to perform on behalf of the AOC holder sorted by aerodrome location.

48.6.2 EVALUATION OF SERVICE PROVIDER ARRANGEMENTS

A. At least 15 working days prior to the use of a service provider, the AOC holder must submit to CAAB with a copy of the agreement containing the proposed arrangements for the services to be provided.

B. CAAB will review that agreement with emphasis on the:

1. Parties to the agreement;
2. Function(s) that will be provided by the service provider;

3. Contact points in each organization for on-going arrangements between the parties

4. Policy/procedure guidance that will be used by the service provider and its personnel during the conduct of the services provided to the AOC holder;

5. Requirements for initial and recurrent training of the service provider's personnel for the functions they will perform for the AOC holder, especially those aircraft type-specific functions;

6. Requirement that the services may be terminated if the services are not provided to a satisfactory standard;

7. Unrestricted right of the operator to audit the service provider, the performance of its personnel, facilities and equipment and required records;

8. Unrestricted right of CAAB inspectors to audit the service provider, the performance of its personnel, its facilities and equipment and required records;

9. The provisions for timely resolution of issues identified during the audit process.

48.6.3 COMPLETION OF THE EVALUATION

A. If the arrangements are not acceptable to CAAB, the assigned inspector will:

1. Issue a short letter to that effect;

2. Provide the CAAB notes as an attachment to that letter; and

3. Make a CAA Action entry to record the completion of the task.

B. If the arrangements are acceptable, the assigned inspector will—

1. Issue a short letter to that effect;

2. Make a CASORT ORG AOC Contracted Services entry; and

3. Make a CAA Action entry to record the completion of the task.

Note: CAAB Operations Inspectors' guidance information has been outlined in the 'Ground Handling and Station Inspection Guide' in Part-II, Chapter-68, Appendix-31.

CHAPTER-49

GROUND HANDLING, STATIONS & AERODROMES

This chapter provides guidance for conducting inspections of the ground handling arrangements at a station, including inspections of the passenger handling and aerodrome facilities.

49.1 GROUND HANDLING INSPECTIONS

49.1.1 GENERAL

A. Ground handling operations are defined as those support activities required to originate, turn around, or terminate a flight.

1. The purpose of the ground handling inspections is to assess the acceptability as it pertains to the operation under consideration of various navigation, communications-meteorological facilities and equipment, related operational control procedures and ground services and to evaluate the competency of the assigned staff to operate them.

2. The objective is to ascertain that these facilities meet established requirements, that they are properly managed by qualified staff and that the required records are properly maintained.

B. Ground handling and facilities inspections should be conducted at every location at which an AOC holder initiates and turns scheduled flights with passengers.

C. Ground handling inspections should also be conducted selectively at other locations where the operator performs or arranges for ground handling personnel, facilities, equipment and services in connection with its operations.

49.1.2 THREE-STAGE APPROACH TO THE INSPECTIONS

A. Preferably these inspections should be conducted in three stages:

1. Inspect the AOC holder's infrastructure at the airport, including service provider arrangements, for acceptable facilities, equipment, personnel and policy/procedure manuals;

2. Inspect the training and operational records that are located at the airport, including the service provider's records, to ensure that the personnel are qualified; and

3. Inspect actual departure or arrival operations in progress in order to obtain an over-all view of the operation of the station and the effectiveness of the personnel, equipment, services, procedures and service providers utilized.

B. The CAAB inspector should review operator and service provider staffing and the assignment of CAR various duties with the operator's representative or service providers at the station.

C. During this inspection a review should be made of the pertinent manuals (operations. maintenance, training, routes. etc.) to determine if they are readily available and current.

D. The primary focus will be the demonstrated competency and knowledge of the personnel:

1. Personnel responsible for CAR various duties should be queried regarding their familiarity with those operator instructions applicable to them and a determination made as to how competently they are performing their assigned duties.

2. The operator's routine and emergency procedures for the operations of the station and related facilities must be reviewed and discussed with personnel concerned.

49.1.3 INSPECTION AREAS

Nine inspection areas have been identified as areas for inspectors to observe and evaluate during ground handling and station inspections. These inspection areas are:

A. Personnel. This area refers to the personnel employed at the facility. Inspectors must evaluate the adequacy of staffing levels and the competency of assigned personnel in the performance of their duties.

B. Manuals. This area refers to the availability, currency, and content of the written guidance required by employees in the performance of their assigned duties.

C. Records. This area refers to those records that the operator is required to maintain relative to station activities. For example, operators are required to record hazardous material training for operations personnel. This area does not include those records inspected during a "records inspection."

D. Training. This area refers to the adequacy of the training given to assigned personnel as demonstrated by their knowledge of their duties. This area does not include crew and dispatcher training.

E. Facility/Equipment/Surface. This area refers to the CAR various physical elements required to support flight operations, such as ramp areas, blast fences, signs, signaling devices, lighting, passenger and cargo loading equipment, aircraft servicing, towing equipment, ground deicing and anti-icing.

F. Conformance. This area refers to the operator's employees' compliance with the operator's procedures and the applicable aviation laws and regulations.
G. Operational Control. This area refers to the control and support of aircraft flight operations.

H. Servicing. This area refers to the operator's procedures and standards required for the safe servicing and handling of its aircraft.

I. Management. This area refers to the effectiveness of the operator's management and supervisory personnel.

49.2 MANAGEMENT OF GROUND HANDLING & STATION INSPECTIONS

A. POI and PMI inspectors are responsible for planning and coordinating ground handling and station inspections in their areas of responsibility.

B. POIs shall ensure that ground handling and station inspections are planned as required inspection items in the Minimum Required Annual Inspection program for each station in the unit's area of responsibility.

C. When an operator establishes a new station, the principal operations inspector (POI) and the principal maintenance inspector (PMI) must coordinate the inspection plan before the inspection is conducted.

D. The POI is responsible for conducting the inspection; however, the POI may decide to include one or more inspectors on the team to ensure that appropriate guidance is available, and for standardization purposes.

49.3 GENERAL INSPECTION PRACTICES & PROCEDURES

A. Inspectors who conduct ground handling and station inspections encounter a wide range of situations and operational conditions. Station facilities range from large (that have a permanently assigned station manager, numerous employees, and CAR various departments) to a single counter manned by a single employee.

B. A ground handling and station inspection may be conducted to provide an overall view of operations, or it may be focused on a specific area of interest. Inspectors should use the direction, guidance, and procedures that follow when conducting a ground handling and station inspection.

49.3.1 PLANNING FOR THE INSPECTION

A. The inspector should carefully plan a ground handling and station inspection before conducting it. The inspector should review previous inspection reports, identify any areas of weakness previously reported, and review the corrective actions that were taken.

B. Other inspectors get a briefing from the appropriate POI to determine if there are any specific areas that may currently need inspection. The inspector should coordinate with the station manager (or service provider representative) ahead of time to establish a date and time for conducting the inspection.

49.3.2 BRIEFING FOR THE INSPECTION

A. Before beginning the inspection, the inspector should request that the station manager provide a briefing on the ground handling operations, including the assigned personnel and operational procedures.

B. In turn, the inspector should brief the station manager, his staff (and representatives of the service providers) on the purpose and scope of the inspections.

C. This discussion should include the following points:

1. Purpose of the facility inspection
2. Introduction of inspectors
3. The specific areas to be inspected
4. Inspection authority
5. The proposed time and place of the exit briefing

49.3.3 PRELIMINARY TOUR

A. The actual inspection should begin with a tour. The tour should provide the inspector with an overview of the operation and the location of individuals and entities associated with ground handling and other station function.

B. Inspectors should introduce themselves to supervisors and other employees during this tour to become familiar with each pertinent location.

C. The tour should include those areas that are utilized by the flight and cabin crews for dispatch, briefing, and flight planning, and those areas that are utilized for passenger loading, cargo loading, weight and balance preparation, and ramp areas.

49.4 SPECIFIC INSPECTION PRACTICES & PROCEDURES

49.4.1 JOB AIDS

A. Inspectors should use the job aids for ground handling and station operations during the inspection. This job aid provides inspectors with "reminder" items to check when they evaluate specific areas.

B. There also may be items on the job aid which are not observed and should, therefore, be identified as “NS=Not Seen.”

C. The job aid is designed solely as a reminder and as a means of standardization to ensure that station facilities inspections are conducted in the same general manner. Inspectors should conduct station facilities inspections by using the procedures that follow.

49.4.2 PERSONNEL

A. The inspector should review the operator and service provider staffing. During this review, the inspector should attempt to determine whether or not there is adequate staffing and whether or not assigned personnel are competent in their duties.

B. The inspector may accomplish this by observing individuals as they perform their assigned job tasks.

1. For example, the inspector may review recently completed forms for accuracy and may interview personnel, while being careful to avoid interfering with their duties.

49.4.3 MANUALS

The inspector should review the operator (and service providers) manuals determine whether or not the manuals are on hand, current, readily available to personnel, and adequate in content.

49.4.4 ON-HAND REQUIREMENTS

A. Inspectors should determine what manuals the operator requires its station personnel and service providers to maintain and then determine whether or not these manuals are on hand.

B. As a result of the inspection, the inspector should be able to conclude that either these manuals are sufficient for the purposes of the station or that station personnel require additional information which was not available.

49.4.5 CURRENCY REQUIREMENTS

A. The inspector should also ensure that the operator and service providers manuals are current and that any required revisions are accurately posted.

B. The inspector should obtain information on the revision status of manuals from the POI before beginning the inspection.

49.4.6 CONTENT REQUIREMENTS

A. Each manual or publication should be checked by the inspector to ensure that it includes that information and guidance necessary to allow personnel to perform their duties and responsibilities effectively and safely.

B. Depending on the scope of operations conducted at the station, direction and guidance may be required in the following operational areas—

1. Operation of ground service equipment/procedures
2. Security training and procedures
3. Ticketing and gate procedures
4. Passenger handling procedures
5. Carry-on baggage procedures
6. General aircraft movement procedures, including marshalling and parking requirements
7. Company and aircraft-specific towing procedures
8. Company and aircraft-specific refueling procedures
9. Company and aircraft-specific servicing procedures
10. Company and aircraft-specific loading procedures
11. Company and aircraft-specific mass and balance calculation procedures
12. Company and aircraft-specific takeoff, en-route and landing computation
13. Approved Flight Manual (AFM) for company aircraft
14. Company and service provider training programs
15. Company and service provider emergency response procedures, including current emergency telephone listing
16. Company and service provides accident/incident telephone listing
17. Severe weather notification procedures
18. General and aircraft-specific ground deicing procedures (depending on location)
19. Identification or handling of hazardous materials/procedures

20. Instructions and procedures for NOTOC when there are hazardous materials aboard

21. Procedures for passenger operation of electronic devices

22. Listing of approved service providers and their contracted functions

23. Company (if applicable, service provider) procedures for disposition and retention of official records.

49.4.7 RECORDS

A. Available records relative to ground handling and station operations should be inspected, such as communications, fueling, servicing, loading, flight preparation and personnel training records.

B. In a small facility, a records inspection and a facility inspection could be conducted on the same day. In most facilities, however, the ground handling and station inspections should be planned and conducted separately.

49.4.8 TRAINING

A. The inspector should review the training conducted for the CAR various groupings of ground handling and station personnel. The regulations do not specify training requirements either by subject or frequency for station personnel, yet these personnel should receive both initial and recurrent training in assigned job functions.

B. This training may be either formal classroom training or on the job training. Specific areas of training include the following:

1. Duties and responsibilities

2. Hazardous materials

3. Passenger handling and protection

4. Load planning and weight and balance procedures

5. Communications procedures

6. Manual backup procedures in case of computer or communications equipment failures

7. Aircraft servicing and ramp operations

8. First aid and emergency actions

49.4.9 FACILITY/EQUIPMENT/SURFACE

The facilities must be adequate to provide safe operating conditions for both aircraft and personnel. The inspector should conduct an evaluation to ensure that the following conditions are met:

A. Ramp Maintenance. Ramp areas should be clean and clear of foreign objects. The operator should have a regular program for inspecting, cleaning, and repainting ramp surfaces. Adequate equipment must be available for snow removal.

B. Passenger Safety. Employees and passengers must be protected from jet or prop blast. If a jetway is unavailable or not used, inspectors should evaluate passenger handling procedures and facilities and give particular attention to the movement of passengers across ramps. The operator must have established procedures for assisting handicapped passengers, especially when boarding ramps are not used.

C. Night Operations. To ensure that adequate lighting is available and is being used for safe ground operations, inspectors should conduct observations during night operations, if feasible.

D. Station & Ground Handling Manager Responsibilities. The operator's management usually assigns managers with the responsibility for maintaining surveillance of the airport and for reporting airport hazards and any new obstructions.

E. Inspectors should determine what responsibilities have been assigned to the station manager and how those responsibilities are being discharged.

F. Airport Deficiencies. Inspectors are not tasked with conducting a physical inspection of the airport during a station facilities inspection; however, any airport deficiencies observed during a station facilities inspection must be noted by inspectors.

49.4.10 CONFORMANCE

In each area to be inspected, inspectors should evaluate the operator's procedures for compliance with provisions of the applicable AARS Parts. In addition, the operator and service provider employees must comply with the operator's directives as provided for in the operator's manuals.

49.4.11 FLIGHT CONTROL

The inspection of a station's flight control function should be conducted while actual arrival or departure operations are in progress. This allows the inspector to get an overall view of the effectiveness of the operation and its assigned personnel.

49.4.12 OPERATIONAL CONTROL INSPECTION

A. When a dispatch or flight following center is located within the station, an operational control inspection should be conducted in conjunction with the station facilities inspection.

B. Unless the station is small, these two inspections should be planned and conducted as separate events.

49.4.12.1 LINE STATION FUNCTIONS

A. Operators often exercise operational control from a central location and assign the line stations with related support functions, such as delivering dispatch releases and flight plans to the flightcrew.

B. In this situation, inspectors should determine which functions are the responsibility of the station. Inspectors should evaluate station personnel in the performance of these functions.

C. Inspectors should also evaluate the effectiveness of the division of responsibility between the central operational control center and the line stations.

49.4.13 LOAD PLANNING

A. Inspectors should determine who is assigned responsibility for load planning and weight and balance control.

1. Passenger and cargo weights must be accurate and reliably obtained, collected, and transmitted.

2. Personnel must be adequately trained.

3. Procedures should be simple and effective.

B. When computerized systems are used, there must be adequate backup provisions for computer failure.

1. When personnel are required to perform manual calculations in case of computer failure, the operator must ensure continued proficiency of personnel in making these calculations.

2. Inspectors should ask these individuals to perform a manual calculation and compare the individual's solution to the computer solution.

49.4.14 WEATHER INFORMATION

A. Inspectors should determine the approved source of weather for the station.

B. If weather information is provided by a supplementary aviation weather reporting station, the inspector should determine that the weather station is receiving adequate oversight.

49.4.15 SERVICING

A. The servicing area of a station facilities inspection covers routine loading and servicing as opposed to aircraft maintenance activities.

B. Inspectors should evaluate areas of concern to operations personnel, such as the manner in which logbooks are handled and how MEL/ CDL provisions are administered.

C. The inspector should observe and verify safe practices in the operator's service operations and that adequate personnel are available for the required aircraft servicing.

D. Operations to be observed should include, but are not limited to, the following:

1. Fueling (ensuring that proper procedures are being followed)

2. Deicing (ensuring that the correct ratio and temperature of the glycol/water mix is being used and that all snow and ice is removed)

3. Marshaling (ensuring safe operation and correct procedures)

4. Chocks/Mooring (ensuring chocks are in place, the parking ramp is relatively level, and brakes are set or released)

49.4.48 MANAGEMENT

A. Throughout the inspection, inspectors should observe managers and supervisors and evaluate the organizational relationships, particularly the effectiveness of vertical and horizontal communications.

B. Managers and supervisors should be thoroughly aware of their duties and responsibilities and those of the personnel they supervise.

C. Areas that inspectors must observe and evaluate include the following:

1. Service Providers. If the operator contracts with other companies for certain functions and services, the station
2. manager should have established adequate controls over their performance.

3. Contingency Plans. The management should be prepared for contingencies. Action plans should be available for use in case of such events as accidents, injury, illness, fuel spills, bomb threats, hijacking, severe weather, and hazardous material spins.

   a. Station personnel should know the location of these plans. Plans should contain emergency notification checklists and procedures for suspending or canceling operations.

   b. Emergency telephone listings should be posted in obvious locations and be clearly legible.

49.5 GROUND HANDLING & STATION INSPECTIONS GUIDE

For Ground Handling & Station Inspections Guide, Operations Inspectors of CAAB shall refer to Part-II, Chapter-68, Appendix-31.

49.6 PASSENGER HANDLING INSPECTION GUIDE

For Passenger Handling Inspection Guide, Operations Inspectors of CAAB shall refer to Part-II, Chapter-68, Appendix-47.

CHAPTER-50

GROUND DEICING PROGRAMS

This section contains policy, direction, and guidance to inspectors for review, evaluation, and approval of deicing/anti-icing procedures.

50.1 GENERAL

The regulations requires that an operator conducting operations when conditions are such that frost, ice, or snow may reasonably be expected to adhere to the aircraft must satisfy the following criteria—

A. Have and use an approved aircraft ground deicing/anti-icing programme; or

B. Be issued an authorization which requires the operator to perform an outside the aircraft check (OTAC) within 5 minutes prior to beginning takeoff to ensure that the wings, control surfaces, and other critical surfaces are free of frost, ice, and snow.

1. To be eligible for approval, the OTAC procedure for all aircraft must include a provision for close visual scrutiny of selected portions of all of the critical surfaces of the particular type aircraft to be checked.

2. Operators who elect to operate under an OTAC authorization must have the procedures for their OTAC in their appropriate manuals and be approved by the principal operations inspector (POI) prior to conducting operations when frost, ice, or snow may reasonably be expected to adhere to the aircraft.

3. In addition, for hard wing airplanes with aft, fuselage mounted, turbine powered engines, the OTAC procedure must also include a tactile check of selected portions of the wing leading edges and the upper wing surfaces.

50.2 BACKGROUND

A. There are essential differences in the ground deicing/anti-icing requirements that AOC holders will be required to meet.

1. For an operator that wants the authorization to takeoff when ground icing of the aircraft is occurring, a complete deicing/anti-icing programme that includes the training and testing of all personnel involved in the ground deicing/anti-icing process will be required

2. On the other hand, air taxis requires training and testing for pilots only. Additionally, if a air taxi operator chooses to use personnel other than pilots to assist in the ground deicing/anti-icing and verification process, then those individuals must receive adequate and appropriate training.

B. Recognizing that most inspectors will be required to inspect a CAR ‘84iety of aircraft and operators, this chapter will attempt to present the differences in a meaningful manner.

50.3 DEICING REGULATIONS

A. The current regulations prohibit a takeoff when frost, ice, or snow (contamination) is adhering to the wings, control surfaces, or propellers of an airplane

B. Traditionally, the pilot-in-command (PIC) has been held responsible for ensuring that critical surfaces of the aircraft are free of adhering frozen contaminants before takeoff.

1. By the mid-1990's, an analysis of air carrier accidents led the ICAO to conclude that many PICs had not been provided with sufficient information to ensure that the aircraft is free of frost, ice, and snow.

2. ICAO Annex 6-I was amended to provide specific Standards for operating (that is, taking off) in weather when frost, ice, or snow could reasonably be expected to adhere to the aircraft (ground icing conditions).

50.4 AIRLINE GROUND DEICING/ANTI-ICING

50.4.1 GENERAL

A. CAR '84 Part 10 prohibits takeoff when contamination is adhering to critical surfaces of an airplane.

B. A Ground Deicing programme may be approved for use by airlines during these conditions to operate "any time conditions are such that frost, ice, or snow may reasonably be expected to adhere to the aircraft" (ground icing conditions.

C. There is also a provision for an aircraft operator to operate without a programme.

D. Otherwise the operator may not "dispatch, release, or takeoff" of an aircraft in ground icing conditions.

50.4.2 PROVISIONS AND EXCEPTIONS

A. An exception to the requirements for a complete deicing/anti-icing programme provides that an air carrier is not required to have an approved deicing/anti-icing programme if an outside the aircraft check (OTAC) is completed within 5 minutes prior to beginning the takeoff.

B. An OTAC must be performed from outside the aircraft to ensure that "wings, control surfaces, and other critical surfaces are free of frost, ice, and snow" when the certificate holder is operating in ground icing conditions.

1. If an AOC holder chooses to operate using this provision, the requirement for an OTAC must be approved in its operations specifications.

50.5 PERTINENT GROUND DEICING DEFINITIONS

50.5.1 PRE-TAKEOFF CHECK

A. A pre-takeoff check is a check of the aircraft's wings or representative aircraft surfaces for frost, ice, or snow within the aircraft's holdover time. This check is required when the AOC holder operates (that is, intends to takeoff) in ground icing conditions, the aircraft has been deiced/anti-iced, and a holdover time is established.

B. This check is accomplished within the holdover time range, and is normally accomplished by the flightcrew from inside the cockpit.

C. The pre-takeoff check requires the flight-crew to check the aircraft's wings or representative aircraft surfaces for contamination as well as to assess the current weather or other situational conditions.

50.5.2 PRE-TAKEOFF CONTAMINATION CHECK

A. A pre-takeoff contamination check is a check that the flightcrew and ground personnel conduct after the hold-over time has been exceeded to make sure that the wings, control surfaces, and other critical surfaces, as defined in the operator's programme, are free of frost, ice, and snow.

B. The pre-takeoff contamination check must be completed within 5 minutes before beginning the takeoff. Operators must have aircraft-specific procedures for use by flight crewmembers and qualified ground personnel while conducting the check to ensure that the aircraft's wings, control surfaces, and other critical surfaces remain free of frost, ice, or snow when a holdover time has been exceeded.

C. The pre-takeoff contamination check must be conducted from outside the aircraft for the following:

1. Hard wing airplanes with aft, fuselage mounted, turbine powered engines

2. All other airplanes unless the operator shows that the check can be adequately accomplished from inside the airplane.

50.5.3 OUTSIDE THE AIRCRAFT CHECK (OTAC)

A. OTAC is a check that must be accomplished from outside the aircraft. An OTAC is required for all operators who operate in ground icing conditions without an approved ground deicing/antiicing programme.

B. For those operators without an approved programme, any time frost, ice, or snow may reasonably be expected to adhere to the aircraft, an OTAC must be performed to ensure that the wings, control surfaces, and other critical surfaces are free of contamination.

50.5.4 HOLDOVER TIME

A. Holdover time is the estimated time deicing/anti-icing fluid will prevent the formation of frost or ice, and the accumulation of snow on the treated surfaces of an aircraft.

B. Holdover time begins when the final application of deicing/anti-icing fluid commences and expires when the deicing/anti-icing fluid applied to the aircraft loses its effectiveness.

50.6 GROUND DEICING/ANTI-ICING PROGRAMME

50.6.1 ACCEPTABLE PROGRAMS

In order for the certificate holder to receive approval, an operator's ground deicing/ anti-icing programme must cover the following four areas:

A. Management plan detailing operational responsibilities and procedures

B. Holdover timetables and procedures for their use

C. Procedures and responsibilities for the following:

1. Aircraft ground deicing/anti-icing
2. Pre-takeoff check
3. Pre-takeoff contamination check procedures

D. Initial and recurrent ground training and/or testing for flight crewmembers and qualification for all other affected personnel, as applicable

50.6.2 MANAGEMENT PLAN

A. The operator should develop, implement, and use a management plan to ensure proper execution of its approved deicing/anti-icing programme.

B. The management plan should include operations and maintenance responsibilities and identify the management positions that are responsible for ensuring that all necessary elements of the deicing/anti-icing programme are properly executed.

50.7 HOLDOVER TIMETABLES & PROCEDURES

50.7.1 HOLDOVER TIMETABLES

A. Each operator is required to develop, and have available, holdover timetables for use by its personnel. In addition, each operator must make its hold-over timetables available for use in the cockpit.

B. These time-tables are required to be supported by data acceptable to the CAAB. Currently, the only acceptable data that contain the tables that are considered acceptable for use by the operators to develop their timetables are from the:.

1. Society of Automotive Engineers (SAE) and International Standards Organization (ISO).
2. ARP 4737, “Aircraft Deicing/Anti-Icing Methods with Fluids, for Large Transport Aircraft,” and
3. ISO 11076, “Aerospace - Aircraft Deicing/Anti-icing Methods with Fluids,”

50.7.2 TAKEOFF WITHIN A HOLDOVER TIME

A. If takeoff is conducted within the holdover time, at least one pre-takeoff check of the wings or representative surfaces should be completed by the flightcrew within the holdover time range prior to the takeoff.

B. Operators’ manuals should contain detailed procedures regarding the use of the timetables in their operations.

50.7.3 TAKEOFF AFTER THE HOLDOVER TIME IS EXCEEDED

Takeoff after the holdover time is exceeded is permitted only if one or more of the following actions has been taken—

A. A pre-takeoff contamination check is made to ensure that wings, control surfaces, and other critical surfaces, as defined in the certificate holder’s programme, are free of frost, ice, or snow

B. It is otherwise determined by an alternative procedure, which was developed by the operator and approved by the CAAB (for example, wing icing sensors) that the wings, control surfaces, and other critical surfaces as defined in the certificate holder’s programme, are free of frost, ice, or snow

C. The wings, control surfaces, and other critical surfaces have been re-deiced and a new holdover time has been established

50.8 AIR TAXI SPECIAL CONSIDERATIONS

50.8.1 AOC HOLDER DOES NOT OPERATE IN GROUND ICING CONDITIONS

A. The ground deicing requirements are not applicable to an operator who does not operate in ground icing conditions.

B. The AOC holder who does not operate in ground icing conditions is not required to train its pilots or develop pre-takeoff contamination procedures.

50.8.2 OPERATORS WHO USE ONLY ONE PILOT IN THEIR OPERATIONS

A. Operators who use only one pilot in their operations (single pilot operator) are not required to comply with training requirements. for ground deicing.

B. However, single pilot operators must comply with all the operational requirements for ground deicing.

C. Those operational requirements include:

1. A pre-takeoff contamination check; or
2. An approved alternative procedure to the pre-takeoff contamination check approved by the CAAB.

D. The pilots of these types of operators will need to demonstrate knowledge to operate in ground icing conditions during the initial and recurrent flight checks.

50.9 GROUND DEICING TRAINING REQUIREMENTS

A. If an operator is required to have an approved training programme for ground deicing, that training programme must include pilot ground training relating to deicing and anti-icing operations in all for initial and recurrent training and checking.

B. These training requirements must include procedures for operating airplanes during ground icing conditions. The operator must provide that training to its pilots and all other participating personnel.

C. The training must include at least the following elements:

1. Use of Holdover Times;
2. Airplane Deicing/Anti-Icing Procedures;
3. Communications;
4. Contamination;
5. Deicing/Anti-icing Fluids;

6. Cold Weather Preflight Inspection Procedures;

7. Contamination Recognition.

D. All training should be aircraft-specific. When an operator has different kinds of aircraft, any unique characteristics of these aircraft while operating in ground icing conditions should be covered.

E. Other than single pilot operators, who must have the pre-takeoff contamination check procedures described in their Ops Specs, the AOC holders must have documentation in their general manuals (GM) or flight manuals for the procedures they intend to use to comply with their respective deicing/anti-icing rule.

1. These procedures may include descriptions of how and by whom the pre-takeoff contamination check will be accomplished, and how the operator will comply with its approved deicing/anti-icing procedures.

2. If an operator elects to not fly when frost, ice, or snow may reasonably be expected to adhere to the surface of an aircraft, that operator's manuals should contain specific guidance to that effect.

3. This guidance should leave no doubt in the minds of the flight crewmembers that this operator does not have deicing/anti-icing procedures in effect and does not authorise takeoff during ground icing conditions.

50.10 APPROVAL PROCESS

50.10.1 PHASE ONE - PRE-APPLICATION

A. Phase one begins when the operator initially approaches the CAAB to obtain approval of a ground deicing/anti-icing programme.

B. At this stage, both the Authority and the o Principal inspectors should ensure that the operator is aware of these sources of information.

C. The principal inspectors should outline for the operator those elements that must be contained in the operator's proposed programme and the actions that will be required at each stage of the approval process.

50.10.2 PHASE TWO - INITIAL APPLICATION REVIEW

A. Phase two begins when the operator initially submits a proposed programme package.

B. The principal inspectors' first action is to review the operator's submission to determine if each element specified in phase one is included.

1. If the operator's initial programme is incomplete, the principal inspectors must immediately inform the operator and determine what action the operator proposes to take to complete the package.

2. If the operator's package is complete or the principal inspectors judge that it will soon be complete, the principal inspectors should distribute the elements to the appropriate inspectors for a prompt initial examination.

50.10.2.1 INITIAL EXAMINATION

A. The initial examination does not include a detailed operational or technical evaluation (this analysis is conducted in phase three).

B. The phase two examination is conducted in sufficient detail to assess the completeness of the operator's package.

C. Inspectors assigned to complete the initial review should promptly complete the initial evaluation and inform the principal inspectors of their findings.

50.10.2.2 UNACCEPTABLE ELEMENTS

A. At this point it is appropriate for the principal inspectors to hold a meeting with the operator to discuss any obviously unacceptable elements of the programme.

B. Under unusual circumstances, the principal inspectors may need to return the operator's entire package with a written statement that explains why the submission is unacceptable.

50.10.2.3 INITIALLY ACCEPTABLE PACKAGE

When the operator's package is initially acceptable, the principal inspectors should:

A. Inform the operator; and

B. Provide an estimate of when the operator can expect to be informed of the results of the phase three analysis.

50.10.3 PHASE THREE - DOCUMENT CONFORMANCE

A. Phase three consists of a detailed analysis of the operator's ground deicing/anti-icing programme, training, equipment, and facilities.

B. Throughout phase three, inspectors and operators should expect to encounter CAR various deficiencies. Inspectors and operators should plan to meet and work closely to agree on corrections for these deficiencies throughout phase three.

50.10.3.1 DOCUMENT REVIEW

A. The first step in phase three is a detailed review and analysis of those manual sections the operator has prepared for the ground deicing/anti-icing programme.

B. The manual should provide all categories of employees with sufficient instructions and information to allow them to perform their duties with a high degree of safety.

C. The operator's Ops Manual, Part A, including those sections concerning the ground deicing/anti-icing programme, does not require CAAB approval.

1. However, the appropriate principal inspector must review and find acceptable the appropriate sections of the manual before the CAAB grants initial approval to the operator to conduct a ground deicing/anti-icing programme.
2. The operator is granted approval by means of Ops Specs .
3. After the operator receives initial approval of the programme or procedures, the applicable principal
4. inspectors may require the operator to further revise manual contents.

D. Inspectors should ensure that the content of the operator's manual meets the following criteria:

1. Identifies clearly each category of employee with responsibility for programme elements
2. Defines the duties of each category of employee involved
3. Provides adequate background information, step-by-step procedures and,
4. When appropriate, checklists that allow each category of employee to perform to the required standard.

50.10.3.2 PRE-TAKEOFF CONTAMINATION CHECK

The experience gathered during deicing/ anti-icing surveillance has shown that when hold-over times have been exceeded, the most critical area of an operator's ground deicing/anti-icing pro-gram is an adequate pre-takeoff contamination check.

1. It is essential for the POI to ensure that the operator's procedures offer the means for personnel to adequately determine that the aircraft is free of contamination before a takeoff during conditions when frost, ice, or snow may reasonably be expected to adhere to the aircraft.
2. This becomes more critical if the POI authorizes the pre-takeoff contamination check to be conducted from inside the airplane.

50.10.3.3 TRAINING PROGRAMME REVIEW

The operator must prepare a training/testing programme to qualify each required category of employee who has responsibilities for ground deicing/anti-icing to perform their assigned duties.

1. The training must include both general procedures and the specific requirements of each make, model, series, and CAR '84iant of aircraft.
2. The training programme must include a means of testing and qualification for each category of employee who is covered under the approved programme and who checks, inspects, deices, anti-ices, releases, dispatches, or operates an aircraft.
3. The operator's training programme must include flightcrew and dispatcher training.

50.10.3.4 FACILITIES AND EQUIPMENT

A. The operator must acquire and deploy the equipment to accomplish ground deicing/ anti-icing.

B. Inspectors should plan to inspect some or all of the facilities at which this equipment is deployed (depending on the size of the operator) before granting initial approval.

C. Some operators fulfill part of this requirement by demonstrating the knowledge of procedures and equipment during non icing conditions prior to the deicing/ anti-icing season.

D. Inspectors must also evaluate coordination procedures between the airport operator and the air traffic control (ATC) facility at the airport.

50.10.3.5 OPS SPECS FOR OPERATORS WITH GROUND DE-ANT-ICING

A. When the POI and PMI are satisfied that the operator is able to begin ground deicing/anti-icing operations, they should issue applicable Operations Specifications.

B. The Ops Specs should reference the sections of the operator's manual that contain the operations and airworthiness portions of the operator's programme.

50.10.4 PHASE FOUR - INSPECTION & DEMONSTRATION

A. Phase four consists of a validation of the operator's procedures in actual operations. This process consists of a progressive refinement of the operator's manuals, checklists, and procedures as experience is gained and inspector surveillance reports become available.

B. Inspections of the actual ground deicing/anti-icing of the aircraft is necessary to evaluate the effectiveness of these programmes as well as to provide input on the adequacy of the rule requirements. Obviously this particular inspection must be done in the actual environment.

1. This may require inspector travel to locations where the ground de-icing occurs.

50.10.4.1 OPPORTUNITIES TO MONITOR DEICING-IN-PROGRESS

A. The only time that it may be possible to determine that the operator's ground deicing/anti-icing procedures are safe and effective is during actual icing conditions. Therefore, inspection of operator ground deicing/anti-icing procedures should be conducted during the times that winter operations and certificate holders' ground deicing/anti-icing procedures are in effect.

B. Through effective sampling, the Authority should be able to determine the operator's ability to comply with the ground deicing regulations and meet the requirements of their Ops Specs.

1. The required number of ground deicing surveillance activities necessary to determine a particular operator's effectiveness

may vary from a relatively low percentage to a very high percentage.

2. For certain operators, 100 percent surveillance may be necessary in order to determine the operator's capability to safely operate during ground icing conditions.

50.10.4.2 TYPES OF INSPECTIONS

A. Inspections can be conducted in conjunction with ramp or en route inspections, or during airport site visits. Each principal inspector should develop and coordinate a ground deicing/anti-icing surveillance plan.

B. Surveillance of operators' recurrent ground deicing/anti-icing testing or training programmes should also be conducted.

C. The POI should coordinate an inspection of the ground deicing/anti-icing equipment used by the operator, with other inspectors traveling to airport where the equipment is located.

1. In some cases, one operator or contractor may deice more than one air carrier.

2. In this case, it is necessary for the POI to ensure that the operator/contractor doing the deicing has a complete knowledge of the specific operator's approved ground deicing/anti-icing programme.

D. The POI can conduct this type of surveillance prior to the deicing/anti-icing season and should confirm that the company performing the deicing has the knowledge and the ability regarding ground deicing/anti-icing equipment.

50.10.4.3 CONCLUSION OF PHASE FOUR

A. Phase four may be concluded when, in the judgment of the POI and PMI, surveillance of the operator's programme shows that the operator is successfully conducting the programme under actual ground icing conditions.

B. There is no minimum time period for phase four, but the principal inspectors must have an adequate number of surveillance reports to form an educated opinion of the operator's performance.

C. Normally, operators should be able to progress through phase four in one winter season or less.

50.10.4.4 DEFICIENCIES

A. If final approval cannot be granted after an entire winter season due to deficiencies in the operator's programme, the POI and PMI should consider having the operator return to phase two.

B. Principal inspectors shall revise the Ops Specs of operators who are returned to phase two.

50.10.5 PHASE FIVE - FINAL CERTIFICATION ACTION

When the principal inspectors are satisfied with the operator's performance, they should inform the operator in writing that the verification process is complete.

CHAPTER-51

AIRCRAFT PERFORMANCE

51 GENERAL

A. This chapter contains information and guidance to operations inspectors for reviewing and approving the presentation of performance data in company flight manuals (CFM's).

B. The Company Flight Manual (CFM) referenced here refers to manual approved by the CAAB for pilot operations and may be titled as:

1. Flight Crew Operating Manual (Handbook)
2. Approved Flight Manual
3. Manufacturer's Flight Crew Operating Manual, or
4. AOC holder's tailored Flight Crew Operating Manual.

51.1 APPROVAL CRITERIA

Operations inspectors may approve any method of performance data computation and presentation that meets the following criteria:

A. The system must make all of the computations required in the AFM and in the pertinent operating rules.

B. Provisions must be made in the system for all makes, models, and CAR '84iations of aircraft used by the operator.

C. The system must account for all pertinent CAR '84iables such as:

1. Temperature,
2. Weight,
3. Thrust,
4. Runway condition, and
5. Obstacles.

D. The system must be appropriate to the operator's requirements.

E. Large, highly-complex airplanes usually require very different systems from those required for small, simple airplanes.

F. The system must be reliable in that identical answers must be generated each time theprocess is entered with identical parameters.

G. The system must be accurate in that it generates performance data that agrees with AFM data within the degree of accuracy inherent in the original AFM data.

H. For example, when the AFM data is accurate to + 2%, the operator's system must produce results that do not deviate from the AFM data by more than + 2%.

I. The system should be relatively simple, easy to use, and not error-prone.

J. When simplifying assumptions are made, those assumptions must be clearly and completely stated in the operator's CFM or Ops Manual, Part A as operator-imposed limitations

K. When the assumptions cannot be met, the actions to be taken by the flight crew, flight followers, and dispatchers must be clearly specified.

L. In such cases, operations must be prohibited or alternate procedures specified.

M. The flight crew procedures for generating, obtaining, and verifying data must be thoroughly described in the procedures section of the CFM.

N. In the case of the same procedure applying to all airplanes, the flight crew procedures must be described in a section of the Ops Manual, Part A.

51.2 ACCURATE GENERATION OF TABLES

A. The operator must be capable of generating performance data tables which retain the degree of accuracy inherent in the AFM data.

B. Generally, this must be done manually, by carefully picking data points from a graph, entering the data into a computer, and carefully verifying the generated points.

C. Most operators choose to buy a digital data package from the manufacturer (or some other source) from which to generate the required tables.

D. Operations inspectors may approve other sources, however, when the operator can adequately establish the accuracy of the data.

E. The AOC personnel should be required to run several problems with known correct answers to ensure the quality of the generated tables

F. The operator's system must be capable of performing all of the required computations for each takeoff situation, including the selection of the correct controlling obstacle for each flap setting.

G. A means must be available to transmit current charts to the flight crew before they are needed.

H. Provisions must be made for temporarily shortened runways.

51.3 SIMPLIFIED DATA METHOD

A. A simplified data system is based on a specified set of assumptions about the conditions under which the aircraft will be operated.

1. For example, takeoffs might be limited to runways longer than 5,000 feet and less than 4,000 feet elevation.

B. In this system, the crew is supplied with a simple chart or set of cards which gives the V speeds at specified weight increments.

1. This chart is used on all runways.

C. The operator performs an airport analysis for each airport served and demonstrates that when the aircraft is operated in accordance with the specified set of assumptions, it will perform either equal to, or better than, the performance required in the applicable regulations on all runways the crew is authorized to use.

D. Some of the system's advantages are:

1. Its relative simplicity,
2. The lack of crew error,
3. The ease of crew training, and
4. The speed with which the crew can determine V speeds.

E. Some of the system's disadvantages are:

1. It often imposes severe performance penalties on operators,
2. It is inflexible, and
3. Operations must either be terminated or
4. An alternate system used when the simplifying assumptions cannot be met.

F. The system is best suited for operators who serve a limited number of locations regularly and who operate either at large airports, near sea level, or at moderate temperatures.

51.4 REAL TIME METHOD

A. A real time data system is one in which the required computations are made immediately before takeoff for every flight.

1. Usually the data is relayed to the flight crew by radio or through ACARS.

B. The advantages of such a system are that it is extremely flexible, up-to-date, and efficient.

C. Changes in obstacles due to construction, weight, temperature, and runway can be handled immediately.

D. Also, the operator can take maximum advantage of the performance capabilities of the airplane.

E. Some disadvantages of the system are that:

1. It is expensive,

2. It requires extensive equipment and highly trained personnel to operate, and

3. Adequate backup must be available should the main computer go off-line.

51.5 EVALUATION OF AN OPERATOR'S SYSTEM

A. Generally, operations inspectors do not have the capability to verify each data point when approving the performance data section of a CFM. The validity and reliability of the computation system itself, however, can be evaluated.

B. Operations inspectors shall require the operator to provide an analysis, with documentation, of the following:

1. The source of the computer programme

2. Assumptions on which the computer programme is based (for example, they must determine if the correct factors are used for each type of aircraft);

3. Source and accuracy of the databases used

4. Operator's capability for handling data

5. Results of parallel manual calculations made with AFM data to confirm results

51.6 VERIFICATION

The operations inspector or an aircraft-specific qualified inspector should review the verification process conducted by the operator.

A. Several runways at different airports should be selected for verification with the AFM data.

B. Short runways with obstacles should be checked by manual calculation, particularly at airports with higher temperatures and elevations.
C. The operator should be able to identify all of the obstacles evaluated by the computer and the one selected as the limiting obstacle in each case.

D. The operations inspector must be aware that under different temperature and weight conditions, a different flap setting may be required, and different obstacles may be controlling.

E. The inspector should ensure that the operator has verified the limiting obstacle under CAR various conditions and flap settings.

CHAPTER-52

MINIMUM EQUIPMENT LISTS

52. GENERAL

This chapter provides guidance for the evaluation and approval of a Minimum Equipment List.

52.1 BACKGROUND

A. MEL procedures were developed to allow the continued operation of an aircraft with specific items of equipment inoperative under certain circumstances. The aviation industry, in concert with the civil aviation authorities, have found that for particular situations, an acceptable level of safety can be maintained with specific items of equipment inoperative for a limited period of time, until repairs can be made.

B. The MEL document describes the limitations that apply when an operator wishes to conduct operations when certain items of equipment are inoperative.

52.2 POI RESPONSIBILITIES

A. The principal operations inspector (POI) is the primary CAAB official responsible for the overall process of administering, evaluating, and approving an operator's MEL.

B. It is essential that the POI work with the principal maintenance inspector (PMI), the principal avionics inspector (PAI), and other individuals or groups involved in this process.

C. Should the POI require additional Technical information related to a specific MEL item, he or she should consult the State of Manufacture or Design.

52.3 DEFINITIONS

The following definitions are used throughout this chapter:

A. Airplane Flight Manual (AFM) and Rotorcraft Flight Manual (RFM). The approved flight manual is the document approved by the responsible aircraft certification office (ACO) during type certification. The approved flight manual for the specific aircraft is listed on the applicable type certificate data sheet. The approved flight manual is the source document for operational limitations and performance parameters for an aircraft. The term, approved flight manual, can apply to either an AFM or an RFM. The CAAB requires an approved flight manual for aircraft type certification.

B. Aircraft Maintenance Manual (AMM). The AMM is the source document for aircraft maintenance procedures. The term AMM can apply to either an airplane or a rotorcraft manual. The CAAB requires an AMM for aircraft certification.

C. Configuration Deviation List (CDL). Aircraft may be approved for operations with missing secondary airframe and engine parts. The aircraft source document for such operations is the CDL. The ACO grants approval of the CDL under an amendment to the type certificate. For U.S. certificated aircraft, the CDL is incorporated into the limitations section of the approved flight manual as an appendix.

D. Inoperative. Inoperative means that a system or component has malfunctioned to the extent that it does not accomplish its intended purpose and/or is not consistently functioning normally within its approved operating limits or tolerances.

E. Master Minimum Equipment List (MMEL). The MMEL is a list of equipment that the CAAB has determined may be inoperative under certain operational conditions and still provide an acceptable level of safety. The MMEL contains the conditions, limitations and procedures required for operating the aircraft with these items inoperative. The MMEL is used as a starting point in the development and review of an individual operator's MEL.

F. Minimum Equipment List (MEL). The MEL is derived from the MMEL and is applicable to an individual operator. The operator's MEL takes into consideration the operator's particular aircraft configuration, operational procedures and conditions. When approved and authorized for use, the MEL permits operation of the aircraft under specified conditions with certain inoperative equipment.

52.4 PURPOSE OF MEL

A. CAR ‘84 permits the authorization of an MEL if the CAAB finds that compliance with all the aircraft equipment requirements is not necessary in the interest of safety for a particular operation.

B. Through the use of appropriate conditions or limitations, the MEL provides for improved scheduled reliability and aircraft utilization with an equivalent level of safety.

C. This process is possible because of the installation of additional and redundant instruments, equipment and/or systems in present transport aircraft.

D. Without an approved MEL, inoperative equipment would ground the airplane until repair or replacement of the non-functioning equipment.

E. An MEL is approved for a specific make and model of aircraft, and the use of it is authorized by its operations specifications (Ops Specs).

52.5 ITEMS LISTED ON THE MEL

A. There are three categories of items that may be contained in the operator's MEL:

1. MMEL items

2. Passenger convenience items

3. Administrative control items

B. MMEL Items. The MEL will list all of the items for which the operator seeks relief and that are appropriate for its operation. The operator, by not listing at its discretion certain items in its MEL, may be more restrictive than permitted by the MMEL.

C. Passenger Convenience Items. The passenger convenience items, as contained in the operator's approved MEL, are those related to passenger convenience, comfort, or entertainment, such as, but not limited to, galley equipment, movie equipment, inflight phones, ashtrays, stereo equipment, and overhead reading lamps.

1. It is incumbent on the operator and the POI to develop procedures to ensure that those inoperative passenger convenience items are not used.

2. Passenger convenience items do not have fixed repair intervals.

3. Items addressed elsewhere in the MMEL shall not be authorised relief as a passenger convenience item.

4. "M" and "O" procedures may be required and should be developed by the operator, approved by the POI, and included in the air carrier's appropriate document.

D. Administrative Control Items. An operator may use an MEL as a comprehensive document to control items for administrative purposes.

1. In such cases, the operator's MEL may include items not listed in the MMEL; however, relief may not be granted for these items unless conditions and limitations are contained in approved documents other than the MMEL or meet the regulatory requirements of the CAR ‘84 Part 6.

2. Examples of items considered to be administrative control items would be cockpit procedure cards, medical kits, delaminated windshields, and life vests.

52.6 GENERAL MEL POLICY

52.6.1 RECORD KEEPING

When an item of equipment becomes inoperative, the operator must report it by making an entry in the aircraft maintenance record, as prescribed by CAR ‘84.

52.6.2 MULTIPLE ITEMS THAT ARE INOPERATIVE

Individual MEL requirements are designed to provide coverage for single failures en-route. When operating with multiple inoperative items, the operator should consider the interrelationships between those items and the effect on aircraft operation and

crew workload, including consideration of a single additional failure occurring en-route.

52.6.3 FLEET APPROVAL

An operator who has a single MEL for multiple aircraft may reflect equipment in its MEL that is not installed on all aircraft in its fleet. In this case, the item's title in the operator's MEL need not reference any specific airplane identification (usually registration number) unless the operator determines that there is need to do so.

52.6.4 ACCESS TO MEL

CAR '84 requires that the MEL be carried aboard the aircraft or that the flightcrew have direct access to the MEL information prior to flight. Other means of direct access require approval.

52.6.5 CONFLICT WITH OTHER CAAB APPROVED DOCUMENTS

The MEL may not conflict with other CAAB approved documents such as the approved flight manual (AFM) limitations and airworthiness directives (AD). The operator's MEL may be more restrictive than the MMEL, but under no circumstances may the operator's MEL be less restrictive.

52.7 MEL APPROVAL PROCESS

52.7.1 GENERAL

A. This section contains specific direction, guidance, and procedures to be used by aviation safety inspectors (ASI) when evaluating and approving MELs.

B. The operator's MEL is developed by the operator from the appropriate master minimum equipment list (MMEL), then approved by the CAAB. The CAAB approval process for an MEL follows the general process for AOC certification. This section contains an expansion of the CAAB approval process for the MEL.

52.7.2 MEL ACCEPTABILITY

The general criteria for MEL acceptability are as follows:

A. Equally or More Restrictive. The operator's MEL must not be less restrictive than the MMEL, the CAR '84 Parts, the operations specifications (Ops Specs), the approved flight manual limitations, certification maintenance procedures, or airworthiness directives (AD).

B. Appropriate. The MEL must be appropriate to the individual aircraft make and model.

C. Specific. The operator's operations ("O") and maintenance ("M") procedures must be specific to the aircraft and the operations conducted.

D. Applicability. An MEL should be applicable for the CAR '84 Part 6 requirements.

52.7.3 INITIAL PHASE OF MEL APPROVAL

A. In this phase of the MEL approval process, the operator should consult with the principal operations inspector (POI) regarding requirements for either developing an MEL or for revising an existing MEL.

B. The POI should consult with and seek the participation of the principal maintenance inspector (PM I) and the principal avionics inspector (PAI) during the entire approval process.

C. During the review of the "O" and "M" procedures, the POI, PMI, and PAI may consult with the State of Manufacture or the manufacturer as necessary concerning specific procedures.

D. Operator Familiarization. In phase one of the MEL approval process, the POI should determine the scope of the task, based on the operator's experience with MELs. POIs should adapt the

E. discussion to fit the operator's needs and experience, and should provide advice and guidance to the operator as necessary. POIs must ensure that the operator clearly understands that MEL document preparation is solely the operator's responsibility.

F. Required Document Submittal. POIs should advise the operator that, for an MEL to be approved, the following documents must be submitted:

1. The proposed MEL or MEL changes

2. Necessary "O" and "M" procedures, which may be based on the aircraft manufacturer's recommended procedures, Supplemental Type Certificate (STC) modifier's procedures, or

3. equivalent operator procedures

4. A description of the MEL management programme and its procedures as required by paragraph D95 of the Ops Specs, unless an MEL management programme is already in place

5. Any required guidance material developed by the operator, such as training material, guidance, and deferral procedures for both maintenance and operations personnel

G. When a manufacturer's recommended procedures exist, operators may use them or may develop alternate procedures.

H. When contract services are used to develop the operator's MEL along with acceptable "O" and "M" procedures, the principal inspectors should review the "O" and "M" procedures in light of the type of operations being conducted and should ensure the acceptability of the procedures.

I. The principal inspectors should ensure that the developed MEL procedures can be adequately implemented by the operator.

J. Materials Provided to the Operator. It is the operator's responsibility to obtain and provide to the CAAB a hard copy of the MMEL document and appropriate guidance material (as a last resort)

K. Document Form. The operator may submit MEL draft documents to the CAAB either on hard copy (printed on paper) or on computer disk, as mutually agreed upon between the operator and the POI. The operator and the POI should discuss the techniques that will be used for revising and editing the proposed document. It is important that the operator understand that when the process is complete, the final proposed MEL must be submitted on paper.

L. MEL Format. The MMEL format has been standardized to facilitate the development, revision, and approval of both master and operator documents. While the master document contains eight total sections, six of these sections are considered basic for MEL development and should be included in each operator's MEL.

M. Generic Single Engine MMELs. A generic MMEL for single engine aircraft was developed and published by the United States FAA. This MMEL is applicable to all single engine airplanes and helicopters for which a specific MMEL has not been issued. When an operator is approved to use this generic MMEL, and a specific MMEL for the individual aircraft type is subsequently issued, the operator's MEL must be revised within the specified time frame to conform to the specific MMEL.

52.7.4 FINAL PHASE 0F MEL APPROVAL PROCESS

A. The final phase begins when the operator formally submits the proposed MEL or MEL changes to the POI. The POI should initially review the operator's submittal to verify that it is complete, contains the required elements and is detailed enough to permit a thorough evaluation of the MEL.

1. Unacceptable Submittal. If the POI finds the proposed MEL package to be incomplete or unacceptable at this time or at any other juncture in the approval process, the POI should contact the operator. If a mutually acceptable correction cannot be immediately agreed upon, the entire package must be immediately returned to the operator, or its representative, along with an explanation of the problems found within the documents.

2. Acceptable Submittal. If the POI finds the proposed MEL package to be complete and to contain the required information in an acceptable format, the detailed analysis begins.

B. During this analysis, the POI should coordinate with the PMI and the PAI to perform a detailed examination of the proposed MEL document and other supporting documents and procedures.

C. If the operator does not currently have an MEL programme, its MEL management programme must also be reviewed for acceptability. Inspectors should examine the technical content and quality of the proposed MEL document and other supporting documents and procedures as follows:

1. Timely Review. POIs should promptly address all deficiencies and notify the operator of any discrepancies or outstanding issues. The POI and the operator may informally coordinate by telephone to clarify minor discrepancies or misunderstandings.

2. Reference Material. Inspectors should use the MMEL as the primary reference document when reviewing and approving the MEL. In addition, inspectors should use the following references:

a. Related CAR '84 Parts

b. Appropriate advisory circulars

c. Approved flight manual

d. Operator's Ops Specs

e. Operator's manuals

f. MMEL policy letters

3. Coordination with Technical Groups. During this phase, the POI may wish to coordinate with the appropriate aircraft evaluation group (AEG) for guidance.

4. Document Deficiencies.

5. Change in Schedule. If certain MMEL items must be addressed within a specific time frame, the POI should notify the operator of this requirement as soon as possible. If the operator is unable to meet these schedule requirements, the POI should negotiate a new schedule with the operator.

52.8 MEL EVALUATION

Inspectors should compare the operator's MEL changes against the corresponding items in the current MMEL for the specific aircraft type. In addition, inspectors should verify that the operator's MEL contains the following required items:

A. Cover Page (Optional). The MEL cover page contains the operator's name and the make and model of the aircraft to which the MEL applies.

B. Table of Contents (Required). The table of contents contains a list of all of the pages in the MEL by title and the corresponding page identification (usually a page number).

C. Log of Revisions (Required). The log contains the revision identification (usually a number) and date of the revision. It may also contain a list of the revised pages, a block for the initials of the person posting the change, and additional enhancements for use by the operator.

D. Preamble and Definitions (Required). The standard MMEL preamble and definitions section must be reproduced word for word in each MEL, without modification.

E. Control Page (Required). The control page is used as a method for keeping track of the status of the MEL and includes a record of the revision status or the date of each page of the operator's MEL. It may also be used as a means of conveying CAAB approval of the MEL.

52.8.1 MINIMUM CONTENTS

At a minimum, the control page must contain the following:

A. The operator's name

B. A listing of all of the pages in the MEL (including the date of each page and its page number or revision number)

C. The MMEL revision number on which the MEL is based

D. A signature block containing space for signature of the DOT (only if this page is used as a means of conveying CAAB approval of the MEL)

E. Optional Contents. The operator may include additional information on the control page to provide flexibility and additional approval functions.

F. (vi) Highlights of Change Page (Optional). This page contains a synopsis of the changes made by the operator in each revision.

G. Additional Items. The operator may include additional information sections in excess of the six CAAB sections.

52.8.2 INDIVIDUAL ITEMS OF EQUIPMENT

A. The MMEL contains listed items of installed equipment that may be inoperative.

1. MMEL Items not Listed on the Operator's MEL. If items listed on the MMEL are not listed on the MEL there is no relief.

2. MMEL Items Listed on the Operator's MEL. Each piece of equipment that is installed on the aircraft and that is contained in the MMEL, for which the operator seeks relief and that is appropriate for its operation, should be listed on the appropriate page of the operator's MEL within the associated ATA system. The operator may be more restrictive than permitted by the MMEL by not listing certain items in its MEL.

B. Each item title on the operator's MEL will generally be entered exactly as it is shown on the MMEL. Exceptions include the following:

1. When the MMEL uses a generic term to address equipment that serves a similar function but various operators use different names for that equipment; or

2. When the MMEL lists functions rather than individual pieces of equipment within that category (Examples include "Navigation Equipment" or "Communications Equipment." In such cases, the MEL must contain a list of the individual equipment or systems within that category that are actually installed on the aircraft, such as "VHF Communications Transceivers." When items of this type consist of several components of a system, the item may be listed as a complete system, such as "VOR Navigation System," consisting of a VOR navigation receiver and its associated indicator. The inspector should ensure that the operator has not listed inappropriate items or items that are listed individually elsewhere in the MMEL. However, the POI is authorized to approve generic MMEL relief for navigation or communication equipment that is appropriate such as ILS, VOR, VHF, HF and GPS.)

52.8.3.1 ITEMS LISTED ON THE MMEL BUT NOT INSTALLED ON THE OPERATOR'S AIRCRAFT

The POI may follow several acceptable methods of dealing with an item of equipment being listed on the MMEL but not installed on the operator's aircraft. One method is to simply omit the item from the MEL altogether, renumbering individual items within an ATA category as necessary to provide proper continuity. (It should be noted that individual item numbers on a page are not necessarily ATA code numbers, but are simply sequential item numbers within an ATA category.) Another method is to list the item as shown on the MMEL, and to show the Number Installed as zero. In this case, the "Number Required for Dispatch" would also be zero, and the remark "Not Installed" may be noted under "Remarks and Exceptions"; repair category designators should be omitted.

52.8.3.2 TRIPLE ASTERISK SYMBOL (***)

The triple asterisk symbol is used in an MMEL to indicate that an item is not installed on some models of the aircraft. Operators should not produce or use this symbol in the MEL.

52.8.3.3 REPAIR CATEGORY

Each item of equipment listed in the operator's MEL, except for Administrative Control Items and Passenger Convenience Items, must include the repair category designator for that item as shown on the MMEL. These designators, categorized as "A," "B," "C," or "D," indicate the maximum time that an item may remain inoperative before repair is made. The actual repair categories corresponding to these letters are provided in the "Notes and Definitions" section of the MMEL. The operator may choose to adopt a more restrictive repair category than the one shown on the MMEL, but may not relax the requirement. Components or subsystems of items categorized in the MMEL, such as items of communications or navigation equipment that are not listed individually in the MMEL, must retain the repair category shown on the MMEL when listed as separate items on the MEL.

52.8.3.4 PASSENGER CONVENIENCE ITEMS

A. Passenger convenience items relate to the convenience, comfort, and entertainment of passengers and must never affect the airworthiness of the aircraft. These items do not carry a specific repair category; however, the operator should make repairs to convenience items within a reasonable time frame.

B. Normally, the operator lists these items individually in ATA chapters 52 and 38. Passenger convenience items may be included elsewhere in the MEL if clearly identified as passenger convenience items.

C. POIs should review the proposed MEL to decide which passenger convenience items are components of an item appearing in the MMEL. When listing passenger convenience items on the MEL, the operator must list each item for which the operator wishes relief. The operator may make a list of passenger convenience items that, once it is acceptable to the POI, is held at the CAAB office. Passenger convenience items also apply to cargo airplanes, as appropriate.

52.8.3.5 ADMINISTRATIVE CONTROL ITEMS

A. "Administrative control item" means an item listed by the operator in the MEL for tracking and informational purposes. It may be added to an operator's MEL by approval of the POI, provided no relief is granted, or

provided conditions and limitations are contained in an approved document, such as Structural Repair Manual or airworthiness directive.

B. If relief other than that granted by an approved document is sought for an administrative control item, the operator must submit a request to the Manager.

C. If the request results in review and approval by the State of the Manufacturer, the item becomes an MMEL item rather than an administrative control item.

1. Examples of items that could be considered administrative control items are cockpit procedure cards, medical kits, and life vests. These items should appear in the appropriate ATA chapter and would not have a repair category.

D. When the operator chooses this course of action, the POI must examine each proposed administrative control item on the operator's proposed MEL to ensure that the following conditions are met:

1. No item is included as an administrative control item if it is included elsewhere in the MMEL

2. Administrative items are not included as a subsystem of items listed in the MMEL

3. Administrative items are not granted relief in the MEL unless the release conditions or limitations are contained in another approved document

52.8.3.6 NUMBER OF ITEMS INSTALLED

The MEL will normally contain the actual number of items of particular equipment installed on the aircraft. This number may be either greater or less than the number shown on the MMEL.

A. The MMEL shows the number of items installed as the number of those items normally installed on a particular aircraft type.

B. Individual aircraft operated by an operator may have a different number of items.

C. Frequently the MMEL shows a dash in the "Number Installed" column. This dash indicates that a CAR ‘84iable quantity of these items are generally installed on the aircraft.

D. If the operator has an MEL for a single aircraft or identical aircraft, the actual number of these items on the particular aircraft must be listed in the MEL.

E. If the operator has an MEL for multiple aircraft, and the equipment is not installed on all aircraft or there is a CAR ‘84iable quantity between aircraft, the operator's MEL will not reference specific aircraft identifications; the "Number Installed" column may contain a dash.

52.8.3.7 NUMBER OF ITEMS REQUIRED FOR DISPATCH

Normally, the number of items required for dispatch is determined by the State of the Manufacturer and may be modified in the MEL in only two cases:

A. When the item is not installed on the aircraft, in which case a zero may be shown as the number required for dispatch

B. When the item is shown in the MMEL as being a variable number required for dispatch

C. In some cases, it is determined by a reference to specific requirements listed in the "Remarks or Exceptions" column of the MMEL.

D. An example would be cabin lights. In this case, the MMEL may show a variable number installed while the "Remarks or Exceptions" column might state that 50 percent of those items be operable. The number required for dispatch would therefore be 50 percent of the number of lights determined to be actually installed on the individual aircraft.

E. Another case where the MMEL may show a variable number required for dispatch is when the "Remarks or Exceptions" column of the MMEL contains the statement. In this case, the number is the minimum quantity of these items that must be installed for operations under the least restrictive regulation under which the operator conducts operations. For example, CAR ‘84 has differing requirements for when two communications transmitters are necessary for instrument flight rules (IFR). Sometimes only one transmitter is required and none are required for visual flight rules (VFR) operations when operating outside of controlled airspace. If none are required, the minimum number of transmitters required for dispatch could be zero.

F. “Remarks or Exceptions." Certain items demand specific relief developed by the operator as authorized through Ops Specs, area of operation and applicable regulations.

G. Other Items. Other items in which relief has been specifically written to reflect actions or restrictions to the operation may be changed only when the State of Manufacture makes a change to the MMEL. Generally they contain "O" and "M" procedures in which the operator develops its company procedures to comply with the MEL.

52.9 EVALUATION OF ASSOCIATED DOCUMENTATION

The inspector should evaluate the supporting documentation submitted by the operator to ensure that it is complete and appropriate.

52.9.1 THE OPERATOR'S MANUAL

A. Inspectors should evaluate the operator's manual to ensure that it contains adequate guidance for the operator's personnel in conducting operations using the MEL.

A. Generally, if the operator does not presently have an MEL programme, the applicable portions of its manual and other guidance material should be submitted at the time the MEL is submitted for initial review.

B. When evaluating the operator's manual, inspectors should use the following guidance:

52.9.1.1 DOCUMENTATION PROCEDURES

The procedures for documenting inoperative equipment and any required maintenance release procedures should be clear. At a minimum, provisions for recording the following items should be developed:

A. An identification of the item of equipment involved

B. A description of the nature of the malfunction

C. An identification of the person making the entry

D. The MEL item number for the equipment involved

52.9.1.2 CREW NOTIFICATION

A. The operator should establish procedures for advising the pilot in command (PIC) of inoperative items and required procedures such as affixing placards, alternate operating procedures, and instructions for the isolation of malfunctions.

B. The PIC and the operator are both responsible for ensuring that flights are not dispatched or released until all of the requirements of the "O" procedures and "M" procedures have been met.

52.9.1.3 FLIGHT RESTRICTIONS

A. The operator should establish procedures to ensure that dispatch or other operational control personnel, as well as the flightcrew, are notified of any flight restrictions required when operating with an item of equipment that is inoperative.

B. These restrictions may involve maximum altitudes, limitations for the use of ground facilities, weight limitations, or a number of other factors.

52.9.1.4 TRAINING PROGRAMME MATERIAL

Inspectors should ensure that the operator's flight and ground personnel training programmes contain adequate instruction for MEL use.

52.9.1.5 MEL MANAGEMENT PROGRAMME

A. The POI should coordinate closely with both the PMI and the operator on the MEL management programme.

B. Operators must develop an MEL management programme as a comprehensive means of controlling the repair of items listed in the approved MEL.

C. Operators must include a description of the programme in their maintenance manual or other documents.

D. The MEL management plan must include the following:

1. A method for tracking the date and time of deferral and repair

2. The procedures for controlling extensions to maximum repair categories

3. A plan for coordinating parts, maintenance, personnel, and aircraft at a specific time and place for repair

4. A review of items deferred due to unavailability of parts

5. The specific duties and responsibilities of the managers of the MEL management programme, listed by job title

52.10. "O" AND "M" PROCEDURES.

A. "O" and "M" procedures must contain descriptions of the individual steps necessary to accomplish each process. For example, if the MMEL contains an "M" symbol with a provision that a valve must be closed, the operator must include the appropriate procedures to close the valve as part of the operator's manual or MEL. The reviewing inspector must ensure that the procedure addresses the following:

1. How the procedure is accomplished
2. The order of accomplishing the elements of the procedure
3. The actions necessary to complete the procedure

B. For example, if the MMEL contains an "M" symbol with a provision that a valve must be closed, the operator must include detailed steps and actions for closing and testing the valve and installing the placard.

1. The actual written procedures may be contained within the "Remarks or Exceptions" section of the MEL, in separate documents, or attached as an appendix.
2. Inspectors should consult the Guidelines for "O" and "M" Procedures of the MMEL when evaluating these procedures.
3. The section about the Guidelines for "O" and "M" Procedures does not have to be contained within the operator's MEL.
4. If the "O" and "M" procedures are not contained within the MEL, the MEL should include a reference to the location of the procedures.

52.10.1 "O" PROCEDURES

A. The "(O)" symbol indicates a requirement for a specific operations procedure, that must be accomplished in planning for and/or operating with the listed item inoperative. Normally, these procedures are accomplished by the flightcrew; however, other personnel may be qualified and authorised to perform certain functions.

B. The satisfactory accomplishment of all procedures, regardless of who performs them, is the responsibility of the operator. Appropriate procedures are required to be published as a part of the operator's manual or MEL.

52.10.2 "M" PROCEDURES

A. The "(M)" symbol indicates a requirement for a specific maintenance procedure which must be accomplished prior to operation with the listed item inoperative. Normally these procedures are accomplished by maintenance personnel; however, other personnel may be qualified and authorised to perform certain functions.

B. Procedures requiring specialized knowledge or skill, or requiring the use of tools or test equipment should be accomplished by maintenance personnel.

C. The satisfactory accomplishment of all maintenance procedures, regardless of who performs them, is the responsibility of the operator. Appropriate procedures are required to be published as part of the operator's manual or MEL.

52.10.3 POI APPROVAL OF THE OPERATOR'S MEL

A. After the POI is satisfied that the MEL is in full compliance with all applicable requirements, the POI shall sign the MEL control page or the individual MEL pages to signify approval.

B. If the operator has not previously been authorized to operate under an MEL, the PMI should issue paragraph D95 of the Ops Specs concurrently.

C. The POI may send a letter of approval if desired.

52.11 MEL USE IN SERVICE

This section contains specific direction, guidance, and procedures for aviation safety inspectors (ASI) on the revision, administration, and policy application for administering MELs that have been approved for use by air carriers operating under the provisions of CAR '84.

52.11.1 REVISIONS TO AN MEL

A. Revisions to an operator's MEL may be initiated by either the operator or the CAAB.

B. Operator initiated revisions may be equal to or more restrictive than the Master Minimum Equipment List (MMEL).

C. It is not necessary for an operator to submit an entire MEL when requesting the approval of a revision.

D. The minimum submission would consist of only the affected pages; the approval by the principal operations inspector (POI) may only consist of specific items.

E. These items are approved within a controlled process, and the carrier will produce the final MEL document.

F. If the revision results in individual pages either being added or deleted, a revised table of contents page is also required.

G. The issuance of an airworthiness directive (AD) will not be the basis for change to an operator's MEL. Instead, ADs will be referred to the State of Manufacture for appropriate changes to the MMEL.

52.11.2 MEL REVISION INITIATED BY AN OPERATOR

An operator initiated MEL revision will normally fit into one of the following three categories:

A. Items Not Requiring an MMEL Change. Operators may propose changes to an MEL that are equal to, or more restrictive than, the MMEL. These revisions are approved by the POI using the same procedures as those required for an original MEL approval.

B. Items Requiring an MMEL Change. Operators may request changes to an MEL that are less restrictive than the MMEL. However, the MEL cannot be revised until the MMEL has been revised to permit the proposed MEL change. The most common instance of a revision request of this type occurs when an operator installs additional equipment on an aircraft and provisions for that equipment are not included on the current MMEL.

C. Major Aircraft Modifications. Major aircraft modifications, such as a supplemental type certificate (STC), a major alteration (Form, "Major Repair and Alteration") or a type certificate (TC) amendment, may invalidate the MEL for that aircraft. Operators should review the MEL to assess the impact of any planned modification and should immediately notify the POI of these modifications and the impact on the MEL.

52.11.3 MEL REVISIONS INITIATED BY THE CAAB

52.11.3.1 NON-MANDATORY REVISION

A. MMEL revisions that only provide additional relief are reflected by a lower case letter suffix following the MMEL numeric revision number.

1. For example, MMEL Revision No. 8 would become Non-mandatory Revision No. 8a.

B. Any MMEL changes that are less restrictive than the operator's MEL may be ignored by the operator.

1. An example of a non-mandatory revision is when the MMEL has been revised to provide for optional equipment normally not installed on all aircraft of a particular type, such as logo lights. Operators that operate aircraft with logo lights may choose to revise the MELs, while operators operating without logo lights would not.

52.11.3.2 GLOBAL CHANGE

A. A global change is another type of non-mandatory revision. A global change generally applies to items of equipment that are required to be

installed by a new regulatory requirement, such as a cockpit voice recorder (CVR), or a traffic alert and collision avoidance system (TCAS).

B. Items affected by CAAB policy decisions, such as Observer Seat Notice are also global changes.

C. The global change does not replace the normal MMEL revision process. When a standard revision to an MMEL is issued, it will include all global changes issued to date.

D. However, since the process for revising the MMEL can be lengthy, and the operator's MEL must be based on the MMEL, a global change will allow an operator to revise its MEL prior to the change in the MMEL.

A. The POI has the authority to approve the operator's MEL revision on the basis that the global change is an approved addendum to the existing MMEL.

52.11.3.3 MANDATORY REVISIONS

A. Mandatory changes, which are more restrictive and may remove relief from the current MMEL, are reflected by the next successive change to the basic MMEL revision number itself.

1. For example, the next mandatory revision following the non-mandatory revisions 6a, 6b, or 6c would be revision 7.

B. Any MMEL changes that are more restrictive than the operator's MEL will be implemented by the operator as soon as possible.

C. In some cases when relief is removed from the MMEL, there will be a specific date for compliance, or guidance for an acceptable date to be negotiated between the POI and the operator.

52.11.3.4 POI INITIATED REVISION

A. A POI may initiate an MEL revision that is not based on a revision to the MMEL. The POI should make such a request to the operator in writing, stating specific reasons why the revision is necessary.

B. A POI initiated revision may be made upon the discovery that an operator has modified an aircraft or that faulty maintenance or operations procedures exist.

C. The POI should work closely with the operator and make every effort to resolve the matter in a mutually agreeable manner.

D. The operator should be given a reasonable time period to make the required changes depending on whether safety of flight is affected.

E. In the event that the operator declines to make the required change, the POI may consult with the PMI to initiate an amendment of the operator's Ops Specs to rescind the authority for the MEL.

52.11.3.5 MODIFICATIONS WITHIN A FLEET

A. If an operator has been granted approval to use the MEL for a fleet, and the operator installs a new piece of equipment in one or more aircraft, the operator may continue to operate that aircraft under the provisions of the currently approved MEL.

B. The operator may not defer repair of the new item until an appropriate revision to the MEL has been approved.

52.12 AVAILABILITY OF MEL FOR FLIGHT CREWMEMBERS.

A. CAR '84 requires that flight crewmembers have direct access to the MEL at all times prior to flight. Although not required, the easiest method of compliance with this requirement is for the operator to carry the MEL aboard each aircraft.

B. The operator may choose to use some system of access to the MEL other than the MEL document.

1. For example, the flightcrew may obtain access to the MEL through the ARINC Communications Addressing and Reporting System (ACARS).

C. The critical element in approving an alternate form of access is whether or not the flightcrew has a direct means of access to the appropriate information in the MEL, specifically "O" and "M" procedures.

1. Direct access should not be construed to mean access through telephone or radio conversations with maintenance or other personnel.

2. If the operator chooses to provide the flightcrew with access to the MEL by other than printed means, the method must be approved in the operator's MEL programme.

52.13 DEVELOPMENT AND APPROVAL OF A CDL

A. An aircraft manufacturer develops a proposed CDL for a specific aircraft type. The proposed CDL is submitted to the responsible ACO for approval by engineering specialists.

B. The ACO will then coordinate with the appropriate aircraft evaluation group (AEG) to resolve any problems and discrepancies prior to approving the CDL.

B. For United States (U.S.) certificated airplanes, the CDL, once approved, is incorporated into the limitations section of the airplane flight manual (AFM) as an appendix.

C. For manufacturers outside the U.S., the CDL may be a stand alone document and part of the Structure Repair Manual, or another manufacturer's document.

D. Some operators may choose to attach a copy of the CDL to their MEL for easy and ready reference by flight crews.

52.13.1 USE OF THE CDL

Operators must follow the CDL limitations when operating with a configuration deviation. Operators are required to observe the following:

A. The limitations in the CDL when operating with certain equipment missing (except as noted in the appendix to the approved flight manual)

B. The flight operations, restrictions, or limitations that are associated with each missing airframe and engine part

C. Any placard(s) required by the CDL describing associated limitations, which must be affixed in the cockpit in clear view of the pilot in command (PIC) and other appropriate crewmembers

52.13.2 CDL PROCEDURES

The principal operations inspector (POI) must ensure that the operator has developed appropriate procedures for the PIC and, if appropriate, procedures for notifying dispatch of the CDL missing parts by an appropriate notation in the aircraft logbook or other acceptable means.

52.14 MEL EVALUATION GUIDE

For MEL Evaluation Guide, Operations Inspectors of CAAB shall refer to Part-II, Chapter-68, Appendix-32.

CHAPTER-53

TRAINING INSPECTIONS (TRAINING-IN-PROGRESS, TRAINING FACILITIES AND TRAINING DELIVERY)

This chapter provides guidance for conducting inspections of training-in-progress, training facilities and training delivery.

53.1 GENERAL

A. The inspector's objective is to ensure that the operator's training programme complies with regulatory requirements and that instructional methods are effective.

B. Principal operations inspectors (POIs) are required to schedule annual training programme surveillance as part of a work programme, in response to:

1. Minimum required annual inspection (MRAI) guidelines, or

2. When an operator's inspection reports, incidents, or accidents indicate deficiencies in crewmember or dispatcher skill or knowledge.

53.2 TRAINING PROGRAMME INSPECTION AREAS

A. Training programme inspections involve much more than simply observing "training in progress."

B. The CAAB has identified five primary inspection areas to be observed during training programme inspections:

1. Training curriculums

2. Courseware

3. Instructional delivery methods

4. Testing and checking methods

5. Specific topics

53.2.1 ANNUAL INSPECTION PLAN

A. Principal inspectors must develop annual inspection programmes that are adapted to specific operators.

B. Training programmes vary in their complexity depending on the operator's size, aircraft fleet diversification, number of crewmembers and dispatchers, training locations, and scope of operation.

1. POIs may find that a single annual inspection is sufficient to verify the effectiveness of a simple operator's programme.

2. Inspection of a complex operator, however, requires a modular approach in which specific programme components or locations are identified and inspected in progressive increments.

53.2.2 SPECIAL INSPECTIONS

A. A POI may determine that there is a need to initiate a "special emphasis" training programme inspection.

B. This type of inspection may be initiated for such reasons as incidents, accidents, or a series of deficiencies discovered through trend analysis of inspection data.

C. "Special emphasis" training programme inspections are relatively short in duration and usually focus on a limited area, such as training on the use of checklists or on windshear.

53.3 CONDUCT A TRAINING PROGRAMME INSPECTION

A. There are many methods of curriculum development and training methods that an operator may use.

B. To obtain approval of a programme, the operator must demonstrate that the programme or programme segment is in compliance with regulatory requirements and that it effectively prepares crewmembers and dispatchers to perform duties in revenue service.

C. Inspectors should be aware of the competitive economic incentives operators have to improve the quality of, and to reduce the costs of, their training.

D. Operators have great latitude in developing training programmes tailored to their needs, and POIs have great latitude in approving individualized programmes.

53.3.1 PREPARATION

A. Before conducting an inspection of a particular training programme area, the inspector should first obtain a copy of the operator's approved training programme outline and become familiar with it.

B. The inspector should review the outline for regulatory compliance and for adequate subject coverage.

C. Should the inspector discover a discrepancy that requires a modification of the outline, a report must be made to the POI by means of the Action safety issue tracking process.

D. Should the inspector discover a serious discrepancy, the inspector shall notify the DOT by telephone and follow that up with an Action safety issue entry.

53.3.2 ON SITE ACTIVITIES

A. On arriving at the training site, inspectors should:

1. Introduce themselves to the person conducting the training,

2. Present their CAAB credentials, and

3. State the purpose of the inspection.

B. Inspectors shall refrain from active participation in the training being conducted and shall make every effort not to influence the training environment or the instruction in the subject matter.

C. Should an inspector have comments on any of the areas of training, the inspector may communicate this information to the appropriate individual(s) in private.

D. The inspector will reserve comments for debriefing of the instructor until after the training session or during an appropriate break in training.

E. Inspectors should be aware that approved training hours are measured by curriculum segments and that each hour of training normally contains a reasonable "break time" of 10 minutes.

53.4 TRAINING DELIVERY INSPECTION EMPHASIS

53.4.1 COURSEWARE INSPECTION

While observing the training, inspectors should evaluate the courseware. Inspectors should also evaluate whether or not the courseware and the instructor are effective in communicating the essential points of the lesson.

53.4.1.1 INSTRUCTOR COURSEWARE

A. The inspector must observe whether or not the operator's instructor guides and lesson plans follow the approved outline.

B. During observation, inspectors must also ensure that instructor guides and lesson plans adhere to the following criteria:

1. Instructor courseware should be clearly titled for the appropriate curriculum segment.

2. The instructor must be able to conduct detailed instruction for each subject area.

3. Instructional material should be presented in a logical manner and in a sequence that is easy to use and comprehend.

4. Courseware should provide references to applicable manuals of the operator.

5. The instructor should use some means of determining that the students are properly assimilating the material (such as "responder" panels, multiple choice questions, or in class exercises).

53.4.1.2 STUDENT COURSEWARE

A. The inspector must evaluate various "self-teaching" training mediums such as video tapes, audiovisual (carousel type) slide presentations, computer based training (CBT) presentations, programmed teaming publications, and home study materials, to ensure that they satisfy the requirements of the approved outline.

B. Training mediums must adhere to the following standards:

1. The information must agree with the operator's manual and other publications.

2. The material must have sufficient detail to ensure that students comprehend the applicable subject area.

3. The courseware should include some means of testing student assimilation of information presented.

53.4.2 INSTRUCTIONAL DELIVERY METHODS

This inspection area consists of the following inspection modules:

53.4.2.1 TRAINING FACILITIES/ENVIRONMENT INSPECTION

A. The inspector must ensure that the operator's training facilities and the instructional environment are conducive to learning.

B. An inspector must ensure that the facilities meet the following standards:

1. Provide adequate seating space for students

2. Provide storage areas for training materials

3. Provide area for instructors to prepare their lessons

4. Are free of distractions, which adversely affect instructional delivery (such as excessive temperatures, extraneous noise, poor lighting, and cramped classrooms and/or work spaces)

53.4.2.2 CRITERIA FOR INSTRUCTORS

A. The inspector must ensure that the quality of instruction provided by instructors in both ground and flight training segments is effective.

1. Instructors must create an effective environment for training.

2. The instructor must be flexible and alert to individual needs of the students.

B. The following guidelines apply to instructors and/or flight instructors. Instructors must follow these criteria where applicable.

1. Instructors:.

a. Must know the operator's training policies and procedures, know how to complete required training forms, and must exhibit satisfactory instructional methods and techniques
b. Must be knowledgeable in the specific area of instruction and must be able to present the material in a logical, clear, and organised manner
c. Must be aware of the minimum equipment required for each element of training and must conform to the limitations imposed on the training element(s) by inoperative component(s)
d. Should follow the applicable lesson plans, guides or other training aids to ensure that the material is properly presented as designed

2. Flight Instructors:

a. Must be competent in the operation of flight training devices or flight simulators and must be knowledgeable of the training elements that may be accomplished in that level of simulator or training device

b. Should provide a thorough preflight briefing on all maneuvers and procedures that will be accomplished

c. Should provide a thorough post flight debriefing to review each student's performance during a training session

53.5 TRAINING EQUIPMENT

53.5.1 TRAINING AIDS & EQUIPMENT

A. Inspectors must ensure that the operator's training aids and equipment are appropriate to the subject matter and that they operate properly.

B. This includes audiovisual equipment, systems mockup boards, panel layouts, ground training devices, instructor station equipment, student responders (if applicable), and other related items.

1. All equipment used in the training programme must operate and function in good working order. Replacement parts or components (such as slide projector lamps) should be readily available.

2. Any equipment designated to be used for "self-teaching" purposes, such as CBT platforms, must have clear operating instructions readily available for student use.

3. Systems panels, layouts, boards, or mockups (such as aircraft exit mockups) should accurately represent the designated aircraft.

53.5.2 FLIGHT SIMULATOR OR TRAINING DEVICE INSPECTION MODULE

The inspector should ensure that the operator's flight simulators and flight training devices are being adequately maintained and that they effectively replicate the associated aircraft.

53.6 TESTING & CHECKING

A. In the inspection of an operator's training programme, the inspector must conduct observations of the elements that involve evaluation and qualification.

B. These elements include, but are not limited to:

1. Check pilot programmes and activities,

2. Training records,

3. Failure rates, and

4. Testing and checking standards.

C. The inspector must evaluate the following modules:

53.6.1 CHECK PILOT PROGRAMMES AND ACTIVITIES.

The inspector should evaluate all elements that relate to check pilot training and qualification, check pilot records, and standardization programmes.

53.6.2 TRAINING RECORDS

A. The inspector should evaluate the operator's training records for information regarding the overall effectiveness of an operator's training programme.

B. The testing and checking results available from training records are an excellent source of information for POIs to establish positive or negative trends in the operator's training programme.

53.6.3 ORAL & PRACTICAL TESTS

A. Inspectors should observe or conduct a number of airman certification evaluations as well as proficiency, competency, or line checks (as applicable) to determine the overall effectiveness of the operator's training programmes, check pilot programmes, and testing and/or checking standards.

B. Inspectors should place specific emphasis on flight events which require repetition or excessive instruction and should evaluate them according to the following criteria:

1. Testing and checking standards must comply with the regulations, the safe operating practices, and the guidance contained in this handbook.

2. Testing and checking standards must be consistently applied throughout the operator's training organization by its check pilot and instructor personnel.

53.7 QUALITY ASSURANCE

A. The inspector shall observe the operator's quality assurance programme to ensure that training effectiveness is continually monitored and that specific areas or items are corrected when necessary.

B. The operator's quality assurance system must ensure that students do not proceed to the next module or training segment until satisfactory proficiency has been achieved.

C. Additionally, training folders must be maintained by the operator while students are in a specific curriculum.

D. Inspectors should review the information contained in these folders to identify any deficient trends.

E. This information, coupled with the results of testing and checking, provides a quantifiable method for measuring training effectiveness.

53.8 INSPECTION RESULTS

As a source of information about an operator's overall performance, inspectors can evaluate inspections and investigations previously done on the operator.

A. A high rate of satisfactory performance usually indicates a strong, effective training programme.

B. Repeated cases of unsatisfactory performance, however, often indicate deficiencies in an operator's training programme.

53.8.1 USE OF THE ACTION DATABASE

A. The Action report and Safety Resolution reports are effective tools for inspectors to use during the examination and analysis of information obtained from investigative and inspection reports.

B. Standard and ad hoc reports can be generated by the system to search for inspector comment codes which specifically relate to or, through analysis, could lead to deficient areas in an operator's training programme.

53.8.2 PRINCIPAL INSPECTOR REVIEW

The POI shall review results of inspection reports, incident or accident reports, enforcement actions, and other relevant information about the operator's performance for indications of training effectiveness.

A. For example, repeated reports of deficiencies, such as configuring too late, incomplete briefings, or incorrect use of the checklists may be traceable to a lack of specific training or ineffective training in a particular area.

53.9 TRAINING IN PROGRESS INSPECTION GUIDE

For Training In Progress Inspection Guide, Operations Inspectors of CAAB shall refer to Part-II, Chapter-68, Appendix-33.

CHAPTER-54

FLIGHT SIMULATION TRAINING DEVICES

The purpose of this chapter is to provide guidance for the evaluation and approval of flight simulation training devices.

54.1 BACKGROUND

A. Any training device to be used by an Bangladesh aircraft operator for qualification for flight crews (pilots, flight engineers, navigators, cabin crews, etc.) or ground crews (maintenance/avionics personnel, etc.) is subject to CAAB approval, prior to use. This discussion will deal with approval for an Bangladesh aircraft operator to utilize a simulator that has been previously approved for use by another operator (Bangladesh or otherwise).

B. A Bangladesh AOC holder must make a written approval request, specifying the training or checking that is intended. Regardless of the operator's intended application of the training device, there are general areas of interest to the approving Authority.

54.1.1 APPROVAL DOCUMENTS

Has the operator provided approval documents from the civil aviation authorities providing surveillance/qualification of the device. In the case of the:

A. United States FAA: Approval Test Guide (ATG),

B. European Aviation authorities: Master Approval Test Guide (MATG))

54.1.2 AIRCRAFT VS. SIMULATOR DIFFERENCES

A. Has the operator provided detailed layouts of their aircraft cockpit and detailed layouts of the simulator, for comparison purposes?

B. Are there aircraft/simulator differences; if so is a differences training course required?

1. Make/Model/Series
2. Engines (Manufacturer, thrust, type, etc.)
3. Instrumentation (Analog vs. Digital, Total Glass CP, etc.)
4. Fuel System (number of tanks, jettison capability, range)
5. Electrical System (number of generators, backup generator)
6. Hydraulics (number of hydraulic pumps, RAT)

7. Lift/Drag Devices (leading edge, trailing edge, spoilers, etc.)
8. Air-conditioning & Pressurization (Number of Packs, Pack Operation)
9. Switches (Toggle vs. Push Button)
10. Gauges (Round Dial or Digital)
11. Navigation/communication (GPS, FMS, HF, EFB, etc.)

54.1.3 QUALIFICATIONS OF INSTRUCTORS & CHECK AIRMEN

Who is providing the Simulator Instructor/Check Airmen?

A. Regardless of which, what is this individual's qualification/medical certificate, currency, experience, etc (resume provided)?

B. If not provided by the Bangladesh applicant, what method was used for this individual to become familiar with the Bangladesh aircraft operator's procedures/checklists/abnormals/training and checking programmes/etc?

C. If not provided by the Bangladesh aircraft operator, is this individual able to accurately communicate with the trainees.

54.1.4 SOPS & CHECKLISTS TO BE USED

A. Are the crews and their instructors utilizing their Bangladesh company manuals (standard operating procedures and checklists) or are these provided by the simulator provider?

B. Only in very unusual situation would the SOPs and checklists of the training provider be permitted for use by the crews of the aircraft operator.

54.2 SIMULATOR EVALUATION BY THE CAAB

A. The approving inspector must be allowed to operate the simulator through a series of approaches/maneuvers to determine if all systems operate normally

B. Depending upon the inspector's intimacy with a particular simulator, it might require performing a "hands on demonstration" of the type normally performed by a CAAB aircraft type qualified crewmember when determining the simulator authorizations for initial and recurrent qualification.

C. Depending on how comfortable the Inspector is with the noted differences, discrepancies, and performance, would impact just how thorough such a fly-off would be.

D. The specific use of the simulator should be carefully specified. Some examples of specific application areas and their corresponding "sub areas of interest" would be:

54.2.1 PERMITTED INITIAL AIRCRAFT TRAINING/CHECKING

The following are types of authorizations that may be issued by the CAAB. if the necessary evaluation is satisfactory :

A. Aircraft Type Rating

B. Initial Aircraft Qualification (Copilot, Engineer)

C. Requalification Training

D. Credit for landings (No/Partial Flap, Visual, Engine Inoperative, Two Engine Inoperative, Three Engine Inoperative)

E. Circling approach capable

F. Non Precision Approaches (NDB, LOC, VOR, VOR/DME, FMS, etc.)

G. Taxi Capability

H. Aircraft performance during Stalls, Steep Turns, Engine failures prior to & after V1, Windshear, Turbulence

I. Navigation capability (FMS, GPS, INS, etc.)

J. Significant aircraft differences?

54.2.2 PERMITTED RECURRENT TRAINING/CHECKING

If an evaluation finds that the simulator may be used in lieu of the aircraft to qualify crews for the following listed items, the aircraft operator may be issued the following specific authorizations for recurrent training and checking:

A. Proficiency Checks (Pilots/Flight Engineers)

B. Credit for landings (No/Partial Flap, Visual, Engine Inoperative, Two Engine Inoperative, Three Engine Inoperative)

C. Circling approach capable

D. Taxi Capability

E. Low Departure Minimums Capable

F. Low Precision Approach Capable

G. Cat II Capable

H. Cat III/A/B/C Capable

I. ASR/PAR Approaches (Radar) Capable

J. Navigation/Route Training/Checking capable? (FMS, GPS, INS, etc.)

K. Significant aircraft differences

54.2.3 REGAINING APPROACH/LANDING CURRENCY

If an evaluation finds that the simulator may be used in lieu of the aircraft to requalify crews for approach and/or landing currency, the aircraft operator may be authorized to use it for:

1. Credit for landings, and

2. Airports/approach capability.

54.2.4 RESTRICTED/SPECIAL AIRPORT QUALIFICATION/CURRENCY

A. If an evaluation finds that the simulator has the capability to be used for qualifying crews for operations into restricted or special airports, the aircraft operator may be authorized to use the simulator for that purpose.

B. The specific airport must be identified in the authorization.

54.2.5 LOFT CAPABLE

A. If an evaluation finds that the simulator has the capability to support a line orientated training curriculum, the aircraft operator may be authorized to use it for that purpose.

B. The specific approved curriculums must be identified in the authorization.

54.2.6 INSTRUCTOR/CHECK AIRMEN TRAINING

A. If an evaluation finds that the simulator has the capability to accurately simulate the aircraft maneuvers and procedures specified for aircraft type instructor and check airman curriculums, the aircraft operator may be authorized to use it for that purpose.

B. The specific curriculums must be identified in the authorization.

54.3 APPLICATION FOR FLIGHT SIMULATOR APPROVAL

54.3.1 APPLICABLE REGULATION – CAR ‘84

54.3.2 APPLYING FOR THE APPROVAL

A. To take advantage of these provisions, the certificate holder must request approval of the simulator or other training device in writing, specifying the intended application.

B. CAAB inspectors will then evaluate the simulator with respect to its intended use and commonality with the certificate holder's airplane.

C. If they determine that it is satisfactory for the application intended, CAAB will issue a letter to the certificate holder specifying the applications for which the simulator may be used.

54.3.3 OWNERSHIP

A. The certificate holder does not have to own or otherwise have physical possession of the simulator. As long as it has been evaluated and approved specifically for the use of the certificate holder, it may be owned and operated by another organization.

B. However, in order to request approval for use of a simulator by a Bangladesh aircraft operator, it must have a current initial Approval Test Guide (ATG) and recurrent approved Master Approval Test Guide (MATG) (or JAA equivalents),

D. It will be the certificate holder's responsibility to assure that the simulator continues to meet the standards and applications originally approved. If CAAB determines that the basis for original approval are degraded, the approval will be immediately withdrawn.

54.4 CONTENTS OF SIMULATION APPROVAL REQUEST

The operator should submit a cover letter and an ATG which includes:

A. A title page with the operator and FAA/JAA approval signature blocks.

B. A simulator information page, for each configuration in the case of convertible simulators, providing:

1. The operator’s simulator identification number or code.
2. Airplane model and series being simulated.
3. Aerodynamic data revision.
4. Engine model and its data revision.
5. Flight control data revision.
6. Flight Management System identification and revision level.

7. Simulator model and manufacturer.
8. Date of simulator manufacture.
9. Simulator computer identification.
10. Visual system model and manufacturer.
11. Motion system type and manufacturer.

C. Table of contents.

D. Log of revision and/or list of effective pages.

E. Listing of all reference source data.

F. Glossary of terms and symbols used.

54.5 PROCEDURE FOR CAAB EVALUATION & APPROVAL

When the inspector receives a letter of request from an aircraft operator engaged general aviation aerial work or commercial air transport operations, that inspector should use the job aid provided in Appendix 17-C to conduct the evaluation.

54.5.1 REVIEW APPLICATION DOCUMENTS

The evaluating inspector should review the contents of the aircraft operator's application:

A. Review the letter of request, the ATG and the MATG.

B. Contact the issuing CAA to determine that the documents are accurate and the most current.

C. Review the ATG and MATG to determine that the simulator is suitable for the aircraft operator's training programme.

D. Review the detailed layouts of the aircraft operator's cockpit for the requested aircraft for later comparison with the simulator.

54.5.2 CONTACT SIMULATOR PROVIDER

The evaluating inspector should make arrangements for the evaluation:

A. Contact the organization owning/operating the simulator and make arrangements for an inspection.

B. Ensure that a qualified simulator instructor will be available to support the inspection.

C. Make arrangements to travel to the simulator.

54.5.3 GENERAL INSPECTION OF SIMULATOR

Before the fly-off inspection, the evaluating inspector should determine whether the air

A. Inspect the simulator's maintenance records to determine if there is a history of recurring failures.

B. Visually inspect the simulator for overall condition and cleanliness.

C. Visually inspect the simulator using the aircraft operator's cockpit layouts to determine if the configuration matches the operator's aircraft.

D. Ensure that the simulator's parameters are set to match the make, model, and series of the operator's aircraft. Note any differences.

E. If there are differences, do not issue a Letter of Authorization (LOA) until a suitable differences programme is developed.

F. Review the aircraft operator's approved training manual to confirm that all requested maneuvers can be performed, including visuals.

54.5.4 CONDUCT FLY-OFF EVALUATION

The evaluating inspector will, with the assistance of the qualified simulator inspector, perform the fly off evaluation.

A. Operate the simulator through a series of approaches/ maneuvers as necessary to establish to determine if all systems appear to be operating normally.

B. Ensure that the simulator is capable of critical events included in the job aid.

C. If malfunctions are found determine why they have not been documented and corrected.

54.6 EVALUATION OF SIMULATOR TRAINING & CHECKING GUIDE

For Evaluation of Simulator Training & Checking Guide, Operations Inspectors of CAAB shall refer to Part-II, Chapter-68, Appendix-34.

CHAPTER-55

REDUCED VERTICAL SEPARATION MINIMA (RVSM)

This chapter provides guidance for the CAAB Inspectors for authorization of aircraft operators for RVSM operations

55.1 GENERAL

A. This chapter contains the criteria to be used by the CAAB when asked to approve an AOC holder's request to use RVSM airspace. RVSM airspace is being implemented worldwide and international convention requires AOC holders to obtain approval from their CAAB before conducting any operations within this airspace.

B. The criteria used to obtain approval are developed from ICAO and Bangladesh guidance material; specifically:

C. ICAO's *Manual on Implementation of a 550 m (1000 ft) Vertical Separation Minimum Between FL 290 and FL 410 Inclusive* (Doc 9574-AN/934) and

D. When applying, the AOC holder must list the aircraft by type and series. If aircraft of the same type/series are equipped with different altimetry system configurations, they should be listed by the aircraft registration or serial number.

E. When the criteria for approval are met, this shall be inserted in the operations specifications (AOC holder). If an operator has aircraft that are capable of flying within RVSM airspace but does not intend to operate there, they should not be issued an authorization.

55.2 APPROVAL PROCESS

55.2.1 GENERAL

A. Airspace where RVSM is applied is considered to be special qualification airspace. Both the individual operator and the specific aircraft type or types which the AOC holder intends to use must be approved by the CAAB before the operator conducts flight in RVSM airspace.

B. In addition to CAAB approval, the aircraft must undergo height monitoring by a height monitoring unit (HMU) or GPS monitoring unit (GMU) to confirm the aircraft meets RVSM performance criteria before operational approval is given.

C. Finally, the CAAB must record the relevant information in a RVSM database for each aircraft approved and provide this database to the organization responsible for the RVSM airspace in question.

55.2.2 AIRCRAFT APPROVAL

A. Each aircraft type that an AOC holder intends to use in RVSM airspace should have received airworthiness approval in accordance with the criteria provided in Doc 9574 and the CAAB *Airworthiness Inspector Manual*.

B. Individuals or AOC holders seeking approval for its aircraft should contact the manufacturer of the specific aircraft type and apply to the CAAB to determine/co-ordinate the process.

55.2.3 OPERATIONAL APPROVAL

A. This section is intended to provide detailed guidance on the content of operational programme, practices and procedures that an AOC holder should follow to receive approval to operate an aircraft in RVSM airspace.

B. It also describes specifically the steps in the process: application for CAAB evaluation and granting of approval to operate.

55.2.4 GENERAL

The CAAB should ensure that each AOC holder can maintain high levels of height-keeping performance. It should be satisfied that operational programme are adequate for each AOC holder. Operations and training manuals as well as flight crew training should be evaluated.

55.2.5 PRE-APPLICATION MEETING

A. A pre-application meeting should be scheduled between the AOC holder and the CAAB to inform the operator of CAAB expectations regarding the approval process to operate in a RVSM environment.

B. The content of the operator RVSM application, CAAB review and evaluation of the application, validation flight and conditions for removal of RVSM authority should be basic items of discussion.

55.3 CONTENT OF OPERATOR RVSM APPLICATION

The following paragraphs describe the material that an operator applying for RVSM authority should provide to the CAAB for review and evaluation at least 30 days prior to the intended start of RVSM operations.

55.3.1 AIRWORTHINESS DOCUMENTS & MAINTENANCE PROGRAMME

Sufficient documentation should be available to show that the aircraft and maintenance programme has been approved in accordance with the CAAB Airworthiness Inspector Manual.

55.3.2 DESCRIPTION OF AIRCRAFT EQUIPMENT

The applicant should provide a configuration list that details all components and equipment relevant to RVSM operations.

55.3.3 AIRCRAFT INFORMATION

The applicant shall complete a Technical Data Sheet for each aircraft to be approved for RVSM operations and submit all sheets with the application.

55.3.4 OPERATIONS MANUALS & CHECKLISTS

A. The appropriate manuals and checklists should be revised to include information/guidance on standard operating procedures. The SOPs are to include ACAS considerations when in level flight, climbing or descending in RVSM airspace.

B. Appropriate manuals should also include a statement of the airspeeds, altitudes and weights considered in RVSM aircraft approval to include identification of any operating restrictions established for that aircraft group.

C. For example, when an aircraft is restricted from conducting RVSM operations in areas of the full RVSM envelope where the value of mean ASE exceeds 120 ft (37 m) and/or the absolute value of mean ASE plus three standard deviations of ASE exceed 245 ft (75 m). When such a restriction is established, it should be identified and documented in appropriate aircraft operating manuals; however, visual or aural warning/indication systems should not be required to be installed on the aircraft.

55.3.5 OPERATIONS TRAINING PROGRAMME & OPERATING PRACTICES & PROCEDURES

A. AOC holders shall submit training syllabi and other appropriate material to the CAAB to show that the operating practices, procedures and training items related to RVSM operations are incorporated in initial and, where warranted, recurrent training programme.

B. Training for dispatchers shall also be included where appropriate.

D. General Aviation operators shall demonstrate to the CAAB through oral or written tests that their knowledge of RVSM operating practices and procedures is equivalent to AOC holders and is sufficient to warrant granting of approval to conduct RVSM operations.

E. Practices and procedures in flight planning, aircraft pre-flight procedures for each flight, procedures prior to RVSM airspace entry, in-flight procedures and flight crew training procedures should be standardized.

55.4 OPERATING PRACTICES & PROCEDURES

55.4.1 GENERAL

The following has been written for use by a wide variety of operator types and therefore, certain items have been included for purposes of readability and completeness.

55.4.2 FLIGHT PLANNING

A. During flight planning the flight crew should pay particular attention to conditions which may affect operation in RVSM airspace. These include, but may not be limited to:

1. Verifying that the aircraft is approved for RVSM operations;
2. Reported and forecast weather conditions on the route of flight;
3. Minimum equipment requirements pertaining to height-keeping systems; and
4. If required for the specific aircraft group, accounting for any aircraft operating restriction related to RVSM airworthiness approval.

55.4.3 AIRCRAFT PRE-FLIGHT PROCEDURES FOR EACH FLIGHT

The following actions should be accomplished during pre-flight:

A. Review maintenance logs and forms to ascertain the condition of equipment required for flight in RVSM airspace. Ensure that maintenance action has been taken to correct defects to required equipment;

B. During the external inspection of aircraft, particular attention should be paid to the condition of static sources and the condition of the fuselage skin in the vicinity of each static source and any other component that affects altimetry system accuracy (this check may be accomplished by a qualified and authorised person other than the pilot; e.g., a flight engineer or maintenance personnel);

C. Before takeoff, the aircraft altimeters should be set to the local altimeter (QNH) setting and should display a known elevation (e.g. field elevation) within the limits specified in aircraft operating manuals. The two primary altimeters should also agree within the limits specified by the aircraft operating manual. An alternative procedure using QFE may also be used;

D. Before take-off, the equipment required for flight in RVSM airspace should be operational and indications of malfunction should be resolved.

55.4.4 PROCEDURES PRIOR TO RVSM AIRSPACE ENTRY

The following equipment should be operating normally at entry into RVSM airspace:

A. Two primary altitude measurement systems;

B. One automatic altitude-control system;

C. One altitude-alerting device; and

D. Should any of the required equipment fail prior to the aircraft entering RVSM airspace, the pilot should request a new clearance so as to avoid flight in this airspace.

E. Operating Transponder. The operator should ascertain the requirement for an operational transponder in each RVSM area and transition areas adjacent to RVSM airspace where operations are intended.

55.4.5 IN-FLIGHT PROCEDURES

The following policies should be incorporated into flight crew training and procedures:

A. Flight crews should comply with aircraft operating restrictions (if required for the specific aircraft group) related to RVSM airworthiness approval;

B. Emphasis should be placed on promptly setting the sub-scale on all primary and standby altimeters to 29.92 in Hg/1013.2 mb (Hp) when passing the transition altitude and rechecking for proper altimeter setting when reaching the initial cruising flight level (CFL);

C. In level cruise it is essential that the aircraft maintains the CFL. This requires that particular care is taken to ensure that ATC clearances are fully understood and followed. Except in contingency or emergency situations, the aircraft should not intentionally depart from CFL without a positive clearance from ATC;

D. During cleared transition between levels, the aircraft should not be allowed to overshoot or undershoot the cleared flight level by more than 150 ft (45 m);

E. An automatic altitude-control system shall be operative and engaged during level cruise, except when circumstances such as the need to re-trim the aircraft or turbulence require disengagement. In any event, adherence to cruise altitude should be done by reference to one of the two primary altimeters;

F. The altitude-alerting system shall be operational;

G. At intervals of approximately one hour, cross-checks between the primary altimeters should be made. A minimum of two should agree within 200ft (60m). (Failure to meet this condition will require that the altimetry system be reported as defective and ATC notified) Crosscheck
procedures include:

1. The normal pilot scan of cockpit instruments should suffice for altimeter cross-checking on most flights.

2. At least the initial altimeter cross-check in the vicinity of the point of maximum range of ICAO standard navaids (VOR/ NDB) should be recorded (e.g. on coast out). The readings of the primary and standby altimeters should be recorded and available for use in contingency situations.

H. Normally, the altimetry system being used to control the aircraft should be selected to provide the input to the altitude-reporting transponder transmitting information to ATC;

I. If the pilot is advised in real time that the aircraft has been identified by a height-monitoring system as exhibiting a Total Vertical Error (TVE) greater than 550 ft (90 m) and/or Altimetry System Error (ASE) greater than 245 ft (75 m) then the pilot should follow established regional procedures to protect the safe operations of the aircraft. (This assumes that the monitoring system will identify TVE or ASE within agreed levels of accuracy and confidence); if the pilot is notified by ATC of an Assigned Altitude Deviation (AAD) error that exceeds 550 ft (90 m) then the pilot should take action to return to the CFL as quickly as possible;

55.4.6 CONTINGENCY PROCEDURES

If, after entering RVSM airspace, the required minima cannot be maintained, the following actions will apply:

A. The pilot should notify ATC of contingencies (equipment failures, weather conditions) which affect the ability to maintain the CFL and co-ordinate a plan of action. ICAO Doc 7055, *Regional Supplementary Procedures*, is the primary reference document for contingency procedures.

B. Examples of equipment failures that ATC should be notified of are:

1. Failure of all automatic altitude-control systems; aboard the aircraft;

2. Loss of redundancy of altimetry systems;

3. Loss of thrust on an engine necessitating descent; or

4. Any other equipment failure affecting the ability to maintain CFL;

5. The pilot should notify ATC when encountering greater than moderate turbulence; and

6. If unable to notify ATC and obtain an ATC clearance prior to deviating from the assigned CFL, the pilot should follow established contingency procedures and obtain ATC clearance as soon as possible.

55.4.6.1 Post Flight

A. In making maintenance log book entries against malfunctions in height-keeping systems, the pilot should provide sufficient detail to enable maintenance to effectively troubleshoot and repair the system.

B. The pilot should detail the actual defect and the crew action taken to try to isolate and rectify the fault.

C. The following information should be noted when appropriate:

1. Primary and standby altimeter readings;
2. Altitude selector setting;
3. Subscale setting on altimeter;
4. Autopilot used to control the aeroplane and any differences when the alternate system was selected;
5. Differences in altimeter readings if alternate static ports selected;
6. Use of air data computer selector for fault diagnosis procedure; and
7. Transponder selected to provide altitude information to ATC and any difference if alternate transponder or altitude source was manually selected.

55.5 SPECIAL EMPHASIS ITEMS: FLIGHT CREW TRAINING

The following items should also be included in flight crew training programme:

A. Knowledge and understanding of standard ATC phraseology used in each area of operations;

B. The importance of crewmembers cross-checking each other to ensure that ATC clearances are promptly and correctly complied with;

C. Use and limitations in terms of accuracy of standby altimeters in contingencies. Where applicable, the pilot should review the application of SSEC/PEC through the use of correction cards;

D. Problems of visual perception of other aircraft at 1,000 ft (550 m) planned separation during night conditions, when encountering local phenomena such as northern lights, for opposite and same direction traffic and during turns;

E. Characteristics of aircraft altitude capture systems that may lead to the occurrence of overshoots;

F. TCAS considerations, particularly during climbs/descents in RVSM airspace;

G. Relationship between the altimetry, automatic altitude control and transponder systems in normal and abnormal situations;

H. Aircraft operating restrictions (if required for the specific aircraft group) related to RVSM airworthiness approval; and

I. Contingency procedures in the event of equipment failures, including reporting procedures in the event of altitude errors exceeding requirements.

55.6 OTHER APPLICATION REQUIREMENTS

55.6.1 PAST PERFORMANCE

A. An operating history of the aircraft to be used should be included in the application.

B. The applicant should show any events or incidents related to poor height-keeping performance that may indicate weaknesses in training, procedures, maintenance or the aircraft group intended to be used.

55.6.2 MINIMUM EQUIPMENT LIST

A minimum equipment list (MEL), adopted from the master minimum equipment list (MMEL), should include items pertinent to operating in RVSM airspace.

55.6.3 MAINTENANCE

The operator should submit a maintenance programme at the time the operator applies for operational approval.

55.6.4 PLAN FOR PARTICIPATION IN VERIFICATION/MONITORING PROGRAMME

A. The operator shall provide a plan for participation in the verification/monitoring programme.

B. This programme will normally entail a check of at least a portion of the operator's aircraft by an independent height-monitoring system.

55.6.4.1 Verification/Monitoring Programme

A. A programme to monitor or verify aircraft height-keeping performance is considered a necessary element of RVSM implementation for at least the initial area where RVSM is implemented.

B. The verification/monitoring programme have the primary objective of observing and evaluating aircraft height-keeping performance to validate crew procedures, aircraft performance and maintenance procedures.

C. Each aircraft or group of aircraft is required to receive HMU approval.

D. Arrangements for GMU monitoring may be done by contacting ARINC Inc., Annapolis, Maryland, USA (telephone 410-266-4956 or fax 410-573-5507). The ARINC website is http://www.arinc.com for additional information.

55.7 APPLICATION REVIEW & EVALUATION

A. Once the application has been submitted, the CAAB will begin the process of review and evaluation. If the content of the application is insufficient, the CAAB will request additional information from the operator.

B. When all other airworthiness and operational requirements of the application are met, the CAAB will proceed with the validation flight(s).

C. This flight(s) may be conducted in conjunction with the verification/monitoring programme.

55.7.1 VALIDATION FLIGHT(S)

A. In some cases, the review of the RVSM application and programme may suffice for validation purposes. However, the final step of the approval process may be the completion of a validation flight(s).

B. The CAAB may accompany the operator on a flight through RVSM airspace to verify that operations and maintenance procedures and practices are applied effectively. If the performance is adequate, operational approval for RVSM airspace will be granted.

55.7.2 OPERATIONAL AUTHORISATION

After all open discrepancies have been closed, the:

A. AOC holder must can be issued a revision to Ops Specs to include the RVSM authorisation.

B. General Aviation Operator must be issued a Letter of Authorisation (General Aviation).

55.8 REMOVAL OF RVSM AUTHORITY

55.8.1 CONDITIONS FOR REMOVAL OF RVSM AUTHORITY

A. The incident of height-keeping errors that can be tolerated in an RVSM environment is very small. It is incumbent upon each operator to take immediate action to rectify the conditions that caused the error.

    1. The operator should also report the event to the CAAB within 72 hours with initial analysis of causal factors and measures to prevent further events.

    2. The requirement for follow-up reports should be determined by the CAAB.

B. Height-keeping errors fall into two broad categories: errors caused by malfunction of aircraft equipment and operational errors.

    1. An operator who consistently commits errors of either variety may be required to forfeit authority for RVSM operations.
    2. If a problem is identified that is related to one specific aircraft type, then RVSM authority may be removed from the operator for that specific type.

C. The operator should make an effective, timely response to each height-keeping error. The CAAB may consider removing RVSM operational approval if the operator's response to a height-keeping error is not effective or timely.

    1. The CAAB will also consider the operator's past performance in determining the action to be taken.

    2. If an operator shows a history of operational and/or airworthiness errors, then approval may be removed until the root causes of these errors are shown to be eliminated and RVSM programme and procedures are shown to be effective.

    3. The CAAB will review each situation on a case-by-case basis.

CHAPTER-56

REQUIRED NAVIGATION PERFORMANCE (RNP)

This chapter provides guidance for the CAAB Inspectors for authorization of aircraft operators for RNP operations.

56.1 GENERAL

A. This chapter contains criteria to be used by the CAAB when approving the use of onboard Area Navigation (RNAV) equipment requirements for AOC holders operating in a Basic Area Navigation (BRNAV) environment.

B. It also identifies types of RNAV equipment that the CAAB has determined to be acceptable for BRNAV and contains guidelines for AOC holders using global positioning system (GPS) equipment as the primary means for BRNAV.

C. This section represents one means but not the only means of satisfying the intent of ICAO *Doc. 9613-AN/937, Manual on RNP, First Edition, 1994*.

D. RNP-5/BRNAV airspace has been established in numerous areas of the world in an effort to maximize the flow of traffic in congested airspace. Inspectors should verify conformance of the AOC holder's navigation system to the RNP-5 standard and provide the approval necessary for aircraft in a BRNAV environment.

56.2 DEFINITIONS

The following definitions are used in this chapter:

A. Area Navigation (RNAV). This is a method that permits aircraft navigation along any desired flight path within the coverage of the associated navigation aids or within the limits of the capability of self-contained aids, or a combination of these methods.

B. RNAV equipment. That equipment which operates by automatically determining aircraft position from one, or a combination, of the following sensors with the means to establish and follow a desired path:

1. VOR/DME;
2. DME/DME;
3. INS* or IRS*; or
4. GPS*

C. Class I Navigation. Class I navigation is any en-route flight operation or portion of a flight operation conducted in an area entirely within the officially designated operational service volumes of ICAO standard airways navigation facilities.

D. Basic RNAV (BRNAV). For the purposes of this instruction, BRNAV is defined as RNAV that meets a track-keeping accuracy equal to or better than +/- 5 NM for 95% of the flight time (RNP-5).

E. This value includes signal source error, airborne receiver error, display system error and flight technical error.

F. This navigation performance assumes the necessary coverage provided by satellite or ground based navigation aid is available for the intended route to be flown.

G. Global Positioning System (GPS). This is a space-based positioning, velocity and time system composed of space, control and user elements.

1. The space element is nominally composed of 24 satellites in six orbital planes.

2. The control element consists of five monitor stations, three ground antennas and a master control station.

3. The user element consists of antennas and receiver processors that provide positioning, velocity and precise timing to the user.

H. Pseudo range. The distance from the user to a satellite plus an unknown user clock offset distance. With four satellite signals it is possible to compute position and offset distance. If the user clock offset is known, three satellite signals would suffice to compute a position.

I. Receiver Autonomous Integrity Monitoring (RAIM). A technique whereby a GPS receiver/processor monitors the GPS. This integrity determination is achieved by a consistency check among redundant measurements.

J. Required Navigation Performance (RNP). This is a statement of the navigation performance necessary for operation within a defined airspace.

K. Required Navigation Performance Type (RNP Type). RNP types are established according to navigational performance accuracy in the horizontal plane; that is, lateral and longitudinal position fixing. The type is identified as an accuracy value expressed in nautical miles (e.g., RNP-5).

56.3 BACKGROUND

A. Implementation of RNAV is one of the key elements to obtain system capacity improvements and should allow airspace users to benefit from more direct routings and greater fuel savings.

1. RNAV will allow greater flexibility in airspace design and reduce the need to depend totally on groundbased point source navigation aids when planning Air Traffic Services (ATS) routes.

B. RNP-5 was initially chosen for operations in European airspace to take account of existing aircraft equipage and the current navigation infrastructure.

1. Only RNAV-equipped aircraft having a navigation accuracy meeting RNP-5 may plan for operations under IFR on the ATS routes of the Flight Information Regions (FIR)/Upper Information Regions (UIR) and/or designated Standard Instrument Departures (SID) and Standard Terminal Arrival Routes (STAR) in/out of Terminal Management Areas identified in ICAO *Regional Supplementary Procedures Doc 7055/4*, paragraph 14.2.1.

C. Since the European experience, the establishment of RNP-5 airspace has expanded and is to become the standard in high density and other traffic areas.

56.4 APPROVAL PROCESS FOR RNP-5/BRNAV

A. AOC holders should address the guidance contained in this section to ensure that the requirements are met for:

1. RNAV system equipment, eligibility and usage limitations,

2. General operating procedures,

3. Pilot knowledge items,

4. Flight plan procedures, and

5. Any policy or procedures related to BRNAV operations that are required by foreign civil aviation authorities.

56.4.1 AOC HOLDER/RNAV SYSTEM APPROVAL FOR BRNAV

A. Aircraft Equipment. An aircraft may be considered eligible for BRNAV approval if it is equipped with one or more RNAV systems approved and installed in accordance with the guidance contained in this section.

B. The minimum level of availability and integrity required for BRNAV systems for use in designated BRNAV airspace can be met by a single installed system comprising one or more sensors, RNAV computer, control display unit and navigation display(s) (e.g. HSI or CDI), provided that the system is monitored by the flight crew and that in the event of a system failure, the aircraft retains the capability to navigate relative to ground based navigation aids (e.g. VOR, DME or NDB) without a degradation of navigation capability.

C. AOC holder/RNAV System Eligibility Based on the Aircraft Flight Manual (AFM) (Supplement).

56.4.2 AIRCRAFT BRNAV SYSTEM ELIGIBILITY

A. The aircraft should be considered eligible for BRNAV operations if the AFM shows that the navigation system installation has received airworthiness approval in accordance with US FAR 25, European JAR 25 or their equivalent.

B. Once equipment eligibility is established, AOC holder approval should proceed as specified in this section.

56.4.3 GENERAL AVIATION OPERATOR APPROVAL

A. General Aviation operators should review their AFM to establish that it shows RNAV system eligibility.

B. Once RNAV system eligibility has been established, the operator should take steps to ensure that BRNAV operations can and will be conducted in accordance with the guidance contained in this section as well as any other operational or airspace requirements that may be established by the authorities controlling the BRNAV airspace.

C. When these actions have been completed, the operator will submit a request to the CAAB for BRNAV approval and include a package verifying the ability to safely conduct BRNAV operations.

D. A Letter of Authorization (LOA) will be issued when eligibility is based on the AFM.

56.4.4 AOC HOLDER APPROVAL

AOC holders should present the following documentation to the CAAB:

A. The sections of the AFM that document airworthiness approval in accordance with an appropriate regulatory authority as detailed in this section; and

B. Training and operations manuals that reflect the operating policies of this section as well as any other operational or airspace requirements that may be established by the authorities controlling the BRNAV airspace.

1. Once the AOC holder has addressed the guidance in this section to the satisfaction of the CAAB, Section H of the Ops Specs will be re-issued to reflect RNP-5/BRNAV approval.

56.4.5 DEMONSTRATION FLIGHT

A. A demonstration flight(s) will not be required if previous Ops Specs or a LOA were issued permitting MNPS airspace operations and/or RNAV operations.

B. If the application for RNP-5/BRNAV approval is an initial application involving the use of longrange navigation systems, the requirement for a demonstration flight(s) will be established during the Formal Application phase of the certification process.

56.4.6 AOC CASORT ORG ENTRY

Following the successful conclusion of the demonstration flight for an AOC holder, a new record will be entered to include the RNP-5/BRNAV authorization.

56.4.7 OPERATIONAL AUTHORISATION

After all open discrepancies have been closed, the:

A. AOC holder must can be issued a revision to Ops Specs Section H to include the RNP-5/BRNAV authorisation.

B. General Aviation Operator must be issued a Letter of Authorisation (General Aviation).

56.5 ELIGIBILITY NOT BASED ON THE AIRCRAFT FLIGHT MANUAL (SUPPLEMENT)

A. The AOC holder may not be able to determine the airborne equipment's eligibility from the AFM. In such cases, the CAAB shall be provided with the RNAV system make, model and part number, evidence from the manufacturer of meeting RNP-5 accuracy requirements, the BRNAV system requirements, crew operating procedures, bulletins and any other pertinent information that would support a claim of the suitability of the proposed equipment and its use for BRNAV operations.

C. Once the aircraft and navigation equipment have been deemed to be eligible for BRNAV operation, the AOC holder will submit the remaining documentation requirements, as appropriate, with the request for BRNAV approval.

56.6 LIMITATIONS ON THE DESIGN AND/OR USE OF NAVIGATION SYSTEMS

Although the following navigation systems have RNAV capability, limitations are required for their use when conducting operations in designated BRNAV airspace.

56.6.1 INERTIAL NAVIGATION SYSTEMS (INS)

A. Those approved INS system installations that meet the required functions, but do not have automatic radio navigation updating of INS position, are limited to a maximum 2-hour time limit for operation in designated BRNAV airspace from the time that the system is placed in the navigation mode (NAV SELECT).

B. The CAAB will give consideration to extending the 2-hour time limit for specific INS configurations. Requests for time extensions should be submitted with supporting rationale and data to the Flight Safety Department.

56.6.2 GLOBAL POSITIONING SYSTEMS (GPS)

56.6.2.1 GPS DESIGN

GPS should provide pseudo range step detection and health word checking functions in accordance with the appropriate provisions established by CAAB. Compliance with these requirements can be established by one of the following:

A. A Statement in the AFM(s) that the GPS equipment meets the criteria for Primary Means of Navigation in Oceanic and Remote Airspace;

B. A placard on the GPS receiver evidencing it meets the TSO-129 or equivalent standard;

C. A letter of design approval for the applicable equipment from the Civil Aviation Authority of the country of manufacture of the aircraft. AOC holders should contact the avionics installer or manufacturer to determine if the equipment complies and if a letter of design approval is available. AOC holders should keep this letter with the AFM entry as evidence of BRNAV eligibility; or

D. GPS equipment that has been approved in accordance with TSO C-129 or equivalent, but which does not satisfy the step detection and health word checking, may still obtain a letter of design approval for BRNAV. In this case, BRNAV operations are limited to flights where RAIM outages do not exceed 5 minutes.

56.6.2.2 FLIGHT PLANNING RESTRICTIONS FOR GPS

During pre-flight planning, if 24 satellites (23 if baro-aiding is incorporated into the GPS installation) are projected to be operational for the flight, then the aircraft can depart without further action.

A. If, however, 23 or fewer satellites (22 if baro-aiding incorporated) are projected to be operational, then the availability of GPS integrity (RAIM) should be confirmed for the intended flight (route and time).

B. This should be obtained from a prediction programme that is provided in the GPS unit installed in the aircraft, a prediction programme run outside the aircraft (such a programme should use the same algorithms as those in the aircraft GPS units), or from an alternative method considered acceptable to the CAAB.

C. In the event of a predicted continuous loss of RAIM of more than 5 minutes for any part of the intended flight, the flight should be delayed, cancelled or re-routed on a track where RAIM requirements can be met.

56.6.2.3 Loss of RAIM En-route

A. In the event of loss of the RAIM detection function, the GPS stand-alone equipment may continue to be used for navigation as long as the flight crew determines, by cross-checking other on-board navigation systems, that the GPS system is continuing to provide an acceptable level of IFR navigation performance.

B. Otherwise, the flight crew should notify ATC and revert to an alternative means of navigation (e.g., VOR, DME or NDB).

56.6.2.4 ACTIONS WHEN FAILURE DETECTED

A. In the event of a detected failure (including detected failure of satellites for GPS-based RNAV systems), the flight crew should notify ATC and revert to an alternative means of navigation.

B. Availability of VOR, DME or ADF. VOR, DME or ADF capability should be installed and operative consistent with the applicable operating rules and intended route-of-flight to ensure availability of a suitable alternative means of navigation in the event of GPS/RNAV system failure.

56.7 BRNAV OPERATING PROCEDURES

For BRNAV operations, the flight crew should be familiar with the normal operating procedures and the contingency procedures detailed as follows:

56.7.1 NORMAL PROCEDURES

The procedures for the use of navigational equipment on BRNAV routes should include the following:

A. When a navigation database is installed, the database validity should be checked before the flight; and

B. Other NAVAIDs (e.g., VOR, DME and ADF) should be selected so as to allow immediate cross-checking or reversion in the event of loss of RNAV capability.

56.7.2 CONTINGENCY PROCEDURES

The flight crew should notify ATC of conditions (e.g., equipment failures and weather conditions) that may affect the ability of the aircraft to maintain position within the designated BRNAV airspace.

A. In this case, flight crews should state their intentions, coordinate a plan of action and obtain a revised ATC clearance.

B. If unable to obtain an ATC clearance prior to deviating from the BRNAV airspace, the flight crew should follow established contingency procedures, as defined by the region of operation, and obtain an ATC clearance as soon as possible.

56.7.3 PILOT KNOWLEDGE

Pilots should be knowledgeable in the following areas:

A. RNP definition as it relates to BRNAV requirements in the appropriate airspace;

B. Airspace where RNP-5 is required;

C. Changes to charting and documents to reflect RNP-5;

D. Navigation equipment required to be operational for flight in designated BRNAV airspace and limitations associated with the RNAV equipment;

E. Flight planning requirements;

F. Contingency procedures (e.g. for equipment failure);

G. En-route, terminal and approach procedures applicable to RNAV;

H. The procedures for navigation accuracy determination and record-keeping; and

I. The information in this section.

56.7.4 FLIGHT PLANS

Bangladesh-registered aircraft filing flight plans into BRNAV-designated airspace are expected to meet the BRNAV airspace requirements.

A. AOC holders should indicate approval for BRNAV/RNP-5 operations by annotating block 10 (Equipment) of the ICAO flight plan with the letter "R".

B. If there are any other flight plan annotations required by individual States, AOC holders should make appropriate annotations.

56.7.5 NAVIGATION ERROR RECORD KEEPING

A. AOC holders shall establish a programme for recording navigational errors so as to ensure that the accuracy of the navigation system is being maintained.

B. Flight crews will be trained in this programme and the procedures so developed will be reflected in the Company Operations Manual.

CHAPTER-57

GPS-BASED AREA NAVIGATION (RNAV)

This chapter provides guidance for authorization of aircraft operators for area navigation instrument flight operations using the GPS.

57.1 GENERAL

A. Instrument flight has traditionally been restricted to flying along routes connected by ground-based navigation aids. But, technology has evolved to the extent that reliance on this traditional means of instrument navigation is no longer necessary.

1. Modern flight management systems are capable of incorporating navigation information from ground or satellite-based sources that enable aircraft to take direct routes during all phases of IFR flight.

2. Furthermore, vertical guidance is available for use during en-route and terminal operations.

B. Detailed guidance covering most aspects of RNAV approvals may be found in the following U.S. FAA documents (equivalent guidance from other Aviation Authorities may be acceptable):

1. AC 25-15, *Approval of Flight Management Systems in Transport Category Airplanes*;

2. AC 90-45A, *Approval of Area Navigation Systems for Use in the U.S. National Airspace System*;

3. AC 20-163, *Airworthiness Approval of GPS Navigation Equipment For Use As a VFR and IFR Supplemental Navigation System*;

4. AC 90-94, *Guidelines for Using GPS Equipment for IFR En Route and Terminal Operations and for Non-precision Instrument Approaches in the U.S. National Airspace System*; and

5. Document N8110.60, *GPS as a Primary Means of Navigation for Oceanic/Remote Operations*.

57.2 APPROVAL OF GPS RNAV

57.2.1 GENERAL

In most cases, GPS-equipped aircraft will already be certified with an approved RNAV system, which only leaves the training in its use to be approved.

A. In instances where the RNAV system is installed “after market”, airworthiness approval will be required in addition to the operations approval.

B. In all cases, a Company Operations/Training Manual change incorporating the RNAV training programme would be required for air operators.

57.2.2 AOC CASORT ORG ENTRY

Following the successful conclusion of the demonstration flight for an AOC holder, a new record will be entered to include the *GPS NAV* authorization.

57.2.3 OPERATIONAL AUTHORISATION

After all open discrepancies have been closed, the:

A. AOC holder must can be issued a revision to Ops Specs to include the GPS NAV authorization.

B. General Aviation Operator must be issued a Letter of Authorization (General Aviation).

C. Individual operators would be required to show they have received the training required by this chapter.

57.3 CONDITIONS FOR USE OF GPS RNAV

57.3.1 DEFINITIONS

57.3.1.1 PRIMARY MEANS OF NAVIGATION

A. A primary-means navigation system is a navigation system approved for a given operation or phase of flight that must meet accuracy and integrity requirements, but need not meet full availability and continuity of service requirements. Safety is achieved by limiting flights to specific time periods and through procedural restrictions.

B. Primary-means navigation systems, under the right GPS constellation conditions, may be used as the only required means of satisfying the necessary levels of accuracy, integrity and availability for a particular area, route, procedure or operation.

C. The use of primary-means equipment requires that flights be planned for times when GPS signals will support operations. This pre-flight planning is achieved through the use of a Receiver Autonomous Integrity Monitoring (RAIM) prediction programme, and certain dispatch conditions apply.

57.3.1.2 Class II Navigation

Any en-route flight operation or portion of an en-route operation (irrespective of the means of navigation), which takes place outside (beyond) the designated Operational Service Volume of ICAO standard airways navigation facilities (VOR, VOR/DME, NDB).

57.3.1.3 Fault Detection and Exclusion (FDE)

Capability of GPS to:

A. Detect a satellite failure which effects navigation; and

B. Automatically exclude that satellite from the navigation solution.

57.4 REQUIRED MINIMUM CONVENTIONAL NAVIGATION EQUIPMENT

A. Operators of aircraft using RNAV systems incorporating GPS as the primary means of navigation must ensure their aircraft are fitted with at least the minimum conventional navigation equipment specified by regulations for IFR or VFR flight.

1. For IFR flight, that would mean sufficient radio navigation equipment to permit the pilot, in the event of the failure at any stage of the flight of any item of that equipment, including any associated flight instrument display, to proceed to the destination aerodrome or proceed to another aerodrome that is suitable for landing, complete an instrument approach and, if necessary, conduct a missed approach procedure.

2. This means the aircraft must be fitted with the appropriate navigation equipment to fly the route if GPS failure occurs (VOR/DME, ADF for domestic operations and in addition, INS/IRS for long range international operations).

B. The navigation database must be current and existing fixes/waypoints used for navigation shall be retrieved from the database, unless ATC assigns a pseudo-fix consisting of a latitude and a longitude.

57.5 USE OF GPS: IFR EN-ROUTE & TERMINAL OPERATIONS

GPS may be used as the primary means of IFR flight guidance for en-route and terminal operations, including STARs and SIDs, subject to the following provisions:

A. When selecting an alternate aerodrome, if required, the determination of the alternate weather minima for that aerodrome shall be based on any conventional approaches published for that aerodrome not on GPS approaches, unless GPS is the only available approach; and

B. When filing flight plans, the COM/NAV equipment suffix “G” must be used to indicate GNSS capability.

57.6 USE OF GPS: IFR APPROACHES/MISSED APPROACHES

57.6.1 PRIMARY MEANS OF NAVIGATION

57.6.1.1 GENERAL

GPS may be used as the primary means of IFR flight guidance for published GPS approaches and missed approaches provided:

A. The GPS navigation database contains the GPS approach to be flown and the approach is retrieved from that database.

B. The database must store the location of all waypoints required to define the approach and present them in the order depicted on the published instrument approach procedure chart.

C. Approach waypoints must be verified either by confirming the coordinates or ensuring that the bearing and distance information between waypoints is consistent with charted data;

D. When communicating with ATC, the pilot shall request the approach by its published name (for example, for the GPS Rwy 12 approach at Hanoi: "RNAV RWY 12");

57.6.1.2 COINCIDENT WITH CONVENTIONAL APPROACH

For GPS approaches that are coincident with a conventional approach, the pilot does not commence using or continue to use GPS for the approach if a receiver autonomous integrity monitoring (RAIM) warning is displayed or there is some other malfunction of the GPS equipment.

A. If the warning precludes the approach but GPS en-route navigation is still possible, maintain the missed approach altitude and follow the missed approach routing for the GPS approach being flown.

B. If a complete loss of GPS is experienced and VFR flight is not possible, revert to the conventional approach, maintain the missed approach altitude and follow the missed approach routing for the conventional approach. Advise ATC as soon as possible; and

57.6.1.3 NOT COINCIDENT WITH CONVENTIONAL APPROACH

For GPS approaches that are not coincident with a conventional approach, the pilot does not commence using or continue to use GPS for the approach if a RAIM warning is displayed or there is some other malfunction of the GPS equipment.

A. If the warning precludes the approach but en-route navigation is still possible, maintain the missed approach altitude and follow the missed approach routing.

B. If a complete loss of GPS is experienced and VFR flight is not possible, climb to the appropriate minimum sector altitude immediately, advise ATC and request further clearance/vectoring.

57.6.2 SUPPLEMENTARY MEANS OF NAVIGATION

GPS may be used as a supplementary means of IFR flight guidance for published approaches based on conventional navigation aids provided:

A. The primary navigation aid is a ground-based navigation aid and the GPS is used as backup;

B. The GPS navigation database contains the non-precision approach to be flown. The database must store the location of all waypoints required to define the approach and present them in the order depicted on the published instrument approach procedure chart; and

C. When communicating with ATC, the pilot shall request the approach by its published name (for example, for the VOR Rwy 12 approach at Hanoi: "VOR RWY 12").

57.7 GPS NAVIGATION PROCEDURES

The following procedures shall be followed by pilots using GPS for navigation:

A. Continuously monitor the GPS by comparing with conventional navigation systems where possible;

B. If a RAIM warning occurs while using GPS as the primary means of navigation, discontinue use of the GPS, advise ATC and obtain a revised clearance;

C. When using GPS as a supplementary aid, in the event of a discrepancy between GPS and conventional navigation information, discontinue GPS navigation and use the conventional navigation system. Report the circumstances to ATC;

D. When responding to ATC requests for a distance from a VOR or a fix based on DME, GPS distance may be used. In replying, pilots shall use the phraseology "30 miles from the _____ VOR" or "30 miles from the _____ fix" for GPS distance, or "30 DME from the _____ VOR" or "30 DME from the _____ fix" for DME distance; and

E. Where a fix is defined overhead an NDB, VOR or by an ADF or VOR/DME bearing(s), the pilot may use GPS waypoints for navigational reference in their place when the GPS position coincides with the fix.

57.8 TRAINING

57.8.1 GENERAL

A. Due to the increasing use of GPS as the preferred means of navigation and the relative simplicity of inertial systems, this section will focus on GPS training requirements. Training in RNAV systems based on ground-based navigation aids and inertial reference will be similar but not as extensive.

B. Holders of air operator certificates and individual operators must ensure that the required training has been completed. Air operators shall submit their training programme for approval prior to undertaking the training.

1. If the content appears satisfactory, interim approval will be granted and training may commence.

2. In some cases, final approval may be issued immediately.

3. Individual operators may take out-sourced training but must ensure the programme includes all the elements outlined below and must provide proof of this when seeking approval to conduct RNAV operations.

57.8.2 GENERAL TRAINING

A. To qualify for use of RNAV systems in IFR operations, including RNAV approaches, an air operator shall have an approved flight crew training and qualifications programme for use of the system.

1. All flight crew shall have completed the appropriate training and, in addition, flight crew involved in air transport operations shall have completed an in-flight check or an equivalent check in an approved synthetic training device.

B. Training shall be in the following areas:

1. Pre-flight;
2. Normal operation of the system;
3. Procedures for manually updating the system;
4. Methods of monitoring, cross checking and recording system information;
5. Operation in area of compass unreliability;
6. Malfunction procedures;
7. Terminal procedures;
8. Waypoint symbology, plotting procedures, record keeping duties/practices;
9. Time keeping procedures; and
10. Post-flight.

C. Where pilots are required to use more than one type of GPS for approach, the training programme shall address the differences between the units, unless the units have been determined by the CAAB to be sufficiently similar.

D. Ground training shall include "hands on" training using a desk top simulator, a computer based simulation of the unit to be used, a static in-aircraft unit or other ground training device acceptable to the CAAB.

57.8.3 GROUND TRAINING: NON-INTEGRATED RECEIVERS (PANEL MOUNTED GPS RECEIVERS)

An operator shall ensure that the training programme candidates are trained to proficiency in each of the elements associated with the following areas:

57.8.3.1 KNOWLEDGE

The GPS system, including:

1. GPS system components and aircraft equipment;
2. The composition of satellite constellation;
3. The minimum number of satellites required for 2-D and 3-D navigation;
4. The basic concept of satellite ranging;
5. Factors affecting the accuracy of GPS signals;
6. The World Geodedic Survey 84 (WGS 84) datum and the effect of using any other datum;
7. Human factors applicable to the use of GPS and how errors may be reduced or eliminated;
8. Company standard operating procedures for using GPS units; and
9. Procedures for reporting GPS problems and database errors.
10. Ability to perform the following operational tasks:
11. Select appropriate operational modes;
12. Recall categories of information contained in the database;
13. Predict RAIM availability and enter and verify user defined waypoints;
14. Recall and verify database waypoints;
15. Interpret typical GPS navigational displays including latitude/longitude, distance and bearing to waypoint, course deviation indication (CDI), desired track (DTK), track made good (TMG), actual track (TK), cross track error and any other information appropriate for the equipment used;
16. Intercept and maintain GPS defined tracks;

17. Determine navigation information appropriate for the conduct of the flight including ground speed (GS), estimated time of arrival (ETA) for next waypoint and destination;
18. Recognition of waypoint passage;
19. Use of 'direct to' function;
20. Link en-route portion of GPS flight plan to approach;
21. Conduct SIDs, STARs, terminal area procedures and holds;
22. Retrieve, verify and conduct GPS stand alone approaches; and
23. Conduct GPS missed approaches.

57.8.3.2 OPERATIONAL & SERVICEABILITY CHECKS

Ability to conduct the following operational and serviceability checks

1. Database currency and area of operation;
2. Receiver serviceability;
3. RAIM status;
4. CDI sensitivity;
5. Position indication; and
6. Number of satellites acquired and, if available, satellite position information.

57.8.3.3 WARNINGS & MESSAGES

Ability to recognize and take appropriate action for all GPS warnings and messages including, where applicable:

1. Loss of RAIM";
2. "2D navigation";
3. “In Dead Reckoning Mode";
4. "Database out of date";
5. "GPS fail"
6. "Barometric input fail";
7. "Power/battery low" or "fail";
8. "Parallel offset on"; and
9. "Satellite fail".

57.8.4 GROUND TRAINING: INTEGRATED RECEIVERS (FLIGHT MANAGEMENT SYSTEMS)

An operator shall ensure that the training programme candidates are trained to proficiency in each of the elements associated with the following areas—

57.8.4.1 GPS SYSTEMS

Knowledge with the respect to the GPS system and theory of operation, including:

1. GPS system components and aircraft equipment;
2. The composition of satellite constellation;
3. The minimum number of satellites required for 2-D and 3-D navigation;
4. The basic concept of satellite ranging;
5. Factors affecting the accuracy of GPS signals;
6. The WGS84 datum and the effect of using any other datum; and
7. Human factors applicable to the use of GPS and how errors may be reduced or eliminated (i.e. maintaining situational awareness).

57.8.4.2 OPERATIONAL TASKS

Ability to perform the following operational tasks:

1. Predict RAIM availability;
2. Link en-route portion of GPS flight plan to approach;
3. Conduct GPS stand alone approaches; and
4. Conduct GPS missed approaches.

57.8.4.3 OPERATIONAL & SERVICEABILITY CHECKS

Ability to conduct the following operational and serviceability checks:

1. RAIM status;
2. CDI sensitivity; and
3. Number of satellites acquired and, if available, satellite position information.

57.8.4.4 WARNINGS & MESSAGES

Ability to recognize and take appropriate action for all GPS warnings and messages including, where applicable:

1. "Loss of RAIM";

2. "2D navigation";
3. "GPS fail";
4. "Barometric input fail"; and
5. "Satellite fail".

57.9 FLIGHT TRAINING

A. Pilots shall complete flight training in the use of GPS for approach and other associated duties for each crew position they are authorized to occupy. Flight training may be completed in an aircraft, or in a level A or higher simulator that is equipped with the same model of GPS receiver (or a model determined by the CAAB to be sufficiently similar) that is installed in company aircraft.

B. Flight training shall be conducted by a designated training pilot who has completed the company ground training programme approved by the CAAB, and demonstrated proficiency in the use of the model of GPS (or a model determined by the CAAB to be sufficiently similar), or to an approved check pilot.

CHAPTER-58

CATEGORY II & CATEGORY III LANDING MINIMA APPROVAL

This chapter provides guidance for authorization of aircraft operators for Category II and Category III approach and landing operations.

58.1 GENERAL

A. The regulations require that aircraft cannot be descended below established minima during instrument approaches unless the required visual reference has been established.

1. International convention has established the standard minima for precision and non-precision approaches and these values have been applied to all approaches and published in the appropriate IFR publications.

2. The lowest standard approach minimum for a precision approach is 200 feet above the touchdown zone elevation.

3. Technology, training and equipment improvements now enable this “standard” minimum to be lowered. Accordingly, there is the capability for aircraft to land automatically or manually to limits of zero feet and zero visibility.

B. Depending on a variety of factors, an operator may be granted approval to conduct the following categories of approaches to the limits specified:

C. This section contains the criteria pertaining to operations and flight crew to be used by Operations Inspectors when asked to approve Category (CAT) II and III landing minima for operators.

1. When the criteria for approval are met, an Ops Specs revision will be made to Section H, as applicable, or a LOA for GA aircraft operators will be issued.

2. The Ops Specs will included specific reference to the location of the applicable policy and procedure in the company manual system.

3. The LOA will contain specific guidance regarding pilots, aircraft and airports when CAT II and CAT III landing minima are used.

D. The complete requirements specified in the US FAA Advisory Circular (AC) 120-29A and 91-16 (as amended) for CAT II and AC 120-28D (as amended) for CAT III, or their equivalents, must be met prior to issuing the appropriate Ops Specs.

58.2 TRAINING

A. Operators requesting CAT II and III landing minima shall provide flight crew member training programme for low visibility operations that include structured courses of ground and simulator training.

B. Flight crew members with no previous CAT II or III experience must complete the initial training programme prescribed in this section.

58.2.1 INITIAL GROUND TRAINING

Operators requesting CAT II and III landing minima shall provide an initial ground training course for low visibility operations that covers at least:

A. The characteristics and limitations of the precision approach being used;

B. The aircraft requirements to conduct CAT II/III approaches;

C. The ground system requirements to conduct CAT II/III approaches;

D. The characteristics of the visual aids;

E. The effect on minima caused by changes in the status of ground installations;

F. The effects of known unserviceabilities and the use of minimum equipment lists;

G. Operating limitations resulting from airworthiness certification;

H. Guidance on the visual cues required at decision height (DH), if applicable, together with information on maximum deviation allowed from glide path or localizer;

I. The importance and significance of Alert Height (AH), if applicable, and the action in the event of any failure above and below the AH;

J. The characteristics of fog;

K. The operational capabilities and limitations of the particular airborne system;

L. The effects of precipitation, ice accretion, low level wind shear and turbulence;

M. The effect of specific aircraft malfunctions;

N. The use and limitations of RVR assessment systems;

O. The principles of obstacle clearance requirements;

P. Recognition of and action to be taken in the event of failure of ground equipment;

Q. The procedures and precautions to be followed with regard to surface movement during operations when the RVR is 600ft (180m) or less;

R. The significance of DH based upon radio altimeters and the effect of terrain profile in the approach area on radio altimeter readings and on the automatic approach/landing systems;

S. The qualification requirements for pilots to obtain and retain approval to conduct CAT II and III operations; and

T. The importance of correct seating and eye position.

58.2.2 INITIAL SIMULATOR TRAINING

58.2.2.1 GENERAL REQUIREMENTS

A. The operator's simulator training for low visibility operations shall include:

1. Checks of satisfactory functioning of equipment, both on the ground and in flight;

2. Monitoring of automatic flight control systems and autoland status annunciators with emphasis on the action to be taken in the event of failures of such systems; and

3. Actions to be taken in the event of failures such as engines, electrical systems, hydraulics or flight control systems.

B. An operator must ensure that each flight crew member is trained to carry out his duties and instructed on the co-ordination required with other crew members.

C. Training must be divided into phases covering normal operation with no aircraft or equipment failures but including all weather conditions that may be encountered and detailed scenarios of aircraft and equipment failure which could affect CAT II or III operations. If the aircraft system involves the use of hybrid or other special systems (such as heads-up displays or enhanced vision equipment) then flight crew members must practise the use of these systems in normal and abnormal modes during the simulator phase of training.

D. Incapacitation procedures appropriate to CAT II and III operations shall be practised.

58.2.3 REQUIRED EXERCISES

A. CAT II and III training shall include at least the following exercises:

1. Approaches using the appropriate flight guidance, autopilots and control systems installed in the aircraft, to the appropriate DH and to include transition to visual flight and landing;

2. Approaches with all engines operating using the appropriate flight guidance systems, autopilots and control down to the appropriate DH followed by a missed approach, all without external visual reference;

3. Where appropriate, approaches utilizing automatic flight systems to provide automatic flare, landing and roll out; and

4. Normal operation of the applicable system both with and without acquisition of visual cues at decision height.

B. Subsequent phases of training must include at least:

1. Approaches with engine failure at various stages on the approach;

2. Approaches with critical equipment failures (e.g. electrical systems, autoflight systems, ground and/or airborne ILS/MLS/GPS systems and status monitors);
3. Approaches where failures of autoflight equipment at low level require either:

a. Reversion to manual flight to control flare, landing and roll out or missed approach; or

b. Reversion to manual flight or a downgraded automatic mode to control missed approaches from, at or below DH including those that may result in a touchdown on the runway;

4. Failures of the systems which will result in excessive localizer and/or glideslope deviation, both above and below DH/AH, in the minimum visual conditions authorised for the operation.

5. In addition, a continuation to a manual landing must be practised if a heads-up display forms a downgraded mode of the automatic system or the heads-up display forms the only flare mode; and

6. Failures and procedures specific to the aircraft type or variant.

C. The training programme must provide practice in handling faults that require a reversion to higher minima.

D. The training programme must include the handling of the aircraft when, during a CAT III approach, the fault causes the autopilot to fail at or below DH/AH when the last reported RVR is 1000ft (300m) or less.

58.3 FLIGHT CREW MEMBER QUALIFICATIONS – AOC HOLDERS

A. Prior to being authorised for unrestricted CAT II/III approaches:

1. The pilot conducting the approach shall have acquired the following as part of the line indoctrination training on the aircraft type being flown under the supervision of a qualified company training pilot or Check Pilot:

2. For CAT II operations, a minimum of 3 manual landings from autopilot disconnect at DH; and

3. For CAT III operations, a minimum of 3 autolands except that only 1 autoland is required if the simulator training had been completed in a Level D simulator;

    a. The pilot conducting the approach shall have acquired a minimum of 100 hours or 20 sectors on the aircraft type, whichever is earlier, unless converting from a similar type aircraft (turbo-prop to turbo-prop or turbo-jet to turbo-jet) in which he/she had maintained a CAT II/III qualification to the same limits prior to conversion.

    b. Upon completion of the line indoctrination training on the new aircraft, such pilots may be authorised for CAT II/III operations; and

    c. While acquiring the required experience and for an additional 100 hours or 20 sectors on type, whichever is earlier, 300 ft (90m) must be added to the applicable CAT II or III RVR unless:

        1. The flight crew includes a qualified training pilot or a check pilot; or

        2. He/she has been previously qualified for CAT II or III operations with a CAAB approved operator.

B. Prior to a pilot conducting a CAT II/III approach:

    A. He /she shall have completed the CAT II/III training within the preceding 12 months; and
    B. He /she shall have been checked by a CAAB Flight Operations Inspector or a check pilot within the preceding 6 months.

58.4 FLIGHT CREW MEMBER QUALIFICATIONS – GENERAL AVIATION

A. The pilot conducting the approach shall have completed the qualification requirements of this section under the supervision of another pilot qualified in CAT II/III operations on that aircraft type.

B. The pilot conducting the approach shall acquire specified experience except that the RVR increase may be disregarded:

    1. If the crew includes another pilot qualified in CAT II/III operations on that aircraft type or

    2. The pilot has had previous CAT II/III experience in aircraft of a similar type.

C. The pilot shall, within the preceding 12 months prior to conducting a CAT II or III approach, have completed the CAT II/III training and been checked by a CAAB Flight Operations Inspector.

58.5 CONVERSION TRAINING REQUIREMENTS

An operator shall ensure that each flight crew member completes the following CAT II/III training if converting to a new type or variant of aircraft in which CAT II and III operations will be conducted:

A. Ground Training. The appropriate initial training requirements, taking into account the flight crew member's CAT II and CAT III training and experience.

B. Simulator Training:

1. A minimum of eight (8) approaches and/or landings in a simulator approved for the purpose.

2. Additional training if any special equipment is required that the pilot has no previous experience, such as heads-up displays or enhanced vision equipment.

58.6 SUPERVISED LINE FLYING

An AOC holder must ensure that each flight crew member undergoes the following line flying under supervision:

A. For CAT II, a minimum of three (3) landings from autopilot disconnect at DH; and

B. For CAT III, a minimum of three (3) autolands except that only one autoland is required when the required simulator training has been carried out in a Level D flight simulator.

58.7 RECURRENT TRAINING & CHECKING

A. An operator must ensure that, in conjunction with the normal recurrent training and operator proficiency checks, a pilot's knowledge and ability to perform the tasks associated with the particular category of operation for which he is authorised is checked.

1. The required number of approaches to be conducted during such recurrent training is to be a minimum of two, one of which is to be a missed approach.

B. An operator must use a flight simulator approved for CAT II/III training.

C. An operator must ensure that, for CAT III operations on aircraft with a fail-passive flight control system, a missed approach is completed at least once every 18 months as the result of an autopilot failure at or below DH/AH when the last reported RVR was 1000ft (300m) or less.

58.8 CATEGORY II/III RECENCY REQUIREMENTS

A. An operator must ensure that, in order for pilots to maintain a CAT II or CAT III qualification, they have conducted:

1. A minimum of 3 approaches and landings using approved CAT II/III procedures during the previous six month period,

2. At least one of which must be conducted in the aircraft.

B. An operator may not substitute this recency requirement for recurrent training.

58.9 MANUAL REQUIREMENTS

A. AOC holders are required to amend their flight crew training manual to reflect their CAT II/III training programme.

B. In addition, a Company Operations Manual amendment will be required to establish the dispatch and operating procedures associated with CAT II/III.

C. Finally, SOP amendments may be required, particularly if company procedures restrict the approaches to Captains only.

58.9.1 OPERATIONAL AUTHORISATION

A. After successful accomplishment of the training and all open discrepancies have been closed, the operator can be re-issued the operations specifications (AOC holder) or Letter of Authorization to General Aviation.

B. The CAAB may impose higher minima than the lowest applicable for an additional period.

D. The increase in minima will normally only refer to RVR and/or a restriction against operations with no DH, and must be selected such that they will not require any change in the operational procedures.

58.10 OPERATIONAL AUTHORISATION WITH LIMITING FACTORS

After successful accomplishment of the training/checking and all open discrepancies have been closed, the operator can be issued an Ops Specs revision to include the LVTO authorization (for AOC holders) or Letter of Authorization to General Aviation. Demonstrated limiting factors that may be cited:

A. RVR 600; X-W 5 kts

B. RVR 1200; X-W 10 kts

C. RVR 1800; X-W 12 kts

58.11 MONITORING PROGRAMME

A. After obtaining the initial authorisation, the operations must be continuously monitored by the operator to detect any undesirable trends before they can become hazardous.

1. Close liaison with the operator's maintenance personnel is required.

2. For AOC holders, the following information must be submitted to the Flight Operations Department and retained for a period of 12 months:

B. The total number of approaches, by aircraft type, where the airborne CAT II or III equipment was utilized to make satisfactory approaches (actual or practice) to the applicable CAT II/III minima;

C. Reports of unsatisfactory approaches and/or automatic landings, by aerodrome and aircraft registration, in the following categories:

1. Airborne equipment faults (these may be recorded through the Maintenance Reliability programme);

2. Ground facility difficulties;

3. Missed approaches because of ATC instructions; or

4. Other reasons.

D. An operator must establish a procedure to monitor the performance of the autoland system of each aircraft. This is usually accomplished through the Maintenance Reliability programme for AOC holders.

CHAPTER-59

LOWER-THAN-STANDARD TAKE-OFF MINIMA APPROVAL

This chapter provides guidance for authorization of aircraft operators for low visibility takeoff operations associated with all weather operations.

59.1 GENERAL

A. This chapter contains criteria to be used by operations inspectors when asked to approve lower-than-standard take-off minima for AOC holders or individual operators.

1. When the criteria for approval are met, a revision to the operations specifications will be issued to include any requirements regarding pilots, aircraft and aerodromes when lower-than-standard take-off minima are used.
2. If an operator is not authorized to use lower-than-standard take-off minima, this authorization will not appear in their Ops Specs.

B. The CAR '84 require that an operator's aircraft may only take off in weather conditions that are at or above those published for the departure airport.

1. The normal minimum visibility for take-off is ½ statute mile, which equates to a Runway Visual Range (RVR) of 2600ft or 2650ft in some countries (approximately 790/730m).
2. However, the published value may be greater, in which case the higher value is to be observed.
3. Take-off minima below the standard may be approved down to as low as RVR 600 (approximately 180m).

59.2 TRAINING

59.2.1 GENERAL

A. Operators requesting lower-than-standard take-off minima shall develop flight crew member initial and annual recurrent training programme for low visibility operations that include structured courses of ground, simulator and/or flight training.

B. Flight crew members with no previous lowerthan- standard take-off visibility experience must complete the full training programme prescribed in this section.

59.2.2 INITIAL GROUND TRAINING

Operators requesting lower-than-standard take-off minima shall provide an initial ground training course for low visibility operations that covers at least the following subject elements:

A. The aircraft requirements to conduct CAT II/III approaches;

B. The ground system requirements to conduct CAT II/III approaches;

C. The characteristics of the visual aids;

D. The characteristics of fog;

E. The operational capabilities and limitations of the particular airborne system;

F. The effects of precipitation, ice accretion, low level wind shear and turbulence;

G. The effect of specific aeroplane malfunctions;

H. The use and limitations of RVR assessment systems;

I. The principles of obstacle clearance requirements;

J. Recognition of and action to be taken in the event of the failure of ground equipment;

K. The procedures and precautions to be followed with regard to surface movement during operations when the RVR is 1200ft or less (approximately 615m) and any additional procedures required for take-off in conditions as low as RVR 600 (approximately 180m);

L. The qualification requirements for pilots to obtain and retain approval to conduct low visibility take-offs;

M. The importance of correct seating and eye position; and

N. Take-off alternate requirements.

59.2.3 INITIAL SIMULATOR TRAINING & AIRCRAFT TRAINING

A. The operator's simulator and/or initial flight training for low visibility operations shall include events that demonstrate the following:

1. Checks of satisfactory functioning of equipment, both on the ground and in flight;

2. Effect on minima caused by changes in the status of ground installations;

3. Actions to be taken in the event of failures such as engines, electrical systems, hydraulics or flight control systems;

4. The effects of known unserviceabilities and the use of minimum equipment lists;

5. Operating limitations resulting from airworthiness certification;

6. Rejected take-offs in a low visibility environment appropriate to that being sought;

7. Engine failure at V1 in the lowest visibility being sought;

8. Taxing in a low visibility environment with emphasis on preventing runway incursion; and

9. Appropriate additional training if any special equipment is required such as heads-up displays or enhanced vision equipment.

B. Training must be divided into phases covering:

1. Normal operation with no aeroplane or equipment failures but including all weather conditions that may be encountered, followed by

2. Detailed scenarios of aeroplane and equipment failures that could affect operations.

C. An operator must ensure that each flight crew member is trained to carry out his/her duties and instructed on the co-ordination required with other crew members.

1. This training must include the use of any special procedures and equipment.

D. Incapacitation procedures appropriate to Low Visibility Take-Offs (LVTO) shall be practised.

59.3 FLIGHT CREW MEMBER QUALIFICATIONS

59.3.1 INITIAL QUALIFICATION

A. Prior to being authorized for lower-than standard take-offs, the pilot conducting the takeoff shall have acquired a minimum of 100 hours on the aircraft type

1. Unless converting from a similar type aircraft (turbo-prop to turbo-prop or turbo-jet to turbo-jet) in which he/she had maintained a low visibility take-off qualification at the same limits for at least 90 days prior to conversion.

B. Prior to conducting a lower-than-standard take-off, within the preceding 12 months:

1. Each pilot shall have completed the low visibility training; and

2. Pilots authorised to conduct RVR 600 take-offs shall have been checked by a Flight Operations Inspector or a check pilot.

59.3.2 RECURRENT TRAINING

A. An operator must ensure a pilot's knowledge and ability to perform the tasks associated with LVTO are maintained.

B. The recurrent flight training shall include at least one low visibility rejected take-off and a take off to the lowest applicable minima approved.

59.3.3 LVTO RECENCY REQUIREMENTS

Recency for LVTO is maintained by the requirement for annual recurrent training.

59.4 MANUAL REQUIREMENTS

A. AOC holders are required to amend their flight crew and flight dispatcher training manuals to reflect their LVTO training programme.

B. In addition, a Company Operations Manual amendment will be required to establish the dispatch and operating procedures associated with LVTO.

C. Finally, SOP amendments may be required, particularly if company procedures restrict the takeoff to Captains only.

59.5 ISSUE OF OPERATIONAL AUTHORIZATION

59.5.1 OPERATIONAL AUTHORISATION WITH LIMITING FACTORS

After successful accomplishment of the training/checking and all open discrepancies have been closed, the operator can be issued an Ops Specs revision to include the LVTO authorization (for AOC holders) or Letter of Authorization (General Aviation). Demonstrated limiting factors that may be cited:

A. RVR 600; X-W 5 kts

B. RVR 1200; X-W 10 kts

C. RVR 1800; X-W 12 kts

CHAPTER-60

MINIMUM NAV PERFORMANCE SPECIFICATION (MNPS) AIRSPACE

This chapter provides guidance for authorization of aircraft operators for operations in MNPS airspace.

60.1 GENERAL

A. In an effort to maximize the use of airspace, ICAO and individual States have established areas wherein reduced aircraft separation criteria apply based on the operator's ability to navigate with greater degrees of accuracy than was previously possible. These areas have been termed MNPS airspace.

B. The navigation accuracy standard used by most States and ICAO is that developed for the North Atlantic (NAT) MNPS airspace. The criteria used to obtain approval to use NAT MNPS airspace is contained in the US FAA AC 120-58, *Operational Approval of Airborne Long-Range Navigation Systems for Flight within the North Atlantic Minimum Navigation Performance Specifications Airspace*. AC 120-58 (as amended), or its equivalent, remains the basis for approval to use most MNPS airspace.

C. ICAO requires operators to obtain approval from their CAAB before conducting any operations within such airspace (Annex 6 requires approval by the State of Registry of the aircraft). However, when aircraft are leased to operators in another State, the State of the operator is normally considered the State to issue the approval.

60.2 CAAB APPROVAL

A. This section contains the basic guidance to be used by the CAAB to approve an operator's request to operate in MNPS airspace.

B. When the criteria for approval are met:

1. A revision to Section H of the Ops Specs will be issued (AOC holder), or

2. An LOA (General Aviation) will be issued,

3. Either of these document must contain the performance specification, define the airspace boundaries and list the aircraft that have been approved, by type (make, model, series) and their navigation equipment.

60.2.1 DEMONSTRATION FLIGHT

After the AOC holder has accomplished its training, at least one demonstration flight must be conducted.

A. The test(s) will evaluate the AOC holder's procedures and knowledge of operations within MNPS airspace.
B. A Flight Operations Inspector shall conduct an en-route inspection with special emphasis on the AOC holder's MNPS training subject areas.

C. The crew should be a randomly picked line crew and shall be tested on general knowledge and the various contingencies that can occur in the airspace.

60.2.2 AOC CASORT ORG ENTRY

Following the successful conclusion of the demonstration flight for an AOC holder, a new record will be entered to include the RVSM authorization.

60.2.3 OPERATIONAL AUTHORISATION

After all open discrepancies have been closed, the—

A. AOC holder must can be issued a revision to Ops Specs to include the RVSM authorization.

B. General Aviation Operator must be issued a Letter of Authorization (General Aviation).

60.3 NAVIGATION EQUIPMENT

A. An assessment will be made to determine if the equipment is appropriate for the route to be flown and the operator's manuals, procedures and training programme are adequate.

B. Navigation equipment must be approved and installed in accordance with the aircraft's type certificate (TC), a supplemental type certificate (STC) or an acceptable method approved by another ICAO State.

C. In any case, co-ordination should be accomplished with an Airworthiness Inspector to ensure it is operational and installed correctly and that maintenance programme and training are adequate.

60.4 OPERATIONS MANUAL

A. An AOC holder's Operations Manual must provide specific pre-flight, in-flight and post-flight procedures as well as crewmember procedures for the verification of waypoint entry information and other procedures to preclude navigation errors.

B. The Training Manual must include requirements for training and checking crewmembers on its operational use.

60.5 TRAINING

60.5.1 GROUND TRAINING

AOC holder's requesting to operate within MNPS airspace shall provide its flight crew members with the following information and ground training:

A. The MNPS "Specification" and what it means, including the historical concept of MNPS airspace and the horizontal separation standard;

B. The geographical boundaries of MNPS airspace and route structures/systems within and around it.

60.5.2 FLIGHT/SIMULATOR TRAINING

Flight/simulator training requirements shall be completed prior to approval for flight operations within MNPS airspace being granted.

CHAPTER-61

EXTENDED RANGE TWIN ENGINE OPERATIONS (ETOPS)

This chapter provides guidance for authorization of aircraft operators for ETOPS operations.

61.1 GENERAL

A. This chapter contains some of the criteria to be used by the CAAB before authorizing ETOPS operations for air carrier operators.

B. However, the basic criteria used to obtain approval may be found in relevant ANO on "ETOPS Certification."

1. ICAO Annex 6 requires approval by the state of registry of the aircraft; however, when aircraft are leased to operators in another state, the state of the operator is normally considered the state to issue the approval.

2. When the criteria for approval are met, Section H of the operations specifications will be reissued authorizing the ETOPS operations of the specific MMS aircraft citing the company documentation that must be followed by the company.

C. The operator must list the aircraft type, registration and/or serial number, which are ETOPS approved in accordance with the appropriate maintenance requirements, including:

1. Aircraft/propulsion system combination,

2. Specific systems and components,

3. MEL and

4. Communication and navigation systems.

61.2 OPERATIONS MANUAL REQUIREMENTS

A. The operator's Operations Manual must provide specific pre-flight requirements and procedures, including ETOPS in MNPS airspace and in-flight normal and abnormal procedures.

B. Communication and navigation procedures shall be included covering ETOPS flight planning and position plotting requirements.

C. A section specific to dispatch requirements shall be included covering MEL issues, fuel and oil supply, alternate aerodromes, aircraft performance data, weather, weather minima, flight planning and navigation, NOTAMs and flight watch procedures, including communication.

61.3 TRAINING MANUAL REQUIREMENTS

The operator's Training Manual shall include requirements for training and checking of dispatch personnel and flight crew members on ETOPS operations.

61.3.1 GROUND TRAINING

Operators requesting ETOPS operational approval shall provide its dispatch and flight crew members with at least the following information and ground training:

A. The concepts and requirements of ETOPS, including the company procedures with respect to these requirements;

B. A full glossary of ETOPS-specific terms and their definitions;

C. ETOPS dispatch and MEL requirements, including considerations following previous equipment failures;

D. Flight planning and navigation documentation and procedures specific to ETOPS;

E. Weather and minima requirements with specific emphasis on en-route alternates;

F. En-route alternate aerodrome selection criteria;

G. Fuel requirements, including minimum requirement, contingency fuel reserve and critical fuel scenarios;

H. MMNPS procedures and requirements;

I. Abnormal and emergency (contingency) procedures and diversion procedures, including procedures for single and multiple equipment failures in flight and the operational restrictions with these failures;

J. The use of performance data on one-engine inoperative; and

K. Communication procedures.

61.3.2 SIMULATOR/FLIGHT TRAINING

A. The operator's simulator training programme shall include a dedicated ETOPS critical scenario covering an engine failure and/or emergency depressurization and associated decision making criteria.

B. MNPS procedures for in-flight contingencies and navigation cross-check procedures shall be reviewed in either the simulator training or during flight training.

D. Flight training under supervision shall consist of four sectors over an ETOPS route the last of which can be a check flight.

E. It is recommended that dispatchers be given a minimum of two flight sectors as observers for the purpose of familiarization.

61.4 DEMONSTRATION FLIGHT

A. Prior to ETOPS approval, an operator will be required to validate its ETOPS training, dispatch and operational procedures through a demonstration to the CAAB of the following:

1. The conduct of at least one ETOPS flight in a simulator on a route representative of one to be flown by the operator, including a failure en-route requiring a descent and diversion to the en-route alternate; and

2. An actual ETOPS flight.

   a. The entire operation must be assessed including dispatch, pre-flight planning and briefing and the conduct of the flight.

   b. This demonstration flight may, at the discretion of the CAAB, be a revenue or non-revenue flight.

   c. If a diversion is not required, a simulated emergency will be introduced to determine the capabilities of the dispatcher and flight crew and to test the communications network.

B. Operators with ETOPS authority adding a new aircraft will be required to gain a minimum of three months of operating experience with the aircraft prior to applying for its addition to the ETOPS approval, before the conduct of the actual ETOPS validation flight.

CHAPTER-62

DANGEROUS GOODS

This chapter contains policy, direction, and guidance to be used by inspectors for review, coordination, evaluation, inspections, and approval of operators for the transportation of dangerous goods by air.

62.1 GENERAL POLICY

A. CAAB Dangerous Goods Coordinator will be the key person for any certification to authorize transportation of dangerous goods by air.

B. The assigned inspector will consult with the DFSR prior to completion of all other certification processes to endure that the potential for transportation of unauthorized dangerous goods has been addressed in manuals and training programs.

C. All AOC holders are required to provide training to their personnel on the identification of dangerous goods.

D. Those operators who transport dangerous goods must include procedures for handling these materials in their operations manual.

F. These operators must also train their personnel in the use of these procedures.

62.2 ICAO TECHNICAL INSTRUCTIONS

62.2.1 TECHNICAL INSTRUCTIONS ARE CONTROLLING

A. The ICAO Technical Instructions amplify the basic provisions of Annex 18 to the Convention on International Civil Aviation, and contain detailed instructions necessary for the safe international transport of dangerous goods by air. These instructions are issued in a 2-year edition on alternate Septembers, becoming effective the following January 1.

B. CAR ‘84 mandates that the ICAO Technical Instructions will be applied without deviation by the operators authorized to transport dangerous goods.

62.2.2 POSSIBLE EXEMPTIONS

A. It is unlikely that an exemption will be issued, but operators considering an exemption should be advised to follow the procedures outlined in CAR ‘84/TI.

B. Any applications for exemption will be processed by the CAAB Dangerous Goods Inspector. The role of other CAAB inspectors will be limited to providing technical input to the DFSR.

62.3 CAAB ORGANISATION RELATIONSHIPS

A. CAAB has a Dangerous Goods Inspector in FSR Directorate. The DGI has oversight responsibility for an operator's dangerous goods programme.

B. The DGI is the technical expert and must evaluate all dangerous goods programmes.

C. An operator's dangerous goods programme is contained in its Dangerous Good manual; which includes the approved dangerous goods training programme for it's personnel.

D. The DGI is responsible for the development and implementation of the annual Surveillance requirements for inspections of operators authorised to transport dangerous goods by air as well as for others.

62.3.1 COORDINATION

A. The DFSR may be required to act as a coordinator between the operator and DGI for technical issues.

B. The DGI should be contacted regarding all aspects of the transportation of dangerous goods by air.

62.3.2 VIOLATIONS & INVESTIGATIONS

A. When any inspector becomes aware of a suspected dangerous goods violation, that inspector shall notify DFSR and the appropriate POI. It will be the responsibility of the DGI to determine the extent and participants in the subsequent investigation.

B. Aviation safety inspectors with qualification regarding dangerous goods may be assigned to conduct inspections, surveillance, and investigations of the transportation of dangerous goods in commercial air transport operations.

62.3.3 EXEMPTIONS

When an operator applies for either an initial CAAB exemption or the renewal of an exemption for the transportation of certain dangerous good in by air, the POI and the principal person in charge of DG of the operator may be assigned to assist the DGI in reviewing the compliance history of the certificated operator.

62.4 PROCEDURES FOR APPROVAL

62.4.1 APPROVAL OF DANGEROUS GOODS MANUALS

A. Like other manuals, the dangerous goods manual is required by CAR ’84 and must be accepted by the DFSR.

B. However, DFSR will not accept this manual until the DGI has evaluated it and recommended it for acceptance.

C. When a DFSR receives a dangerous goods manual for review from an operator:

1. The DFSR will forward it to the DGI.
2. The DGI will review the contents of the manual and consult with the POI when necessary.
3. The operator should coordinate directly with the DGI as necessary to formulate a satisfactory dangerous goods manual.
4. Once the DGI is satisfied with the manual, he will recommend it to the DFSR in writing for acceptance.
5. After receiving the DGI’s written recommendation, the DFSR will issue the necessary operations specification revision approving the operator for transportation of dangerous goods by air.

62.4.2 APPROVAL FOR DANGEROUS GOODS TRAINING

A. When a DFSR receives proposed or updated dangerous goods training from an operator, that DFSR will forward it to the DGI.

1. The DGI evaluates the contents of the training and consults with the POI when necessary.
2. The operator should be advised to coordinate directly with the DGI as necessary to formulate satisfactory dangerous goods training.

B. Once the DGI is satisfied with the training, he will recommend it to the DFSR in writing for final approval.

1. The DFSR then approves the implementation of the training in accordance with CAR ‘84 requirements.
2. The initial approval of the training is usually done at the same time as the review and acceptance of the dangerous goods manual.
3. Operator staffs shall receive training as in Table 1-4 of TI.
4. Operators staff who do not carry DG shall receive training as in Table 1-5 of TI.

62.5 OPERATORS WHO DO NOT TRANSPORT DANGEROUS GOODS

Operators who do not accept, handle, or store dangerous goods must provide procedures and instructions in the operator's manual as follows:

A. Procedures and instructions so that all personnel responsible for accepting and

B. handling any cargo or packaged materials receive adequate training on the recognition of items classified as dangerous goods;

C. Procedures and instructions to ensure that no packages are accepted by the operator containing a dangerous good;

D. Procedures and instructions for reporting that damaged packages found to contain, or that are suspected of containing, dangerous goods or dangerous goods are reported in compliance with CAR '84;

E. Procedures and instructions to see that all company material (COMAT) containing dangerous goods will be offered to a different mode of transportation (e.g., ground) and/or an operator that is authorized to transport dangerous goods; and

F. Procedures and instructions to see that any employee, agent, or contract employee of the operator who prepares and/or offers COMAT containing dangerous goods for shipment via any mode is fully trained as a dangerous goods shipper.

62.6 OPERATORS WHO ACCEPT DANGEROUS GOODS FOR TRANSPORT

A. Operators who transport dangerous goods must provide instruction and procedures on the basic subjects outlined in CAR '84.

B. The information is provided in this section as background material for the aviation safety inspector (ASI).

C. DFSR may share this information when requested, but must see that the operator understands that the DGI is the CAAB point of contact for approval of documentation that the operator must work with when developing, implementing or changing a dangerous goods programme.

62.6.1 PROCEDURES AND INSTRUCTIONS ON ACCEPTANCE OF DANGEROUS GOODS

The operator's instructions should contain the following information:

62.6.1.1 PACKAGING

A. The material must be properly packaged in accordance with the packaging rules and it must be properly marked, labeled, and documented.

B. The total quantity must be within the quantity limitations and the shipment must be accompanied by the proper shipping papers, CAAB, or

competent authority certificates, as determined by the inspection requirements for accepting shipments.

62.6.1.2 DAMAGE-FREE

The package may not leak or be damaged, and must be an authorized package in accordance with the applicable regulations and Technical Instructions.

62.6.1.3 AUTHORISATION OF TRANSPORT

The package must either be authorized for transport in passenger-carrying aircraft or, if it is not acceptable for such aircraft, clearly labeled for cargo-only aircraft

62.6.1.4 IDENTIFICATION

The material must be identified by the proper shipping name, hazard class or division, identification number, and packing group, when required, in accordance with ICAO Technical Instructions.

62.6.1.5 MARKING AND LABELING.

The package must be properly marked and labeled in accordance with the ICAO Technical Instructions.

62.6.1.6 SHIPPING PAPERS

Shipping papers must be reviewed to ensure that all necessary information is entered, including any additional information that may be required because of the commodity shipped, or because the method of transportation is related to air transportation.

62.6.2 STORAGE OF DANGEROUS GOODS

A. Operators should provide specific guidance on the storage of dangerous goods.

B. This guidance should include instructions for Class 8 (corrosive), Class 7 (radioactive), and Class 6, Division 6.1 (poisonous) materials as discussed below:

62.6.2.1 CORROSIVE MATERIALS (CLASS 8)

A. The storage of Class 8 (corrosive) materials next to, or in contact with, Class 4, Division 4.2 or 4.3 (flammable) solids or Class 5, Division 5.1 (oxidizing) materials must be prevented.

B. The segregation prescribed the Technical Instructions must be maintained for all packages containing dangerous goods that might react dangerously when stored in a position that causes or contributes to leakage.

62.6.2.2 RADIOACTIVE MATERIALS (CLASS 7)

A. The storage of Class 7 (radioactive) materials labeled yellow II and/or yellow III will not exceed a transport index (TI) of 50 in a single storage location.

B. These materials are stored in an area that is isolated from people and does not permit pedestrian traffic or loitering.

C. The minimum separation distances prescribed in the Technical Instructions should be maintained between radioactive materials labeled yellow II and yellow III and packages of undeveloped film.

62.6.2.3 POISONOUS MATERIALS (CLASS 6, DIVISION 6.1)

Packages bearing a Class 6, Division 6.1 poison label will not be stored in the same location as foodstuffs, feeds, or any edible materials intended for consumption by either humans or animals.

62.6.3 LOADING OF DANGEROUS GOODS

A. The operator should provide specific guidance for loading dangerous goods.

B. This guidance should include:

1. Loading of dangerous goods in aircraft in accordance with CAR ‘84.

2. Loading and carriage of dangerous goods in cargo-only aircraft, when other means of transportation are not available or impracticable, in accordance with the Technical Instructions

3. Loading of radioactive materials in aircraft to ensure that TI limitations are in accordance with the provisions of the Technical Instructions and that radioactive packages are transported.

4. Loading of dangerous goods in cargo compartments or freight containers within cargo compartments, in accordance with Part 18 and the Technical Instructions

5. A prohibition against loading packages bearing a poison label in the same compartment that holds foodstuffs, feeds, or any edible materials intended for consumption by humans or animals unless both commodities are in separate, closed-unit load devices known as freight containers.

C. Operators must establish procedures for notifying the PIC when dangerous goods are carried on board the aircraft.

62.6.4 REPORTING DANGEROUS GOODS INCIDENTS

The dangerous goods information must include company procedures for reporting dangerous goods incidents and should include the procedures for reporting discrepancies with the loading or the shipper's papers.

62.6.5 DAMAGE TO DANGEROUS GOODS PACKAGES.

A. The operator must develop procedures for handling damaged packages, radioactive contamination, and substances in Class 6, Division 6.2 (infectious substances),.

B. The information should include a list of telephone numbers and addresses of organizations that can provide technical advice on clean-up techniques and precautions to minimize the possibility of injury to employees and the general public.

62.7 DANGEROUS GOODS INSPECTION GUIDE

For Dangerous Goods Inspection Guide, Operations Inspectors of CAAB shall refer to Part-II, Chapter-68, Appendix-36.

62.8 Inspectors will submit the inspection report to the Director (Flight Safety & Regulations). Director (Flight safety & Regulations) will intimate the operator about the findings with a request to submit the corrective action plan.

62.9 RESOLUTION OF FINDINGS

Inspector must continue to monitor the operator's short and long term responses to the audit non-conformance findings. CAA must regulate the operator maintaining constant surveillance.

62.10 ENFORCEMENT

Enforcement action will be taken against the operator as per Rule 304O of CAR-84 and the enforcement manual, failing to take necessary corrective action within the stipulated time

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CHAPTER-63

INCIDENT REPORTING SYSTEMS

This section contains policy, direction, and guidance to inspectors for review, evaluation, and acceptance of incident reporting systems.

63.1 INCIDENT REPORTING SYSTEMS

63.1.1 INTRODUCTION TO REPORTING SYSTEMS

A. A great deal is learned about safety deficiencies from accident investigations. Fortunately, aviation accidents are rare events. They are, however, generally investigated more thoroughly than incidents. When safety initiatives rely exclusively on accident data, the limitations of small samples apply. As a result, the wrong conclusions may be drawn, or inappropriate corrective actions taken.

B. Research leading to the 1:60 Rule showed that the number of incidents is significantly greater than the number of accidents for comparable types of occurrences. The causal and contributory factors associated with incidents may also culminate in accidents. Often, only good fortune prevents an incident from becoming an accident. Unfortunately, these incidents are not always known to those responsible for reducing or eliminating the associated risks. This may be due to the unavailability of reporting systems, or people not being sufficiently motivated to report incidents.

63.1.2 VALUE OF REPORTING SYSTEMS

A. Recognizing that knowledge derived from incidents could provide significant insights into safety hazards, several types of incident reporting systems have been developed. Depending on the type of reporting programme, a rich source of data for safety analysis may be available. Although these occurrences may not be investigated to any depth, the anecdotal information they provide can offer meaningful insight into the perceptions and reactions of pilots, cabin crew members, mechanics and air traffic controllers.

B. Safety reporting systems should not just be restricted to incidents, but should include provision for the reporting of hazards, i.e. unsafe conditions which have not yet caused an incident. For example, some organisations have programmes for reporting conditions deemed unsatisfactory from the perspective of experienced personnel (Unsatisfactory Condition Reports). In some States, Service Difficulty Reporting (SDR) systems are effective in identifying airworthiness hazards. Aggregating data from such hazard and incident reports provides a rich source of experience to support risk management programmes.

C. Data from incident reporting systems can facilitate an understanding of the causes of hazards, help define intervention strategies, and the effectiveness of interventions. Depending on the depth to which they are investigated, incidents can provide a unique means of obtaining firsthand evidence on the factors associated with mishaps from the participants themselves. Reporters can describe the relationships between stimuli and their actions. They may provide their interpretation of the effects of various factors affecting their performance, such as fatigue, interpersonal interactions and distractions. Furthermore, many reporters are able to offer valuable suggestions for remedial action. Incident data have also been used to improve operating procedures, display and control design, and provide a better understanding of human performance associated with the operation of aircraft and air traffic control.

63.1.3 ICAO REQUIREMENTS

ICAO requires that States establish a mandatory incident reporting system to facilitate collection of information on actual or potential safety deficiencies. In addition, States are encouraged to establish a voluntary incident reporting programme, adjusting their laws, regulations and policies so that the voluntary programme:

A. Facilitates the collection of information that may not be captured by a mandatory incident reporting system;

B. Is non-punitive; and

C. Affords protection to the sources of the information.

63.2 TYPES OF INCIDENT REPORTING SYSTEMS

A. In general, an incident involves an unsafe, or potentially unsafe, occurrence or condition that does not involve serious personal injury or significant property damage; that is, it does not meet the criteria for an accident, but could have.

B. When an incident occurs, the individual(s) involved may or may not be required to submit a report. The reporting requirements vary with the laws of the State where the incident occurred. Even if not required by law, operators may require reporting of the occurrence to the company.

63.2.1 MANDATORY INCIDENT REPORTING SYSTEM

A. A company should establish a mandatory incident reporting system to facilitate the collection of information on actual or potential safety deficiencies, including all regulatory requirements.

B. In a mandatory system, people are required to report certain types of incidents. This necessitates detailed regulations outlining who shall report and what shall be reported. The number of variables in aircraft operations is so great that it is

difficult to provide a comprehensive list of items or conditions which should be reported.

1. For example, loss of a single hydraulic system on an aircraft with only one such system is critical. On a type with three or four systems, it may not be.

2. A relatively minor problem in one set of circumstances can, in different circumstances, result in a hazardous situation.

3. However, the rule should be: If in doubt — report it.

C. Because mandatory systems deal mainly with "hardware" matters, they tend to collect more information on technical failures than on the Human Factor aspects. To help overcome this problem, States with well-developed mandatory reporting systems are introducing voluntary incident reporting systems aimed specifically at acquiring more information on the human factor aspects of occurrences.

63.2.2 VOLUNTARY INCIDENT REPORTING SYSTEMS

A. Voluntary incident reporting systems to supplement the information obtained from mandatory reporting systems. In such systems, the reporter, without any legal or administrative requirement to do so, submits a voluntary incident report. In a voluntary reporting system, regulatory agencies may offer an incentive to report.

B. For example, enforcement action may be waived for unintentional violations that are reported. The reported information should not be used against the reporters, i.e. such systems must be non-punitive to encourage the reporting of such information.

63.2.3 CONFIDENTIAL REPORTING SYSTEMS

A. Confidential reporting systems aim to protect the identity of the reporter. This is one way of ensuring that voluntary reporting systems are non-punitive.

B. Confidentiality is usually achieved by de-identification, often by not recording any identifying information of the occurrence. One such system returns to the user the identifying part of the reporting form and no record is kept of these details.

C. Confidential incident reporting programmes facilitate the disclosure of human errors, enabling others to learn from mistakes made, without fear of retribution or embarrassment.

63.3 PRINCIPLES FOR EFFECTIVE INCIDENT REPORTING SYSTEMS

A. People are understandably reluctant to report their mistakes to the company that employs them, or to the government department that regulates them. Too often following an

occurrence, investigators learn that many people were aware of the unsafe conditions before the event. For whatever reasons, however, they did not report the perceived hazards, perhaps because of:

1. Embarrassment in front of their peers;

2. Self-incrimination, especially if they were responsible for creating the unsafe condition;

3. Retaliation from their employer for having spoken out; or

4. Sanction (such as enforcement action) by the regulatory authority.

B. Use of the following principles help overcome the natural resistance to safety reporting.

63.3.1 TRUST

A. Persons reporting incidents must trust that the receiving organisation (whether the State or company) will not use the information against them in any way. Without such confidence, people will be reluctant to report their mistakes and they may also be reluctant to report other hazards they are aware of.

B. Trust begins with the design and implementation of the programme. Employee input into the development of a reporting system is vital. A positive safety culture in the organisation generates the kind of trust necessary for a successful incident reporting system. Specifically, the culture must be error tolerant and non-punitive. In addition, incident reporting systems need to be perceived as being fair in how they treat unintentional errors or mistakes. (Most people do not expect an incident reporting system to exempt criminal acts, or deliberate violations, from prosecution or disciplinary action.) Some States consider such a process to be an example of a “Just Culture”.

63.3.2 NON-PUNITIVE

A. Non-punitive reporting systems are based on confidentiality. Before employees will freely report incidents, they must receive a commitment from the regulatory authority or from top management that reported information would not be used punitively against them. The person reporting the incident (or unsafe condition) must be confident that anything said will be kept in confidence. In some States, “Access to Information” laws make it increasingly difficult to guarantee confidentiality. Where this happens, reported information will tend to be reduced to the minimum to meet mandatory reporting requirements.

B. Sometimes reference is made to anonymous reporting systems. Reporting anonymously is not the same as confidential reporting. Most successful reporting programmes have some type of callback capability in order to confirm details, or obtain a better understanding of the occurrence. Reporting anonymously makes it

impossible to ensure understanding and completeness of the information provided by the reporter. There is also a danger that anonymous reporting may be used for purposes other than safety.

63.3.3 INCLUSIVE REPORTING BASE

A. Early voluntary incident reporting programmes were targeted at flight crews. Pilots are in a position to observe a broad spectrum of the aviation system, and are therefore well situated to comment on the system=s health. Nonetheless, incident reporting systems which focus solely on the flight crew's perspective, tend to reinforce the idea that everything comes down to pilot error. Taking a systemic approach to accident prevention requires that safety information be obtained from all parts of the operation.

B. In State-run incident reporting systems, collecting information on the same occurrence from different perspectives facilitates forming a more complete impression of events. For example, ATC instructs an aircraft to *'go around'* because there is a maintenance vehicle on the runway without authorisation. Undoubtedly, the pilot, the controller and the vehicle operator would all have seen the situation from different perspectives. Relying on one perspective only may not provide a complete understanding of the event.

63.3.4 INDEPENDENCE

A. Ideally, State-run voluntary incident reporting systems are operated by an organisation separate from the aviation administration responsible for the enforcement of aviation regulations. Experience in several States has shown that voluntary reporting benefits from a trusted A third party" managing the system.

B. The third party receives, processes and analyses the incident reports and feeds the results back to the aviation administration and the aviation community. With mandatory reporting systems, it may not be possible to employ a third party

C. Nevertheless, it is desirable that the aviation administration gives a clear undertaking that any information received will be used for accident prevention purposes only. The same principle applies to an airline or any other aviation operator that uses incident reporting as part of its accident prevention programme.

63.3.5 EASE OF REPORTING

A. The task of submitting incident reports should be as easy as possible for the reporter. Reporting forms should be readily available so that anyone wishing to file a report can do so easily.

B. They should be simple to compile, with adequate space for a descriptive narrative and they should encourage suggestions on how to improve the situation or prevent a reoccurrence.

63.3.6 ACKNOWLEDGMENT

The reporting of incidents requires time and effort by the reporter and should be appropriately acknowledged. To encourage further reports, the operator includes a blank report form with the acknowledgment letter. In addition, the reporter naturally expects feedback about actions taken in response to the reported safety concern.

63.3.7 PROMOTION

A. The (de-identified) information received from an incident reporting system should be made available to the aviation community in a timely manner. This may also help to motivate people to report further incidents.

B. Such promotion activities may take the form of monthly newsletters or periodic summaries. Ideally a variety of methods would be used with a view to achieving maximum exposure.

63.4 INFORMATION GATHERING AND ANALYSIS GUIDE

For Information Gathering and Analysis Guide, Operations Inspectors of CAAB shall refer to Part-II, Chapter-68, Appendix-37.

CHAPTER-64

SAFETY MANAGEMENT SYSTEMS

This section contains policy, direction, and guidance to inspectors for review, evaluation, and approval of safety management systems.

64.1 SAFETY MANAGEMENT SYSTEMS

Effective safety management systems comprise three defining cornerstones. The characteristics for each are:

64.1.1 CORPORATE APPROACH

A comprehensive corporate approach to safety which provides for such things as:

A. Ultimate accountability for corporate safety is assigned to the Board of Directors and Chief Executive Officer (CEO) with evidence of corporate commitment to safety from the highest organizational levels;

B. A clearly enunciated safety philosophy, with supporting corporate policies, including a non-punitive policy for disciplinary matters;

C. Corporate safety goals, with a management plan for meeting these goals;

D. Well defined roles and responsibilities with specific accountabilities for safety published and available to all personnel involved in safety;

E. A requirement for an independent safety officer (or Accident Prevention Adviser);

F. Demonstrable evidence of a positive safety culture throughout the organization;

G. Commitment to a safety oversight process which is independent of line management;

H. A system of documentation of those business policies, principles, procedures and practices with safety implications;

I. Regular review of safety improvement plans; and

J. Formal safety review processes.

64.1.2 ORGANISATIONAL TOOLS

Effective organizational tools for delivering on safety standards through such activities as:

A. Risk-based resource allocation;

B. Effective selection, recruitment, development and training of personnel;

C. Implementation of Standard Operating Procedures (SOPs) developed in cooperation with affected personnel;

D. Corporate definition of specific competencies (and safety training requirements) for all personnel with duties relating to safety performance;

E. Defined standards for, and auditing of, asset purchases and contracted services;

F. Controls for the early detection of - and action on - any deterioration in the performance of safety significant equipment, systems or services;

G. Controls for monitoring and recording the overall safety standards of the organization;

H. The application of appropriate hazard identification, risk assessment and effective management of resources to control identified risks;

I. Provision for the management of major changes in such areas as the introduction of new equipment, procedures or types of operation, turnover of key personnel, mass layoffs or rapid expansion, mergers and acquisitions;

J. Arrangements enabling staff to communicate significant safety concerns to the appropriate level of management for resolution and feedback on actions taken;

K. Emergency response planning and simulated exercises to test the plan's effectiveness; and

L. Assessment of commercial policies with regard to their impact on safety.

64.1.3 INTERNAL FORMAL SYSTEM FOR SAFETY OVERSIGHT

A formal system for safety oversight with such desirable elements as—

A. A system for analyzing flight recorder data for the purpose of monitoring flight operations and for detecting unreported safety events;

B. An organization-wide system for the capture of reports on safety events or unsafe conditions;

C. A planned and comprehensive safety audit review system which has the flexibility to focus on specific safety concerns as they arise;

D. A system for the conduct of internal safety investigations, the implementation of remedial actions and the dissemination of such information to all affected personnel;

E. Systems for the effective use of safety data for performance analysis and for monitoring organizational change as part of the risk management process;

F. Systematic review and assimilation of best safety practices from other operations;

G. Periodic review of the continued effectiveness of the safety management system by an independent body;

H. Line managers= monitoring of work in progress in all safety critical activities to confirm compliance with all regulatory requirements, company standards and procedures, with particular attention to local practices;

I. A comprehensive system for documenting all applicable aviation regulations, corporate policies, safety goals, standards, SOPs, safety reports of all kinds, etc. and for making such documentation readily available for all affected personnel; and

J. Arrangements for ongoing safety promotion based on measured internal safety performance.

64.2 MANAGEMENT'S SPECIAL RESPONSIBILITY FOR SAFETY

A. The management teams of operators and service providers bear a special responsibility for safety management. In a major study of airlines around the world, it was found that the safest airlines had a clear safety mission, starting at the top of the organisation and guiding actions right down to the operational level. Lautman and Gallimore found that in the safest airlines:

B. Flight operations and training managers recognize their responsibility to flight safety and are dedicated to creating and enforcing safety-oriented policies. There is a method of getting information to the flight crews expeditiously and a policy that encourages confidential feedback from pilots to management. The management attitude is a dynamic force that sets the stage for the standardization and discipline in the cockpit brought about by a training programme oriented to safety issues."

C. The safest organizations are often the most efficient. Although trade-offs between safety management and costs may occur, management needs to recognize the hidden costs of accidents and that safety is good for business. By taking a systematic approach to corporate decision-making and risk management, accidental losses are reduced.

D. Management has the authority and the responsibility to manage safety risks in the company. This is achieved by establishing a systematic method for identifying hazards, assessing risks, assigning priorities to these risks and then by reducing or eliminating those hazards which pose the greatest potential loss. Management alone has the ability to introduce changes in the organization's structure, staffing, equipment, policies and procedures.

E. Above all, management sets the organizational climate for safety. Without its wholehearted commitment to safety, safety management will be largely ineffective. By positively reinforcing safety actions, management sends the message to all staff that it really cares about safety and that they should too.

F. Management needs to establish safety as a core value of the organization. It can accomplish this by setting objectives and safety goals, then holding managers and employees accountable for achieving those goals. Staff look to management for:

1. *Clear direction* in the form of credible policies, objectives, goals, standards, etc.;

2. *Adequate resources,* including sufficient time, to fulfil assigned tasks safely and efficiently; and

3. *Expertise* in terms of access to experience through safety literature, training, seminars, etc.

G. This onus on management applies regardless of the size or type of organisation providing the aviation service. The role of management in managing safety is a recurring theme of Safety Management Systems.

64.3 RESPONSIBILITIES & ACCOUNTABILITIES

A. Responsibility and accountability are closely related concepts. While individual staff members are responsible for their actions, they are also accountable to their supervisor or manager for the safe performance of their functions and may be called on to justify their actions. Although individuals must be accountable for their own actions, managers and supervisors are accountable for the overall performance of the group that reports to them. Accountability is a two-way street. Managers are also accountable for ensuring that their subordinates have the resources, training, experience, etc. needed for the safe completion of their assigned duties.

B. A formal statement of responsibilities and accountabilities is advisable, even in small organizations. This statement clarifies the formal and informal reporting lines on the organizational chart and specifies accountabilities for particular activities with no overlap or omission. The contents of the statement will vary depending on organizational size, complexity and relationships.

64.3.1 SAFETY IS A CONDITION

A. Safety is a condition in which the risk of harm or damage is limited to an acceptable level. The safety hazards creating risk may become evident after an obvious breach of safety, such as an accident or incident, or they may be pro actively identified through formal safety management programmes before an actual safety event occurs. Having identified a safety hazard, the associated risks must be assessed. With a clear understanding of the nature of the risks, a determination can be made as to the “acceptability” of the risks. Those found to be unacceptable must be acted upon.

B. Safety management is centered on such a systematic approach to hazard identification and risk management — in the interests of minimizing the loss of human life, property damage, and financial, environmental and societal losses.

64.3.2 CONCEPT OF RISK

A. Since safety is defined in terms of risk, any consideration of safety must therefore involve the concept of risk.

B. There is no such thing as absolute safety. Before any assessment can be made as to whether or not a system is safe, it is first necessary to determine what the acceptable level of risk is for the system.

C. Risks are often expressed as probabilities; however, the concept of risk involves more than probabilities.

1. To illustrate this with a hypothetical example, let us assume that the probability of the supporting cable of a 100-passenger cable car failing and allowing the cable car to fall was assessed as being the same as the probability of a 12-passenger elevator failing and allowing the elevator to fall.
2. While the probabilities of the events occurring may be the same, the potential consequences of the cable car accident are much more severe. Risk is therefore two-dimensional.

D. Evaluation of the acceptability of a given risk associated with a particular hazard must always take into account both the likelihood of occurrence of the hazard and the severity of its potential consequences.

E. The perceptions of risk can be derived from the following three broad categories:

1 Risks that are so high that they are unacceptable;

2 Risks that are so low that they are acceptable; and

3 Risks in between the two categories in 1) and 2), where consideration needs to be given to the various trade-offs between risks and benefits.

F. If the risk does not meet the predetermined acceptability criteria, an attempt must always be made to reduce it to a level that is acceptable, using appropriate mitigation procedures. If the risk cannot be reduced to or below the acceptable level, it may be regarded as tolerable.

64.4 SAFETY CYCLE

A. Given the number and potential relationships of the factors that may affect safety, an effective SMS is required.

B. Hazard identification is the critical first step in managing safety. Evidence of hazards is required and may be obtained in a number of ways from a variety of sources, for example:

1 Hazard and incident reporting systems;

2 Investigation and follow-up of reported hazards and incidents;

3 Trend analysis;

4 Feedback from training;

5 Flight data analysis;

6 Safety surveys and operational oversight safety audits;

7 Monitoring of normal operations;

8 State investigation of accidents and serious incidents; and

9 Information exchange systems.

D. Each hazard identified must be evaluated and prioritized. This evaluation requires the compilation and analysis of all available data. The data is then assessed to determine the extent of the hazard; is it a “one-of-a-kind” or is it systemic? A database may be required to facilitate the storage and retrieval of the data. Appropriate tools are needed to analyze the data.

E. Having validated a safety deficiency, decisions must then be made as to the most appropriate action to avoid or eliminate the hazard or reduce the associated risks. The solution must take into account the local conditions, as “one size” does not fit all situations. Care must be taken that the solution does not introduce new hazards. This is the process of risk management.

F. Once appropriate safety action has been implemented, performance must be monitored to ensure that the desired outcome has been achieved, for example:

1 The hazard has been eliminated (or at least the associated risks have been reduced in probability or severity).

2 The action taken permits coping satisfactorily with the hazard.

3 No new hazards have been introduced into the system.

G. If the outcome is unsatisfactory, the whole process must be repeated.

64.5 KEY SAFETY MANAGEMENT ACTIVITIES

A. Those organizations which manage safety most successfully practice several common activities. Some of those specific activities are:

1 *Organization.* They are organized to establish a safety culture and to reduce their accidental losses.

2 *Safety assessments.* They systematically analyze proposed changes to equipment or procedures to identify and mitigate weaknesses before change is implemented.

3 *Occurrence reporting.* They have established formal procedures for reporting safety occurrences and other unsafe conditions.

4 *Hazard identification schemes.* They employ both reactive and proactive schemes for identifying safety hazards throughout their organisation, such as voluntary incident reporting, safety surveys, operational safety audits, and safety assessments. Chapters 16 and 17 outline several safety processes that are effective in the identification of safety hazards, for example, Flight Data Analysis (FDA), Line Operations Safety Audit (LOSA) and Normal Operations Safety Survey (NOSS).

5 *Investigation and analysis.* They follow up on reported occurrences and unsafe conditions and, if necessary, initiate competent safety investigations and safety analyses.

6 *Performance monitoring.* They actively seek feedback necessary to close the loop of the safety management process using such techniques as trend monitoring and internal safety audits.

7 *Safety promotion.* They actively disseminate the results of safety investigations and analyses, sharing safety lessons learned both within the organisation and outside, if warranted.

8 *Safety oversight.* The State (regulator) and regulated organisation both have systems in place to monitor and assess safety performance.

B. All these activities are described in more detail elsewhere in this manual.

64.6 SAFETY MANAGEMENT PROCESS

A. Conceptually, the safety management process parallels the safety cycle described in Figure 4-6. Both involve a continuous loop process as represented in Figure 5-2.

B. Safety management is evidence-based, in that it requires the analysis of data to identify hazards. Using risk assessment techniques, priorities are set for reducing the potential consequences of the hazards.

1. The risk is less than the predetermined unacceptable limit;

2. The risk has been reduced to a level that is as low as reasonably practicable; and

3. The benefits of the proposed system or changes are sufficient to justify accepting the risk.

4. All three of the above criteria should be satisfied before a risk is classed as tolerable.

C. Even where the risk is classed as acceptable (tolerable), if any measures that could result in the further reduction of the risk are identified, and these measures require little effort or resources to implement, then they should be implemented.

D. The acronym *ALARP* is used to describe a risk that has been reduced to a level that is *as low as reasonably practicable.* In determining what is *"reasonably practicable"* in this context, consideration should be given to both the technical feasibility of further reducing the risk, and the cost; this could include a cost-benefit study.

E. Showing that the risk in a system is ALARP means that any further risk reduction is either impracticable or grossly outweighed by the costs. It should, however, be borne in mind that when an individual or society "accepts" a risk, this does not mean that the risk is eliminated. Some level of risk remains; however, the individual or society has accepted that the residual risk is sufficiently low that it is outweighed by the benefits.

64.7 SAFETY MANAGEMENT SYSTEM GUIDE

For Safety Management System Guide, Operations Inspectors of CAAB shall refer to Part-II, Chapter-68, Appendix-38.

CHAPTER-65

ACCIDENT PREVENTION PROGRAMS

This section contains policy, direction, and guidance to inspectors for review, evaluation, and approval of accident prevention programs.

65.1 ICAO REQUIREMENTS

A. ICAO requires that operators establish and maintain an accident prevention and flight safety programme.

B. Some of the basic ingredients of an effective accident prevention and flight safety programme are requirements for:

1 Incident reporting systems;

2 Database systems;

3 Analysis of data and preventive action; and

4 Exchange of safety information.

C. The accident prevention and flight safety programme should be documented in a company's operation manual, including a statement on the company's safety policy and the responsibility of personnel. To ensure the necessary focus, the safety programme is often contained in a separate volume of the company operations manual.

65.2 ORGANISATIONAL RESPONSIBILITIES

A. The responsibility for preventing accidents goes well beyond the cockpit. It is a shared responsibility involving a wide spectrum of organizations and institutions. These include international organizations, major aircraft and power-plant manufacturers, State regulatory authorities for civil aviation, owners and operators, maintenance organizations, industry and professional associations, aviation education and training institutions, etc. Further, third parties that provide aviation support services (including contracted services) must also share in the responsibility for accident prevention — observing the safety standards pertinent to their areas of endeavour.

B. To reduce the severity and probability of mishaps, each of these institutional stakeholders has particular roles to perform diligently. Generally, these organizational responsibilities fall into the following areas:

1 Defining policies and standards affecting accident prevention;

2 Allocating resources to sustain accident prevention initiatives and activities;

3 Providing expertise for the identification and evaluation of safety hazards;

4 Taking safety action to eliminate or reduce systemic hazards to what has been decided is an acceptable level of risk;

5 Incorporating technical advances in design and maintenance of equipment; Conducting safety oversight and accident prevention programme evaluation; Contributing to the investigation of accidents and serious incidents;

6 Keeping abreast of best industry practices, adopting these as appropriate;

7 Promoting aviation safety (including the exchange of safety-related information); and

8 Amending regulations governing civil aviation safety as required.

65.3 AIRLINE OPERATORS

A. Most major airlines employ many of the accident prevention activities outlined in this manual, while many of the smaller airlines may not employ any. Where such activities exist, they are usually carried out by a section or safety office which monitors overall operating experience and provides independent advice to company management on the preventive action needed to eliminate or avoid identified hazards. Such activities may also lead to economies in the airlines operation.

B. These prevention activities usually include some form of incident reporting, safety surveys and audits and information feedback by means of periodic safety magazines, bulletins, newsletters, or the company's website.

C. The safety aspects of the engineering/manufacturing side of an airline are often the responsibility of a Quality Control Manager/Chief Inspector. Accident prevention programmes have tended to be oriented towards the flight operations side of the organisation. Safety, however, must embrace the total airline and it is essential that a close working relationship be maintained between all parts of the organization.

D. A State's civil aviation authority uses regulations, standards, recommended procedures and other guidelines to help operators manage the risks inherent in aviation. However, regulations may not always fit an airline's safety needs perfectly. Airlines which rely on regulatory compliance as the cornerstone of their accident prevention and risk management programmes, may not achieve the results they desire.

65.4 GENERAL AVIATION

A. In many States, general aviation accidents constitute a major loss of resources. As a consequence, substantial benefits are to be gained from accident prevention programmes aimed at this group. In addition, general aviation operators often share facilities such as aerodromes, air traffic services, etc. with airline operators. This mixing of operations with differing requirements and performance standards may introduce hazards.

B. General aviation embraces a wide range of aircraft types, crew qualifications and operating environments. In many States it includes the expanding areas of corporate or business flying, often operating sophisticated aeroplanes or helicopters flown by professional pilots; through to non-professional pilots who only fly occasionally for pleasure. Motivating an interest and awareness of safe aviation practices is a challenge for an accident prevention programme aimed at this varied group.

C. Specialized general aviation aerial work operations, such as fire fighting and aerial application, create unique hazards which have led some States to conduct safety programmes aimed specifically at these groups.

65.5 SERVICE PROVIDERS

A. Safe and efficient flight operations depend on effective delivery of a variety of supporting services. Operators may provide some of these services themselves, or they may contract these services out to specialist service providers. Such services include:

1 Aircraft maintenance, repair and overhaul;

2 Flight planning, flight dispatch and flight following;

3 Ramp handling; and

4 Crew training, etc.

5 Other key services, which are supplied by providers external to the operator, include:

6 Air Traffic Control;

7 Aerodrome operations, including airport emergency services;

8 Airport security; and

9 Navigation aids.

B. Traditionally, such external services have been provided by the State — usually through their civil or military aviation authorities. However, civil aviation authorities in some States have discovered potential conflicts of interests in the dual roles of the State as both a regulator and as a service provider. Moreover, some States believe that there are operational efficiencies and economies to be gained from the corporation of many of these services. As a result, some States have delegated responsibilities for the provision of many such services.

C. Regardless of the ownership or management structure for the provision of such supporting services, responsible managers are expected to develop and implement accident prevention (or loss control) programmes within these separate areas of expertise. The guidance material provided in this manual applies equally to the provision of such support services, regardless of whether they are governed by State-run or corporate management.

65.6 THIRD PARTY CONTRACTORS

A. The provision of services supporting flight operations has long involved private contractors in such areas as refueling, catering and other aircraft ground services, runway and taxiway construction and repair, etc. Indeed, the number of disparate vehicles on any busy airport ramp reflects the number of third party contractors.

B. Whether a large corporate contractor or small entrepreneur, the contracting authority holds overall responsibility for managing the safety risks taken by the contractor. The contract must specify safety standards to be met. The contracting authority then has the responsibility of ensuring the contractor complies with the safety standards prescribed in the contract.

D. The relationship between the contracting authority and a contractor is more than a legal situation. It represents the best interests of both parties. For example, an airline must protect its revenue source (the fare-paying public) by ensuring that its approved maintenance organization (AMO) provides airworthy aircraft; and the AMO would understand that sub-standard service would compromise future work with the airline.

65.7 ORGANIZATIONAL CLIMATE

A. Above all, management sets the organizational climate for safety. Without management's wholehearted commitment to safety, any accident prevention programme will be largely ineffective. In positively reinforcing safety actions, management sends the message to all staff that it really cares about safety and they had better too.

B. To establish safety as a core value of the organization, it is necessary to make safety an integral part of the management plan. This can be done by setting objectives and safety goals, then holding managers and employees accountable for achieving those goals. Staff, then look to management for:

1 Clear direction in the form of credible policies, objectives, goals, standards, etc.;

2 Time for meetings, setting and communicating policies and standards, etc.;

3 Adequate resources to fulfill assigned tasks safely and efficiently; and,

4 Expertise in terms of access to experience through safety literature, training, seminars, etc.

C. The special onus on management for accident prevention applies, regardless of the size or type of organization providing the aviation service. The role of management in accident prevention is a recurring theme throughout this document.

65.8 ACCIDENT PREVENTION PROGRAMME GUIDE

For Accident Prevention Programme Guide, Operations Inspectors of CAAB shall refer to Part-II, Chapter-68, Appendix-39.

CHAPTER-66

LINE OPERATIONAL SAFETY AUDIT PROGRAMS (LOSA)

This section contains policy, direction, and guidance to inspectors for review, evaluation, and approval of LOSA programs.

66.1 LINE OPERATIONAL SAFETY AUDITS

66.1.1 BACKGROUND

A. Increasingly, the aviation industry is recognizing the need to anticipate the negative consequences of human error.

B. Hazards can be identified, analyzed and validated based on data collected through the monitoring of day-to-day operations. Line Operational Safety Audits (LOSA) is another method for monitoring normal flight operations for accident prevention purposes.

C. Like Flight Data Analysis (FDA) programmes, LOSA facilitates hazard identification through the analysis of actual in-flight performances. Whereas FDA provides accurate data on exceedences from expected aircraft performance, LOSA provides information on human behaviour;

D. It facilitates understanding the context for the behaviour that may have precipitated the exceedences.

E. While FDA and LOSA are well suited for application in larger airline operations, they can both be used very effectively in smaller airlines and are increasingly being used by them.

F. LOSA is a tool for the management of human errors in flight operations. It is used to identify the threats to aviation safety which lead to human errors, to minimize the risks that such threats may generate and to implement measures to manage these errors within the operational context. LOSA enables operators to assess their resistance to operational risks and front-line personnel errors. Using a data-driven approach, they can prioritize these risks and identify actions to prevent accidents. In short, LOSA is a risk management tool.

G. By observing normal day-to-day flight operations, data about flight crew behaviour and situational factors in “normal” operations are collected. Thus, LOSA facilitates understanding both successful behaviour and failures. Hazards deriving from operational errors can be identified and effective countermeasures developed.

H. LOSA uses experienced and specially trained observers to collect data about flight crew behaviour and situational factors on “normal” flights. During audited flights, observers record error-inducing circumstances and the crew’s responses to them. The audits are conducted under strict non-punitive conditions, without fear of disciplinary action for detected errors. Flight crews are not required to justify their actions.

I. Data from LOSA also provide a picture of system operations that can guide strategies in regard to accident prevention, training and operations.

1 Like FDA programmes, data collected through LOSA can provide a rich source of information for the pro-active identification of systemic safety hazards.

2 A particular strength of LOSA is that it identifies examples of superior performance that can be reinforced and used as models for training. (Traditionally, the industry has collected information on failed performance and revised training programmes accordingly.)

3 With LOSA, training interventions can be based on the most successful operational performance.

a. For example, based on LOSA data, CRM training can be modified to reflect best practices for coping with particular types of unsafe conditions and for managing typical errors related to these conditions.

66.2 TERMINOLOGY

LOSA employs specific terminology concerning threats, errors, threat and error management and countermeasures:

66.2.1 THREATS

A. During normal flights, crews routinely face situations created outside the cockpit that they must manage. Such situations increase the operational complexity of their task and pose some level of safety risk. These external situations may be relatively minor (such as frequency congestion), through to major (such as an engine-fire warning). In LOSA, such situations are referred to as *threats.*

B. Some threats can be anticipated (such as a high workload situation during approach) and the crew may brief in advance, for example, “In the event of a go-around….”. Other threats may be unexpected. Since they occur without warning, no advanced briefing is feasible, (for example, a TCAS advisory).

66.2.2 ERRORS

A. Humans are generally quite effective in balancing the conflicting demands between *“getting the job done”* and *“getting the job done safely”.* However, errors are a normal part of all human behaviour — including the performance of flight crews. In an operational context, flight crew errors tend to reduce the margin of safety and increase the probability of accidents.

B. Any action or inaction by the flight crew that leads to deviations from expected behaviour may be viewed as an error. Examples of crew errors might include non-compliance with regulations and SOPs, or unexpected deviation from company or

ATC expectations. Errors may be minor (setting the wrong altitude, but correcting it quickly) or major (not completing an essential checklist item).

C. LOSA employs five categories of crew errors. These include:

1 *Communication error.* Miscommunication, misinterpretation, or failure to communicate pertinent information among the flight crew or between flight crew and an external agent (for example, ATC or ground operations personnel);

2 *Proficiency error.* Lack of knowledge or psychomotor *("stick and rudder")* skills;

3 *Operational decision error.* Decision-making error that is not standardized by regulation or operator procedures and that unnecessarily compromises safety. (For example, a crew decision to fly through a known wind shear on approach instead of going-around.);

4 *Procedural error.* Deviation in execution of regulatory and/or operator procedures. The intention is correct but the execution is flawed. This category also includes errors where a crew forgot to do something; and

5 *Intentional non-compliance error.* Wilful deviation from regulations and/or operator procedures (i.e. violations).

66.3 THREAT & ERROR MANAGEMENT

A. Since threats and errors are an integral part of daily flight operations, systematic understanding of them is required for safely dealing with them.

66.3.1 LOSA DATA

A. LOSA offers an informed perspective on threats and errors from which suitable coping strategies can be developed. Specifically, quantifiable LOSA data are useful in answering such questions as:

1 What type of threats do flight crews most frequently encounter? When and where do they occur, and what types are the most difficult to manage?

2 What are the most frequently committed crew errors, and which ones are the most difficult to manage?

3 What outcomes are associated with mismanaged errors? How many result in the aircraft being in an "undesired" state (such as fast/slow on final approach)?

4 Are there significant differences between airports, fleets, routes or phases of flight *vis à vis* threats and errors?

66.3.2 SYSTEMIC COUNTERMEASURES

A. Accepting that error is inevitable, the most effective countermeasures go beyond trying to simply prevent errors. They need to highlight unsafe conditions early enough to permit flight crews to take corrective action before adverse consequences result from the error. In other words, they "trap" the error.

B. The most effective countermeasures seek to improve the everyday work situation in which flight crews face the inevitable threats to safe performance, measures which give crews a *"second chance"* to recover from their errors. Such systemic countermeasures include changes in aircraft design, crew training, company operating procedures, management decisions, etc.

66.4 DEFINING CHARACTERISTICS OF LOSA

The following characteristics of LOSA ensure the integrity of the methodology and its data:

66.4.1 JUMP SEAT OBSERVATIONS DURING NORMAL FLIGHT OPERATIONS

A. LOSA observations are limited to routine flights (as opposed to line checks, or other training flights). Check pilots add to an already high stress level, thus providing an unrealistic picture of performance.

B. The best observers learn to be unobtrusive and non-threatening, recording minimum detail in the cockpit.

66.4.2 JOINT MANAGEMENT & PILOT SPONSORSHIP

A. In order for LOSA to succeed as a viable accident prevention programme, both management and pilots support the project. Joint sponsorship provides "checks and balances" for the project to ensure that any necessary change will be made as a result of LOSA data.

B. A LOSA audit does not proceed without the endorsement of the pilots via a signed agreement with management. A LOSA steering committee with pilot and management representatives shares responsibility for the planning, scheduling, supporting observers and verifying the data.

66.4.3 VOLUNTARY CREW PARTICIPATION

A. Maintaining the integrity of LOSA within the airline is extremely important for long-term success. One way to accomplish this goal is to collect all observations with voluntary crew participation.

B. Before conducting LOSA observations, an observer obtains the flight crew's permission. If an airline conducting LOSA has an unreasonably high number of refusals by pilots to be observed, this may indicate that there are critical "trust" issues to be dealt with first.

66.4.4 COLLECTION OF ONLY DE-IDENTIFIED, CONFIDENTIAL SAFETY DATA

A. LOSA observers do not record names, flight numbers, dates or any other data that can identify a crew. This allows for a high level of protection against disciplinary action.

B. Airlines should not squander an opportunity to gain insight into their operations by having pilots fearful that a LOSA observation could be used against them in disciplinary proceedings.

1. In other words, LOSA must not only be seen to be non-punitive, it must be non-punitive.

66.5 TARGETED OBSERVATIONS

All data is collected on a specifically designed LOSA Observation Form. Typically, the following types of information are collected by the LOSA observer:

A. Flight and crew demographics such as city pairs, aircraft type, flight time, years of experience in that position and with that airline, and crew familiarity;

B. Written narratives describing what the crew did well and what they did poorly and how they managed threats or errors for each phase of the flight;

C. RM performance ratings using validated behavioural markers;

D. Technical worksheet for the descent/approach/landing phases that highlight the type of approach flown, the landing runway and whether the crew met the parameters of a stabilized approach;

E. Threat management worksheet that details each threat and how it was handled;

F. Error management worksheet that lists each error observed, how each error was handled and the final outcome; and

G. Crew interview conducted during low workload periods of the flight, such as cruise, that asks pilots for their suggestions to improve safety, training, and flight operations.

66.5.1 TRUSTED, TRAINED & STANDARDIZED OBSERVERS

Observers are primarily pilots drawn from the line, training department, safety department, management, etc. Experienced LOSA observers from a non-affiliated airline may be more objective and serve to provide an anchor point for company observers, especially for companies initiating a new LOSA programme. Regardless of the source, it is critical that the observers are respected and trusted to ensure acceptance of LOSA by the line pilots. The observers must be trained in concepts of threat and error management and in the use of the LOSA rating forms. Standardized rating is vital to the validity of the programme.

66.5.2 TRUSTED DATA COLLECTION SITE

In order to maintain confidentiality, airlines must have a trusted data collection site. No observations can be misplaced or improperly disseminated within the airline, without compromising LOSA integrity. Some airlines use a "third party" to provide a neutral party for objective analysis of results.

66.5.3 DATA VERIFICATION ROUND-TABLES

Data-driven programmes like LOSA require data quality management procedures and consistency checks. For LOSA, round table discussions with representatives of management and the pilots association scan raw data for inconsistencies. The database must be validated for consistency and accuracy before a statistical analysis can proceed.

66.5.4 DATA-DERIVED TARGETS FOR ENHANCEMENT

As the data are collected and analyzed, patterns emerge. Certain errors occur frequently, certain airports or activities are problematic, certain SOPs are ignored or modified, and certain manoeuvres pose particular difficulties. These patterns become targets for enhancement. The airline then develops an action plan and implements appropriate change strategies based on the input of expertise available to the airline. Through subsequent LOSA audits, the effectiveness of the changes can be measured.

66.5.5 FEEDBACK OF RESULTS TO THE LINE PILOTS

After a LOSA is completed; the airline's management team and the pilots association have an obligation to communicate the findings to the line pilots. Pilots are interested not only in the results but also management's plan for improvement.

66.6 LOSA PROGRAMME EVALUATION GUIDE

For LOSA Programme Evaluation Guide, Operations Inspectors of CAAB shall refer to Part-II, Chapter-68, Appendix-40.

CHAPTER-67

FLIGHT DATA ANALYSIS PROGRAMS

This section contains policy, direction, and guidance to inspectors for review, evaluation, and approval of an FDA program.

67.1 FLIGHT DATA ANALYSIS PROGRAMMES

A. Flight Data Analysis (FDA) programmes, sometimes referred to as Flight Data Monitoring (FDM), or Flight Operations Quality Assurance (FOQA), provide another tool for the proactive identification of hazards.

B. They are logical complements to the incident reporting systems and to LOSA programmes.

67.1.1 WHAT IS AN FDA PROGRAMME

A. Initially, the principal use of flight recorders was to aid accident investigators, especially in those accidents with no surviving crewmembers. However, early on, it was recognized that analysis of this recorded data was also useful for better understanding serious incidents. More progressive organizations saw further potential for analyzing flight recorder data in aggregate.

B. In the 1970s, several airlines realized that the flight parameters recorded in the mandatory Flight Data Recorders (FDR) provided valuable insights for safe flight operations. By routinely accessing these recorded flight parameters, using a secondary quick access recorder (QAR), much could be learnt about the safety of flight operations and the performance of airframes and engines. Valuable data about the things that go right in day-to-day operations was available, putting accident and incident data into perspective. As well, analysis of this de-identified data could assist in the identification of safety hazards before a serious incident or accident occurred.

C. To capitalize on these benefits, such airlines set up systems and processes to retrieve and analyze flight data recorded across their fleets. Despite some controversy, the aviation industry is slowly adopting the practice of routinely analyzing recorded data from routine operations in support of their accident prevention programmes. Now, rather than merely reacting to serious events, management has the capability to pro actively identify safety hazards and mitigate risks.

D. Any effective FDA programme requires the cooperation of the pilot group. It is essential that agreement is reached on the processes to be followed, in particular the non-punitive aspects of such a programme. Such details are normally contained in a formal agreement between management and their flight crew. An example of one such agreement is shown at the end of this chapter.

E. For the purposes of this Manual, a Flight Data Analysis (FDA) Programme may be defined as:

1. A proactive and non-punitive programme for gathering and analyzing data recorded during routine flights to improve flight crew performance, operating procedures, flight training, air traffic control procedures, air navigation services, or aircraft maintenance and design.

67.1.2 BENEFITS OF FDA PROGRAMMES

A. Today, Flight Data Analysis (FDA) programmes are increasingly used for the monitoring and analysis of flight operations and engineering performance. FDA programmes are a logical component of a mature safety management system, particularly for larger airlines. Successful programmes encourage adherence to Standard Operating Procedures, deter non-standard behaviour and so enhance flight safety. They can detect adverse trends in any part of the flight regime and so facilitate the investigation of events other than those which have had serious consequences.

B. Flight data analysis is used to detect flight parameter exceedences and to identify non-standard or deficient procedures, weaknesses in the ATC system, and anomalies in aircraft performance. FDA allows the monitoring of various aspects of the flight profile, such as the adherence to the prescribed take-off, climb, cruise, descent, approach and landing SOPs. Specific aspects of flight operations can be examined, either retrospectively to identify problem areas, or pro actively prior to introducing operational change and subsequently, to confirm its effectiveness.

C. While using flight recorder data during incident analysis is to be recommended, such recorded data provides the ability to compare a specific flight with the fleet profile thereby providing the ability to analyze the systemic aspects of an incident. It may be that the parameters of the incident vary only slightly from many other flights, possible indicating a requirement for change in operating technique or training. For example, it would be possible to determine whether a tailscrape on landing was an isolated event, or symptomatic of a wider mishandling problem, such as over-flaring on touchdown or improper thrust management procedures.

D. Engine monitoring programmes require the automated analysis of flight recorder data for reliable trend analysis. The value of manually coded engine data is limited in terms of accuracy, timeliness and reliability. Using flight recorder data, accurate analysis is possible within a short time, thereby increasing the potential for preventive action. It is also possible to monitor other aspects of the airframe and systems.

67.2 CAAB REQUIREMENTS

A. Recognizing the potential for accident prevention, the CAAB has introduced provisions for a flight data analysis programme to be part of an operator's accident prevention and flight safety programme.

B. Operators of larger aircraft authorised to conduct international commercial air transport operations will be accountable for the operation of a non-punitive FDA programme, which contains adequate safeguards to protect the source(s) of the data.

1. They may obtain the services of a specialist contractor to operate the programme.

67.2.1 USING AN FDA PROGRAMME

A. As already seen, FDA programmes offer a wide spectrum of potential applications for accident prevention, as well as improvements in operational efficiency and economy. Data aggregated from many flights may be useful to:

1. Determine operating norms for day-to-day performance;
2. Identify unsafe trends;
3. Facilitate certification of equipment and SOPs;
4. Identify operational hazards in specific operating procedures, fleets, domiciles, airports, ATC procedures, etc.;
5. Monitor the effectiveness of specific safety actions taken;
6. Support quality assurance programmes and safety audits;
7. Reduce operating and maintenance costs;
8. Optimize training procedures; and
9. Provide a performance measurement tool for risk management programmes.

B. Typically, FDA data today are being used in five areas:

1. Exceedance detection;
2. Routine measurements;
3. Incident investigations;
4. Continuing airworthiness; and
5. Linked databases (or integrated safety analysis).

67.2.2 EXCEEDANCE DETECTION

A. Initially, FDA programmes may be used for detecting exceedences or safety events, such as deviations from flight manual limits, standard operating procedures, or good airmanship. A set of core events (usually provided by the FDA software vendor in consultation with the operator/ manufacturer) establishes the main areas of interest to operators.

1. Example: High lift-off rotation rate, stall warning, GPWS warning, flap limit speed Exceedance, fast approach, high/low on glide slope, heavy landing.

B. FDA provides useful information from safety events which can complement that provided in crew reports.

1. Example: Reduced flap landing, emergency descent, engine failure, rejected take-off, go-around, TCAS or GPWS warning, system malfunctions, etc.

C. Companies may also modify the set of core events (in accordance with the agreement with their pilots) to account for unique situations they regularly experience or the SOPs they use.

1. Example: To avoid nuisance reports from a non-standard SID.

D. They may also define new events (with the agreement of the pilots) to address specific problem areas.

1. Example: Restrictions on the use of certain flap settings to increase component life.

E. Care must be taken that in order to avoid an Exceedance, crew do not attempt to fly the FDA profile rather than follow SOPs. Such an action can quickly turn a poor situation into something worse.

67.2.3 ROUTINE MEASUREMENTS

A. Increasingly, data is retained from all flights, not just the ones producing significant events. A selection of measures is retained that are sufficient to characterize each flight and allow comparative analysis of a wide range of operational variability.

B. Trends may be identified before there are statistically significant numbers of events. Emerging trends and tendencies are monitored before the trigger levels associated with exceedences are reached.

1. Examples of parameters monitored: take-off weight; flap setting; temperature; rotation and lift-off speeds vs. scheduled speeds; maximum pitch rate and attitude during rotation; gear retraction speeds, heights and times.

2. Examples of comparative analyses: pitch rates from high vs. low take-off weights; good vs. bad weather approaches; and touchdowns on short vs. long runways.

67.2.4 INCIDENT INVESTIGATION

A. Recorded data provide valuable information for follow-up to mandatory reportable incidents and other technical reports. Quantifiable recorded data have been useful in adding to the impressions and information recalled by the flight crew.

B. The recorded data also provide an accurate indication of system status and performance, which may help in determining cause and effect relationships.

C. Examples of incidents where recorded data could be useful:

1. Emergencies, such as:

a. High speed rejected take-offs;

b. Flight control problems;

c. System failures, etc.;

2. High cockpit workload conditions as corroborated by such indicators as:

a. Late descent;

b. Late localizer and/or glide slope interception;

c. Large heading change below a specific height;

d. Late landing configuration;

e. Un-stabilized and rushed approaches, glide path excursions, etc.;

f. Exceedences of prescribed operating limitations (such as flap limit speeds, engine over-temperatures, V-speeds, stall onset conditions, etc.; and,

g. Wake vortex encounters, low-level wind shear, turbulence encounters or other vertical accelerations, etc.

67.2.5 CONTINUING AIRWORTHINESS

A. Both routine and event data can be utilized to assist the continuing airworthiness function.

B. Traditionally, engine-monitoring programmes have looked for measures of engine performance to determine operating efficiency and predict impending failures. The engine manufacturer normally supplies these programmes.

1. Examples of continuing airworthiness uses: engine thrust level and airframe drag measurements; avionics and other system performance monitoring; flying control performance; brake and landing gear usage.

67.2.6 INTEGRATED SAFETY ANALYSIS

A. All the data gathered in an FDA programme should be kept in a central safety database. By linking the FDA database to other safety databases (such as incident reporting systems and technical fault reporting systems), a more complete understanding of events becomes possible through cross-referencing the various sources of information.

B. Care must be taken however, to safeguard the confidentiality of FDA data when linking it to identified data.

1. Example of integration: A heavy landing results in a crew report, an FDA event and an engineering report. The crew report provides the context, the FDA event the quantitative description and the engineering report the result.

C. The integration of all available sources of safety data provides the company safety management system with viable information on the overall safety health of the operation.

67.3 FDA EQUIPMENT

A. FDA programmes generally involve systems that capture flight data, transform the data into an appropriate format for analysis, and generate reports and visualization to assist in assessing the data. The

B. level of sophistication of the equipment can vary widely. Typically, however, the following equipment capabilities are required for effective FDA programmes:

1. An on-board device to capture and record data on a wide range of in-flight parameters (such as altitude, airspeed, heading, aircraft attitude, aircraft configuration, etc.);

2. A means to transfer the data recorded on-board the aircraft to a ground-based processing station. In the past, this largely involved the physical movement of the memory unit from the QAR (either tape, optical disc, or solid state). To reduce the physical effort required, later transfer methods utilize wireless technologies;

3. A ground-based computer system (using specialized software) to analyze the data (from single flights and/or in an aggregated format), identify deviations from expected performance, generate reports to assist in interpreting the read-outs, etc.; and

4. Optional software for a flight animation capability to integrate all data, presenting it as a simulation of inflight conditions, thereby facilitating visualization of actual events.

67.3.1 AIRBORNE EQUIPMENT

A. Modern glass-cockpit and fly-by-wire aircraft are equipped with the necessary digital data buses from which information can be captured by a recording device for subsequent analysis. Older aircraft may be retrofitted to record additional parameters. However, for older (non-digital) aircraft, it is unlikely to be practical to record sufficient parameters to support a viable FDA programme.

B. The number of parameters recorded by the mandatory FDR may determine the scope of an FDA programme. Unfortunately, in some cases the number of parameters and recording capacity required by law to be recorded to support accident investigations may be insufficient to support an effective FDA programme. Thus many operators are opting for additional recording capacity, capable of being easily downloaded for analysis.

C. Quick access recorders (QAR) are installed in the aircraft and record flight data onto a low-cost removable medium such as tape cartridge, optical disk, or solid-state recording medium. The recording can be removed from the aircraft after a series of flights. New technology QARs are capable of supporting more than 2,000 parameters at much higher sampling rates than the FDR. The expanded data frame greatly increases the resolution and accuracy of the output from ground analysis programmes.

D. To eliminate the task of moving the data from the aircraft to the ground station by physically removing the recording medium of the QAR, newer systems automatically download the recorded information via secure wireless systems when the aircraft is in the vicinity of the gate. In still other systems, the recorded data is analyzed on-board while the aircraft is airborne. The encrypted data is then transmitted to a ground station using satellite communications.

67.3.2 GROUND REPLAY & ANALYSIS EQUIPMENT

A. Data is downloaded from the recording device into a central replay and analysis department, where the data is held securely to protect this sensitive information. A variety of computer platforms, including networked PCs, are capable of hosting the software needed to replay the recorded data. Replay software is commercially available, however, the computer platform will require front-end interfaces (usually provided by the recorder manufacturers) to cope with the variety of QAR, FDR and other inputs available today.

B. FDA programmes generate large amounts of data requiring specialized analytical tools. These tools, which are commercially available, facilitate the routine analysis of flight data in order to reveal situations that require corrective action.

C. The analysis software checks the downloaded flight data for abnormalities. The Exceedance detection software typically includes a large number of trigger logic expressions derived from a variety of sources, such as, flight performance curves; standard operating procedures; engine manufacturers= performance data; airfield layout and approach criteria. Trigger logic expressions may be simple exceedences, such as redline values.

D. However, the majority are composites which define a certain flight mode, aircraft configuration or payload-related condition. Analysis software can also assign different sets of rules dependent on airport or geography. For example, noise sensitive airports may use higher than normal glide slopes on approach paths over populated areas.

E. Events and measurements can be displayed on a ground computer screen in a variety of formats. Recorded flight data is usually shown in the form of colour-coded traces and associated engineering units, cockpit simulations or animations of the external view of the aircraft.

67.4 FDA PROCESS

Typically, operators follow a closed-loop process in applying an FDA programme:

67.4.1 BASELINE ESTABLISHED

Initially, operators establish a baseline of operational parameters against which changes can be detected and measured.

A. Example: Rate of unstable approaches, or hard landings.

67.4.2 UNUSUAL OR UNSAFE CIRCUMSTANCES HIGHLIGHTED

The user determines when non-standard, unusual or basically unsafe circumstances occur; by comparing them to the baseline margins of safety, the changes can be quantified.

A. Example: Increases in unstable approaches (or other unsafe events) at particular locations.

67.4.3 UNSAFE TRENDS IDENTIFIED

Based on the frequency of occurrence, trends are identified. Combined with an estimation of the level of severity, the risks are assessed to determine which may become unacceptable if the trend continues.

A. Example: A new procedure has resulted in high rates of descent that are nearly triggering GPWS warnings.

67.4.4 RISKS MITIGATED

Once an unacceptable risk has been identified, appropriate risk mitigation actions are decided and implemented.

A. Example: Having found high rates of descent, the Standard Operating Procedures (SOPs) are changed to improve aircraft control for optimum/maximum rates of descent.

67.4.5 EFFECTIVENESS MONITORED

Once a remedial action has been put in place its effectiveness is monitored, confirming that it has reduced the identified risk and that the risk has not been transferred elsewhere.

A. Example: Confirm that other safety measures at the airfield with high rates of descent do not change for the worse after changes in approach procedures.

67.4.6 ANALYSIS & FOLLOW-UP

A. FDA data are usually compiled on a monthly basis. The data should then be reviewed by a working group — looking for specific exceedences and for emerging undesirable trends and for dissemination of information to flight crews.

B. If deficiencies in pilot handling technique are evident, the information is de-identified in order to protect the identity of the flight crew. The information on specific exceedences is passed to an agreed aircrew representative for confidential discussion with the pilot. The aircrew representative provides the necessary contact with the pilot in order to clarify the circumstances, obtain feedback, and give advice and recommendations for appropriate action, such as: retraining for the pilot (carried out in a positive and non-punitive way); revisions to operating and flight manuals; changes to ATC and airport operating procedures; etc.

C. As well as reviewing specific exceedences, all events are archived in a database. The database is used to sort, validate and display the data in easy-to-understand management reports. Over time, this archived data can provide a picture of emerging trends and hazards which would otherwise go unnoticed. Where the development of an undesirable trend becomes evident (within a fleet, or at a particular phase of flight, or airport location), the fleet's training department can implement measures to reverse the trend through modification of training exercises and/or operating procedures. Likewise with other areas of the operation

requiring action, the data can then be used to confirm the effectiveness of any action taken.

E. Lessons learned from the FDA programme may warrant inclusion in the company's safety promotion programmes. However, care is required to ensure that any information acquired through FDA is studiously de-identified before using it in any training or promotional initiative.

F. As in any closed-loop process, follow-up monitoring is required to assess the effectiveness of any corrective actions taken. Flight crew feedback is essential for the identification and resolution of safety problems. For example:

1. Are the desired results being achieved soon enough;

2. Have the problems really been corrected, or just relocated to another part of the system; and

3. Have new problems been introduced.

G. All successes and failures should be recorded, comparing planned programme objectives with expected results. This provides a basis for review of the FDA programme and the foundation for future programme development.

67.5 CONDITIONS FOR EFFECTIVE FDA PROGRAMMES

Following are several conditions that are fundamental to successful FDA programmes.

67.5.1 PROTECTION OF FDA DATA

A. Airline management and pilots both have legitimate concerns regarding the protection of FDA data, for example:

1. Use of data for disciplinary purposes;

2. Use of data for enforcement actions against individuals or against the company, except in cases of criminal intent or intentional disregard of safety;

3. Disclosure to the media and the general public under the provisions of State laws for access to information; and

4. Disclosure during civil litigation.

B. The integrity of FDA programmes rests upon protection of the FDA data. Any disclosure for purposes other than accident prevention can compromise the voluntary provision of FDA data, thereby compromising flight safety. Thus, the prevention of misuse of FDA data is a common interest of the State, the airlines and the pilots.

67.5.2 ESSENTIAL TRUST

A. As with any successful incident reporting system, the trust established between management and its pilots is the foundation for a successful FDA programme. This trust can be built on:

1. Early participation of the pilots' association in the design, implementation and operation of the FDA programme;
2. A formal agreement between management and the pilots identifying the procedures for the use and protection of data; and
3. Data security, optimized by:

   a. Adhering to stringent agreements with the pilots' associations;

   b. Strictly limiting data access to selected individuals within the company;

   c. Maintaining tight control to ensure that identifying data are removed from the flight data records as soon as possible;

   d. Ensuring that operational problems are promptly addressed by management; and

   e. Destruction of all identified data as soon as possible.

B. Access to crew identification information during follow-up should only be available to specifically authorized persons and only used for the purpose of an investigation. Subsequent to the analysis, the data enabling this identification should be destroyed.

67.5.3 REQUISITE SAFETY CULTURE

Consistent and competent programme management characterize successful FDA programmes. Examples of an effective safety culture include:

A. Top management's demonstrated commitment to promoting a pro-active safety culture, championing the cooperation and accountability of all organisational levels and relevant aviation associations (pilots, cabin staff, engineers, dispatchers, etc.);

B. A non-punitive company policy. (The main objective of the FDA programme must be to identify hazards, not to identify individuals who may have committed an unsafe act.);

C. FDA programme management by a dedicated staff within the safety or operations departments with a high degree of specialization and logistical support;

D. Potential risks are identified through the correlation of the results of the analysis by persons with appropriate expertise. (For example, pilots experienced on the aircraft type being analyzed are required for the accurate diagnosis of operational hazards emerging from FDA analyses.);

E. Primary focus on monitoring fleet trends aggregated from numerous operations rather than on specific events; the identification of systemic issues adds more value for accident prevention than (perhaps isolated) events;

F. A well-structured, de-identification system to protect the confidentiality of the data; and

G. An efficient communication system for disseminating hazard information (and subsequent risk assessments) to relevant departments and outside agencies to permit timely safety action.

67.6 IMPLEMENTING AN FDA PROGRAMME

A. Typically, the following steps are required to implement an FDA programme:

1. Implementation of pilot association agreements;
2. Establishment and verification of operational and security procedures;
3. Installation of equipment;
4. Selection and training of dedicated and experienced staff to operate the programme; and
5. Commencement of data analysis and validation.

B. Bearing in mind the time required to get crew/management agreements and procedures developed, a start-up airline with no FDA experience would not likely achieve an operational system in less than 12 months.

C. Another year may be required before any safety and cost benefits appear. Improvements in the analysis software, or the use of outside specialist service providers, may shorten these time frames.

D. Integrating the FDA programme with other safety monitoring systems into a coherent safety management system will increase the potential benefits. Safety information gathered from other programmes of the SMS gives context to the FDA data. In turn, FDA can provide quantitative information to support investigations that otherwise would be based on less reliable subjective reports.

67.6.1 AIMS & OBJECTIVES OF AN FDA PROGRAMME

67.6.1.1 DEFINE OBJECTIVES OF PROGRAMME

As with any project there is a need to define the direction and objectives of the work. A phased approach is recommended so that the foundations are in place for possible subsequent expansion into other areas. Using a building block approach will allow expansion, diversification and evolution through experience.

A. Example: With a modular system begin by looking at basic safety related issues only. Add engine health monitoring etc. in the second phase. Ensure compatibility with other systems.

67.6.2 SET BOTH SHORT & LONG TERM GOALS

A staged set of objectives starting from the first week's replay and moving through early production reports into regular routine analysis will contribute to a sense of achievement as milestones are met—

67.6.2.1 SHORT TERM

A. Establish data download procedures, test replay software and identify aircraft defects;

B. Validate and investigate Exceedance data; and

C. Establish a user-acceptable routine report format to highlight individual exceedences and facilitate the acquisition of relevant statistics.

67.6.2.2 MEDIUM TERM

A. Produce annual report - include key performance indicators;

B. Add other modules to analysis (e.g. Continuing Airworthiness); and

C. Plan for next fleet to be added to programme.

67.6.2.3 LONG TERM

A. Network FDA information across all company safety information systems;

B. Ensure FDA provision for any proposed advanced training programme; and

C. Use utilization and condition monitoring to reduce spares holdings. Initially, focusing on a few known areas of interest will help prove the system's effectiveness. In contrast to an undisciplined "scatter-gun" approach, a focused approach is more likely to get early successes.

Example: Rushed approaches, or rough runways at particular airports; unusual fuel usage on particular flight segments; etc. Analysis of such

known problem areas may generate useful information for the analysis of other areas.

67.6.3 THE FDA TEAM

A. Experience has shown that the "team" required to run an FDA programme could vary in size from one person with a small fleet (5 aircraft), to a dedicated section for large fleets. The descriptions below identify various functions to be fulfilled, not all of which need a dedicated position. For example, engineering may provide only part time support.

B. All FDA team members require appropriate training or experience for their respective area of data analysis. Each team member must be allocated a realistic amount of time to regularly spend on FDA tasks. With insufficient available manpower, the entire programme will underperform or even fail.

1. *Team leader.* Team leaders must earn the trust and full support of both management and flight crews. They act independently of other line management to make recommendations that will be seen by all to have a high level of integrity and impartiality. The individual requires good analytical, presentation and management skills.

2. *Flight operations interpreter.* This person normally is a current pilot (or perhaps a recently retired senior Captain or trainer), who knows the company's route network and aircraft. Their in-depth knowledge of SOPs, aircraft handling characteristics, airfields and routes will be used to place the FDA data in a credible context.

3. *Technical interpreter.* This person interprets FDA data with respect to the technical aspects of the aircraft operation. He is familiar with the powerplant, structures and systems departments' requirements for information and any other engineering monitoring programmes in use by the airline.

4. *Aircrew representative.* This person provides the link between the fleet or training managers and flight crew involved in circumstances highlighted by FDA. The position requires good people skills and a positive attitude towards safety education. The person is normally a representative of the flight crew association and should be the only person permitted to connect the identifying data with the event. The aircrew representative requires the trust of both crewmembers and managers for their integrity and good judgment.

5. *Engineering technical support.* This person is normally an avionics specialist, involved in the supervision of mandatory serviceability requirements for FDR systems. They must be knowledgeable about FDA and the associated systems needed to run the programme.

6. *Air safety coordinator.* This person cross-references FDA information with other air safety monitoring programmes (such as the company's mandatory or confidential incident reporting programmes), creating a credible integrated context for all information. This function can reduce duplication of follow-up investigations.

7. *Replay operative and administrator.* This person is responsible for the day-to-day running of the system, producing reports and analysis. Methodical, with some knowledge of the general operating environment, this person keeps the programme moving.

67.7 OFF-THE-SHELF PACKAGES

A. The QARs available on most large, modern aircraft can be analyzed on a suitably configured replay and analysis system. Even though the operators themselves can configure the various event equations and Exceedance levels, suppliers of ground replay software offer both starter packs and advanced flight operations monitoring programmes for a variety of different aircraft types. It is not normally cost-effective for new operators to configure FDA systems themselves, although most suppliers will review the relevance and levels of event triggers with each new operator.66

B. Some aircraft manufacturers actively support FDA programmes for their aircraft.67 They provide airlines with packages including tools and software, handbooks to support their flight data analysis methods and procedures, and additional assistance for operators implementing their programme. (They see the sharing of data and information provided by the airline as a means for improving their aircraft, SOPs and training.)

C. Most system vendors provide one year of maintenance and support in the original package but charge an annual fee thereafter. In addition, other cost factors to be considered by prospective purchasers include:

1. Installation costs;

2. Training costs;

3. Software upgrade costs (often included in the maintenance contracts); and

4. Other software license fees that may be necessary.

D. FDA programmes are often viewed as one of the most expensive safety systems in terms of the initial outlay, software agreements and personnel requirements. In reality, they have the potential to save the company's considerable expense by reducing the risk of a major accident, improving operating standards, identifying external factors affecting the operation and improving engineering monitoring programmes.

67.8 FDA PROGRAMME EVALUATION GUIDE

For FDA PROGRAMME EVALUATION GUIDE, Operations Inspectors of CAAB shall refer to Part-II, Chapter-68, Appendix-41.

Civil Aviation Authority, Bangladesh

PART-II

OPERATIONS INSPECTORS MANUAL

CHAPTER – 68/APPENDICES

Directorate of Flight Safety & Regulations

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Chapter-68 contains various 'Appendices' relevant to Part-I ('Main Text') of the FOI Handbook. The 'Appendices' contain 'Guidance Material, Checklists and other references. 'Table of Content', relevant to Chapter-68, and the 'Record of Revision' relevant to the 'Appendices' have been provided inside this Chapter as in Part-1.

CAAB Inspectors should refer to the contents of this Chapter as applicable with reference to the information provided in Part-I ('Main Text') for having continuity in acquiring and/or accumulating knowledge and its application thereof.

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RECORD OF AMENDMENTS

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CHAPTER-68/APPENDIX-01
MODEL AGREEMENT BETWEEN STATES ON THE IMPLEMENTATION OF ARTICLE 83 *BIS* OF THE CONVENTION

Model Agreement between [State 1] and [State 2] on the Implementation of Article 83 *bis* of the Convention

WHEREAS, the Protocol relating to Article 83 *bis* of the *Convention on International Civil Aviation* (Chicago, 1944) (hereinafter referred to as "the Convention"), to which [State 1] and [State 2] are parties, entered into force on 20 June 1997;

WHEREAS Article 83 *bis*, with a view to enhanced safety, provides for the possibility of transferring to the State of the Operator all or part of the State of Registry's functions and duties pertaining to Articles 12, 30, 31 and 32 *a)* of the Convention;

WHEREAS, in line with Doc 9760 (*Airworthiness Manual*), Volume II, Part B, Chapter 10, and in light of Doc 8335 (*Manual of Procedures for Operations Inspection, Certification and Continued Surveillance*), Part V, it is necessary to establish precisely the international obligations and responsibilities of [State 1] (State of Registry) and [State 2] (State of the Operator) in accordance with the Convention;

WHEREAS, with reference to the relevant Annexes to the Convention, this Agreement organizes the transfer from [State 1] to [State 2] of responsibilities normally carried out by the State of Registry, as set out in Sections 3 and 4 below;

The Government of [State 1], represented by its [Civil Aviation Authority], and The Government of [State 2], represented by its [Civil Aviation Authority], Hereinafter referred to as "the Parties", have agreed as follows on the basis of Articles 33 and 83 *bis* of the Convention:

ARTICLE I—SCOPE

Section 1. [State 1] shall be relieved of responsibility in respect of the functions and duties transferred to [State 2], upon due publicity or notification of this Agreement as determined in paragraph *b)* of Article 83 *bis*.

Section 2. The scope of this Agreement shall be limited to [types of aircraft] on the register of civil aircraft of [State 1] and operated under leasing arrangement by [operator], whose principal place of business is in [State 2]. The list of aircraft concerned, identified by type, registration number and serial number, is reproduced in Attachment 1, which also indicates the term of each leasing arrangement.

ARTICLE II—TRANSFERRED RESPONSIBILITIES

Section 3. Under this Agreement, the Parties agree that [State 1] transfers to [State 2] the following functions and duties, including oversight and control of relevant items contained in the respective Annexes to the Convention:

Annex 1 — *Personnel Licensing,* issuance and validation of licenses.

Annex 2 — *Rules of the Air*, enforcement of compliance with applicable rules and regulations relating to the flight and manoeuvre of aircraft.

Annex 6 — *Operation of Aircraft* (Part I — *International Commercial Air Transport — Aeroplanes* and Part III — *International Operations — Helicopters*), all responsibilities which are normally incumbent on the State of Registry. Where responsibilities in Annex 6, Part I, may conflict with responsibilities in Annex 8 — *Airworthiness of Aircraft*, allocation of specific responsibilities is defined in Attachment 2.

Section 4. Under this Agreement, while [State 1] will retain full responsibility under the Convention for the regulatory oversight and control of Annex 8 — *Airworthiness of Aircraft*, the responsibility for the approval of line stations used by the [operator], which are located away from its main base, is transferred to [State 2]. The procedures related to the continuing airworthiness of aircraft to be followed by the [operator] will be contained in the operator's maintenance control manual (MCM). Attachment 2 hereunder describes the responsibilities of the Parties regarding the continuing airworthiness of aircraft.

ARTICLE III—NOTIFICATION

Section 5. Responsibility for notifying directly any States concerned of the existence and contents of this Agreement pursuant to Article 83 *bis b)* rests with [State 2] as the State of the Operator, as needed. This Agreement, as well as any amendments to it, shall also be registered with ICAO by [State 1] as the State of Registry or [State 2] as the State of the Operator, as required by Article 83 of the Convention and in accordance with the *Rules for Registration with ICAO of Aeronautical Agreements and Arrangements* (Doc 6685).

Section 6. A certified true copy [in each language] of this Agreement shall be placed on board each aircraft to which this Agreement applies.

Section 7. A certified true copy of the air operator certificate (AOC) issued to [operator] by [State 2], in which the aircraft concerned will be duly listed and properly identified, will also be carried on board each aircraft.

ARTICLE IV—COORDINATION

Section 8. Meetings between [State 1-CAA] and [State 2-CAA] will be held at [three-] month intervals to discuss both operations and airworthiness matters resulting from inspections that have been conducted by respective inspectors. For the sake of enhanced safety, these meetings will take place for the purpose of resolving any discrepancies found as a result of the inspections and in order to ensure that all parties are fully informed about the [operator's] operations. The following subjects will be among those reviewed during these meetings:

A. Flight operations
B. Continuing airworthiness and aircraft maintenance
C. Operator's MCM procedures, if applicable

D. Flight and cabin crew training and checking
E. Any other significant matters arising from inspections

Section 9. Subject to reasonable notice, [State 1-CAA] will be permitted access to [State 2-CAA] documentation concerning [operator] in order to verify that [State 2] is fulfilling its safety oversight obligations as transferred from [State 1].

Section 10. During the implementation of this Agreement, and prior to any aircraft subject to it being made the object of a sub-lease, [State 2], remaining the State of the Operator, shall inform [State 1]. None of the duties and functions transferred from [State 1] to [State 2] may be carried out under the authority of a third State without the express written agreement of [State 1].

ARTICLE V—FINAL CLAUSES

Section 11. This Agreement will enter into force on its date of signature, and come to an end for aircraft listed in Attachment 1 at the completion of the respective leasing arrangements under which they are operated. Any modification to the Agreement shall be agreed by the parties thereto in writing.

Section 12. Any disagreement concerning the interpretation or application of this Agreement shall be resolved by consultation between the Parties.

Section 13. In witness thereof, the undersigned directors of civil aviation of [State 1] and [State 2] have signed this Agreement.

For the Government of [State 1]	For the Government of [State 2]
[Signature] [Name, title, place and date]	[Signature] [Name, title, place and date]

Attachments:

Attachment 1 — Aircraft Affected by this Agreement
Attachment 2 — Responsibilities of [State 1] and [State 2] Regarding Airworthiness

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CHAPTER-68/APPENDIX-02
ICAO MODEL CLAUSE ON AVIATION SAFETY

1. PURPOSE AND SCOPE

1.1 A model clause on aviation safety consists of an article specifically addressing aviation safety, which States may incorporate into bilateral or multilateral air service agreements. Such a safety clause would assist States in ensuring that foreign aircraft operating in their airspace are operated and maintained in accordance with ICAO standards.

1.2 A safety clause provides States with a standardized process to address safety concerns they may have regarding the safe operation of foreign aircraft and emphasizes the responsibilities of States for providing adequate safety oversight of commercial air transport operations.

1.3 The model clause on aviation safety contains no reference to sanctions or penalties for non-compliance with Standards, on the basis that air service agreements normally include an article addressing non-compliance issues.

1.4 The ICAO Council adopted the following Resolution and model clause on 13 June 2001.

2. ICAO COUNCIL RESOLUTION

Whereas the primary objective of the Organization continues to be that of ensuring the safety of international civil aviation worldwide,

Whereas Article 37 of the Convention requires each Contracting State to collaborate in securing the highest practicable degree of uniformity in regulations and practices in all matters in which such uniformity will facilitate and improve air navigation,

Considering that the rights and obligations of States under the Chicago Convention and under the Standards and Recommended Practices adopted by the Council of ICAO on aviation safety could be complemented and reinforced in cooperation between States,

Considering that the agreements on air services represent the main legal basis for international carriage of passengers, baggage, cargo and mail,

Considering that provisions on aviation safety should form an integral part of the agreements on air services,

Noting that nothing prevents States who incorporate the ICAO model safety clause into their aviation agreements from including any additional, or more restrictive criteria, which the parties agree are necessary for assessing the safety of an aircraft operation.

The Council:

Urges all Contracting States to insert into their agreements on air services a clause on aviation safety, and

Recommends that Contracting States take into account the model safety clause attached to this resolution.

3. MODEL CLAUSE

1. Each Party may request consultations at any time concerning the safety standards maintained by the other Party in areas relating to aeronautical facilities, flight crew, aircraft and the operation of aircraft. Such consultations shall take place within thirty days of that request.

2. If, following such consultations, one Party finds that the other Party does not effectively maintain and administer safety standards in the areas referred to in paragraph 1 that meet the Standards established at that time pursuant to the *Convention on International Civil Aviation* (Doc 7300), the other Party shall be informed of such findings and of the steps considered necessary to conform with the ICAO Standards. The other Party shall then take appropriate corrective action within an agreed time period.

3. Pursuant to Article 16 of the Convention, it is further agreed that, any aircraft operated by, or on behalf of an airline of one Party, on service to or from the territory of another Party, may, while within the territory of the other Party be the subject of a search by the authorized representatives of the other Party, provided this does not cause unreasonable delay in the operation of the aircraft. Notwithstanding the obligations mentioned in Article 33 of the Chicago Convention, the purpose of this search is to verify the validity of the relevant aircraft documentation, the licensing of its crew, and that the aircraft equipment and the condition of the aircraft conform to the Standards established at that time pursuant to the Convention.

4. When urgent action is essential to ensure the safety of an airline operation, each Party reserves the right to immediately suspend or vary the operating authorization of an airline or airlines of the other Party.

5. Any action by one Party in accordance with paragraph 4 above shall be discontinued once the basis for the taking of that action ceases to exist.

6. With reference to paragraph 2 above, if it is determined that one Party remains in non-compliance with ICAO Standards when the agreed time period has lapsed, the Secretary General of ICAO should be advised thereof. The latter should also be advised of the subsequent satisfactory resolution of the situation.

CHAPTER-68/APPENDIX-03
GUIDANCE ON THE CONDUCT OF A RAMP INSPECTION

1. GENERAL

The items to be checked by the inspector during a ramp check are summarized below:

A. Flight deck
B. Cabin/Safety
C. Aircraft external condition
D. Cargo
E. General

2. DETAILED LIST

The detailed list contains information on the items to be checked. For each item, guidance is provided on how to perform the check.

3. SCOPE

It is not possible to cover all items on the list at every ramp inspection. Inspections should be planned to cover high-risk items and to cover all other items over a series of inspections. It is essential that adequate records be kept and that there is complete coordination between all inspectors involved in ramp inspections for any one operator.

4. ITEMS TO BE CHECKED

A. FLIGHT DECK — GENERAL

A 1. General Condition
(Instructions: Check cleanliness, tidiness and general condition).

A 2. Emergency Exit
(Instructions: Check whether in compliance with ICAO SARPs).

A 3. Equipment
(Instructions: Check for the presence of the following equipment where required:

a. Two sensitive pressure altimeters with counter drum-pointer or equivalent presentation (IFR operations);
b. Airborne collision avoidance system (ACAS);
c. Cockpit voice recorder (CVR) and flight data recorder (FDR);
d. ELT;
e. Ground proximity warning system (GPWS); and
f. Where a flight management computer (FMC) is provided — valid database.

A.4 Flight Deck — Documentation

a. Manuals -All required manuals
(Instructions: Check for presence. Check whether manuals are up to date and accepted or approved as required).

b. Checklists
(Instructions: Confirm checklists are available and up to date. Check whether their content is in compliance with the requirement. Normal, non-normal and emergency checklists are sometimes combined in a Quick Reference Handbook;
Check the availability of an aircraft search procedure checklist; and Confirm availability of the checklist of emergency and safety equipment).

c. Route Guide
(Instructions: Check whether a route guide, including charts, is available, suitable and up to date).

d. MEL
(Instructions: Check whether the MEL is available, up to date and approved).

A.5 Documents Required to be Carried on Board

a. Certificate of registration
(Instructions: Check for presence and accuracy and format).

b. Identification plate
(Instructions: Check presence and location).

c. Certificate of airworthiness
(Instructions: Check that the certificate of airworthiness of the aircraft is on board and valid).

d. Crew member licenses
(Instructions: Check validity of: date; type rating; instrument rating; competency check; language proficiency endorsement; medical assessment;

e. Journey log book or technical log and voyage report
(Instructions: Check whether entries are up to date, validity of maintenance release. Check number of deferred defects (specify in the report where necessary). Check that defect deferments include time limits and comply with the stated time limits. Where applicable, check compliance with the aircraft MEL).

f. Radio station license
(Instructions: Check whether available and up to date).

g. Noise certification document or statement, where applicable
(Instructions: Check whether available and valid).

h. AOC (certified true copy) and operations specifications (copy)
(Instructions: Check whether available, applicable and valid).

A 6. Operational Flight Plan
(Instructions: Check for presence, accuracy and signature(s), and for adequate fuel and oil reserve planning and supply on board. Check for presence of ATS flight plan).

A 7. Mass And Balance Sheet
(Instructions: Check for presence of load sheet and accuracy).

A 8. Aircraft Performance Limitations Using Current Route, Airport Obstacles And Runway Analysis Data
(Instructions: Check for availability of aircraft performance information including limitations and runway performance analysis based on current airport data).

A 9. Cargo Manifest And , If Applicable, Passenger Manifest
(Instructions: Check for availability of completed cargo manifest and, if required, passenger manifest).

A 10. Preflight Inspection
(Instructions: Check for presence of preflight inspection or preparation forms).

A 11. Weather Reports and Forecasts
(Instructions: Check for availability of weather reports and forecasts adequate for the flight).

A 12. NOTAM
(Instructions: Check for availability of NOTAMs for the route of flight).

FLIGHT DECK — SAFETY EQUIPMENT

A 13. Portable Fire Extinguishers
(Instructions: Check for presence, number, condition and expiry date).

A 14. Life Jackets/Flotation Devices
(Instructions: Check for presence, condition and, where applicable, expiry date).

A 15. Safety Harness
(Instructions: Check for presence, condition and quantity).

A 16. Oxygen Equipment
Instructions: Check for presence, quantity and condition.

A 17. Emergency Flashlight
(Instructions: Check for appropriate quantities of emergency flashlight. Check their condition if possible).

B. CABIN/SAFETY

B 1. General Condition
(Instructions: Check for cleanliness, tidiness and general condition).

B 2. Cabin Crew Seats and Safety Harness
(Instructions: Check for presence and compliance with the requirement).

B 3. First Aid Kit/Emergency Medical Kit
(Instructions: Check for presence, condition, location and expiry date if available).

B 4. Portable Fire Extinguishers
(Instructions: Check for presence, number, condition and expiry date if available).

B 5. Life Jackets/Flotation Devices
(Instructions: Check for presence, condition and expiry date as applicable).

B 6. Seat Belts
(Instructions: Check for presence and condition).

B 7. Emergency Exit Lighting and Marking, Emergency Flashlights
(Instructions: Check for presence of emergency exit signs, lighting and marking, and emergency flashlights, one per cabin crew member. Where possible, check condition of floor path lighting/marking and of flashlights).

B 8. Slides/Life Rafts and Pyrotechnical Distress Signaling Devices (As Required)
(Instructions: Check bottle gauge, slide bar and slide expiry date. Check presence of life raft, when required).

B 9. Oxygen Supply — Cabin Crew and Passengers
(Instructions: Check for presence and condition where applicable).

B 10. Emergency Briefing Cards
(Instructions: Check for presence and accuracy).

B 11. Cabin Crew Members
(Instructions: Check that the number of cabin crew is appropriate. Check whenever possible that the location of cabin crew members allows to effect a safe and expeditious evacuation of the aircraft).

B 12. Access to Emergency Exits
(Instructions: Check that appropriate access to emergency exits is provided and that it is not impeded).

B 13. Safety of Cabin Baggage
(Instructions: Check that the crew and the passengers do not carry oversized hand baggage for the stowage capacity of the aircraft. Check proper stowage of cabin baggage).

B 14. Seating Capacity
(Instructions: Check that the number of persons boarding does not exceed the number permitted).

B 15. Security of the Flight Crew Compartment Door (If Applicable)
(Instructions: Check that the flight crew compartment door, if provided, is lockable. Where applicable, check that the flight crew compartment door is penetration resistant).

C. AIRCRAFT EXTERNAL CONDITION

C 1. General External Condition
(Instructions: Check general condition of the airframe: apparent corrosion; cleanliness; presence of ice, snow, frost; legibility of markings, etc).

C 2. Doors and Hatches
(Instructions: Check for passenger and cargo door condition, external markings, seals, operating instructions and condition of hatches).

C 3. Wings and Tail
(Instructions: Check wings, vertical and horizontal stabilizers, including all flight control surfaces. Check for obvious damage, corrosion, disbonding, evidence of lightning strikes, dents, looseness of fittings, missing static discharges, etc).

C 4. Wheels, Brakes and Tires
(Instructions: Inspect for damage, wear and signs of underinflated tires).

C 5. Undercarriage
(Instructions: Visual inspection. Focus on lubrication, leakage and corrosion, and wear on door fittings and hinges).

C 6. Wheel Well
(Instructions: Visual inspection. Focus on cleanliness, leakage and corrosion).

C 7. Intake and Exhaust Nozzle
(Instructions: Visual inspection. Focus on damage, cracking, dents and loose/missing fasteners (intake) and low pressure turbine blades (where visible), obvious damage to sensors, jet pipe nozzle, exhaust, thrust reversers, etc).

C 8. Fan Blades (If Applicable)
(Instructions: Visual inspection. Check for foreign object damage, cracks, cuts, corrosion, erosion, etc).

C 9. Propellers (If Applicable)
(Instructions: Visual inspection. Check for corrosion, looseness of blades in hub, erosion, stone damage, anti/de-icing system, etc).

C 10. Previous Structural Repairs

(Instructions: Visual inspection. Note any previous repairs, check condition and verify compliance to standard practices).

C 11. Obvious Damage
(Instructions: Visual inspection. Note unassessed and unrecorded damage including corrosion, lightning strike damage, and bird strikes, etc).

C 12. Leakage
(Instructions: Visual inspection: fuel, oil, hydraulic leaks. Inspect for toilet leaks at service locations).

D. CARGO

D 1. General Condition of Cargo Compartment and Containers
(Instructions: Check for cleanliness and general condition of cargo compartment and containers. Check damage to compartment liners and condition of fire protection, detection and extinguishing system, if appropriate. Check condition of container locking devices).

D 2. Dangerous Goods
(Instructions: If dangerous goods are on board, check that the pilot has received appropriate notification, Check that the operations manual includes relevant information as required by Annex 18).

D 3. Safety of Cargo on Board
(Instructions: Check that loads are properly distributed and safely secured).

E. GENERAL

E 1. Additional Remarks
(Instructions: Record and report any items of significant nature that may be observed which are not covered by this guidance).

E 2. Refueling
(Instructions: Check that the procedures relating to refueling with passengers on board are complied with).

E 3. Language for Communication
(Instructions: Check that all pilots, and those flight navigators required to use the radio telephone, are fluent in the language used for radiotelephony communications or in English language

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CHAPTER-68/APPENDIX-04
AIR OPERATOR RAMP INSPECTION REPORT

Civil Aviation Authority, Bangladesh
Headquarters, Kurmitola, Dhaka
Bangladesh

AIR OPERATOR RAMP INSPECTION REPORT

OPERATOR	AOC	TYPE	MODEL	REG	STATION		DATE
CAPTAIN	F/O	PURSER	NO OF CC	OTHER CREW	FLT NO.	FROM/TO	INSPECTOR

S = Satisfactory; U = Unsatisfactory; N = Not Checked; NA = Not Applicable; C = Comment

Note: In case U or C; Inspector must use the 'Comment Box'

A. AIRCRAFT GENERAL		• MEL		G.LOADING & BOARDING	
• Aircraft Hours		• Journey Log Book		1.CARGO & BAGGAGE HANDLING	
• Eng Hours		• Map & Charts		• Compartment Condition	
• Ldg Gear Cycle		• Checklist : Normal & Non-normal		• Training of Loaders	
B. AIRCRAFT CONDITION		• Flt Docs (GD, Load sheet, Manifest)		• Cargo Packing	
• General External		F. SERVICING		• Equipment for Loading	
• Wheels, Tyres, Brakes		1.FUELING		• Loading Procedures	
• Wheel Well		• Fuel Cart Position		2.PAX BOARDING	
• Pylon & Power Plant		• Earth Connection		• Coordination Between Crew & GS	
• Fan Blades / Propellers		• Fuel Test For Contamination		• Cabin Readiness	
• Un-repaired Damage		• Fuel Slip		• Vehicle Position	
• Leakage/ Seepage		Fuel Record		• Release of Pax From Vehicle	
C. MAINTENANCE		2.DE-ICING PROCEDURE		• Boarding Aircraft	

• Maintenance Release		• De-icing Technique		H. RAMP & GATE	
• HIL		• Chemical Type		• Cockpit / Ground Coordination	
• CDL		• Hold over Time		• Gate Removal	
• Compliance of MEL		• Cockpit Procedure		• Push Back / Power Back	
D. LICENSES & CERTIFICATES		3.CATERING			
• Owners Ident Plate		• Loading Procedure			
• AOC and Operation Specifications		• Equipment			
• A/C Registration Certificate		• Storing Facility			
• Airworthiness Certificate		• Heating Procedure			
• Maintenance Certificate		4.CLEANING			
• Radio License		• Training of Cleaners			
• Insurance		• Equipment & Detergent Used			
• BW / BOI		• Lavatory Cleaning			
E. MANUALS & DOCUMENTS		• Cabin Cleaning			
• Airplane Flight Manual		• Equipment & Surface Cleaning			
• FCOM		5.WATER			
• WAB Manual		• Potable Water			
• Operations Manuals (A,B,C,D)		• Drinking Water			
• SMSM		• Lavatory Flushing			
• T/O Performance Manual					
COMMENTS:					

INSPECTION RESULT: SATISFACTORY: UNSATISFACTORY:
_____ SIGNATURE OF FOI Date:

CHAPTER-68/APPENDIX-05
AIR OPERATOR PARTIAL DITCHING DEMONSTRATION REPORT

Civil Aviation Authority, Bangladesh
Headquarters, Kurmitola, Dhaka
Bangladesh

AIR OPERATOR PARTIAL DITCHING DEMONSTRATION REPORT

1. Name of operator:
2. Date/time of demonstration:
3. Aircraft type/model:
4. Civil Aviation Team of Inspectors:
5. Flight Crewmember names:
6. Cabin Crewmember names (List name and crew position of each participant):
7. Times:
   a. From start of demonstration until each exit door or emergency exit to be utilized is opened:
   b. Time when raft is launched:
   c. Time required to inflate raft:
8. Results: Satisfactory/Unsatisfactory
9. Remarks/Recommendations:

Inspector's Signature _____
Name of Team Leader Inspector

CHAPTER-68/APPENDIX-06
AIR OPERATOR PARTIAL EMERGENCY EVACUATION DEMONSTRATION REPORT

Civil Aviation Authority, Bangladesh
Headquarters, Kurmitola, Dhaka
Bangladesh

AIR OPERATOR PARTIAL EMERGENCY EVACUATION DEMONSTRATION REPORT

1. Name of operator:

2. Date/time of demonstration:

3. Aircraft type/model:

4. Number of installed seats:

5. Civil Aviation Team of Inspectors:

6. Crewmember names: (List name and crew position of each participant)

7. Results: Satisfactory/Unsatisfactory

8. Remarks/Recommendation: (Include description of which exits were used and whether or not slides were deployed within 15 seconds of commencement of drill - continue on back if necessary.)

Inspector's Signature _____
Name of Team Leader Inspector

CHAPTER-68/APPENDIX-07
AIR OPERATOR PROVING TEST FLIGHT REPORT

Civil Aviation Authority, Bangladesh
Headquarters, Kurmitola, Dhaka
Bangladesh

AIR OPERATOR PROVING TEST FLIGHT REPORT

1. Name of operator:

2. Aircraft type/model:

3. Date/time of Test Flight: (Block Off, Take Off, Land, Block On)

4. Flight Information:

   A. Call sign, Route Segments, Origin, Flight Level, Destination, Alternate, Flight Time-Day/Night.

5. Civil Aviation Team of Inspectors:

6. Flight Deck Crewmember names:

7. Cabin Crewmember names:

8. Comments on the entire flight scenario :

   A. Starting from Checking in for the flight to termination of flight. This should include all phases of Ground and Flight Operations;
   B. Normal procedure during flights;
   C. Simulated Abnormal/Emergency Scenarios during Flights

9. Results: Satisfactory/Unsatisfactory

10. Remarks/Recommendation:

Note: *Attach en-route cockpit and cabin report forms and station facility inspection report forms if applicable, along with copy of letter to company advising whether flights were found to be satisfactory or unsatisfactory.*

Inspector's Signature _____
Name of Team Leader Inspector

CHAPTER-68/APPENDIX-08
CHECK AIRMAN LETTER OF APPROVAL

Civil Aviation Authority, Bangladesh
Headquarters, Kurmitola, Dhaka
Bangladesh

CHECK AIRMAN LETTER OF APPROVAL

Date: ……

Name:

Designation: DFO/Chief Pilot

Name of Air Operator

Address:

Dear (Name)

Capt (Name), (Country of issue) ATPL number) ……., is approved as a Check Airman. This Check Airman is approved to conduct checks in the …….. aircraft for employees of (Name of Air Operator).

This approval is applicable for the following checking functions:

[ ] Proficiency Check Pilot - Aircraft. Effective _____ (Date) until ____ (Date)

[ ] Proficiency Check Pilot - Simulator. Effective_____ (Date) until _____ (Date)

[ ] Line Check Pilot. Effective _____ (Date) until _____ (Date)

[ ] Check Pilot - All Checks. Effective _____ Date) until _____ (Date)

[ ] Check Flight Engineer - Airplane Only. Effective_____ (Date) until _____ (Date)

[ ] Check Flight Engineer - All Checks. Effective _____ (Date) until _____ (Date)

Please retain a copy of this letter in Mr. (Name's) individual flight training records.

Sincerely,

DFSR, CAAB

CHAPTER-68/APPENDIX-09
AIR OPERATOR COCKPIT EN-ROUTE INSPECTION REPORT

Civil Aviation Authority, Bangladesh
Headquarters, Kurmitola, Dhaka
Bangladesh

AIR OPERATOR COCKPIT EN-ROUTE INSPECTION REPORT

OPERATOR	AOC	FLIGHT NO.	FROM	TO	TYPE/REG NO.		DATE
CAPTAIN	LIC NO.	F/O	LIC NO.	OTHER FLT CREW	PURSER	NO OF CC	INSPECTOR

S = Satisfactory; U = Unsatisfactory; N = Not Checked; NA = Not Applicable; C = Comment
Note: In case U or C; Inspector must use the 'Comment Box'

A. CREWMEMBERS		3. TAKE-OFF		• Approach Procedure	
• Licenses		• Rwy Alignment		• A/C Handling	
• Medical		• Use of Power		• Power Handling	
• Equipment		• Use of Clock		• Callouts	
B. FLIGHT DISPATCH		• Ctre Line Tracking		8. LANDING	
• MET		• Crosswind Control		• Transition to Landing	
• NOTAM		• Callouts		• Rwy Alignment	
• Load Information		• Rotation Technique		• Threshold Crossing Height	
• MEL/CDL		• Initial Climb Spd		• Crosswind Control	
• Fuel Requirement		• Use Of AP/NAV Aids		• Power Control	
• ATC Flt Plan		4. CLIMB		• Flare Technique	
• Ops Flt Plan		• ATC/Sid Compliance		• Touchdown Point	
C. COMBINED CREW BRIEFING		• Climb Profile		• Touchdown & Landing Roll	
D. FLIGHT CONDUCT		• Clean-Up Procedure		• Use of Spoiler/Reverse	
1. PRE-DEPARTURE		• Altimeter Setting		• Braking Technique	
• Ext Inspections		• Speed Transition		• Transition to NW Steering	
• Cockpit Emer Equipment		• Spd/Mach Control		• Min Rwy Occup Time	

				Compliance	
• Cockpit Safety Checks		• Selection of Alt/Fl		9. TAXI- IN	
• Performance Calculation		5. CRUISE		• After Landing Checks	
• NAV Aids Setup		• Spd/Mach Control		• Twy Orientation	
• Crew Briefing		• Flt Prog Monitoring		• Parking & Shutdown	
• GRD/CC Coordination		• A/C Performance Monitoring		• GRD/CC Coordination	
• Push/Power Back		6. DESCENT		10. POST ARRIVAL	
• Engine Start		• Planning		• Checks	
2. TAXI-OUT		• Briefing		• Paperwork	
• Brake-Off Technique		• Speed/Rate Control		E. COMMUNICATION	
• Speed/Directional Control		• Altimeter Setting		• Alertness	
• Turning Technique		• Speed Transition		• R/T Procedure	
• Twy Orientation		7. APPROACH		• R/T Parasologry	
• Adherence To Clearance		• Star Compliance		• Cabin-Cockpit Comm.	
• Vigilance		• Entry & Holding		• PA Announcement	
• Dep Briefing		• Config Procedure			
• NAV Aids Setup		• Speed Control			
F. GENERAL		H. AIRPORTS		2. COMMUNICATION	
• Checklist Procedure		• Surface Condition		• Phraseology	
• Navigation		• Lightings		• Clarity	
• FMS/GPS/RAD/NAV Mgt		• Signs & Markings		• Pronunciation	
• Wx Adoidance Technique		• Nav & Approach Aids		• Transmission Rate	
• ATC Compliance		• Obstruction		3. DEPARTURE & APPROACH	
• Use of Anti-Ice		• FOD		• Quality of Clearance	
• Alertness		• Vehicle Movement		• Responsiveness	
• Instrument Scanning		• Refuelling		• A/C Separation	
• Situational Awareness		• Pax Handling		4. SITUATIONAL AWARENESS	
• CRM And Sop		• Safety & Security Arrangement			
• Time Mgt		I. AIR TRAFFIC CONTROL			
G. KNOWLEDGE		1. RADIO-FREQUENCIES			
• AFM		• Congestion			
• FCOM		• Overlap			
• MEL/CDL		• Blackout Area			
• Airway Manual					

• OM					
COMMENTS:					
INSPECTION RESULT: SATISFACTORY: UNSATISFACTORY: SIGNATURE OF FOI Date:					

CHAPTER-68/APPENDIX-10
AIR OPERATOR CABIN EN-ROUTE INSPECTION

Civil Aviation Authority, Bangladesh
Headquarters, Kurmitola, Dhaka
Bangladesh

AIR OPERATOR CABIN EN-ROUTE INSPECTION REPORT

OPERATOR	AOC	FLIGHT NO.	SECTOR	TYPE/REG NO.	DATE
PURSER	NO OF CC	CAPTAIN	F/O	OTH CREW	INSPECTOR

S = Satisfactory; U = Unsatisfactory; N = Not Checked; NA = Not Applicable; C = Comment
Note: In case U or C; Inspector must use the 'Comment Box'

A. CREWMEMBERS		3. PBE		12. OTHERS	
• Certificates		• Number & Location		• Extension/Infant Seat Belt	
• Equipment (Personal)		• Storage & Seals		• Disposable Bag	
• Crew Compliment		4. MEGAPHONE (IF APPLICABLE)		D. FLIGHT CONDUCT	
• Purser's Briefing		• Number & Location		1. PRE-DEPARTURE	
• Distribution of Duties		• Serviceability		• Equipment Check	
B. AIRCRAFT (GENERAL)		5. ELT		• Cabin Check	
1. CABIN LOG BOOK		• Number & Location		• Galley Check	
• Open Items		• Condition		• Lavatory Check	
• Carry Over Items		6. FIRST AID KIT		• Safety & Security Check	
2. SIGNS & PLACARDS		• Number & Location		• Report to Purser/Captain	
• No Smoking		• List of Contents		2. BOARDING & SEATING	
• Seat Belt		• Expiry Check of Contents		• Welcome	
• Exit		7. PAX SEATS		• Seating Allocation	
• Lavatory		• Seat Condition		• Cabin Baggage Mgt	
• Equipment List (Location Wise)		• Seat Belts		• Pax Count	
3. EMERGENCY EXITS		• Tray Tables		• Door Close & Arming	
• Not Obstructed		• Life Vest (If Applicable)		3. SAFETY ANNOUNCEMENT &	

				DEMO	
• Instructions to Operate		• Safety Card		• Use of Seat Belt	
• Controls & Seals		• Sign & Placard		• Use of Oxygen	
4. STOWAGE		8. CREW STATION		• Use of Life Jacket	
• Latching Mechanism		• Seat Condition		• Evac Procedure	
• Crew Baggage Stowage		• Seat Retractability		• Stowage of Baggage	
• Access to Equipment		• Seat Belt & Shoulder Harness		• No Smoking Regulation	
5. EMERGENCY LIGHTING		• Pa & Interphone System		4. TAXI	
• External Exit Lts		• Emergency Lt Control Panel		• Pax Seated	
• Internal Exit Lts		• Evacuation Signal Cntl Panel		• Seat Belt Check	
• Floor Proximity Lts		9. LAVATORY		• Seat Upright	
C. AIRCRAFT (EQUIPMENT)		• Signs & Lights		• Tray Table Stowed	
1. PORTABLE FIRE EXTINGUISHERS		• Trash Container & Extinguisher		• Hat Racks Closed & Locked	
• Type & Number		• Smoke Alarm		• Under Seat Baggage	
• Location & Validity		10. GALLEYS		• Light Intensity	
• Seal & Lock		• General Condition		• Report to Captain	
2. PORTABLE OXYGEN BOTTLES		• Latching Mechanism		5. TAKE-OFF	
• Number & Location		11. TROLLEY CART		• PA Alert From Flt Deck	
• Validity & Pressure		• General Condition		• Crew Seated and Secured	
• No of Masks & Condition		• Trolley Movement			
		• Trolley Restraints/Brakes			
. CLB/CRZ/DES		7. APP/LDG		8. After LDG/ARR	
• Safety Announcement		• Safety Announcement		• Safety Annuancement	
• Adherence of Safety Sign by Pax/Crew		• Repeat all Item of		• PA from Flight Deck	
• Turbulence Procedure		• PA Alert from Flight Deck		• Door Disarm and Opening	
• Crew Coordination		• Cabin Crew Seated & Secured		• Pax Dis-Embarkatin	
• Cabin/Cockpit Communication				• Paper Work	
COMMENTS:					
INSPECTION RESULT: SATISFACTORY: ☐ UNSATISFACTORY: ☐					

SIGNATURE OF FOI
Date:

CHAPTER-68/APPENDIX-11
INITIAL ROUTE CHECK MONITORING REPORT

Civil Aviation Authority, Bangladesh
Headquarters, Kurmitola, Dhaka
Bangladesh

INITIAL ROUTE CHECK MONITORING REPORT

TRAINEE	LIC & NO.	INSTRUCTOR	LIC & NO.	DATE
OPERATOR	TYPE/REG NO.	FLIGHT	SECTOR	INSPECTOR

S = Satisfactory; U = Unsatisfactory; N = Not Checked; NA = Not Applicable; C = Comment
Note: In case U or C; Inspector must use the 'Comment Box'

A. CREWMEMBERS		• Callouts		• Touchdown & Landing Roll	
• Licences		• Rotation Technique		• Use of Spoiler/Reverse	
• Medical		• Initial Clb Spd		• Braking Technique	
• Equipment		• Use of AP/NAV Aids		• Transition to NW Steering	
B. FLIGHT DISPATCH		4. CLIMB		• Min Rwy Occupancy Time Compliance	
• MET		• ATC/SID compliance		9. TAXI- IN	
• NOTAM		• Climb Profile		• After Landing Checks	
• Load Information		• Clean-up Procedure		• Twy Orientation	
• MEL/CDL		• Altimeter Setting		• Parking & Shutdown	
• Fuel Requirement		• Speed Transition		• GRD/CC Coordination	
• ATC Flt Plan		• Spd/Mach Control		10. POST ARRIVAL	
• OPS Flt Plan		• Selection of ALT/FL		• Checks	
C. COMBINED CREW BRIEFING		5. CRUISE		• Paperwork	
D. FLIGHT CONDUCT		• Spd/Mach Control		E. COMMUNICATION	
1. PRE-DEPARTURE		• Flt Prog Monitoring		• Alertness	
• Ext Inspections		• A/C Performance Monitoring		• R/T Procedure	
• Cockpit Emer Equipment		6. DESCENT		• R/T Phraseology	
• Cockpit Safety Checks		• Planning		• Cabin-Cockpit Comm.	
• Performance Calculation		• Briefing		• PA Announcement	

• NAV Aids Setup		• Speed/Rate Control		F. GENERAL	
• Crew Briefing		• Altimeter Setting		• Checklist Procedure	
• GRD/CC Coordination		• Speed Transition		• Navigation	
• Push/Power Back		7. APPROACH		• FMS/GPS/RAD/NAV Mgt	
• Engine Start		• Star Compliance		• WX Avoidance Technique	
2. TAXI-OUT		• Entry &Holding		• ATC Compliance	
• Brake-Off Technique		• Config Procedure		• Use of Anti-Ice	
• Speed/Directional Control		• Speed Control		• Alertness	
• Turning Technique		• Approach Procedure		• Instrument Scanning	
• TWY Orientation		• A/C Handling		• Situational Awareness	
• Adherence to Clearance		• Power Handling		• CRM & SOP	
• Vigilance		• Callouts		• Time Mgt	
• Dep Briefing		8. LANDING		G. KNOWLEDGE	
• NAV Aids Setup		• Transition to Landing		• AFM	
3. TAKE-OFF		• Rwy Alignment		• FCOM	
• Rwy Alignment		• Threshold Crossing Height		• MEL/CDL	
• Use of Power		• Crosswind Control		• Airway Manual	
• Use of Clock		• Power Control		• OM	
• CTR Line Tracking		• Flare Technique			
• Crosswind Control		• Touchdown Point			

REMARKS REGARDING TRAINEE:

_____

INITIAL OF FOI

REMARKS REGARDING INSTRUCTOR:

_____

INITIAL OF FOI

COMMENTS:

_____

INITIAL OF FOI

INSPECTION RESULT: SATISFACTORY: UNSATISFACTORY:

RECOMMENDATIONS:

SIGNATURE OF FOI
Date:

CHAPTER-68/APPENDIX-12
AIR OPERATOR STATION FACILITY INSPECTION REPORT

Civil Aviation Authority, Bangladesh
Headquarters, Kurmitola, Dhaka
Bangladesh

AIR OPERATOR STATION FACILITY INSPECTION REPORT

OPERATOR	AOC	STATION	TYPES OF A/C OPERATIONS	TYPES OF OPERATIONS	FREQ OF FLTS	DATE
NO. OF PERSONNEL	NO. OF KEY PERSONNEL	NAME OF KEY PERSONNEL			INSPECTOR	

S = Satisfactory; U = Unsatisfactory; N = Not Checked; NA = Not Applicable; C = Comment

Note: In case U or C; must be included in the comment overleaf

A. PERSONNEL STRENGHT		• Baggage Screening		• Signs & Markings	
• Operations		• Baggage Delivery		• Fire Fighting Service	
• Engineering		• Pax Immigration Control		• Medical Service	
• Ground Service		• Pax Custom Control		• Search & Rescue Service	
• Catering		2.CARGO HANDLING			
• Security		• Cargo Packing			
B. MANUALS		• Cargo Weighing			
• Availability		• Cargo Screening			
• Content Adequacy		• Cargo Custom			
• Currency		3.RAMP HANDLING			
• Revision		• Flight Dispatch			
C.TRAINING OF PERSONNEL		• Maintenance Release			
• Pax Handling		• A/C Servicing			
• Cargo Handling		• Pax Boarding/ Disembarkation			
• Weight & balance		• Missing Pax Procedure			
• A/C Servicing		• Missing Pax's Baggage			

		Procedure			
• Ramp Operations		• Delayed Flt Procedure			
• Aviation Security		• Vehicle Movement			
• Emergency & First Aid		• Cargo/ Baggage Loading			
• Dangerous Goods Regulation		• Load & Trim Sheet			
• Communication Procedure		• Chocking A/C Mooring			
• Recurrent Trg		• Marshalling			
D. A/C SERVICING		• Push Back			
• Fueling		F. MANAGEMENT			
• Hydraulic & Oil		• Communication System/Procedure			
• Potable Water		• Outsourcing/ Contracting			
• Oxygen		• Contingency Planning			
• Fire Extinguisher		G.AERODOME FACILITY			
E. A/C ARR/DEP PROCUDURE		• Ramp Area			
1.PAX HANDLIING		• Security arrangement			
• Pax Briefing		• Lighting			
• Hand Baggage Control		• Hazard/ Obstruction Placard			

COMMENTS:

_____

INITIAL OF FOI

RECOMMENDATIONS:

_____

SIGNATURE OF FOI

Date:

CHAPTER-68/APPENDIX-13
THE TEMPLATE OF AIR OPERATOR CERTIFICATE (AOC)

<table>
<tr><td colspan="3">AIR OPERATOR CERTIFICATE</td></tr>
<tr><td rowspan="2">1</td><td>STATE OF THE OPERATOR 2</td><td rowspan="2">1</td></tr>
<tr><td>ISSUING AUTHORITY 3</td></tr>
<tr><td>AOC # 4: Expiry date 5:</td><td>OPERATOR NAME 6 Dba trading name 7: Operator address 8: Telephone 9: Fax: E-mail:</td><td>OPERATIONAL POINTS OF CONTACT 10 Contact details, at which operational management can be contacted without undue delay, are listed in _____ 11 .</td></tr>
<tr><td colspan="3">This certificate certifies that _____12 is authorized to perform commercial air operations, as defined in the attached operations specifications, in accordance with the operations manual and the _____13</td></tr>
<tr><td>Date of issue 14:</td><td colspan="2">Name and signature 15: Title:</td></tr>
</table>

Note:-

1. *For use of CAAB.*
2. *Replace by the name of the State of the Operator.*
3. *Replace by the identification of the issuing authority i.e. CAAB.*
4. *Unique AOC number, as issued by CAAB.*
5. *Date after which the AOC ceases to be valid (dd-mm-yyyy).*
6. *Replace by the operator's registered name.*
7. *Operator's trading name, if different. Insert "dba" before the trading name (for "doing business as").*
8. *Operator's principal place of business address.*
9. *Operator's principal place of business telephone and fax details, including the country code. E-mail to be provided if available.*
10. *The contact details include the telephone and fax numbers, including the country*

code, and the e-mail address (if available) at which operational management can be contacted without undue delay for issues related to flight operations, airworthiness, flight and cabin crew competency, dangerous goods and other matters as appropriate.

11. *Insert the controlled document, carried on board, in which the contact details are listed, with the appropriate paragraph or page reference, e.g.: "Contact details are listed in the operations manual or as listed in the operations specifications". Operator's registered name.*

12. *Insertion of reference to the appropriate CAR '84.*

13. *Issuance date of the AOC (dd-mm-yyyy).*

14. *Title, name and signature of the CAAB representative. In addition, an official stamp may be applied on the AOC*

CHAPTER-68/APPENDIX-14
TEMPLATE OF OPERATIONS SPECIFICATIONS (OPS SPECS)

OPERATIONS SPECIFICATIONS (Subject to be approved conditions in the operations manual)					
ISSUING AUTHORITY CONTACT DETAILS 1 Telephone: _____ Fax: _____ E-mail: _____					
AOC# 2: _____ Operator name 3: _____ Date 4: _____ Signature: _____ Dba trading name: _____					
Aircraft model 5:					
Types of operation: Commercial air transportation • Passengers • Cargo • Other 6: _____					
Area(s) of operation 7:					
Special limitations 8:					
SPECIAL AUTHORIZATIONS	YES	NO	SPECIFIC APPROVALS 9	REMARKS	
Dangerous goods	☐	☐			
Low visibility operations Approach and landing	☐	☐	CAT 10: _____ RVR: _____ m DH: _____ ft		

Take-off	☐	☐	RVR 11: _____ m		
RVSM 12 ☐ N/A	☐	☐			
ETOPS 13 ☐ N/A	☐	☐	Maximum diversion time 14: _____ minutes		
Navigation specifications for PBN operations 15	☐	☐		16	
Continuing airworthiness	☒	☒	17		
Other 18	☐	☐			

Note:-

1. *Telephone and fax contact details of the authority, including the country code. E-mail to be provided if available.*

2. *Insert the associated AOC number.*

3. *Insert the operator's registered name and the operator's trading name, if different. Insert "dba" before the trading name (for "doing business as").*

4. *Issuance date of the operations specifications (dd-mm-yyyy) and signature of the authority representative.*

5. *Insert the Commercial Aviation Safety Team (CAST)/ICAO designation of the aircraft make, model and series, or master series, if a series has been designated (e.g. Boeing-737-3K2 or Boeing-777-232). The CAST/ICAO taxonomy is available at: http://www.intlaviationstandards.org/.*

6. *Other type of transportation to be specified (e.g. emergency medical service).*

7. *List the geographical area(s) of authorized operation (by geographical coordinates or specific routes, flight information region or national or regional boundaries).*

8. *List the applicable special limitations (e.g. VFR only, day only).*

9. *List in this column the most permissive criteria for each approval or the approval type (with appropriate criteria).*

10. *Insert the applicable precision approach category (CAT I, II, IIIA, IIIB or IIIC). Insert the minimum RVR in metres and decision height in feet. One line is used per listed approach category.*

11. *Insert the approved minimum take-off RVR in metres. One line per approval may be used if different approvals are granted.*

12. *"Not applicable (N/A)" box may be checked only if the aircraft maximum ceiling is below FL 290.*

13. *Extended range operations (ETOPS) currently applies only to twin-engined aircraft. Therefore the "Not applicable (N/A)" box may be checked if the aircraft model has more than 2 engines. Should the concept be extended to 3 or 4-engined aircraft in the future, the "Yes" or "No" checkbox will be required to be checked.*

14. *The threshold distance may also be listed (in NM), as well as the engine type.*

15. *Performance-based navigation (PBN): one line is used for each PBN specification authorization (e.g. RNAV 10, RNAV 1, RNP 4), with appropriate limitations or conditions listed in the "Specific Approvals" and/or "Remarks" columns.*

16. *Limitations, conditions and regulatory basis for operational approval associated with the performance-based navigation specifications (e.g. GNSS, DME/DME/IRU). Information on performance-based navigation, and guidance concerning the implementation and operational approval process, are contained in the* Performance-based Navigation Manual *(Doc 9613).*

17. *Insert the name of the person/organization responsible for ensuring that the continuing airworthiness of the aircraft is maintained and the regulation that requires the work, i.e. within the AOC regulation or a specific approval (e.g. EC2042/2003, Part M, Subpart G).*

18. *Other authorizations or data can be entered here, using one line (or one multi-line block) per authorization (e.g. special approach authorization, MNPS, approved navigation performance).*

CHAPTER-68/APPENDIX-15
TEMPLATE OF THE CREDENTIAL OF FOI

FRONT SIDE	BACK SIDE
PHOTO CIVIL AVIATION AUTHORITY BANGLADESH Capt/Mr/Ms …… is an authorized Flight Operations Inspector of Civil Aviation Authority, Bangladesh. He is authorized to exercise the powers delegated to him under Rule …… Of Civil Aviation Rule 1984 as amended from time to time. Date of issue …… Valid until …….. _____ _____ Signature of Holder Signature of Chairman	<u>The holder of this card is authorized to</u> : 1. Enter any place to which access is required for the purpose of exercising his powers as mentioned overleaf. 2. Enter and inspect offices, stores, maintenance facilities and documents of any organization and vendor 3. Enter, inspect and search any civil registered aircraft for the purpose of securing compliance of Part I, VI and VIII of CAR '84 and the relevant ANOs 4. Enter cockpit and cabin of any civil registered aircraft for the purpose of inspection. 5. Prevent an aircraft from operating flights for reasons of flight safety.

CHAPTER-68/APPENDIX-16
AIRCRAFT LEASING ARRANGEMENT GUIDE

Appended below is the aircraft leasing agreement guide which an inspector shall follow for the implementation of aircraft leasing agreement:

A. DOCUMENTATION SUBMITTED TO DFSR

1. A complete copy of the leasing agreement was provided?
2. An operator analysis was provided detailing how the leasing arrangements, particularly those between two operators, will be in conformance with the CAR '84.
3. For foreign air operators: A copy of the applicable AOC and operations specifications was provided?
4. For foreign air operators: A copy of the Bangladesh economic authorization allowing commercial air transport operations to and from the Bangladesh was provided?
5. Copies of the licenses and other required documents for the crew members to be used were provided?
6. A copy of the crew training and qualification records was provided?
7. Copies of each required aircraft document (C of R, C of A, Noise & Radio) are available?
8. A copy of the aircraft maintenance records is available?
9. A copy of the approved Minimum Equipment List was provided?
10. A copy of the approved Maintenance Program (and bridging documents, if applicable) for the aircraft was provided?
11. A copy of the applicable Maintenance Control Manual for the aircraft was provided?
12. A copy of the documents showing the aircraft's conformity with applicable airworthiness requirements for the aircraft involved was provided?
13. An operator-generated assessment of aircraft differences (variances) from the current fleet is provided?
14. The necessary documentation authorizing the CAAB worldwide access for inspection to the aircraft and crews involved is provided?

B. CONTENTS OF THE LEASING AGREEMENT

1. The official names of the parties are included?
2. The official addresses of the parties are included?
3. The duration of the agreement are included with specific start and expiration dates?
4. The make, model, series and registration numbers of each aircraft involved in the agreement are included?
5. An explanation of the type of operations that will be conducted by the lessee are included?
6. The interchange points are included?
7. The specifications regarding which party has responsibility and authority for operational control are included?

8. The specifications regarding which party has the responsibility and authority for provision of aeronautical data, weather and flight planning and release are included?
9. The specifications regarding which party has the responsibility and authority for provision of aircraft loading, computation of mass and balance and performance associated with each flight of the aircraft are included?
10. The specifications regarding which party has responsibility and authority for crew scheduling are included?

11. The specifications regarding which party has responsibility and authority for maintaining crew training, proficiency and line checks, and currency requirements are included?
12. The specifications regarding which party has responsibility and authority for maintenance control are included?
13. The specifications regarding which party has responsibility and authority for arranging maintenance for the aircraft are included?
14. The specifications regarding which party has responsibility and authority for maintaining the maintenance records for the aircraft current form included?
15. All other items, conditions or limitations specified by the DFSR as necessary for this particular agreement are included?

C. FLIGHT OPERATIONS ASSESSMENT RESULTS

1. Lease agreement determined to be acceptable?
2. Arrangements for operational control for the duration of lease are acceptable?
3. Arrangements for provision of aeronautical data, weather and flight planning and release associated with each flight of the aircraft for the duration of the lease are acceptable?
4. Arrangements for provision of aircraft loading, computation of mass and balance and performance associated with each flight of the aircraft for the duration of the lease are acceptable?
5. Crew licenses and medicals determined to be acceptable for the operations proposed?
6. Crew qualifications determined to be acceptable for start of service?
7. Arrangements for maintaining crew training, proficiency and line checks, and currency requirements for the duration of the lease are acceptable?
8. Arrangements for maintaining flight and cabin crew reference documents current and available for the duration of the lease are acceptable?
9. Assessment of the compatibility with lessee's aircraft fleet approvals complete and necessary any necessary arrangements for variances determined to be acceptable? (dry lease)
10. Arrangements and documentation necessary for DFSR unrestricted right of access for inspections for the duration of the lease determined to be acceptable? (foreign-registered aircraft)

D. MAINTENANCE ASSESSMENT RESULTS

1. Assigned maintenance inspector reports that all necessary maintenance assessment and document arrangements have been completed?

E. 83*bis* DOCUMENTATION COMPLETED

1. The official agreement for transfer of maintenance responsibility for the airworthiness of the aircraft involved has been signed by all parties?
2. Notification (in the proper format) has been made to ICAO of the transfer of maintenance responsibility for the airworthiness of the aircraft involved?

F. ACCEPTANCE DOCUMENTS COMPLETION

1. Letter of Acceptance for aircraft lease/interchange/codeshare arrangements issued?
2. ORG Aircraft Leasing Arrangements entries made to reflect acceptance of leasing/interchange/codeshare arrangements?
3. ORG Aircraft Listing entries made to reflect inclusion of the leased aircraft? (dry-lease)
4. Aircraft display operations specifications issued to include each aircraft involved in lease arrangements? (dry-lease)
5. Master operations specifications updated to include new aircraft and leasing arrangements signed?

CHAPTER-68/APPENDIX-17
TRAINING & PROCEDURES MANUAL EVALUATION GUIDE

Inspectors shall follow the guidelines appended below for evaluation of Training Program and approval of the Training Manual of an air operator.

A. MANUAL CONTROLS

1. Complete Checklist as applicable

B. TRAINING ORGANIZATION

1. Structure of the training and checking organization
2. Training policies and directives

C. INSTRUCTORS AND EXAMINERS

1. List of designated instructors and line check airmen

D. SYLLABI

1. Comprehensive syllabi, including lesson plans for approved training for Flight Crew
2. CFIT
3. ACAS
4. Comprehensive syllabi, including lesson plans for approved training for Dispatchers
5. Comprehensive syllabi, including lesson plans for approved training for Cabin Crew

E. EXAMINATIONS

1. Procedures for the conduct of examinations and manoeuvre tolerances for flight crew
2. Procedures for the conduct of examinations for dispatchers
3. Procedures for the conduct of examinations for cabin crew

F. COMPLETION STANDARDS

1. Procedures to require that flight crew members are properly trained and examined on abnormal and emergency conditions
2. Procedures to require that cabin crew members are properly trained and examined on abnormal and emergency conditions
3. Procedures for remedial training and subsequent examination of flight crew unable to achieve or maintain required standards
4. Procedures for remedial training and subsequent examination of dispatcher unable to achieve or maintain required standards
5. Procedures for remedial training and subsequent examination of cabin crew unable to achieve or maintain required standards

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CHAPTER-68/APPENDIX-18
FLIGHT CREW QUALIFICATION RECORDS INSPECTION GUIDE

The following areas should be inspected and the observation found, should be written down for report making on flight crew qualification records inspection:

A. OPERATIONS MANUAL/TRAINING PROGRAMME

1. Minimum initial experience and certificate requirements specified?
2. Minimum Initial qualification via training checking specified.?
3. Minimum initial checking and line experience /checking specified?
4. Landing currency requirements specified?
5. Special airport qualification and currency specified?
6. Special area and/or navigation qualification and currency specified?
7. Form and method of tracking and recording qualifications through training and checking included and acceptable?
8. Retention method and retention period included and acceptable?

B. CREW SCHEDULING

1. Operations manual portions regarding crew qualification and checking requirements available to and consulted by the persons assigned to crew scheduling functions?
2. Persons specifically assigned to accomplish crew scheduling duties have training on determination of crewmember qualifications and currency?
3. These persons demonstrate an adequate knowledge of crewmember qualifications and currency?
4. These persons have available a up-to-the-date qualifications and currency of all crewmembers?
5. A crosscheck of any breaks in the qualification records shows
6. no evidence of crew member assignment during those periods?

C. RECORDING & RETENTION OF CREW QUALIFICATION RECORDS

1. Acceptable person(s) specifically assigned the duty of recording and/or retaining actual records?
2. Tracking method complies with operations manual policies?
3. Retention method complies with operations manual policies?
4. Retention location and responsible person corresponds with CAAB records?

D. ACTUAL QUALIFICATION RECORDS COMPARISON

1. Record of flight crew assignments available for each individual selected?
2. Qualification record available for each individual selected?
3. No records of breaks in qualification?

4. Crosscheck with aircraft tech log entries for dates of training & checking?
5. Crosscheck with pay records for dates of training and checking?
6. Crosscheck with ATC or Customs records for dates of flt training?
7. Crosscheck with crew member logbook for dates of training &
8. checking?

E. CERTIFICATES & INITIAL EXPERIENCE REQUIREMENTS

1. Correct handling of age 60/65 issue?
2. PIC of turbojet or large aircraft has ATP and appropriate type rating?
3. PIC of non-turbojet small aircraft has CP/Category/Class/Instrument rating?
4. PIC aeronautical experience appropriate for flights conducted?
5. SIC licence requirements appropriate for flights conducted?
6. FE licence requirements appropriate for flights conducted?
7. If FE required, one pilot qualified to perform FE functions?
8. Crosscheck of crews by name and experience shows proper pairing?

F. INITIAL QUALIFICATION

1. Completed company procedures indoctrination training?
2. Completed company initial dangerous goods training?
3. Completed company initial security training?
4. Completed company crew resource management training?
5. Completed emergency equipment drills?
6. Completed aircraft ground training qualification?
7. Completed aircraft flight training qualification?
8. Completed specialized qualification training appropriate to operations?
9. Completed aircraft differences training?

G. PROFICIENCY CHECKS

1. Completed initial proficiency check in aircraft?
2. Completed initial instrument proficiency check in aircraft?
3. Completed recurring aircraft proficiency checks within eligibility?
4. Completed recurring instrument proficiency checks within eligibility?
5. Completed training-to-proficiency in lieu of proficiency check?
6. Completed right-seat qualification training (PIC)?

H. ROUTE EXPERIENCE & CHECKS

1. Completed supervised line flying requirements?
2. Completed initial route and area checks?
3. Completed initial low minimums experience?
4. Completed special airport qualification?

I. NO BREAKS IN LANDING QUALIFICATION

1. No breaks in landing qualification?
2. If breaks, proper re-establishment of currency?

J. RECURRENT QUALIFICATION

1. Completed aircraft ground training within eligibility?
2. Completed aircraft flight training within eligibility?
3. Completed emergency drills within eligibility?
4. Completed dangerous goods training within eligibility?
5. Completed security training within eligibility?

K. FLIGHT INSTRUCTORS

1. Completed flight instructor ground training?
2. Completed flight instructor simulator training?
3. Completed flight instructor aircraft training?

L. CHECK PILOT/ENGINEER

1. Completed check pilot ground training?
2. Completed check pilot simulator training?
3. Completed check pilot training?

CHAPTER-68/APPENDIX-19
CABIN CREW QUALIFICATION RECORDS INSPECTION GUIDE

The following areas should be inspected and the observation found, should be written down for report making on cabin crew qualification records inspection:

A. OPERATIONS MANUAL/TRAINING PROGRAMME

1. Minimum Initial qualification via training checking specified?
2. Minimum initial checking and line experience/checking specified?
3. Minimum line experience/checking specified?
4. Minimum recurring qualification specified?
5. Form and method of tracking and recording qualifications through training and checking included and acceptable?
6. Retention method and retention period included and acceptable?

B. CREW SCHEDULING

1. Operations manual portions regarding crew qualification and checking requirements available to and consulted by the persons assigned to crew scheduling functions?
2. Persons specifically assigned to accomplish crew scheduling duties have training on determination of crewmember qualifications and currency?
3. These persons demonstrate an adequate knowledge of crewmember qualifications and currency?
4. These persons have available a up-to-the-date qualifications and currency of all crewmembers?
5. A crosscheck of any breaks in the qualification records shows no evidence of crew member assignment during those periods?

C. RECORDING & RETENTION OF QUALIFICATION RECORDS

1. Acceptable person(s) specifically assigned the duty of recording and/or retaining actual records?
2. Tracking method complies with operations manual policies?
3. Retention method complies with operations manual policies?
4. Retention location and responsible person corresponds with CAAB records?

D. ACTUAL QUALIFICATION RECORDS COMPARISION

1. Record of cabin crew assignments available for each individual selected?
2. Qualification record available for each individual selected?
3. No records of breaks in qualification?
4. Crosscheck with aircraft tech log entries for dates of training & checking?
5. Crosscheck with pay records for dates of training and checking?

E. INITIAL QUALIFICATION

1. Completed company procedures indoctrination training?
2. Completed company initial dangerous goods training?
3. Completed company initial security training?
4. Completed company crew resource management training?
5. Completed emergency equipment drills?
6. Completed aircraft-specific ground training?
7. Completed aircraft differences training?

F. COMPETENCE CHECKS

1. Completed initial competency check appropriate to aircraft?
2. Completed recurring competency check appropriate to aircraft?

G. ROUTE EXPERIENCE AND CHECKS

1. Completed supervised line experience requirements?

H. RECURRENT QUALIFICATION

1. Completed aircraft-specific ground training within eligibility?
2. Completed emergency drills within eligibility?
3. Completed dangerous goods training within eligibility?
4. Completed security training within eligibility

I. COMPETENCY CHECK PERSONNEL

1. Assigned duties to conduct Cabin Crew competency checks?
2. Completed training on the proper methods for competency checks?

CHAPTER-68/APPENDIX-20
AIR OPERATOR CABIN CREWMEMBER CONFORMANCE GUIDE

In order to ensure that the cabin crewmember of an air operator conform to the regulations and required tasks, CAAB Inspectors will follow the guidelines as appended below:

A. GENERAL MANUAL QUESTIONS

1. Definition of crew member.
2. General statement regarding CCM duties and responsibilities.
3. The manual is easy to read.
4. The manual is easy to revise.
5. The manual contains instructions for processing revisions.
6. Each manual page has the date of the last revision.
7. Each crewmember has manual accessible while performing assigned duties.
8. The manual contains the stipulation that each cabin crew member must have a manual readily accessible on board any flight if they are assigned any duties.
9. The manual is up-to-date.
10. The up-to-date policy is stated in the manual.

B. CREW PROCEDURES

1. Policy statement for authority of the pilot-in-command?
2. Policy Method of designating succession of command?
3. If applicable, equipment interchange is in the manual?
4. Policies for admission of persons to the flight deck?
5. Procedure for cockpit crew to identify cabin crew before allowing entry to flight deck?
6. Procedure for locking and unlocking cockpit door?
7. Procedure for notification of sterile cockpit procedure in effect?
8. Normal methods of communication and coordination between crew members?
9. General statement concerning the importance of crew coordination?
10. Outline of preflight crew briefings?
11. Procedures for reporting in-flight irregularities and malfunctions?
12. Carry-on baggage stowed before passenger loading door closed?
13. Crew coordination procedures to ensure that the aircraft including the cabin is ready for movement on the surface for takeoff and landing?
14. Crew coordination procedures for exit seating?
15. Cabin Crew required to be seated during movement on the surface unless performing safety-related duties?
16. Definition of safety-related duties?
17. Number of CCM that must be on board while parked at the gate with passengers on board?
18. Method to identify CCM substitutes that might be used while the aircraft is parked at the gate.

19. Specific number and location of CCMs that must be on board before aircraft movement on the surface?
20. CCM duties and number of CCMs that must be on board during refueling procedures?
21. Policy for use of jumpseat by anyone other than the assigned CCM?
22. Policies and procedures for checking emergency equipment?
23. Before takeoff briefing announcement and demonstration?
24. Demonstration of use of seatbelts?
25. Requirements for use of seatbelts?
26. Policies regarding smoking, including prohibition against smoking in the lavatories or tampering with, disabling or destroying smoke detectors?
27. Compliance with lighted information and crew member instructions?
28. Location of exits?
29. Location and use of required flotation equipment?

C. CREW PROCEDURES

1. Exit seating reference to passenger information cards?
2. Request that a passenger identify him or herself if he or she cannot meet selection criteria?,
3. Requirement for an individual briefing of persons who may need assistance and persons attending to these individuals?
4. After takeoff briefing, including notification to keep seat belts fastened even when light is off?
5. Extended overwater briefing?
6. Demonstration and use of life vests, including infant life vests?
7. Briefing on the location and use of life rafts?
8. Briefing on other flotation means, such as seat cushion?
9. Policy requirement that before operations above flight level 250 that an oxygen briefing must be given?
10. Location of oxygen dispensing equipment?
11. Demonstration of use of oxygen equipment?
12. Requirement for periodic announcements when the passenger safety information sign is illuminated for a period of time?
13. Notification of the PIC when passenger continues not to obey signs?

D. PASSENGERS

1. Disabled: This may include the location, operation, and procedures for use of the following:
   a. onboard wheelchair,
   b. disabled equipped lavatories,
   c. movable armrests.

E. INFANTS & CHILDREN

1. The manual should include the following concerning infants and children:

2. Procedures for restraint including location and actions during emergency.
3. Information about the types of restraint devices that conform to all Federal motor vehicle standards.
4. Information that if the parents have purchased a ticket and the device is approved, it must be allowed.
5. The fact that infants should be restrained in the approved restraint device during turbulence.

F. PASSENGER ISSUES

1. Serving alcohol,
2. Separating persons who cause a disturbance,
3. Armed passengers,
4. Passengers who abuse a crewmember,
5. Interference with a crewmember in the performance of
6. duties,
7. Passengers who are mentally retarded,
8. Passengers who are emotionally disturbed,
9. Pregnant passengers,
10. Non-English speaking passengers - refer to the exit seating rule,
11. Stretcher patients,
12. Policy and procedures for non-compliance of smoking ban,
13. Others.

G. CREW PROCEDURES

1. Restraint of galley equipment (including galley and ticket carts) for movement on the surface, takeoff, landing, and when not in use. This should include the fact that carts should be on a mushroom or otherwise property restrained when not in use.
2. Proper stowage of cargo (including musical instruments and pet carriers) in the cabin.
3. Appropriate portions of carry-on baggage programme.
4. Management of boarding carry-on baggage. Each piece of carry-on baggage is properly stowed before the passenger loading door is closed. This includes closing the overhead bin
5. and cabin cargo compartment doors.
6. Approved stowage areas for carry-on baggage.
7. Crew baggage stowage.
8. Stowage of canes.
9. Prohibition against stowage of trash or carry-on baggage in un-authorized receptacles such as lavatories or the cockpit.
10. Prohibition against commingling articles with safety equipment.
11. Need for tray tables to be stowed for movement on the surface, takeoff, and landing. Movie screens that extend into the aisle must also be stowed for movement on the surface,
12. takeoff, and landing.
13. Need for seatbacks to be in their full upright position before takeoff and landing.
14. Need to stow CCM's restraint systems when not in use.

H. DOORS

1. Readying doors for movement on the surface, including general statement of responsibility for readying doors. Procedures for specific crewmembers at specific doors would probably be better included in aircraft section of the manual.

I. DRUGS

2. Carriage of drugs,
3. Use of drugs.

J. ELECTRONIC DEVICES

1. Procedures to follow when occupants use electronic devices an which devices are not allowed.

K. HAZARDOUS MATERIALS

1. Identification of and, if they are going to be in the cabin, procedures for storage and handling.

L. LIGHTS

1. Flashlight holders and how used, if used.
2. Operator's policy to ensure that each crewmember has a workable flashlight.
3. Cabin light setting for takeoff, landing, and forewarned (anticipated emergency evacuation and ditching.)
4. Specific aircraft light controls may be contained in the aircraft section of the manual.

M. TURBULENCE

1. Crew coordination in turbulence.
2. Service procedures, especially of hot liquids, in turbulence.
3. Passenger seat belt discipline in turbulence.

N. SURVIVAL

1. Information about survival in situations appropriate for operations such as water, mountains, desert, or jungle.

O. HIJACKING

1. Hijacking procedures should be developed with the assistance of the Principal Security Inspector assigned to the operator, but the responsibility for the final acceptance of manual contents rests with the Principal Operations Inspector.

NOTE: Procedures contained in CCM manual may be very limited. These procedures may be a “coded” memory aid. A method of communication with other crewmembers when hijacking is either threatened.

P. WEAPONS

1. Security regulations and operator’s procedures for the carriage of weapons.

Q. ILLNESS/INJURY

1. Contents and procedures for use of first aid kits.
2. Contents and procedures for use of medical kit.
3. Recognition of common medical problems.
4. First aid treatment that considers limited and special space for those problems in aircraft cabins.
5. Use of first aid oxygen may be placed with procedures or with
6. use of equipment. In this checklist, it is with oxygen equipment
7. Additional first aid.

R. OXYGEN: USE & NEED

1. Depressurization.
2. Slow leaks,
3. Rapid depressurization procedures, including the following:
   a. Signs of a loss of cabin pressure,
   b. Symptoms of hypoxia,
   c. Crew coordination,

4. CCM actions, including the following: grabbing the nearest oxygen mask, sitting down or holding on to something solid and waiting for word from the flight deck before moving around, assisting passengers.
5. Description of use of each type of portable oxygen bottle and mask. This is especially important with solid slate (chemical) oxygen generators.
6. Procedures for CCM to administer oxygen to self.
7. Procedures for use of medical (passenger supplied) oxygen (must be under operator’s maintenance programme).
8. Prohibition against smoking when oxygen is being administered.

S. FIRE PREVENTION & CONTROL

1. Fire prevention procedures that at least include the following:

   a. Checking the lavatories before takeoff and periodically during flight.
   b. Use of smoking materials.
   c. Periodic cabin checks.
   d. Use of circuit breakers located in the cabin (precautions against resetting).
   e. Proper storage of articles that could contribute to fire (such as matches).

f. Checking of oven and oven vents.
g. CCM procedures for handling passengers.

2. Fire control procedures should include fires occurring in the following locations:

a. on the ground,
b. outside the aircraft,
c. inside the aircraft,
d. during flight.

3. During fires inside the aircraft, fire control procedures should include the following:

a. Type of fire extinguisher on class of fire.
b. Use of protective breathing equipment (PBE).
c. Fire control when volatile fuel is involved (this may be included in hijacking or threatening passenger part of the manual),
d. Smoke control procedures,
e. Use of circuit breakers,
f. Fire in galley, including oven,
g. Fire in lavatory or other confined spaces,
h. Light ballast fires.

T. EVACUATION PROCEDURES

1. For each type of aircraft evacuation or ditching, the manual should at least include procedures and techniques regarding the following:

a. Crew coordination,
b. Giving commands to passengers,
c. Describing brace for impact positions,
d. Assessing conditions,
e. Ensuring aircraft has come to a complete stop,
f. Evacuating persons and any of their attendants who may need assistance,
g. Redirecting passenger flow,
h. Caring for passengers following accident.
i. Un-forewarned (unanticipated aircraft evacuation or water landing) including the following:
j. Crew coordination,
k. Commands given to passengers,
l. Initiation,
m. Actions at door.
n. Forewarned (anticipated aircraft evacuation or ditching) including the following:
o. Crew coordination,
p. Commands given to passengers,
q. Passenger preparation,
r. Cabin preparation.

s. Unwarranted (unneeded) evacuation, passenger or crew initiated, including Crew coordination and stopping the evacuation.

CHAPTER-68/APPENDIX-21
AIRCRAFT-SPECIFIC CCM MANUAL CONFORMANCE GUIDE

In order to ensure that the Cabin Crew Manual conforms to the safety information required for a specific type of aircraft, CAAB Inspectors shall follow the guidelines as appended below:

A. AIRCRAFT DESCRIPTION

1. The manual should contain a description and/or diagram of each type/model of aircraft showing the items listed below. If the location of any of these items varies from one aircraft to another, aircraft registration numbers with specific location should be given.
2. The assigned takeoff and landing location for each crewmember who might be assigned safety duties in the cabin should be clearly designated.
3. The duties and duty station for each crewmember (including flight crew) during an evacuation or ditching should be given.
4. If it is part of the operator's procedures, the preflight check of specific safety equipment should be given. This should include checking of placards.
5. CCM location for performing safety demonstration.

B. AIRCRAFT EMERGENCY EQUIPMENT

1. The emergency equipment location should be given for each type of aircraft; however, when equipment such as the first aid kit is the same from aircraft to aircraft, the description of the contents and the operation may be contained in the "general section" of the manual
2. Each exit (clearly show what type of exit).
3. Each first aid kit,
4. Medical kit,
5. Portable lights/flashlights,
6. Each fire extinguisher by type,
7. Each PBE,
8. Flotation equipment,
9. Overwater equipment,
10. Survival kits and transmitters, if not attached to life raft,
11. Crash axe,
12. Megaphone,
13. Appropriate circuit breakers,
14. Portable oxygen,
15. Supplemental (ship's) oxygen,
16. Approved crew bag stowage areas.
17. Each type of equipment should be depicted so its operation is easy to follow. This includes the following:

C. FLOOR LEVEL EXITS

1. A description for operations and procedures at floor level exits should include the following:

    a. opening in normal mode,
    b. opening in emergency mode,
    c. ready for movement on the surface,
    d. ready for gate arrival,
    e. ready at gate, if appropriate.

D. EVACUATION SLIDES

1. Description of operation and procedures for evacuation slides, slides/raft, or ramps should include the following:

    a. emergency inflation,
    b. manual inflation.

E. WINDOW EXITS

1. A description of operation and procedures at window exits should include the following:

    a. opening exits,
    b. placement of window,
    c. recommended method of exiting window,
    d. use of life lines.

F. VENTRAL STAIRS

1. A description and procedures pertinent to ventral stairs should include the following:

    a. information regarding lowering or otherwise operating stairs in normal and emergency modes;
    b. information about stair use in evacuations.

G. TAIL CONES

1. The information about the operation and procedures pertinent to tailcones should contain the following:

    a. detailed description of the activation of the tailcone.
    b. details of unusual environmental factors that could affect crewmember performance in or around tailcones.

H. COCKPIT EMERGENCY EXITS

1. Information about this equipment should describe or depict the opening and the use of any equipment that would assist in reaching the ground (such as escape ropes).

I. ESCAPE ROUTES OTHER THAN CABIN

1. Information should show the method of reaching these exits, the opening, and actions necessary to exit.

J. DOOR SAFETY STRAPS

1. Include both location and use in normal and emergency operations.

K. DOOR INOPERATIVE DPROCEDURES

1. If this type of aircraft is allowed to operate with a door inoperative, the procedures to follow for the specific aircraft should be given.

L. CCM STATION

1. The CCM manual should contain a description of each type of CCM station. This description should include the following:

   a. the proper brace position for that station;
   b. information about the restraint system at that station and its use;
   c. the safety equipment that an CCM can reach while seated at that station.

M. ELECTRICAL EQUIPMENT

1. The manual should contain information about circuit breakers, heat, or ventilation located in the cabin. This information should include the following:

   a. location,
   b. function,
   c. operation of the controls.

N. EMERGENCY LIGHTS

1. Location of emergency lights, emergency light switches, and procedures for use should be in the manual.
2. Information about floor proximity lighting should be given as appropriate to that type of aircraft.

O. PUBLIC ADDRESS & INTERPHONE SYSTEM

1. A description of these systems that includes their use in normal and emergency situations should be included.

P. EVACUATION ALARMS

1. 16.1 When evacuation alarms are present, information about their location, function, and operation should be given.

Q. OXYGEN SYSTEMS

1. The manual should include the following information:

   a. location of oxygen dispensing units,
   b. information about additional drop-down masks,
   c. proper method of use,
   d. manual deployment,
   e. if applicable, information about special characteristics of chemically generated devices, (such as heat generating properties).

R. PORTABLE OXYGEN EQUIPMENT

1. Description, location, and operation for each kind of portable oxygen dispensing unit and the masks should be given.

S. GALLEY RESTRAINT

1. 19.1 Description of the locations and methods of securing each piece of galley equipment should be given.

T. CARRY-ON BAGGAGE RESTRAINT

1. Description of the location and operation of carry-on baggage restraints should be given when applicable. This would include use of restraint straps across a closet or securing an overhead bin.
2. Stowage of items other than approved cargo compartments. Some airlines have as part of their carry-on procedures the fact that carry-on baggage may be slowed in a seat. If this is the case, the seats where it can be stowed and method of stowage should be included in the manual.

U. SMOKE ALARMS

The manual should give the location of the smoke alarms. It should also contain information regarding the procedures to follow when a smoke alarm has been activated.

V. TRASH CONTAINER DOORS

1. 22.1 The manual should contain information about the location, function, and proper operation of these doors.

W. UPPER/LOWER DECK

1. Some aircraft are multi-decked. When this is the case, information regarding safety equipment on those decks should be provided.

X. LIFTS

1. Multi-decked aircraft are usually equipped with personnel/galley lifts. Operation and function of the safety interlock system of these lifts should be described.

Y. FLOTATION CUSHIONS

1. Location, function, and use of flotation cushions should be given.

Z. LIFE PRESERVERS

1. Donning, inflation, use, and activation of light for each type of life preserver, including infant and child preservers, should be given. (If only one type is used, this information may have been given in the “general section” of the manual.)

AA. LIFE RAFTS & SLIDES USED IN FLOTATION

1. When the aircraft is equipped with life rafts, slide/raft packs, or slides used as flotation ramps, information about this equipment should include a description of the equipment, its contents, and at least the following:

    a. transfer from one door to the next,
    b. inflation and launching,
    c. proper method of boarding passengers and crew.
    d. crew assignments during ditching and in the life raft.

BB. INOPERABLE EQUIPMENT

1. 28.1 Procedures to follow when a piece of required safety equipment is inoperable should be part of the manual.

CC. FIRE EXTISGUISHERS/PBE

1. The location of the equipment and any features that make use of operation unique to this aircraft.

DD. SMOKE BARRIERS

1. Some aircraft are equipped with smoke barriers. When this is the case, information about their location and use should be part of the manual.

EE. FIRST AID/MEDICAL KITS

1. The location of the equipment and any features that make use unique to this aircraft should be given.

CHAPTER-68/APPENDIX-22
CREW FLIGHT TIME RECORD GUIDE

The following areas should be inspected and the observation found, should be written down for report making:

A. OPERATIONS MANUAL POLICIES

1. Maximum annual flight time policy included and complies?
2. Maximum 30 day flight time policy included and complies?
3. Maximum 7 day flight time policy included and complies?
4. Maximum 24 hour flight time policy included and complies?
5. Inadvertent over flight policy included and complies?
6. Minimum rest period policy included and complies?
7. Maximum duty time policy included and complies?
8. Policy for deadheading and other travel during rest period included?
9. Augmented crew policies included and comply?
10. Form and method of tracking and recording duty/flight/rest included and acceptable?
11. Retention method and period included and acceptable?
12. Operations manual portions regarding duty/flight/rest times available to and consulted by the persons assigned to scheduling and tracking times?

B. CREW SCHEDULING

1. Acceptable, qualified person(s) specifically assigned to accomplish crew scheduling duties?
2. Schedule of duty/flight/rest periods available for each individual selected?
3. Crew scheduling records provide an analytical display of scheduled duty/flight/rest for each hour period?
4. Crew scheduling times corresponds to published air carrier schedule?

C. RECORDING & RETENTION OF RECORDS

1. Acceptable person(s) specifically assigned the duty of recording and/or retaining actual records?
2. Tracking method complies with operations manual policies?
3. Retention method complies with operations manual policies?
4. Retention location and responsible person corresponds with CAAB records?

D. ACTUAL DUTY/FLIGHT/REST RECORDS COMPARISON

1. Record of actual duty/flight/rest available for each individual selected?
2. Record of actual times corresponds to flight following records?
3. Record of actual times corresponds to aircraft tech log entries?
4. Record of actual times corresponds to pay records?
5. Record of actual times corresponds to ATC records?

E. TOTAL TIME RECORDS

1. Records current to the date of inspection?
2. Total flight hours per 12 month periods do not exceed regulations?
3. Total flight hours per 30 day period do not exceed regulations?
4. Total flight hours per 7 day periods do not exceed regulations?
5. Total flight hours per 24 hour periods do not exceed regulations?

F. RUNNING 24 HOUR RECORDS

1. Recording method provides for a continuous updating of actual record of duty/flight/rest each 24 hours?
2. Maximum total 24 hour duty time periods not exceeded?
3. Maximum total 24 hour flight time periods not exceeded?
4. Minimum total 24 hour rest periods not infringed?
5. Instances of operational over flight of times properly explained?
6. Minimum rest periods adjusted for any operational over flight situation?

G. AUGMENTED CREW SITUATIONS

1. AOC holder approved by CAAB for augmented crew situations?
2. Policies for acceptable augmented crew included in operations manual?
3. Were the inflight crew rest quarters approved by CAAB?
4. Maximum total 24 hour augmented crew flight time not exceeded?
5. Minimum in-fight rest periods not infringed?

CHAPTER-68/APPENDIX-23
FLIGHT PREPARATION & TRIP RECORDS GUIDE

The following areas should be inspected and the observation found, should be written down for report making on flight preparation & trip records guide:

A. LICENCES & CERTIFICATES

1. Mass and balance calculations and procedures?
2. Passenger seat assignments?
3. Last-minute mass and balance changes?
4. Takeoff and landing performance calculations?
5. Weather acquisition and briefing?
6. NOTAM acquisition and briefing?
7. Operational flight plan calculations and procedures?
8. Flight following procedures?
9. Adequate communications capability with main base operations and
10. maintenance function, including relay of information?
11. Flight preparation records filing?

B. RECORDS RETENTION & ACCURACY

1. Flight preparation records retention security?
2. Are operational flight plans/NAV logs retained?.
3. Are briefing weather documents retained?
4. Are briefing information such as NOTAMs and other aeronautical
5. data including NOTAMs retained?
6. Are copies of load manifests, including last minute calculations retained?
7. Are copies of tech log pages showing MEL dispatch or maintenance at station retained?
8. Are fuel and oil servicing records retained?
9. Are crew qualification records retained?

CHAPTER-68/APPENDIX-24
AIR OPERATOR OPERATIONS BASE SUPPORT STRUCTURE GUIDE

The following areas should be inspected and the observation found, should be written down for report making on Air Operator Operations Base Support Structure Inspection:

A. ORGANIZATIONAL STRUCTURE

1. Organization suitable with regard to the size and scope of the proposed operation?
2. Management persons assigned to positions key to safety acceptable?
3. CAAB Management Acceptance documents issued for these persons?
4. CAAB Air Operator Management Database correct?

B. CHAIN OF COMMAND ENSURE SAFETY OF OPERATIONS

1. Numbers of management positions not excessive.
2. Flying and administration balanced for flight crew managers?

C. SUFFICIENT QUALIFIED & COMPETENT EMPLOYEES

1. Flight crews?
2. Cabin crews?
3. Crew training and checking?
4. Other technical trainers?
5. Operations planning?
6. Operations control?
7. Crew scheduling?
8. Load control?
9. Passenger handling?
10. Administration Support?
11. CAAB Air Operator Employee Database correct?

D. ADMINISTRATIVE FACILITIES

1. Adequate bases and facilities?
2. CAAB Air Operator Base, Sub-base and Station Database correct?
3. Office accommodation size?
4. Equipment?
5. Support staff?

E. COMMUNICATIONS & PROVISION OF INFORMATION

1. Communication and information system that can communicate efficiently and rapidly with all crew, operational support staff and their managers?
2. Printing and distribution facilities?

F. SERVICES PROVIDED

1. Performance information
2. Navigation information/route charts
3. Instrument approach minima
4. Computer flight planning
5. Obstacle avoidance procedures
6. Operational control support

G. FOR EACH SERVICE PROVIDED - EVALUATE:

1. Staff qualifications
2. Staff training
3. Staff competence
4. Suitability of accommodations
5. Availability of appropriate information
6. Reliability of system to convey current information to crews
7. Responsiveness to changed input

H. RECORDS OF ISSUE OF OPERATIONAL DOCUMENTS TO:

1. Flight crew
2. Cabin crew
3. Load control
4. Dispatch staff
5. Appropriate amendment system of company documents?
6. Responsibility for updating documents?

I. OPERATIONS LIBRARY

1. Location accessible to operating crew
2. All required operational documents and materials available?
3. Documents up-to-date and readily accessible form
4. Current Operations Manual?
5. Aviation regulations
6. Civil aviation guidance
7. Aeronautical information publication
8. Aeronautical maps and charts
9. NOTAMs and other aeronautical information.

CHAPTER-68/APPENDIX-25
AIR OPERATOR MAIN BASE INSPECTION GUIDE

The following areas should be inspected and the observation found, should be written down for report making on Air Operator Main Base Inspection:

A. STAFFING & ORGANIZATION

1. Management structure
2. Operations department staffing
3. Traffic and loading staff
4. Systems for provision of information

B. BASE FACILITIES

1. Adequacy of office services
2. Accommodation
3. Operations library
4. Legislation and AIS information
5. Flying staff instructions
6. Aircraft technical library
7. Navigation logs/records
8. Pilot's flight briefs
9. Voyage reports
10. Passenger and cargo handling procedures
11. Passenger and cargo handling equipment

C. SAFETY PROGRAMME

1. Flight data analysis programme
2. Accident Prevention and Flight Safety Programme
3. Safeguards to protect source of data
4. Programme is non-punitive

D. AIRCRAFT EQUIPMENT

1. Normal equipment
2. Emergency equipment
3. Internal and external markings/notices
4. Checklists
5. Radio/radar navigation equipment
6. Automatic systems (auto-land, etc.)

E. OPERATIONS MANUAL

1. Purpose and scope of manuals
2. List of manuals comprising operations manual

3. Manuals to be carried on aircraft
4. Responsibility for manual content
5. Responsibility for manual amendment
6. Distribution of manuals and amendments

F. MANAGEMENT ORGANIZATION

1. Safety Manager
2. Operations manager — duties and responsibilities
3. Technical manager — duties and responsibilities
4. Chief pilot — duties and responsibilities
5. Training captains — duties and responsibilities
6. Flying hours for management personnel

G. CREW TO BE CARRIED

1. Composition of crew
2. Minimum flight crew
3. Minimum number of cabin crew members
4. Carriage of navigator
5. Carriage of flight engineer
6. Crew licences

H. DUTIES OF FLIGHT CREW & OTHER OPERATING STAFF

1. Designation of pilot-in-command
2. Authority of pilot-in-command
3. Duties of crew members
4. Briefing of passengers
5. Necessity of pilots to remain at controls
6. Co-pilot handling of the aircraft
7. Refuelling duties/responsibilities
8. Loading by flight crew

I. FLIGHT DECK MANAGEMENT

1. Preflight action by pilot-in-command
2. Succession to command
3. Normal duties
4. Flight crew — division of IMC duties
5. Flight crew — procedures in event of incapacitation
6. Flight crew — acknowledgement of calls during take- off and landing
7. Flight crew — querying of deviations from flight plan
8. Flight crew — briefing before take-off and landing
9. Flight crew — consumption of alcohol
10. Flight crew — wearing of harness for take-off and landing
11. Flight crew — simulation of emergencies not permitted when carrying passengers

12. Operation of radio in aircraft
13. Radio checking procedure
14. Altimeter checking procedure
15. Operation of flight data recorder
16. Emergency evacuation procedures
17. Procedures in event of pressurization failure

J. FLIGHT-DUTY TIME LIMITATIONS

1. Definitions of:
2. Flight time
3. Duty period
4. Flying duty period
5. Split duty
6. Positioning
7. Standby duty
8. Rest period
9. Time off
10. Day
11. Local day/night
12. Local time
13. Requirement of scheme to regulate flight times
14. Maximum duty period — two pilot crew — aeroplane
15. Maximum duty period — single pilot crew — aeroplane
16. Maximum duty period — two pilot crew — helicopter
17. Maximum duty period — single pilot crew — helicopter
18. Particular cases:
19. Extension of duty period by inflight relief
20. Split duty
21. Positioning (dead-heading)
22. Standby duty
23. Traveling time
24. Pilot-in-command's discretion to extend flying duty
25. period
26. Minimum rest periods
27. Pilot-in-command's discretion to reduce rest period
28. Cumulative duty and flying hours:
29. Maximum weekly duty hours
30. Maximum monthly duty hours
31. Maximum monthly flying hours
32. Maximum annual flying hours
33. Duty cycles and time-off duty:
34. Normal duty cycle
35. Short breaks away from base
36. Time off at base
37. Records to be maintained for each crew member
38. Scheme for regulation of flight times for cabin crew members

39. Responsibilities of all crew members

K. ADMINISTRATION

1. General requirement for AOC
2. Application for AOC
3. Requirement for air transport licence
4. Form of certificate
5. Renewal of certificate
6. Variation of certificate
7. Revocation of certificate
8. Exits and break-in markings
9. Drunkenness in aircraft
10. Smoking in aircraft
11. Imperiling safety of aircraft
12. Stowaways
13. Carriage of livestock
14. Carriage of dangerous goods
15. Carriage of weapons of war
16. Carriage of unauthorised persons
17. Vehicle ferry operations
18. Provision of navigational flight-plan forms
19. Provision of pilot-in-command's brief
20. Provision of operations library
21. Filing air miss reports
22. Filing flight safety/incident reports
23. Allowable deficiencies
24. Use of flight plans
25. Use of technical log
26. Method of deferring defects approved by Airworthiness division
27. Carriage of CAA inspectors

L. STANDARD AND EMERGENCY CHECKLISTS

1. Drills and checks to be listed in full in the operations manual
2. Checks required prior to take-off
3. Checks required prior to landing
4. Checking/setting V ref
5. Check of safety altitude before descent
6. Emergency drill — items to be covered
7. Checklists for two pilot crews
8. Checklist for flight engineers
9. Checklist for single pilot crews
10. Instruction that checklist must be used
11. Requirement for cabin crew members to be issued with individual copies of emergency evacuation drills

M. FUEL FLIGHT PLANNING & RECORDS

1. Flight planning formula
2. Island reserve
3. Rules for replanning in flight
4. Effect on fuel consumption of use of ancillary equipment
5. Effect on fuel consumption of engine or system failures
6. Fuel consumption records in flight (every hour)
7. Records of uplift and fuel states
8. Retention of fuel records:
9. Technical logs
10. In-flight records
11. Retention of fuel records on navigation logs
12. Refueling with passengers on board — special instructions
13. Fumes in aircraft
14. Jettisoning fuel — special precautions

N. ROUTE OPERATING INFORMATION

1. Company policy on:
2. Flights on and off airways
3. Nomination of alternate aerodromes (heliports)
4. Operation of VFR flights
5. Cancellation of IFR flight plans
6. Details of AOC area of operations
7. Details of navigation area restrictions
8. Details of radio area restrictions
9. Definition of public transport
10. Flight plan/nav forms — items to be provided for:
11. to be retained for _____ months
12. exceptions to above requirement
13. Use of prepared navigational flight plans
14. Nav log forms for use by navigators
15. Radio equipment to be carried
16. Operation of radio in aircraft
17. Radio failure procedures
18. Minimum safe altitudes
19. Terrain clearance following loss of engine(s)
20. Minimum aerodrome facilities for approach and landing
21. Documents to be carried on public transport aircraft
22. Details of aircraft library and NAV bag
23. Flying staff instructions or notices:
24. Operational
25. Technical
26. Administration
27. Time limit after issue
28. Requirement to carry life rafts

29. Provision and use of oxygen
30. Briefing of passengers in use of oxygen
31. Noise abatement procedures
32. Allowable deficiencies — guidance to pilots-in- command

O. AERODROME OPERATING MINIMA

1. Operating minima to be included for every airfield used regularly in respect of take-off, landing and visual manoeuvring
2. Runways NOT to be used to be clearly indicated
3. Conditions for commencing a flight
4. Conditions for commencing/continuing an approach
5. Definitions of:
   a. 15.6 Decision Height
   b. 15.7 Approach to landing
   c. 15.8 Circling approach procedures
   d. 15.9 RVR, etc.
6. Minima for pilots-in-command with limited experience on type
7. Take-off and landing when an RVR reported
8. Take-off and landing when RVR is reported from more than one position on the runway
9. Instructions concerning landing in shallow fog
10. Alternate for each intended destination to be specified
11. General guidance concerning selection of alternate aerodrome
12. Guidance concerning selection of “return” alternate
13. Instructions concerning use of return alternate — weather below landing minima
14. Minima for aerodromes without approach aids
15. Special minima for non-public transport flights
16. Special rules for aircraft with performance category C, D or E
17. Calculation of in-flight visibility for manoeuvring
18. Relationship between RVR and DH
19. Conversion of reported MET visibility to RVR

P. PERFORMANCE DATA

1. Simplified RTOW/landing mass data
2. Calculation of V NO, V Ne, etc.
3. Calculation of V1, V 2, and V ref
4. En-route performance, limitations
5. Flights over water
6. Effect on performance of take-off procedures at particular aerodromes
7. Effect of noise abatement requirements
8. Abnormal pressurization affecting performance
9. Definitions of:
   a. Landing distance
   b. Take-off distance
   c. Emergency distance, etc.

10. Factors arising from runway surface conditions:
    a. Water
    b. Snow and slush
    c. Ice
    d. Grass
11. Minimum strip width after snow clearance
12. Cross-wind limitations
13. Maximum wind velocity — light aircraft
14. Airworthiness or flight manual approval for above
15. Flight manual performance figures
16. Compliance with any special handling instructions not specified in Certificate of Airworthiness or flight manual
17. Ferry flights with one engine inoperative
18. Handling techniques — one engine inoperative
19. Weather and route limitations
20. Fuel consumption

Q. TECHNICAL INFORMATION

1. Airframe leading particulars
2. Simplified description of systems
3. System pressures
4. Fuel system
5. Flying controls, etc.
6. Airframe limitations:
    a. V NO
    b. V NE
    c. V MO/MMO, etc
7. Engine — basic details
8. Engine limitations
9. Certification and Continued Surveillance
10. Engine handling procedures
11. Approved types of:
    a. Fuel
    b. Oil
    c. Coolant
    d. Hydraulic fluid
    e. Water/methanol
    f. Anti-icing fluid, etc.
12. Replenishment of all systems
13. Refueling or de-fuelling
14. Operating instructions — all systems
    a. Electrical
    b. Hydraulic
    c. Brakes
    d. Anti-icing
    e. Oxygen, etc.

15. Radio equipment — general description
16. Radio equipment — operating instructions
17. Operating instructions for:
    a. Auto-pilot
    b. Flight director system
    c. Flight recorder
    d. Special navigation equipment, etc.
18. Preflight inspection by crew
19. Abnormal drills:
    a. Invertor failure
    b. Flight systems failures, etc.
20. Aircraft handling techniques:
    a. following loss of engine in turbulence
    b. on slippery surfaces, etc.
21. Safety precautions (no smoking)
22. Operation with defective fuel tank
23. Method of use of oxygen

R. OPERATIONS MANUAL & TRAINING MANUAL

1. Purpose and scope
2. Responsibility for content
3. Responsibility for distribution
4. Responsibility for amendment
5. Training staff duties and responsibilities
6. Policy statements covering:

    a. Responsibility for appointment and supervision of training staff
    b. Qualifications of training staff

7. Use and approval of flight simulators
8. Administration and recording of crew tests
9. Employment of pilots and flight engineers on more than one type
10. Method of simulating engine failure
11. Method of simulating in-flight conditions
12. Conversion training
13. Minimum qualification and experience
14. Ground technical training
15. Flight conversion training
16. Special equipment training
17. Cabin crew member training
18. Route qualification
19. Records of progress
20. Certification of completion of each stage
21. Conversion to aircraft commander (captain)
22. Periodic Crew Tests
23. Flights on which training may be conducted

24. Adequacy of training syllabus
25. Adequacy of check forms/certificate for crew test
26. Survival tests
27. Six-month check — pilot-in-command/co-pilot
28. Line check — pilot-in-command/co-pilot
29. Rating checks
30. Instrument approach competence
31. Pilot-in-command route competence
32. Flight navigators checks
33. Flight engineer checks
34. Pilot-in-command recent type experience
35. Pilot-in-command aerodrome qualification
36. Cabin crew member checks
37. Pilots' familiarity with flight engineer panel

S. TECHNICAL RECORDS

1. Validity of maintenance certifications
2. Maintenance release properly executed
3. Technical logs correctly completed
4. Fuel, oil and methanol quantities sufficient for flight
5. Flight times correctly entered:
   a. Technical log
   b. Flight log
   c. Engine log
   d. Propeller (if applicable) log
6. Defect correction properly covered by signature
7. Significant defects entered as they occur
8. Deferred defects log
9. Recurring defects and any shortage of spares
10. Records of FDR parameter allocation, conversion equations, periodic calibration and serviceability/maintenance information
11. Retention of flight recorders in safe custody pending their disposition

T. CREW RECORDS

1. Records of flying duty, duty and rest periods
2. Discretionary reports
3. Records of periodic crew tests:
   a. All crew — emergency/survival
4. All pilots:
   a. Annual instrument rating renewal
   b. Line checks
   c. Six-month checks
   d. Instrument approach proficiency
   e. Recency checks
   f. Pilot-in-command — area/route checks

g. Flight engineers — six-month/line checks
h. Flight navigator — annual checks
i. Induction and conversion training

5. List of operator's check and training pilots

CHAPTER-68/APPENDIX-26
AIR OPERATOR OPERATIONS CONTROL INSPECTION GUIDE

The following areas should be inspected and the observation found, should be written down for report making on Air Operator Operations Control Inspection:

A. MANUALS

1. Current copy of the Flight Operations Manual available?
2. Current copy of the Aircraft-Specific Operations Manual available?
3. Current copy of Aircraft-Specific Checklists available?
4. Current copy of Flight Dispatch Manual available?
5. Current copy of AFM Performance available?
6. Current copy of Emergency Response Manual available?

B. OPERATIONAL FLIGHT PLAN - NAV LOG

1. “Standard” operational flight plan used for the flight(s)?
2. “Standard” ops flight plan appropriate for this flight operation?
3. “Standard” flight plan calculated accurately?
4. “Manual” operational flight plan/NAV log issued for the flight(s)?
5. “Manual” ops flight plan appropriate for this flight operation?
6. Assigned person accurately computed the manual plan?
7. Computer operational flight plan/NAV log issued for the flight(s)?
8. Computer plan/NAV log obtained from an approved source?
9. Computer plan/NAV log calculated accurately?
10. Copy of the signed operational plan – NAV log retained?
11. Retention method and time period in use acceptable?
12. Operational flight plan/NAV log formats, examples and completion procedures accurately described in the Operations Manual?
13. Applicable Operations Manual content complete and acceptable?
14. Applicable Operations Manual policies applied as written?

C. WEATHER

1. Complete weather briefing received by the flight crew?
2. Weather data obtained from approved source(s)?
3. Terminal weather observations appropriate for the flight?
4. Terminal weather forecasts appropriate for the flight?
5. En-route weather appropriate for the flight?
6. Significant weather synopsis appropriate for the flight?
7. Winds aloft forecasts appropriate for the flight?
8. Upper Air pressure charts appropriate for the flight?
9. Severe weather reports and forecasts appropriate for the flight?
10. “Real-time” weather displays available for consultation?
11. Weather data consistent with that used for ops plan/NAV log?
12. Flight plan routing the best for the forecast weather?

13. Weather data appropriate to the flight(s) retained?
14. Retention method and period in use acceptable?
15. Weather data formats, examples and instructions accurately described in the Operations Manual?
16. Applicable Operations Manual content complete and acceptable?
17. Applicable Operations Manual policies applied as written?

D. SELECTION OF ALTERNATES

1. Appropriate takeoff alternate selected?
2. Appropriate en-route alternates selected?
3. Appropriate destination alternate selected?
4. Alternates included in ops plan – NAV log?

E. AERONAUTICAL DATA

1. Appropriate NOTAM data provided to the flight crew?
2. NOTAM data obtained from an approved source?
3. Route guide and NAV charts available to operational control?
4. NAV log coordinates compared to the NAV charts coordinates?
5. AFM aircraft-specific performance data available?
6. Aircraft specific takeoff and landing performance available?
7. Takeoff performance manually calculated?
8. Appropriate obstacle data use in the takeoff calculation?
9. TO and LDG performance data from an approved source and current?
10. Takeoff and landing performance data computer-generated?

F. MINIMUM FUEL SUPPLY

1. Flight planning minimum fuel calculations based on weights approximated from a valid source?
2. Minimum fuel supply appropriate for aircraft and operation?
3. Minimum fuel contingencies considered?
4. Fuel/oil uplift information available?

G. AIRCRAFT CONSIDERATIONS

1. On-going MEL -deferred items of the aircraft available?
2. On-going maintenance status of the aircraft available?
3. Copy of the tech log with maintenance release available?
4. Aircraft CAT II/III ready?
5. Aircraft ETOPS ready?

H. ATS STATUS

1. ATS flight planned filed?
2. Operation conducted under instrument flight rules?

I. PROGRESS OF FLIGHT

1. Takeoff and landing times for current flights available?
2. At least one on-duty person could provide an approximate position of the flight(s) at a selected time?
3. Operational control person has immediate access to telephone lines dedicated to flight operations issues?
4. Operational control person could contact the flight en-route?
5. Each station could be contacted during the period prior to flight arrival and immediately prior to flight arrival.
6. Flight locating information available for the flight crew?

J. COMMUNICATIONS RECORDS

1. Operational control person maintains a continuous log?
2. A record of all radio communications is maintained by log or tape?
3. ACARS readout is available for previous flights?

K. OVERALL ASSESSMENT

1. Personnel were competent and proficient?
2. Compliance with Operations Manual, except where noted.
3. Adequate facilities and equipment available for required tasks.

CHAPTER-68/APPENDIX-27
AIR OPERATOR DISPATCH MANUAL INSPECTION GUIDE

The following areas should be inspected and the observation found, should be written down for report making on Air Operator Dispatch Manual Inspection:

A. AUTHORISED OPERATIONS

1. Are the operations that may and may not be conducted according to the Ops Specs (including areas of operation) clearly specified?
2. Are there clear definitions of domestic, flag, and supplemental
3. operations? Are there clear definitions of the rules under which each
4. of these operations is conducted?
5. Are the applicable regulations identified and the operator's policies
6. applicable to each type of operation clearly stated?

B. MANUALS

1. Is there a section of the Ops Manual, Part A in which the policy and guidance for operational control has been collected for the guidance of flight crews and dispatchers?
2. Are the topics listed on this job aid adequately covered?
3. (Is the applicable section of the Ops Manual, Part A readily available to dispatchers and flight crews while they perform their duties?
4. Is the copy of the operator's Ops Manual, Part A that is available to dispatchers or flight crews current?

C. ORIGINAL RELEASE

1. Are the conditions clearly stated under which a flight may and may not be dispatched?
2. Are the conditions stated under which a flight must be re-routed, delayed, or cancelled?
3. Does the flight release contain all required elements?
4. Are limitations required in the remarks of the release?
5. Is a written copy of weather reports and forecasts (including
6. PIREPs) and NOTAMs attached to the release and provided to the flightcrew?

D. RESPONSIBILITY FOR PRE-DEPARTURE FUNCTIONS

1. Are the responsibility and procedures for accomplishing the following functions clearly specified?
2. Crew assignment?
3. Load planning
4. Flight planning
5. Release of the aircraft from maintenance
6. Control of MEL and CDL limitations

7. Weight and balance
8. Have adequate procedures for crosschecking and verifying these
9. activities been established?
10. Is each of these procedures effective?
11. What means has the operator established for the PIC and dispatcher to ensure that each of these functions has been satisfactorily accomplished before the aircraft departs?

E. DISPATCHER BRIEFING

1. How do the operator's procedures provide for briefing of the PIC by the dispatcher?
2. Is the minimum content of the briefing specified and adequate?

F. DUAL RESPONSIBILITY

1. How are the signatures of both the PIC and the dispatcher on the dispatch release accomplished?
2. Is the PIC's obligation to operate the flight according to the release, or to obtain an amended release, clearly stated?

G. FLIGHT-FOLLOWING

1. Are the dispatcher's flight-following requirements and procedures clearly stated?
2. Is policy and guidance provided to flight crews and dispatchers for
3. monitoring fuel en route?
4. Are flightcrew reporting requirements and procedures clearly stated?
5. Are there specified procedures for dispatchers to follow when a required report is not received?
6. Is a record of communication made and retained?

H. INABILITY TO PROCEED AS RELEASED

1. Is a policy stated concerning the PIC's latitude to deviate from a dispatch release without obtaining a new release?
2. Is there specific and adequate direction and guidance to PICs and dispatchers for the actions to take when a flight cannot be completed as planned (such as destinations or alternates below minimums, runways closed or restricted)?
3. Are there procedures to follow in case of diversion or holding specifically
4. and clearly stated?

I. Weather

1. Does the operator obtain weather reports from an approved source?
2. Are procedures for making flight movement forecasts clearly specified?
3. Are those individuals authorized to make a flight movement forecast clearly specified? Are other individuals specifically prohibited from making flight movement
4. forecasts?

5. Does the operator have an adverse weather system?
6. Does the operator have adequate procedures for providing the latest available weather reports and forecasts to flight crews while the flight is en route?
7. Does the operator have adequate procedures for updating weather information when the aircraft is delayed on the ground?

J. WEATHER MINIMUMS

1. Is release under VFR authorized by CAAB?
2. If so, has the forecast and actual weather allowed VFR flight to destination on those flights so released?
3. Have turbojet aircraft been released under VFR?
4. Are IFR departure minimums authorized by CAAB?
5. When flights are released with the departure airport below landing minimums, are takeoff alternates named on the dispatch release?
6. Are destination weather minimums authorized by CAAB?
7. Weather minimums for “high minimums” captains followed?
8. When a flight is released to a destination below CAT I minimums, is that airplane type authorized at CAT II or CAT III operations at that location?
9. When destination alternates are required, are they named on the dispatch release?
10. Is the weather at the named alternate airport equal or better than that required by regulation?
11. Is “marginal” defined for the designation of two alternates on the dispatch release?
12. Are two alternates designated when required?
13. Are dispatchers made aware of these limitations before dispatching a flight?
14. Do weather forecasts from the trip records show that these limits have been complied with for dispatch?

K. SELECTION OF ALTERNATES

1. Is policy, direction, and guidance provided for the selection of alternates?
2. Is terrain and engine-out performance considered in the alternate selection?

L. NOTAMs

1. Is the required NOTAM information provided (Class I, Class II, and Local)?

M. INFORMATION

1. What provisions does the operator make for supplying airport and navigation information?
2. What means does the operator use to comply with the requirement for an airport data system? Is it adequate?
3. Are flight crews provided with written flight plans for monitoring flight progress and fuel burn?
4. How does the operator provide data to dispatchers on takeoff and landing minimums at each airport?

5. Do dispatchers have immediate access to such data?
6. Are provisions made for nonstandard operations, such as inoperative centerline lighting?

N. FUEL

1. Are all the required increments of fuel provided (start and taxi, takeoff to arrival at destination, approach and landing, missed approach, alternate fuel, 45 minutes of reserve, and contingency fuel)?
2. Are the operator's policies concerning contingency fuel adequate for the environment in which operations are conducted?
3. Are there minimum fuel procedures specified for both dispatchers and PICs?
4. When aircraft are dispatched without an alternate, is adequate contingency fuel carried for un-forecast winds, terminal area delays, runway closures, and contingencies?

O. EMERGENCY PROCEDURES

1. Are emergency action procedures and checklists published and readily available for the following emergencies?
   a. In-flight Emergency
   b. Crash
   c. Overdue or missing aircraft
   d. Bomb threat
   e. Hijacking

P. CHANGEOVER PROCEDURES

1. Is an adequate overlap provided for the dispatcher being released to brief the oncoming dispatcher on the situation?

Q. TRIP RECORDS

1. Are the required trip records carried to destination?
2. Are trip records retained for 30 days?

CHAPTER-68/APPENDIX-28
DISPATCHER QUALIFICATION INSPECTION GUIDE

The following areas should be inspected and the observation found, should be written down for report making on Dispatcher Qualification Inspection:

A. QUALIFIED DISPATCHERS

1. Are all dispatchers certified?
2. Have all dispatchers successfully completed a competency check within the eligibility period?
3. Have all dispatchers completed route familiarization within the preceding 12 calendar months?
4. How does the operator ensure that dispatchers are currently familiar with the areas in which they work?

B. KNOWLEDGE OF WEATHER

1. Are dispatchers knowledgeable about the following weather conditions?
2. Surface (fronts, fog, low ceilings, etc.)
3. Upper air (tropopause, jet streams)
4. Turbulence (pressure and temperature gradients)
5. Severe (low-level windshear, microburst, icing, thunderstorms)
6. Can dispatchers read a terminal report, forecast accurately, and interpret the meanings?
7. Can dispatchers read various weather depiction charts and interpret
8. the meanings?
9. Can dispatchers read upper-air charts and interpret the meanings?

C. KNOWLEDGE OF THE AREA

1. Do dispatchers immediately recognize the airport identifiers for the airports in the area in which they are working?
2. Are dispatchers generally familiar with the airports in the area in which they are working (number and length of runways, available approaches, general location, elevation, surface temperature limitations)?
3. Are dispatchers aware of which airports, in the areas in which they
4. are working, are special airports, and why?
5. Are dispatchers aware of the terrain surrounding the airports in the
6. areas in which they are working?
7. Are dispatchers aware of dominant weather patterns and seasonal
8. variations of weather in the area?
9. Are dispatchers aware of route segments limited by drift-down?

D. KNOWLEGE OF AIRCRAFT USED

1. Are dispatchers aware of the general performance characteristics of each airplane with which they are working (such as average hourly fuel burn, holding fuel, engine-out, drift-down height, effect of an additional 50 knots of wind, effect of a 4,000-foot lower altitude, crosswind limits, maximum takeoff and landing weights, required runway lengths)?
2. Can dispatchers read and explain all the items on the operator's flight plan?

E. KNOWLEDGE OF POLICY

1. Are dispatchers knowledgeable of the Ops Specs, particularly such items as authorised minimums?
2. Are dispatchers aware of the policies and provisions of the operator's manual as discussed under policies and procedures?

F. KNOWLEDGE OF RESPONSIBILITIES

1. Are dispatchers knowledgeable of their responsibilities under CAR '84 (such as briefing PIC; canceling, rescheduling, or diverting for safety; in-flight monitoring; in-flight notification to PIC)?
2. Are dispatchers knowledgeable of their responsibilities under the operator's manual?
3. Are dispatchers aware of their obligations to declare emergencies?

G. PROFICIENCY

1. Are dispatchers competent in the performance of their assigned duties?
2. Are dispatchers alert for potential hazards?

H. DUTY TIME

1. Are the regulatory duty time requirements being complied with?

I. SUPERVISORS

1. Are supervisors qualified and current as dispatchers?
2. Are competency checks appropriate, thorough, and rigorous?

CHAPTER-68/APPENDIX-29
DISPATCH FACILITIES AND SUPPORT INSPECTION GUIDE

The following areas should be inspected and the observation found, should be written down for report making on Dispatch Facilities and Support Inspection:

PHYSICAL

1. Is enough space provided for the number of people working in the dispatch center?
2. Are the temperature, lighting, and noise levels conducive to effective
3. human performance?
4. Is access to the facility controlled?

A. INFORMATION

1. Are dispatchers supplied with all the information they require (such as flight status, maintenance status, load, weather, facilities?)
2. Is the information effectively disseminated and displayed? Can information be quickly and accurately located without overloading the dispatcher?
3. Are real-time weather displays available for adverse weather avoidance?

B. DUAL RESPONSIBILITY

1. Can a dispatcher establish rapid and reliable radio communications (voice or ACARS) with the captain when a flight is parked at the gate?
2. How much time does it take to deliver a message to an en route flight and get a response?
3. Are direct-voice radio communications available at all locations?
4. Are they reliable? If communications facilities are shared with other airlines, does traffic congestion preclude rapid contact with a flight?
5. If hub-and-spoke operations are conducted, are there adequate communication facilities available to contact and deliver a message to all arriving flights within a 15-minute period?
6. Are backup communications links available in case of a failure of the primary links?

C. MANAGEMENT

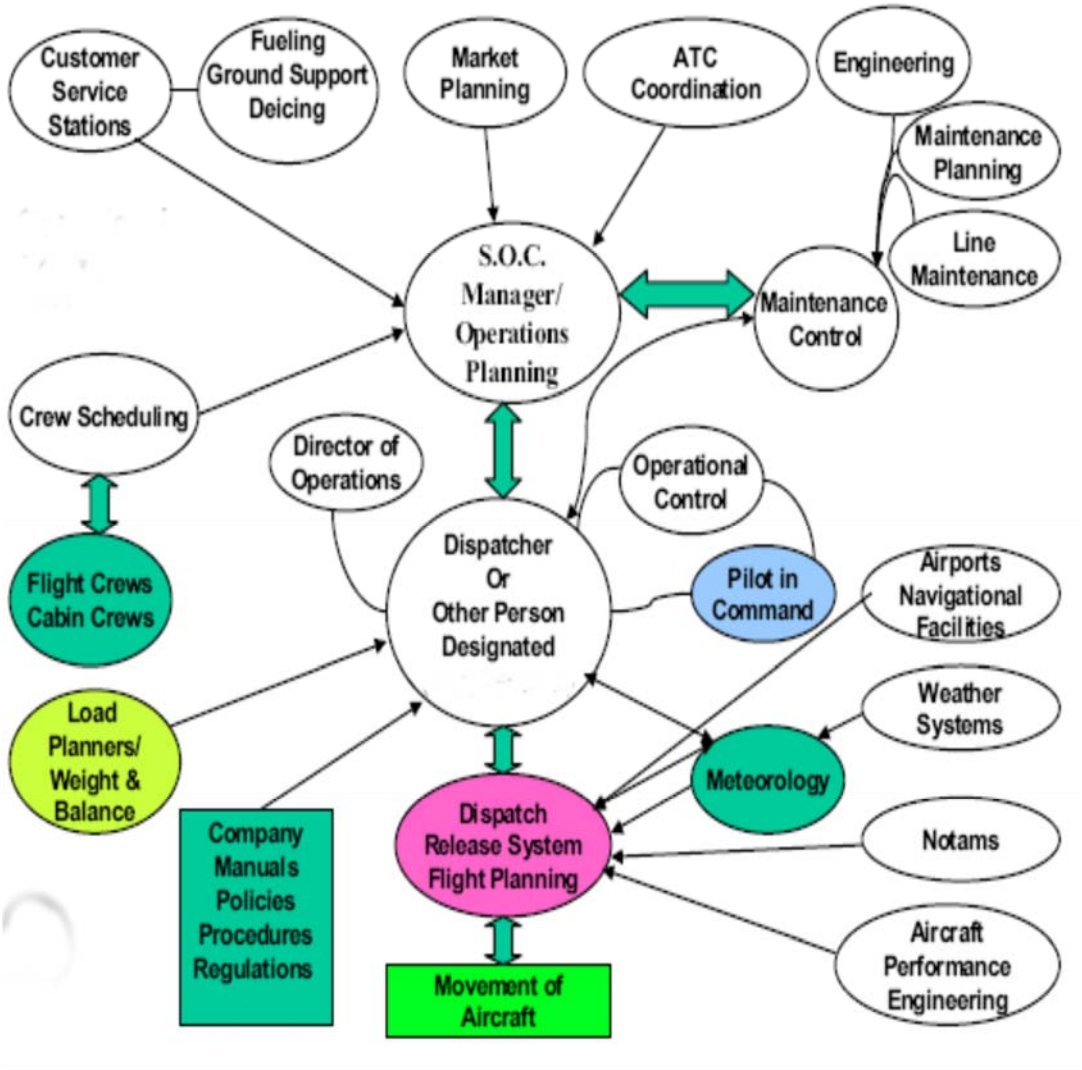
1. Has overall responsibility for operations in progress been assigned to one individual who can coordinate the activities of all the dispatchers?
2. Have procedures been established for coordinating with central flow control?
3. Have adequate internal communications links been established?

D. WORKLOAD

1. What method does the operator use to show compliance with the requirement to assign enough dispatchers during periods of normal operations and periods of non-routine operations?
2. Are the operator's methods adequate?
3. Do dispatchers have enough time to perform both dispatch and flight-following duties in a reasonable manner?

CHAPTER-68/APPENDIX-30
OPERATION CONTROL SYSTEM DIAGRAM

A typical Operation System Control Diagram is shown below:



CHAPTER-68/APPENDIX-31
GROUND HANDLING & STATION INSPECTIONS GUIDE

Appended below is the Ground Handling and Station Inspections Guide that an Inspector should review and follow to make a relevant inspection report:

A. CONFORMANCE WITH RELEVANT STANDARDS

1. Were all personnel and documents in conformance with aviation law and regulations?
2. Were the operations found to be in conformance with ICAO Standards?
3. Were there any practices that did not conform to published relevant safety practices?

B. STATION STAFF (INCLUDING SERVICE PROVIDERS)

1. Is there adequate staff to handle the required support functions?
2. Did all staff demonstrate competent performance in their function?
3. Did the staff follow the proper procedures for the functions they performed?
4. Did the company and service provider training and qualification records show that all personnel were adequately trained for their functions?

C. EQUIPMENT & FACILITIES

1. Were there adequate facilities and equipment for the complexity and functions performed?
2. Were there adequate facilities and equipment for the complexity and functions performed?

D. PASSENGER HANDLING

1. Were adequate guidance and procedure manuals available for the persons performing this function?
2. Were qualified personnel available to accomplish this function for each flight?
3. Were the passenger ticketing and baggage acceptance performed satisfactorily?
4. Were the passengers and baggage weighed before emplaning?
5. Was the handling of passenger enplaning and deplaning performed satisfactory?
6. Were the passenger security measures satisfactory?
7. If a jetway was not used, was a designated walk route with adequate guide persons available to ensure passenger ramp safety?

E. AIRCRAFT MOVEMENT ON RAMP

1. Were adequate guidance and procedure manuals available for the persons performing this function?
2. Were qualified personnel available to accomplish this function for each flight?
3. Was the marshalling of aircraft performed satisfactorily?

4. Were the ramp and gate areas properly marked for towing, taxiing and parking position?
5. Was the aircraft parking area clear of carts and other vehicles during the parking of the aircraft?
6. Was the towing of the aircraft performed satisfactorily?
7. Were security measures for identification of all ramp personnel clearly available?
8. If a service provider was used to perform this function, were the arrangements, guidance and qualification of personnel acceptable?

F. AIRCRAFT SERVICING

1. Were adequate guidance and procedure manuals available for the persons performing functions involved?
2. Were qualified personnel available to accomplish these functions for each flight?
3. Was the servicing of aircraft performed satisfactorily?
4. Was the fueling of aircraft performed satisfactorily?
5. Was the loading of aircraft performed satisfactorily?
6. Was the deicing of aircraft performed satisfactorily?
7. Was the equipment used to perform these functions operational, adequate for the task, and operated knowledgeably by the personnel involved?
8. Were security measures for identification and monitoring of all servicing personnel satisfactory?
9. If service providers were used to perform these functions, were the arrangements, guidance and qualification of personnel acceptable?

G. AIRCRAFT OVERNIGHT PARKING

1. Were adequate guidance and procedure manuals available for the persons performing this function?
2. Were qualified personnel available to accomplish this function for each flight?
3. Was the aircraft properly lighted and identifiable as required for the parking location?
4. Was the aircraft “guarded” by assigned persons at all times?
5. If a service provider were used to perform these functions, were the arrangements, guidance and qualification of personnel acceptable?

H. MASS, BALANCE & PERFORMANCE COMPUTATIONS

1. Were adequate guidance and procedure manuals available for the persons performing this function?
2. Were qualified personnel available to accomplish this function for each flight?
3. Were the correct procedures for passenger loading, count and communication of the positioning followed?
4. Were specific passenger seat assignments used to ensure a safe C.G. for flight?
5. Were the correct procedures for cargo loading, and communication of positioning followed?
6. Were the correct procedures for dangerous goods loading, and communication of positioning (e.g. NOTOC) followed?

7. Were the mass and balance calculations and procedures satisfactory?
8. Were the last-minute mass and balance revisions due to passengers or cargo handled correctly?
9. Were the takeoff and landing performance calculations performed correctly?
10. If a service provider were used to perform these functions, were the arrangements, guidance and qualification of personnel acceptable?

I. FLIGHT PLANNING

1. Were adequate guidance and procedure manuals available for the persons performing this function?
2. Were qualified personnel available to accomplish this function for each flight?
3. Was the weather acquisition (including selection of alternates) and briefing of crews performed correctly?
4. Was the NOTAM acquisition and briefing of crews performed correctly?
5. Was the operational flight plan (including fuel loading) calculations and procedures performed correctly?
6. If a service provider were used to perform one or more of these functions, were the arrangements, guidance and qualification of personnel acceptable?

J. COMMUNICATIONS

1. Were adequate guidance and procedure manuals available for the persons performing this function?
2. Were qualified personnel available to accomplish this function for each flight?
3. Was there adequate communications capability with main base operations and maintenance functions, including relay of information?
4. Were flight following procedures performed correctly?
5. Were emergency response procedures performed correctly?
6. Were accident/incident procedures performed correctly?
7. Were the correct numbers for telephone and/or fax notifications associated with emergency response available?
8. If a service provider were used to perform one or more of these functions, were the arrangements, guidance and qualification of personnel acceptable?

K. MAINTENANCE

1. Were adequate maintenance guidance and procedure manuals available for the level of maintenance to be performed?
2. Were qualified maintenance personnel available to accomplish the level of maintenance to be performed?
3. Was the performance and recording of routine maintenance satisfactory?
4. Was the performance and recording of deferred maintenance satisfactory?
5. If a service provider was used to perform this function, were the arrangements, guidance and qualification of personnel acceptable?

L. RECORDS RETENTION & ACCURACY

1. Were the flight preparation and other official records up-to-date and correctly filed?
2. Was there adequate file retention security for official records?

49.6 PASSENGER HANDLING INSPECTION GUIDE

Appended below is the passenger handling inspections guide that an Inspector should review and follow to make the relevant inspection report:

A. PASSENGER HANDLING IN TERMINAL

1. Acceptable procedures for identification and seat allocation for handicapped persons?
2. Seat allocation for infants and children?
3. Scales for weighing baggage and cargo?
4. Appropriate system for control of loose articles in the cabin (carry-on baggage?

B. PASSENGER RAMP SAFETY

1. DAY – Air bridge/directions to board
2. NIGHT – Air bridge/directions to board
3. DAY – Proper positioning of steps?
4. NIGHT – Proper positioning of steps?
5. DAY – Staff in attendance with passengers?
6. NIGHT - Staff in attendance with passengers?
7. DAY – Protection from jet blast?
8. NIGHT – Protection from jet blast?
9. DAY – Clearance from propellers?
10. NIGHT – Clearance from propellers?
11. DAY – Clear of taxiing aircraft?
12. NIGHT – Clear of taxiing aircraft?
13. DAY – Clear of moving vehicles?
14. NIGHT – Clear of moving vehicles
15. DAY – Positioning of service vehicles?
16. NIGHT – Positioning of service vehicles?
17. DAY – Are there safety routes available for emergency evacuation?
18. NIGHT – Are there safety routes available for emergency evacuation?

C. CREW COORDINATION WITH LOAD CONTROL

1. Are passengers occupying their assigned seats?
2. Was a head count compared to load manifest for accuracy?

CHAPTER-68/APPENDIX-32
MEL EVALUATION GUIDE

CAAB Inspectors should follow the guide appended below for evaluation of MEL:

A. OVERALL MANUAL PRESENTATION

1. Bound in a secure form (not loose)?
2. Exterior of binder clearly indicates manual content?
3. Table of contents?
4. Tabbed by ATA chapter?
5. Revision Instructions adequate?
6. List of effective pages provided and correct?
7. Last applicable MMEL revision identified and latest?
8. Preamble and instructions for use adequate?

B. INDIVIDUAL PAGE PRESENTATION

1. Page numbered?
2. Last revision number/date?
3. ATA chapter identified?

C. INDIVIDUAL ITEM PRESENTATION & CONTENT

1. Proper MMEL-MEL number comparison?
2. Proper item title?
3. No item relief other than that shown in MMEL is allowed?
4. Aircraft for which item is applicable identified by R/N or S/N?
5. Number of item installed correct?
6. Aircraft with non-standard installation identified by R/N or S/N?
7. Correct repair interval listed?
8. Number required for dispatch conforms to MMEL?
9. Placarding symbols provided in accordance with MMEL?
10. (O) & (M) symbols provided in accordance with MMEL?
11. Remarks correctly aligned with applicable “required” numbers?
12. Wording of MEL remarks not less restrictive than MMEL (special
13. attention to use of “or” & “and”?
14. Configuration (# installed/required) allowed is in accordance with all applicable regulations?
15. All references to applicable regulations converted to remarks format and aligned with “required” number?
16. All references to “by AFM” converted to remarks format?
17. Adherence (#installed/required) to all special restrictions applicable to operations authorized for AOC holder included?
18. All references to operations not authorized to AOC holder deleted?

D. INDIVIDUAL (O) & (M) PROCEDURES

1. There is an ops procedure for every MMEL (O) reference?
2. There is an maint procedure for every MMEL (M) reference?
3. Procedures provided in accordance with manufacturers MEL dispatch guide conform to the source references?
4. Maintenance procedures taken from sources other than the manufacturer's
5. dispatch guide are technically correct, meet all remarks and have the source cited?
6. Operations procedures taken from sources other than the manufacturers MEL dispatch guide are technically correct, not a normal operating procedure and meet all remarks?
7. No normal operating procedures are provided?
8. All procedures apply to the "dispatch" of aircraft?

E. CDL EVALUATION

1. CDL properly tabbed in rear of MEL?
2. CDL contents clearly identified?
3. CDL items in accordance with current manufacturers guidance?

CHAPTER-68/APPENDIX-33
TRAINING IN PROGRESS INSPECTION GUIDE

CAAB Inspectors shall take the assistance of the following guidelines for the evaluation of Training Facility and Training In Progress of an air operator for issue of AOC:

A. ADMINISTRATION

1. Adequate accommodation and facilities?
2. Adequate supervisory support staff available?
3. Adequate administrative support staff available?
4. Training schedules coordinated with operational needs?

B. PRODUCTION FACILITIES

1. Printing capability?
2. Presentation development capability?
3. Video editing capability?
4. Electronic versions of training documents and handouts?
5. Computers available to training and checking personnel?

C. TRAINING & PROCEDURES MANUAL

1. Current revision (compare to CAA approved copy)?
2. Current list of effective pages (compare to CAA approved copy)?
3. Manual properly updated?
4. Pertinent portions of manual provided to instructor, checking and
5. administration staff?
6. Tracking of amendments provided to personnel?

D. CURRICULUM & LESSON PLANS

1. Curriculum(s) in use available?
2. Lesson plan(s) in use available?
3. Curriculum(s) and lesson plan(s) current to relevant regulation and
4. industry practices?

E. INSTRUCTOR(S)

1. Adequate staffing/availability for range of training?
2. Knowledge of subjects and procedures?
3. Instruction techniques and delivery?
4. Adherence to lesson plan outline, content and timing?
5. Instructor(s) have proper qualifications?
6. Instructor(s) records up-to-date?
7. Appropriate “O” checklist for evaluation of instructor records completed?

F. CHECKING PERSONNEL

1. Adequate staffing/availability for range of checking?
2. Checking personnel records are available?
3. Checking personnel records up-to-date?
4. Appropriate "O" checklist for evaluation of checking person performance completed?
5. Appropriate "O" checklist for evaluation of checking person records completed?

G. EVALUATION & DEBRIEFINGS

1. Were the acceptable completion standards available?
2. Did the student receive a debriefing regarding performance?

H. COMPLETION OF RECORDS

1. Instructor or checking person made completion entries in student's record(s)
2. Entries were accurate with respect to the debriefing and the student's performance?

I. CLASSROOMS & TRAINING AREAS

1. Number and size adequate for the purpose used?
2. Student seating and writing accommodation?
3. Student visibility accommodation?
4. Student hearing accommodation?
5. Minimal visual and aural distractions?
6. Reasonable heating/cooling/ventilation/lighting?

J. BRIEFING ROOMS FOR PRE-/POST-FLIGHT LESSON

1. Number and size adequate for the task?
2. Adequately furnished and equipped?

K. DOCUMENTS & HANDOUTS

1. Appropriate route and navigation charts available?
2. Appropriate portions of Operations Manual available?
3. Training source materials and examples?
4. Training problems and calculations?
5. Tests and other evaluation tools?

L. EQUIPMENT

1. White boards, markers and erasers?
2. Flight deck pictorial layout available?

3. Overhead projector?
4. Computer projector?
5. Video player?
6. Computer?
7. Special Equipment – System Mockup available?
8. Special Equipment – Synthetic trainer available?
9. Special Equipment – Simulator available?

CHAPTER-68/APPENDIX-34
EVALUATION OF SIMULATOR TRAINING & CHECKING GUIDE

CAAB Inspectors shall take the assistance of the following guidelines for the Evaluation of Simulator Training and Checking:

A. PROCESSING OF REQUEST

1. Were the request documentation contents satisfactory?
2. Was the FAA ATG and MATG Current? (FAA Approval)
3. Was the JAA TG and MTG Current? (EASA Approval)
4. Was the other CAA TG and MTG Current? CAA ID _____
5. Was the CAAB TG and MTG Current? (CAAB Approval)
6. Was the approving CAA contacted to confirm currency of approval? Phone Number:_____
7. Is the simulator to be used for takeoff and landing qualification?
8. Is the simulator to be used for LOFT training?
9. Is the simulator to be used for Category III approach training and checking?
10. Is the simulator to be used for ETOPS training and checking?

B. SIMULATOR MAINTENANCE ARRANGEMENTS

1. Is the daily preflight documentation easily accessible for review?
2. The simulator's maintenance records do NOT show a pattern of recurring failures?
3. Does the simulator owner provide adequate personnel to correct simulator deficiencies during the periods of time the operator's personnel will be engaged in simulator training and checking?

C. SIMULATOR TESTING PROVISIONS

1. Is there a means for quickly and effectively testing simulator programming and hardware?
2. Is there documentation that the control feel dynamics and relative integrated sensory cues were tested in the last CAA approval?
3. Is there ia means of recording the visual response time for visual systems?
4. Were the demonstration of surface resolution confirmed by calculations in the statement of compliance?
5. Do the test procedures confirm that the visual system colour, RVR, focus, intensity, level horizon, and attitude adequately replicate those experienced during operation of the aircraft?
6. Did the visual system meet all standards during the validation of functions and subjective tests?

D. GENERAL IMPRESSION OF SIMULATOR

1. Is the overall condition and cleanliness of simulator acceptable?

2. Does the simulator cockpit consist of all the aircraft cockpit space forward of a cross section of the fuselage?
3. Are the required crew member duty stations and required bulkheads aft of the pilots' seats, (considered part of the cockpit) a replication of the flight deck of the operator's aircraft?
4. Are there observer seats available for the check airman/examiner and inspector?
5. Are the instructor controls adequate to control all required system variables and insert abnormal or emergency conditions necessary for the prescribed procedures and maneuvers?

E. COMPARISON TO OPERATOR'S AIRCRAFT

1. Is the simulator cockpit a full scale replica of the operators aircraft cockpit?
2. Does the simulator replicate the actual instrumentation and switch location of the operator's aircraft?
3. Are the direction of movement of control and switches identical to that in the aircraft?
4. Are circuit breakers properly located and functionally accurate?
5. Are all differences identified and acceptable?

F. PRE-START & GROUND OPERATIONS

1. Cockpit preparation checklist accomplished with normal check indications?
2. Start checklist accomplished with normal start indications?
3. Representative sample of abnormalities possible using instructor control panel?
4. Taxi for takeoff in visual conditions adequately simulated and possible?
5. If low visibility taxi operations, taxi for takeoff in low RVR adequately simulated and possible, including taxiway lighting and markings?
6. Pre-takeoff checklist accomplished with realistic indications?

G. TAKEOFF & CLIMB OPERATIONS

1. Normal maximum gross weight takeoff realistically simulated?
2. Normal visual takeoff with maximum cross-wind component realistically simulated?
3. Low visibility (minimum RVR approved for operator) maximum gross weight takeoff realistically simulated, including visual cues?
4. Low visibility (minimum RVR approved for operator) maximum gross weight abort just prior to V1 realistically simulated, including visual cues?
5. Low visibility (minimum RVR approved for operator) maximum gross weight takeoff with engine failure at V1 and climb profile realistically simulated, including visual cues?

H. INFLIGHT MANUEVERS

1. Warnings for approach to stall in a climb configuration conform to the expected sequence and approximate airspeeds, with realistic recovery profile possible?
2. Warnings for approach to stall in a landing configuration conform to the expected sequence and approximate airspeeds, with realistic recovery profile possible?

3. Windshear profiles provide realistic indications, with escape configuration possible?
4. Steep turns are possible, with realistic power and attitude configurations?
5. Engine-out drift-down and level flight possible in conformance with published performance for weight, temperature and altitude?
6. Navigation simulation appropriate to the type of navigation and RNP requirements?
7. If approved for ETOPS route checking, the necessary route and alternate possibilities are included in simulator software?

I. VISUAL AND INSTRUMENT APPROACHES

1. Maneuvering for landing in visual conditions provide adequate visual cues?
2. Category I precision approach can be made to prescribed minimums
3. Engine-out Category I precision approach can be made to prescribed minimums
4. If approved for the operator, Category II precision approach can be made to prescribed minimums
5. If approved for the operator, Category III precision approach can be made to prescribed minimums?
6. Non-precision approaches (approved for the operator) are possible using nav-aids available in the simulator.
7. Precision approach visual references necessary to land (from lowest approved visibility) are adequate for landing from DH. (Freeze simulator at DH and review)
8. Non-precision visual references necessary to land (from lowest approved visibility) are adequate for landing from MDA. (Freeze simulator at MDA and distance and review)
9. Circle-to-land maneuvering possible from an instrument approach using visual references. (Freeze simulator prior to turning final and review)

J. LANDING & TAXING TO GATE

1. Visual landing from DH possible using visual cues and procedures
2. Rejected landing just prior to touchdown requires realistic configuration and thrust settings for proper completion?
3. Landing in visual conditions with maximum cross-wind component provides realistic approach and landing requirements?
4. Engine-out landing from an Category I precision approach can be completed in accordance with profile?
5. If approved for the operator, Category II or III hand-flown touchdown and rollout realistically possible with visual cues?
6. If approved for the operator, Category III Autoland functions properly throughout the touchdown and rollout with landing?
7. Taxi to the gate possible in visual conditions?
8. If approved for operator, taxi to the gate possible in lowest visibility minima approved?

K. ABNORMAL AND EMERGENCY EVENT REPLICATION

1. All planned abnormal indications can be realistically simulated?
2. Completion of all planned abnormal procedures can be accomplished?

3. All emergencies can be realistically simulated?
4. Completion of all emergency procedures can be accomplished?

L. REPLICATION OF AERODYNAMIC CONTROL FORCES

1. Do the control forces and control travel replicate those of the operator's aircraft?
2. Do the relevant instrument indications replicate those experienced in
3. the operator's aircraft respond correctly to control movement by crew or induced disturbance to the simulated aircraft: e.g. turbulence or windshear?
4. Do the effects of aerodynamic changes for various combination of drag and thrust replicate those normally experienced in the operator's aircraft during flight?
5. '12.4 Are the effects of change in aircraft attitude, thrust, drag, altitude, temperature, gross weight, centre of gravity location, and configuration adequately replicated?

M. REPLICATION OF SYSTEMS/PROCEDURES

1. Do the communications, navigation and caution and warning equipment correspond to that installed in the operator's aircraft?
2. Do the simulator systems replicate applicable aircraft system operation both on the ground and in flight?
3. Is it possible to accomplish all normal, abnormal and emergency procedures as specified in the operator's aircraft and training documentation.

N. REPLICATION OF SENSORY PERCEPTIONS

1. Are the sounds and aircraft noise perceptible to the pilot during ground and flight operations of the operator's aircraft replicated accurately?
2. Do the cockpit sounds which result from pilot actions replicate those experienced in the operator's aircraft?

O. REPLICATION OF AIRCRAFT MOTION

1. Do the motion cues e.g. touchdown cues a function of the simulated rate of descent?
2. Do the touchdown cues correspond to the rate of descent?

P. REPLICATION OF VISUAL CUES

1. Continuous minimum collimated visual field-of-view as specified.
2. Verification of visual ground segment and visual scene content at a decision height on landing approach.
3. Do the visual cues adequately replicate deck angle and sink rate required for depth perception during takeoffs and landings
4. Dusk scene to enable identification of visible horizon and terrain characteristics.
5. Visual landing cues for daylight, dusk and night adequate for recognition of airport, terrain and major landmarks and accomplishment of landing.

Q. AVAILABLE OPERATOR DOCUMENTATION

1. Is the operator's approved condensed checklist available for use during training and checking activities in the simulator?
2. Is the operator's quick reference abnormal and emergency checklist available for use during training and checking activities in the simulator?
3. Is the operator's aircraft operating manual containing expanded normal, abnormal and emergency procedures and aircraft limitations
4. available for use during training and checking activities in the simulator?
5. Is the operator's manual for aircraft systems function and operation
6. available for use during training and checking activities in the simulator?
7. Is the operator's manual for runways analysis and aircraft performance
8. available for use during training and checking activities in the simulator?
9. Is the operator's approved minimum equipment list available for use during training and checking activities in the simulator?
10. Are the operator's instrument departure, en-route and approach charts available for use during training and checking activities in the simulator?

R. ARRANGEMENTS FOR INSTRUCTOR/CHECK PERSONNEL

1. Have the operator's training and checking personnel been trained on the use of the simulator to adequately recreate required scenarios?
2. If training instructors are provided by simulator operator, are there records of the training of these persons?
3. If checking personnel are provided by simulator operator, are there records of the orientation of these persons by the Authority?
4. Does the simulator control panel allow the instructor/check airman to conduct realistic scenarios of flight with this simulator?
5. Does instructor has developed lesson plans and scenarios for the accomplishment of the training with this simulator?
6. Does instructor have developed lesson plans for realistic LOFT scenarios that provide for a normal line flight operation of the aircraft?
7. Does designated check airman/examiner have developed realistic real-time proficiency check scenarios that provide for all required check events and maneuvers to be accomplished in reasonable time?

CHAPTER-68/APPENDIX-35
MULTI-PILOT/CREW PROFICIENCY CHECK GUIDE

CAAB Inspectors shall take the assistance of the following guidelines for the Multi-Pilot/Crew Proficiency Check:

A. FLIGHT PREPARATION

1. Performance calculation?
2. Airplane exterior visual inspection?
3. Use of checklists prior to starting engines?
4. Taxiing (at minimum authorized RVR)?
5. Preflight checks and checklists?

B. TAKEOFFS

1. Normal takeoffs, including expedited takeoff?
2. Takeoff with instrument transition at 100 AGL?
3. Instrument takeoff at minimum authorized RVR?
4. Crosswind Takeoff (a/c if practical)?
5. Takeoff at maximum takeoff mass (actual or simulated)?
6. Takeoff with simulated engine failure (at 500 AGL)?
7. Takeoff with simulated engine failure shortly after reaching V2?
8. Takeoff with simulated engine failure between V1 and V2?
9. Takeoff with simulated engine failure as close as possible after V2?
10. Rejected takeoff at a REASONABLE speed before reaching V1?

C. FLIGHT MANUEVERS

1. Turns with and without spoilers?
2. Tuck under and Mach buffets after reaching critical Mach number?
3. Steep Turns (45 degree bank-180 to 360 degrees left and right)?
4. Takeoff configuration stall (early recognition and counter measures)?
5. Cruising flight configuration stall (recognition and counter measures)?
6. Landing configuration stall (recognition and countermeasures)?
7. Recovery from full stall or activation of stall warning device?

D. ABNORMAL AND EMERGENCY PROCEDURES

1. (Minimum Mandatory = 3 Procedures Selected From List)
2. Fire Drills (e.g. Engine, APU, cabin, cargo compartment, flight deck, win and electrical fires including evacuation)?
3. Smoke control and removal?
4. Engine failures, shutdown and restart (at safe altitude)?
5. Fuel dumping (simulated)?
6. S 4.5 [SO] Wind shear at takeoff or landing?
7. Simulated cabin pressure failure and emergency descent?

8. Incapacitation of flight crew member?
9. Special emergency procedure required by AFM?

E. INSTRUMENT FLIGHT PROCEDURES

1. Adherence to departure and arrival routes and ATC instructions?
2. Holding Procedures?
3. ILS approach (200 DH) manually without flight director?
4. ILS approach (200 DH) manually with flight director?
5. ILS approach (200 DH) automatically with autopilot?
6. ILS approach (200 DH) manually with one engine inoperative?
7. NDB or VOC/LOC to MDA?
8. Circling Approach to another runway at least 90 degrees off centerline from final approach at circling approach altitude (or low visibility pattern?)

F. MISSED APPROACH PROCEDURES

1. Go-around with all engines operating after ILS approach from DH?
2. Other missed approach procedures?
3. Go-around with one engine simulated inoperative at ILS-DH?
4. Rejected landing at 15m (50 feet) above runway threshold and go-around?

G. LANDINGS

1. Normal landings?
2. Normal landings after ILS approach with transition to visual flight on reaching DH?
3. Landing with simulated jammed horizontal stabilizer in any out of trim system?
4. Prior to proficiency check, enter a “X” in the NA column for any line item maneuver not applicable to this particular check or not permitted, if an actual aircraft check.
5. Prior to proficiency check, enter a “W” in the W column for any line item maneuver or procedure that will not be performed during the proficiency check scenario.
6. If the waiver decision is made during the course of the check, the "W” will be entered at that time.
7. Crosswind landing (a/c, if practical)?
8. Traffic pattern and landing without extended or with partly extended
9. flaps and slats?
10. Landing with critical engine simulated inoperative?
11. Landing with two engines inoperative (3 and 4 engine a/c)?

H. ALL WEATHER OPERATIONS

1. (Required, if authorized in company ops specs)
2. Aborted takeoff just prior to V1 at minimum authorised RVR?
3. ILS to applicable DH/AH using flight guidance system?
4. Go-around on reaching DH/AH?
5. Landing with visual reference established at DH/AH
6. Auto landing from CAT IIIc?

I. ADDITIONAL REQUIREMENTS FOR FLIGHT ENGINEERS NORMAL AND ABNORMAL SYSTEMS OPERATIONS (MINIMUM MANDATORY = 3 PROCEDURES SELECTED FROM LIST)

1. Engine (if necessary propeller)
2. Pressurization and air conditioning
3. Pitot/static system
4. Fuel system
5. Electrical system
6. Hydraulic system
7. Flight control and trim system
8. Anti- and de-icing system, glare shield heating
9. Autopilot and flight director
10. Stall warning, stall avoidance and stability augmentation devices
11. Ground proximity warning system, weather radar, radio altimeter,
12. transponder
13. Radios, navigation equipment, instruments, flight management system
14. Landing gear and brake-system
15. Slat and flap system
16. Auxiliary power unit
17. Check YES column if the observed performance met the testing standards.
18. Check NO column if the observed performance did not meet testing standards.
19. Enter any notes regarding a NO answer.

CHAPTER-68/APPENDIX-36
DANGEROUS GOODS INSPECTION GUIDE

CAAB Inspectors shall take the assistance of the following guidelines for the Dangerous Goods Inspection:

A. OPERATIONS MANUAL & PROCEDURES

1. Is the Operations Manual containing dangerous goods policy and procedure available to company personnel as required?
2. Are the company's dangerous goods acceptance procedures in compliance with the regulations?
3. Is the company in compliance with the dangerous goods requirements for provision of information?
4. Are the dangerous goods airway bill procedures in compliance with the appropriate regulations?
5. Are the passenger check-in procedures in compliance with the dangerous goods regulations?
6. Are the company's dangerous goods storage and loading procedures in compliance with the regulations?
7. Does the company have the proper dangerous goods occurrence procedures in place?

B. TRAINING PROGRAMME

1. Does the dangerous goods training programme reflect all regulatory or operational amendments?
2. Does the company's dangerous goods training programme match the CAAB approved programme?

C. TRAINING RECORDS

1. Does the company have files for all employees trained for transportation of dangerous goods?
2. Are all employees, who handle or offer for transport and transport dangerous goods trained?
3. Are trained employees able to produce certificates of dangerous goods training upon request?
4. Do the dangerous goods training certificates contain the required information?

D. DOCUMENTATION

1. Are the Shipper's Declaration dangerous goods completion procedures in compliance with the appropriate regulations?
2. Are dangerous goods shipping documents retained for two years?

E. IMPLEMENTATION OF PROCEDURES

1. Are dangerous goods exemptions, if any, to the use of airway bill, Shipper's Declarations and Pilot Notification documents properly applied?
2. Are ticketing and cargo personnel (including agents) complying with the dangerous goods regulations?
3. Are copies of the applicable dangerous goods regulations and Technical Instructions are available for consultation?
4. Does the operator personnel have the capability to replace lost or stolen dangerous goods safety placard and marks?
5. Are untrained personnel, who are handling or offering for transport and transporting dangerous goods, appropriately supervised?

F. PILOT NOTIFICATION

1. Are the pilot dangerous goods notification system procedures in compliance with the appropriate regulations?
2. Are the pilots been supplied with appropriate information regarding dangerous goods emergency response and occurrence reporting?

G. OCCURENCE REPORTING

1. Does a reporting system exist to identify undeclared or non-declared dangerous goods?

CHAPTER-68/APPENDIX-37
INFORMATION GATHERING AND ANALYSIS GUIDE

CAAB Inspectors shall take the assistance of the following guidelines for the Information Gathering and Analysis:

A. GENERAL

1. Is there effective information gathering methods?
2. Is there a recording of pertinent data?
3. Is preliminary analysis and hazard identification implemented?
4. Is a formal risk assessment process occurring, including prioritization of risks?
5. Are risk control strategies being developed and discussed?
6. Is the preferred risk control option being implemented for each significant hazard?
7. Is there a monitoring and evaluation process to determine the effectiveness
8. of the actions taken, the residual risks?

B. INFORMATION EXCHANGE

1. Are monthly or quarterly safety reports to management?
2. Are notifications of validated hazards to affected personnel?
3. Is feedback to reporters to the safety incident reporting system?
4. Are incident investigation reports disseminated?
5. Is there promotion of specific safety issues and practices?

C. USE OF SAFETY DATA

1. Trend analysis of operational events?
2. Occurrence investigations?
3. Hazard identification, risk assessment and risk control?
4. Routine performance monitoring using FDA and LOSA data?
5. Review of training programmes;?
6. Reports for management (e.g. quarterly summaries, safety promotion)?

D. VERIFYING STATISICAL DATA

1. Conducting more complex statistical analytical procedures?
2. Developing sampling techniques?
3. Interpreting statistical outputs particularly when data samples are small?
4. Advising on the use of appropriate normative data?
5. Assisting in the use of specialized databases, extraction and analysis tools?
6. Detecting data corruption?
7. Advising on the use and interpretation of data from external sources, etc.?
8. Consolidating data, checking its homogeneity and relevance?

E. SAFETY ANALYSIS PRACTICES

1. Verify the utility and limitations of available data?
2. Assist in deciding what additional facts are needed?
3. Establish consistency, validity and logic?
4. Ascertain causal and contributory factors?
5. Assist in reaching valid conclusions; etc.?

F. PROTECTION OF SAFETY DATA

1. Adequacy of “access to information” laws vis-à-vis long-term accident prevention requirements?
2. Company policies on protection of safety data?
3. De-identification, by removing all details which might lead a third party to infer the identity of individuals (flight numbers, dates/times, locations, aircraft type, etc.)?
4. Security of information systems, data storage and communication networks?
5. Limiting access to databases to those with a “need to know”; and Prohibitions on un-authorized use of data?

G. SAFETY DATABASE CAPABILITIES

1. Log safety events under various categories?
2. Link events to related documents (e.g. reports and photographs)?
3. Monitor trends?
4. Compile analyses, charts and reports?
5. Check historical records?
6. Data-share with other organizations?
7. Monitor event investigations?
8. Apply risk factors?
9. Flag overdue action responses?
10. Ensure action taken to avoid reoccurrence?

CHAPTER-68/APPENDIX-38
SAFETY MANAGEMENT SYSTEM GUIDE

CAAB Inspectors shall take the assistance of the following guidelines for the assessment of Safety Management System of an operator:

A. SAFETY POLICY

1. Is a safety management system in place and being followed?
2. Is the safety management system appropriate to the size and complexity of the organization?
3. Is there a safety policy in place?
4. Has the organization based its safety management system on the safety policy?
5. Is the safety policy approved by the accountable executive?
6. Is the safety policy promoted by the accountable executive?
7. Is the safety policy reviewed periodically?
8. Is the safety policy communicated to all employees with the intent that they are made aware of their individual safety obligations?

B. NON-PUNITIVE SAFETY REPORTING POLICY

1. Is there a policy in place that provides immunity from disciplinary action for employees that report safety deficiencies, hazards or occurrences?

C. ROLES & RESPONSIBILITIES

1. Has an accountable executive been appointed with responsibility for ensuring that the safety management system is properly implemented and performing to requirements in all areas of the organization?
2. Does the accountable executive have control of the financial and human resources required for the proper execution of his/her SMS responsibilities?
3. Has a qualified person been appointed to manage the operation of the SMS?
4. Does the person managing the operation of the SMS fulfill the required job functions and responsibilities?
5. Are the safety authorities, responsibilities and accountabilities of personnel at all levels of the organization defined and documented?
6. Do all personnel understand their authorities, responsibilities and accountabilities in regards to all safety management processes, decisions and actions?

D. COMMUNICATIONS

1. Are there communication processes in place within the organization that permit the safety management system to function effectively?
2. Are communication processes (written, meetings, electronic, etc.) commensurate with the size and scope of the organization?
3. Is information established and maintained in a suitable medium that provides direction in related documents?

4. Is there a process for the dissemination of safety information throughout the organization and a means of monitoring the effectiveness of this process?

E. SAFETY PLANNING, OBJECTIVES & GOALS

1. Have safety objectives been established?
2. Is there a formal process to develop a coherent set of safety goals necessary to achieve overall safety objectives?
3. Are safety objectives and goals publicized and distributed?

F. PERFORMANCE MEASUREMENT

1. Is there a formal process to develop and maintain a set of performance parameters to be measured?

G. MANAGEMENT REVIEW

1. Are regular and periodic, planned reviews of company safety performance and achievement including an examination of the company's Safety Management System conducted to ensure its continuing suitability, adequacy and effectiveness?
2. Is there a process to evaluate the effectiveness of corrective actions?

H. APPLICABLE REGULATIONS

1. Has a documented procedure been established and maintained for identifying applicable regulatory requirements?
2. Are Regulations, Standards and Exemptions periodically reviewed to ensure that the most current information is available?

I. DOCUMENTATION - SMS DOCUMENTATIONS

1. Is there consolidated documentation that describes the safety management system and the interrelationship between all of its elements?
2. Does this information reside or is it incorporated by reference into approved documentation, such as Company Operations Manual, Maintenance Control/Policy Manual, Airport Operations Manual, as applicable, and where these approved documents are not required by regulation, the organization includes the information in a separate, controlled document?

J. DOCUMENTATION - RECORDS MANAGEMENT

1. Does the organization have a records system that ensures the generation and retention of all records necessary to document and support operational requirements, and is in accordance with applicable regulatory requirements?
2. Does the system provide the control processes necessary to ensure appropriate identification, legibility, storage, protection, archiving, retrieval, retention time, and disposition of records?

K. REACTIVE PROCESSES

1. Does the organization have a reactive process or system that provides for the capture of internal information including incidents, accidents and other data relevant to SMS?
2. Is the reactive reporting process simple, accessible and commensurate with the size of the organization?
3. Are reactive reports reviewed at the appropriate level of management?
4. Is there a feedback process to notify contributors that their reports have been received and to share the results of the analysis?
5. Is there a process in place to monitor and analyze trends?
6. Are corrective and preventive actions generated in response to event analysis?

L. PROACTIVE PROCESSES

1. Does the organization have a process or system that provides for the capture of internal information including hazard identification, occurrences and other data relevant to SMS?
2. Is the proactive reporting process simple, accessible and commensurate with the size of the organization?
3. Are proactive reports reviewed at the appropriate level of management?
4. Is there a feedback process to notify contributors that their reports have been received and to share the results of the analysis?
5. Is there a process in place to monitor and analyze trends?
6. Has the organization planned self-evaluation processes, such as regularly scheduled reviews, evaluations, surveys, operational audits,
7. assessments, etc.?
8. Are corrective and preventive actions generated in response to hazard analysis?
9. Is a process in place for analyzing changes to operations or key personnel for hazards?

M. INVESTIGATION & ANALYSIS

1. Are there procedures in place for the conduct of investigations?
2. Do measures exist that ensure all reported occurrences and deficiencies are investigated?
3. Is there a process to ensure that occurrences and deficiencies reported are analyzed to identify contributing and root causes?
4. Are corrective and preventative actions generated in response to event investigation and analysis?

N. RISK MANAGEMENT

1. Is there a structured process for the assessment of risk associated with identified hazards, expressed in terms of severity, level of exposure and probability of occurrence?

2. Are there criteria for evaluating risk and the tolerable level of risk the organization is willing to accept?
3. Does the organization have risk control strategies that include corrective/preventive action plans to prevent recurrence of reported occurrences and deficiencies?
4. Does the organization have risk control strategies that include corrective/preventive action plans to prevent recurrence of reported occurrences and deficiencies?
5. Does the organization have a process for evaluating the effectiveness of the corrective/ preventive measures that have been developed?
6. Are corrective/ preventive actions, including time lines, documented?

O. TRAINING, AWARENESS & COMPETENCE

1. Is there a documented process to identify training requirements so that personnel are competent to perform their duties?
2. Is there a validation process that measures the effectiveness of training?
3. Does the training include initial, recurrent and update training, as applicable?
4. Is the organization's safety management training incorporated into indoctrination training upon employment?
5. Does the training include human and organizational factors?
6. Is there emergency preparedness and response training for affected personnel?

P. OPERATIONAL QUALITY ASSURANCE

1. Is a quality assurance system established and maintained and is under the management of an appropriate person?
2. Does the organization conduct reviews and audits of its processes, its procedures, analyses, inspections and training?
3. Does the organization have a system to monitor for completeness, the internal reporting process and the corrective action completion?
4. Does the quality assurance system cover all functions defined within the certificate(s)?
5. Are there defined audit scope, criteria, frequency and methods?
6. Are there selection/training process to ensure the objectivity and competence of auditors as well as the impartiality of the audit process?
7. Is there a procedure for reporting audit results and maintaining records?
8. Is there a procedure outlining requirements for timely corrective and preventive action in response to audit results?
9. Is there a procedure to record verification of action(s) taken and the reporting of verification results?
10. Does the organization perform periodic Management reviews of safety critical functions and relevant safety or quality issues that arise from the internal evaluation programme?

Q. EMERGENCY PREPAREDNESS & RESPONSE

1. Does the organization have an emergency preparedness procedure, appropriate to the size, nature and complexity of the organization?

2. Have the Emergency preparedness procedures been documented, implemented and assigned to a responsible manager?
3. Have the emergency preparedness procedures been periodically reviewed as a part of the management review and after key personnel or organizational change?
4. Does the organization have a process to distribute the ERP procedures and to communicate the content to all personnel?
5. Has the organization conducted drills and exercises with all key personnel at intervals defined in the approved control manual?

CHAPTER-68/APPENDIX-39
ACCIDENT PREVENTION PROGRAMME GUIDE

CAAB Inspectors shall take the assistance of the following guidelines for the evaluation of Accident Prevention Programme of an operator:

1. Does the company have a formal written statement of corporate safety policies and objectives?
2. Are these adequately disseminated throughout the organization? Is there visible senior management support for these safety policies?
3. Does the organization have a safety department or a designated Accident Prevention Adviser (APA)?
4. Is this department or APA effective?
5. Does the department/ APA report directly to senior corporate management?
6. Does the organization support the periodic publication of a safety report or newsletter?
7. Does the organization distribute safety reports or newsletters from other sources?
8. Is there a formal system for regular communication of safety information between management and employees?
9. Are there periodic safety meetings?
10. Does the company participate in industry safety activities, such as those sponsored by the Flight Safety Foundation (FSF), the International Air Transport Association (IATA) and others?
11. Does the organization formally investigate incidents and accidents?
12. Are the results of these investigations disseminated to managers and operational personnel?
13. Does the organization have a confidential, non-punitive hazard and incident-reporting programme?
14. Does the organization maintain an incident database?
15. Is the incident database routinely analyzed to determine trends?
16. Does the company operate a Flight Data Analysis (FDA) programme?
17. Does the company operate a Line Operational Safety Audit (LOSA) programme?
18. Does the company conduct safety studies as a means of pro-actively identifying safety deficiencies?
19. Does the organization use outside sources to conduct safety reviews or audits?
20. Does the organization solicit input from aircraft manufacturers' product support groups?

CHAPTER-68/APPENDIX-40
LOSA PROGRAMME EVALUATION GUIDE

CAAB Inspectors shall take the assistance of the following guidelines for the Losa Programme Evaluation of an operator:

A. GENERAL

1. There is a signed agreement between pilots and management for the application of LOSA audits?
2. Does the LOSA guidance provide for collection of only de-identified, confidential safety data?
3. Is the atmosphere of non-punitive use of the observations applied without exception?
4. The observer obtains the flight crew's permission before conducting LOSA observations?
5. Are LOSA observations are limited to routine flights (as opposed to line checks, or other training flights)
6. Is the there a neutral party arrangement for objective analysis of results?

B. LOSA OBSERVER TRAINING

1. Are the observers trained in concepts of threat and error management and in the use of the LOSA rating forms?
2. Does the company maintain records of the training and standardization of the LOSA observers?
3. Does the airlines have a trusted data collection site that maintains the confidentiality of the observations?

C. FLIGHT CREW PARTICIPATION & INTERACTION

1. Do the line pilots exhibit respect and trust necessary to ensure acceptance of LOSA programme?
2. Do the flight crews allow the conduct of a LOSA without refusals?
3. Flight crews are given feedback of results and management's plan for improvement?

D. DATA COLLECTION

1. Is all data is collected on a specifically designed LOSA Observation Form?
2. Are flight and crew demographics provided, such as city pairs, aircraft type, flight time, years of experience in that position and with that airline, and crew familiarity?
3. Are written narratives provided, describing what the crew did well and what they did poorly and how they managed threats or errors for each phase of the flight?
4. Are CRM performance ratings using made by the observers using validated behavioural markers?
5. Is a technical worksheet used by the observers for the descent/approach/landing phases that highlight the type of approach flown,

6. the landing runway and whether the crew met the parameters of a stabilized approach?
7. Do the observers use a threat management worksheet to detail each threat and how it was handled?
8. Do the observers use a error management worksheet that lists each error observed, how each error was handled and the final outcome?

E. DATA ANALYSIS

1. Before using the data derived, data quality management procedures and consistency checks are employed, including round table discussions with representatives of management and the pilots association to scan raw data for inconsistencies?
2. Identified problematic patterns are identified as targets for enhancement?
3. Action plans are developed and change strategies are implemented to make the necessary enhancements?

F. EFFECTIVENESS OF CHANGE STRATEGIES

1. Redefining operational philosophies and guidelines?
2. Modifying existing procedures or implementing new ones?
3. Arranging specific training in error management and crew countermeasures?
4. Reviewing checklists to ensure relevance of the content and then issuing clear guidance for their initiation and execution?
5. Defining tolerances for stabilized approaches, as opposed to the “perfect approach” parameters promoted by existing SOPs?

CHAPTER-68/APPENDIX-41
FDA PROGRAMME EVALUATION GUIDE

CAAB Inspectors shall take the assistance of the following guidelines for the FDA Programme Evaluation of an operator:

A. GENERAL

1. A non-punitive company policy for the use of the FDA programme is in place. The main objective of the programme must be to identify hazards,
2. There are NO indications that the company management has deviated from this policy?
3. There is a formal agreement between management and the pilots, identifying the procedures for the use and protection of data?
4. There are NO indications that the company management has deviated from this agreement?
5. The FDA programme is managed by a dedicated staff within the safety or operations departments, with a high degree of specialization and logistical support?
6. There are indications that this programme is viewed in positive manner by both management and the flight crews?

B. PROTECTION OF DATA

1. Data has protection from use for disciplinary purposes?
2. Data has protection from use in enforcement actions against individuals or against the company, except in cases of criminal intent or intentional disregard of safety?
3. Data has protection from disclosure to the media and the general public under the provisions of State laws for access to information?
4. Data has protection from disclosure during civil litigation

C. DATA SECURITY

1. There is a well-structured, de-identification system in place to protect the confidentiality of the data?
2. Data security policies strictly limit data access to selected individuals within the company?
3. Data security requires the maintenance of tight control to ensure that identifying data are removed from the flight data records as soon as possible?
4. Access to crew identification information during follow-up is available only to specifically authorized persons and used only for the purpose of an investigation?
5. The data enabling the crew identification is be destroyed immediately after initial analysis for exceedences?

D. FDA PROGRAMME IMPLEMENTATION

1. Has the operator established a baseline of operational parameters against which changes can be detected and measured?

2. Are non-standard, unusual or basically unsafe circumstances compared to the baseline margins of safety and the observed changes quantified?
3. Are unsafe trends identified and the inherent risks assessed to determine the need for mitigation actions?
4. When unacceptable risk are identified, appropriate risk mitigation actions are decided and implemented?
5. Once a remedial action has been put in place, its effectiveness is monitored, confirming that it has reduced the identified risk and that the risk has not been transferred elsewhere?

E. REGULAR ANALYSIS & FOLLOWUP

1. FDA data are compiled on a regular basis (at least monthly)?
2. Data is then reviewed by a working group to identify specific exceedences and emerging undesirable trends?
3. The initial analysis for operational exceedences are conducted promptly after extracting the data from the aircraft?
4. Data information and trends are then disseminated to the flight crews in a de-identified form?
5. The information on specific exceedences is passed to an agreed aircrew representative for confidential discussion with the pilot?
6. The aircrew representative provides the necessary contact with the pilot in order to clarify the circumstances, obtain feedback, and give advice and recommendations for appropriate action,

F. DATABASE ARCHIVE & ANALYSIS

1. All events are archived in a compatible database?
2. Database is used to sort, validate and display the data in easy-tounderstand management reports?
3. Database is used to identify patterns and trends across the fleets?
4. Is a specific organization and manager responsible for the monitoring and identification of the pattern and trends on an on-going basis?
5. Where the development of an undesirable trend becomes evident (within a fleet, or at a particular phase of flight, or airport location), does the operator implement measures to reverse the trend?
6. Are the implemented measures monitored for successful impact and unintended consequences?

CHAPTER-68/APPENDIX-42
OPERATIONS MANUAL INITIAL EVALUATION GUIDE

CAAB Inspectors shall take the assistance of the following guidelines for the Operations Manual Initial Evaluation of an operator:

A. OVERALL MANUAL PRESENTATION

1. Bound in a secure form (not loose)?
2. Binder is 3 or 4 ring?
3. Exterior of binder clearly indicates manual content?
4. Prepared in language of the country?
5. Prepared in English language?

B. MANUAL CONTROL PROCESS

1. Copies numbered for controlled issuance?
2. Amendment issuance tracking process?
3. DCA issued numbered volume?

C. MANUAL REVISION PROCESS

1. Revision Instructions adequate?
2. Revision page for proper revision entry?
3. List of effective pages provided and correct?
4. Last revision to individual pages identified?

D. MANUAL REFERENCING SYSTEMS

1. Table of contents easy to find and use?
2. Index, if included, easy to find and use?
3. Tabbed as necessary for usability without difficulty?

E. INDIVIDUAL PAGE PRESENTATION

1. Page numbered in chronological sequence (by chapter or single
2. document?
3. Last revision number/date appears on each page?
4. Company name (and logo) appears on each page (exception –
5. 18)?
6. If manufacturer's document is submitted in lieu of a company manual,
7. does the manufacturer's name appears on each page?
8. 5.5
9. For all manufacturers' documents submitted, a manufacturer's letter
10. or reference document is provided to substantiate current revision
11. number/date.?

F. PARAGRAPH NUMBERING

1. Paragraphs and sub-paragraphs numbered or alphabetized for ease of reference?

G. SUPPLEMENTARY CONTENT REFERENCING

1. Tables referenced for ease of use?
2. Figures referenced for ease of use?
3. Appendices referenced for ease of use?

H. MANUAL EXCERPTS PROPERLY REFERENCED

1. Condensed Checklists compared and current?
2. Passenger Briefing Cards compared and current.?
3. Training materials?

CHAPTER-68/APPENDIX-43
FLIGHT DECK EN-ROUTE INSPECTION GUIDE

CAAB Inspectors shall take the assistance of the following guidelines for the Flight Deck En-Route Inspection of an operator:

A. OVERALL OBSERVATION

1. Competence and proficiency?
2. Standardization with company procedures?
3. Good crew resource management?
4. Flight Deck and Cabin Crew Coordination

B. COMPLIANCE

1. Compliance with regulations?
2. Compliance with aircraft limitations?
3. Compliance with ATC clearances?
4. Compliance with the checklist philosophy?
5. Compliance with fuel carriage philosophy?
6. Compliance with sterile flight deck philosophy?

C. AWARENESS

1. Proper altitude awareness?
2. Proper airspeed control?
3. Proper visual vigilance and awareness?

D. AIRCRAFT PREPARATION

1. Aircraft loading satisfactory?
2. Aircraft servicing satisfactory?
3. Aircraft maintenance satisfactory?
4. Aircraft ground deicing satisfactory?

E. DOCUMENTS AND RECORDS

1. Crew certificates satisfactory?
2. Crew manuals satisfactory
3. Aircraft certificates satisfactory?
4. Aircraft manuals satisfactory?
5. Maintenance records satisfactory?
6. Route guide and charts satisfactory?
7. Operational flight planning satisfactory?

F. CALCULATIONS AND SETTINGS

1. Performance calculations satisfactory?
2. Mass and balance computations satisfactory?
3. Operational flight plan or nav log calculations satisfactory?
4. Proper instrument settings?
5. Proper navigational settings?
6. Proper use of the navigation charts?
7. Proper equipment use and settings?
8. Proper use of FMS?

G. PROCEDURE AND CHECKLISTS

1. MEL dispatch procedures accomplished properly
2. Preflight inspection accomplished properly?
3. Flight deck setup procedures accomplished properly?
4. “Before-Start” procedures accomplished properly?
5. “Engine Start” procedures accomplished properly?
6. “After Start” procedures accomplished properly?
7. “Before Takeoff” procedures accomplished properly?
8. Appropriate takeoff briefing?
9. “After Takeoff” procedures accomplished properly?
10. Fuel control procedures accomplished properly?
11. Navigation procedures accomplished properly?
12. ETOPS procedures accomplished properly?
13. Communications procedures accomplished properly?
14. “Descent” procedures accomplished properly?
15. Appropriate approach briefing?
16. “Before Landing” procedures accomplished properly?
17. “Missed Approach or Balked Landing accomplished properly?
18. “After Landing” procedures accomplished properly?
19. Were parking procedures accomplished properly?
20. Were the abnormal procedures accomplished properly?
21. Were the emergency procedures accomplished properly?
22. Aircraft inflight anti- and de -icing satisfactory?
23. Severe weather avoidance & turbulence penetration procedures satisfactory?

H. MANEOUVER PROFILES AND CALLOUTS

1. Proper taxi procedures?
2. Proper takeoff profile, procedures and callouts?
3. Proper departure profile, procedures and callouts?
4. Proper climb profile, procedures and callouts
5. Proper cruise profile and procedures?
6. Proper descent profile and procedures
7. Proper arrival profile, procedures and callouts?
8. Proper approach profile, procedures and callouts?
9. Visual or electronic glideslope used?

10. Proper landing profile, procedures and callouts
11. Proper missed approach profile, procedures and callouts

I. MISCELLANEOUS ISSUES

1. Proper security procedures followed?
2. Proper dangerous good procedures followed?
3. Flight deck door kept locked?

J. MAINTENANCE ISSUES

1. The aircraft and aircraft systems were free of defects or irregularities?
2. PIC determined status of all maintenance defects previously logged in tech log?
3. PIC entered all indications of aircraft irregularities or defects in tech log?

CHAPTER-68/APPENDIX-44
CABIN EN-ROUTE INSPECTION GUIDE

CAAB Inspectors shall take the assistance of the following guidelines for the Cabin En-Route Inspection of an operator:

A. CABIN CREW MEMBERS

1. Number of required cabin crew members?
2. Cabin crew members certificates?
3. Cabin crew member assigned duty-flight-rest times?
4. Cabin crew member manuals?
5. Cabin crew member personal torch?
6. Cabin crew member seats and safety harness?
7. Cabin crew members properly secured at duty stations during periods when emergency evacuation may be anticipated?

B. CABIN CREW MEMBER MANUAL AND EQUIPMENT

1. Cabin crew member manual – general procedures?
2. Cabin crew member manual – aircraft-specific details and procedures?
3. Cabin crew member manual – location of emergency equipment?
4. Cabin crew member manual – specific wording of emergency briefings?
5. Bomb search checklist?
6. Recommended contingency location for an explosive device?
7. Cabin crew member personal torch?

C. FLIGHT DECK AND CABIN COMMUNICATIONS

1. Use of crew resource management techniques?
2. Response to flight deck signals?
3. Knowledge of interphone signals?
4. Knowledge of coded communication?
5. Response to turbulence warnings?
6. Use of proper identification signals for flight deck door opening?

D. PASSENGER CONTROL

1. Normal boarding duties?
2. Briefing of handicapped passengers?
3. Use of child restraint devices?
4. Handling of disorderly passengers?
5. Handling of incapacitated passengers?
6. Refueling with passengers procedures?

E. SEATING AND BAGGAGE CONSIDERATIONS

1. Head count taken and communicated to pilot?
2. Verification of seat assignment?
3. Passenger seating vs. center-of-gravity considerations?
4. Closet and overhead bin loading within limits and volume?
5. Carry-on baggage properly stowed during taxi, takeoff and landing?
6. Proper securing of cargo in the passenger compartment?

F. ROUTINE PASSENGER BRIEFING CONTENT

1. Routine no-smoking briefing?
2. Routine seat belt briefing?
3. Routine emergency exits briefing?
4. Routine use of oxygen briefing?
5. Routine use of flotation devices briefing?
6. Routine carry on baggage stowage briefing?
7. Routine survival equipment briefing?
8. Routine landing preparation briefing?
9. Routine after landing briefing?
10. Instructions for transiting ramp to terminal?
11. Routine turbulence briefing?

G. EMERGENCY BRIEFING CONTENT

1. Planned emergency evacuation preparation?
2. Immediate bracing position instructions?
3. Planned ditching preparation?

H. BRIEFING METHODOLOGY

1. Acceptable pacing and communication of information?
2. Audio adequate for all passengers?
3. Content and use of video briefing?

I. SECURING CABIN INSPECTION

1. First flight emergency equipment checks?
2. Pre-flight cabin preparation (pax cards/belts/package search)?
3. Pre-taxi cabin secure inspection?
4. Pre-takeoff cabin secure inspection?
5. Turbulence cabin secure inspection?
6. Pre-landing cabin secure inspection?
7. After landing cabin secure inspection?
8. Securing of serving carts?

J. DOORS/EMERGENCY EXITS

1. Manual door closing procedures?
2. Assisted door closing procedures?
3. Slide arming procedures?
4. Normal assisted door opening procedures?
5. Slide disarming procedures?
6. Normal manual door opening procedures?
7. Emergency door opening procedures?
8. Other emergency exit opening procedures?

K. EMERGENCY EQUIPMENT

1. Fire extinguisher(s) location, use and limitations?
2. Oxygen location, use and limitations?
3. Protective breathing equipment location, use and limitations?
4. First aid kit(s) location and contents?
5. Medical kit location and contents?
6. Megaphone(s) location and use?
7. Life raft location, movement, deployment and contents?

L. EMERGENCY PROCEDURES

1. Cabin fire procedures?
2. Galley fire procedures?
3. Toilet fire procedures?
4. Immediate ditching procedures?
5. Emergency evacuation tasks and procedures?
6. Planned ditching procedures?
7. Aircraft hijacking procedures?
8. Assisting with an incapacitated pilot?

M. MISCELLANEOUS

1. Dangerous goods recognition?
2. Security procedures?

CHAPTER-68/APPENDIX-45
FLIGHT DECK RAMP INSPECTION GUIDE

CAAB Inspectors shall take the assistance of the following guidelines for the Flight Deck Ramp Inspection of an operator:

A. FLIGHT CREW CERTIFICATES & EQUIPMENT

1. Pilot or flight engineer certificate appropriate for assigned duties?
2. Medical certificate appropriate for assigned duties?
3. Torch for each crewmember.
4. Individual aeronautical computing device?
5. Proper glasses for vision (including a spare set)?

B. COMPANY PEROCEDURES MANUALS

1. Current Flight Operations Manuals
2. Current manual operational procedures for area navigation?

C. AIRCRAFT SPECIFIC CHECKLISTS & MANUALS AVAILABLE

1. Condensed normal operations checklists for all crewmembers?
2. Condensed emergency and abnormal checklist readily available?
3. Details of the aircraft systems and limitations?
4. Manufacturers Pilot Operating Handbook?
5. Manufacturers Flight Crew Operating Manual?
6. Company Aircraft Operating Manual?
7. Approved Flight Manual (for specific aircraft serial number)?
8. Runway analysis manual (or AFM charts and obstacle survey
9. data?
10. Performance and planning manual (or AFM section)?
11. MEL/CDL?
12. Loading manual (or ops manual section)?
13. Refueling manual (or ops manual section)?

D. FLIGHT PLANNING

1. Operational Flight Plan (manual or computer) correctly calculated using appropriate routing, weather, fuel burn and contingency information?
2. Re-dispatch planned or executed properly?
3. “Master” flight plan designated and used?
4. ATS Flight Plan filed?
5. Navigation Log completed in accordance with specifications
6. “Standard” flight plan (supported by operational conditions)?
7. Weather reports, forecasts, charts appropriate and valid for flight?
8. Alternate airports identified in flight planning?

E. CURRENT NAVIGATION INFORMATION & EQUIPMENT

1. Fuel burn performance tables or graphs available?
2. Current route guide readily available?
3. Aeronautical information publication readily available?
4. IFR departure navigation charts for each required pilot?
5. IFR approach navigation charts for each required pilot?
6. IFR enroute navigation charts for each required pilot
7. VFR enroute navigation charts for each required pilot

F. LOADING & SERVICING FORMS AVAILABLE

1. Passenger manifest (and compared)?
2. Cargo waybills (and compared)?
3. Load Manifest appropriate to aircraft and signed by proper persons?
4. CG takeoff (with stabilizer) and landing calculated?
5. Takeoff limitations calculated?
6. Dangerous goods notification?
7. Fuel and oil servicing?

G. MAINTENANCE LOG

1. Appropriate maintenance release?
2. Maintenance discrepancies properly corrected?
3. Maintenance discrepancies properly deferred?
4. Appropriate DMI stickers in place?
5. Conformance with MEL dispatch procedures?
6. Fuel uplift entered?
7. Block-out and block-in times entered?
8. Takeoff and landing times entered?

H. FLIGHT DECK INSTRUMENTS & EQUIPMENT

1. Headsets available for all required crewmembers?
2. Boom microphones for all required crewmembers?
3. Microphones available for all required crewmembers?
4. Required VHF communications radios operational?
5. Required HF radios operational?
6. Required navigational radios for routing available?
7. All required flight instruments for daylight and meteorological
8. conditions and required crew positions operational.
9. Instrumentation properly marked?
10. Altitude alerting system operational?
11. Transponder and altitude reporting capability operational?
12. Weather radar operational?
13. GPWS operational?

14. Cockpit voice recorder operational?
15. Flight recorder operational?
16. No circuit breakers popped?

I. FLIGHT DECK EMERGENCY EQUIPMENT

1. Operational safety harness for each required crewmember?
2. Seatbelts and harness for all other occupants?
3. Quick-donning oxygen mask for each required crewmember?
4. Regular oxygen mask for all occupants?
5. Adequate oxygen for the flight (altitude and time)
6. Smoke goggles for each required crewmember?
7. PBEs for each required crewmember?
8. First aid kit (with appropriate contents)?
9. Medical kit (with appropriate contents)?
10. Emergency evacuation means?
11. Emergency locating beacon?
12. Life vests for all occupants?
13. Ditching raft?
14. Crash axe?

J. SECURITY

1. Locking flight deck door?
2. Bomb search checklist?
3. Recommended bomb contingency location guidance?
4. Firearms in the cabin notification?

K. COMPANY MAINTENANCE MANUALS

1. Maintenance Control Manual?
2. Aircraft-specific Manufacturers Maintenance Manuals
3. Aircraft flight-away kit included?

CHAPTER-68/APPENDIX-46
CABIN RAMP INSPECTION GUIDE

CAAB Inspectors shall take the assistance of the following guidelines for the Cabin Ramp Inspection of an operator:

A. AIRCRAFT CERTIFICATES & LOGBOOKS

1. Aircraft registration certificate?
2. Airworthiness certificate?
3. Radio station licence?
4. Aircraft and cabin logbook?
5. Maintenance discrepancies properly repaired or deferred?

B. PERSONNEL

1. Proper crewmember or maintenance certificate(s)?
2. Current manuals used by crewmember and maintenance personnel?

C. GENERAL EMERGENCY EQUIPMENT

1. Emergency equipment location standardized by aircraft type
2. Proper placarding of all emergency equipment locations?
3. Proper installation of emergency equipment?
4. Access to emergency equipment not obstructed?
5. Fire extinguishers – required number, approved type, location suitable, serviced and certificated OK?
6. First aid kit(s) - correct types, numbers and locations, properly serviced, safe-tied, tagged and installed?
7. Medical kit(s) - correct types, numbers and locations, properly serviced, safe-tied, tagged and installed?
8. Crash ax - properly located and installed?
9. Life rafts – proper number, capacity and stowed as indicated on briefing card?
10. Signaling devices (with raft)?
11. Survival equipment (if required)?
12. Portable ELT located in a logical place?

D. COMMUNICATIONS SIGNS & SYSTESMS

1. Operational “Fasten Seatbelt” lights observable from all passenger seats?
2. Operational “No Smoking” lights observable from all passenger seats?
3. Public address system audible throughout cabin?
4. Interphone system operates from all locations?
5. Chime system operates from all locations?
6. Megaphone(s) -correct numbers and locations, in operable conditions
7. and properly installed?

E. PASSENGER SEATS

1. Passenger briefing cards (one at each seat position, appropriate to aircraft, required info depicted?
2. Seat belts properly installed, operator and not frayed or twisted?
3. Self-contained and removable ashtrays?
4. Latching mechanism on tray tables?
5. Passenger seats do not obstruct ready opening of emergency exits?
6. Passenger seats do not recline into emergency exit aisles and access?
7. Emergency exit access and aisles meet the minimum width requirements?
8. Seat backs do not "break over" easily?
9. Flotation devices – proper number, readily accessible to crew and passengers, located and donned as shown on briefing card?
10. Life vests CO2 cartridge tagged and current?

F. CABIN CREW MEMBER SEATING

1. Distributed uniformly throughout cabin?
2. As near as practicable to emergency exits?
3. Each section of cabin under surveillance?
4. Seats equipped with harness – not frayed or twisted?
5. Retractable mechanism works rapidly?
6. Access to intercom when seated?
7. Access to passenger address system?
8. Torches at each crew station?
9. PBEs for cabin crew appropriately located, stowed and sealed?

G. OXYGEN SUPPLY

1. Non-pressurized aircraft oxygen supplies adequate for planned flight?
2. Pressurized aircraft emergency oxygen supply adequate for planned flight and configuration?
3. Emergency oxygen mask conforms to passenger briefing card for donning and use?
4. Passenger oxygen service units – closed and latched with no extended read service indicators or pins?
5. Portable oxygen bottles (correct numbers and locations, properly serviced, tagged and installed, condition of mask, tubing and connectors?

H. EMERGENCY LIGHTING SYSTEMS

1. Emergency light system actuated from the flight deck switch?
2. Emergency lighting system operation independent of main system?
3. Floor patch light system – independent with proper lighting, bulb color?

I. NORMAL & EMERGENCY EXITS

1. Open normally without sticking?
2. Exit signs visible and operative?
3. General condition of exits and seals?
4. Handle mechanisms operative with opening placards and instructions?
5. Lights and switches operative – with guarding covers where required?
6. Slide girt bars and brackets – clean and not worn?
7. Slide or slide raft connections, visible lanyard and pressure indications?
8. Curtain tie-backs capable of securing curtain for takeoff and landing?

J. GALLEY(S)

1. Circuit breakers accessible and clearly identified?
2. Water shutoff valves accessible and clearly identified?
3. Hot liquid restraints provide secure restraint?
4. Primary and secondary latching mechanisms in good working order?
5. Stationary cart tiedowns clean and secure?
6. Galley carts in good conditions and securely stowed?
7. Trash receptacles are properly lined with secure fit of covers?
8. Floor is non-skid, without carpet?
9. Proper operation of galley personnel lift safety interlock system system?
10. Lower lobe galley emergency exits clear and passable?

K. STOWAGE ACCOMODATIONS

1. Under-seat restraint bars – including aisle curve?
2. Overhead compartments with operative latching mechanisms?
3. Hanging bags closets with operative latching mechanisms?
4. All compartments placarded for weight limitations and floor loading?

L. TOILETS

1. Operable smoke alarm (TSO)?
2. No Smoking placards and ashtray
3. Automatic fire extinguishing system?
4. Proper fit and lining of trash receptacles?

M. CABIN LAYOUT

1. Passenger number not more than 5% above that for initial emergency evacuation demonstration?
2. No major configuration change to that in place for initial emergency demonstration?
3. Passenger seating does not exceed maximum number approved in type certificate?

N. CREW REST QUARTERS

1. Crew seating rest area adequate (comfortable, quiet, private)
2. Crew berth rest quarters CAAB approved (comfortable, quiet, private)

O. MISCELLANEOUS

1. Main leading gear viewing ports – clean and usable?

CHAPTER-68/APPENDIX-47
PASSENGER HANDLING INSPECTION GUIDE

Appended below is the passenger handling inspections guide that an Inspector should review and follow to make the relevant inspection report:

A. PASSENGER HANDLING IN TERMINAL

1. Acceptable procedures for identification and seat allocation for handicapped persons?
2. Seat allocation for infants and children?
3. Scales for weighing baggage and cargo?
4. Appropriate system for control of loose articles in the cabin (carry-on baggage?

B. PASSENGER RAMP SAFETY

1. DAY – Air bridge/directions to board
2. NIGHT – Air bridge/directions to board
3. DAY – Proper positioning of steps?
4. NIGHT – Proper positioning of steps?
5. DAY – Staff in attendance with passengers?
6. NIGHT - Staff in attendance with passengers?
7. DAY – Protection from jet blast?
8. NIGHT – Protection from jet blast?
9. DAY – Clearance from propellers?
10. NIGHT – Clearance from propellers?
11. DAY – Clear of taxiing aircraft?
12. NIGHT – Clear of taxiing aircraft?
13. DAY – Clear of moving vehicles?
14. NIGHT – Clear of moving vehicles
15. DAY – Positioning of service vehicles?
16. NIGHT – Positioning of service vehicles?
17. DAY – Are there safety routes available for emergency evacuation?
18. NIGHT – Are there safety routes available for emergency evacuation?

C. CREW COORDINATION WITH LOAD CONTROL

1. Are passengers occupying their assigned seats?

2. Was a head count compared to load manifest for accuracy?

CHAPTER-68/APPENDIX-48
CABIN CREW MANUAL INSPECTION GUIDE

For Checking and Approving the Cabin Crew Manual, CAAB Inspectors should follow the guidelines below:

A. OPERATIONS MANUAL POLICIES

1. The regulatory term "Crewmember" is defined?
2. General statement of the Cabin Crew duties and responsibilities?
3. Policy requiring CC Manual to be up-to-date and cites regulatory reference?
4. Policy that CC Manual must be readily accessible to CC that is on duty?
5. Policy regarding the authority of the pilot-in-command?
6. Method of designating succession of command?
7. Policy regarding persons that may be admitted to the flight deck?
8. This policy corresponds to the FOM policies regarding admission to flt deck?
9. Procedure for flt crew identification of cabin crew before admission to flt deck?
10. This procedure corresponds to the FOM procedures regarding identification?
11. Procedures regarding locking of flt deck door?
12. Procedures to make cabin crew member aware of sterile flt deck period?
13. This procedure corresponds to the FOM/AOM procedures?
14. Procedures for normal method of communications and coordination between CAs?
15. Procedures for normal method of communications & coordination with flt deck?
16. These procedures correspond to those in the FOM?
17. Procedures for establishing communications before flight begins?
18. These procedures correspond to those in the FOM?
19. General statement regarding the need for crew coordination?
20. Policy regarding preflight crew briefings between flight crew and cabin crew members?
21. Procedures for reporting inflight irregularities or malfunctions to flt crew?
22. Procedures to ensure that carry-on baggage is stowed before door is closed?
23. Procedures to ensure that cabin is ready for movement from gate?
24. Policy that CAs be seated during movement unless performing
25. safety duties?
26. Examples of acceptable "safety duties" provided?
27. Required number of CAs with passengers onboard while at gate?
28. Method to identify "substitutes" to use in lieu of CAs while aircraft parked at gate?
29. Required number of CAs that must be onboard during aircraft operations?
30. Required number of CAs for refueling with passengers onboard?
31. Specific duties of these CAs during the refueling?
32. Polices regarding the use of a CC jumpseat by anyone other than assigned CAs.

B. PASSENGER INFORMATION BRIEFINGS

1. Directions for compliance with lighted signs, posted placards, crew instructions?
2. Method for demonstrating fastening and opening seat belts?
3. Method of advising requirement to comply with lighted pax info signs?

4. Method of advising no smoking policy, including tampering with smoke detectors?
5. Method of briefing of emergency exits?
6. Method for briefing location and use of required flotation equipment?
7. Method of reference to passenger information cards?
8. Specific timing & wording of inflight advisory when "seatbelt" light is off?
9. Specific wording of extended overwater briefing? (adult/child flotation
10. & rafts)
11. Specific wording of need for oxygen, location and use of dispensing equipment?
12. Policy for regular announcements when passenger info signs illuminated for long period?
13. Policy of notification of PIC when pax continues not to obey pax info sign?

C. PROCEDURES FOR HANDLING INFANTS AND CHILDREN

1. Procedures for restraint including location and actions during an emergency?
2. Info about the types of restraint devices that are acceptable for use on aircraft?
3. Info allowing such a devices when a ticket for the seat has been purchased?
4. Requirement that infants should be restrained in device during turbulence?

D. PROCEDURES FOR HANDLING DISABLED PERSONS

1. Standard individual briefings for those who may need assistance to exit?
2. Standard individual briefings for persons attending these individuals?
3. If applicable: location, operation and use of onboard wheelchairs?
4. If applicable: location, operation and use of disabled equipped lavatories?
5. If applicable: location, operation and use of movable armrests?

E. EXIT ROW SEATING PROGRAMME

1. Procedures to ensure that exit seating programme is completed?
2. Specific wording to advise a person not meeting selection criteria?
3. Specific wording requesting whether a person has a non-discernible condition?
4. Specific wording questioning the possibility of bodily harm?
5. Specific wording requesting whether a person is willing to perform the functions?
6. Method for determination of whether persons in exit row speaks English?

F. OTHER PASSENGER ISSUES

1. Policies regarding serving of alcohol?
2. Procedures for reporting persons who cause a disturbance?
3. Policies regarding armed passengers?
4. Policies regarding persons who abuse a crewmember?
5. Policies regarding interference with a crewmember in performance of duties?
6. Policy regarding boarding of persons who are mentally retarded?
7. Policy regarding boarding of persons who are emotionally disturbed?
8. Policies for boarding pregnant passengers?
9. Methods for boarding stretcher patients?
10. Specific method for handling noncompliance with smoking ban?

11. Requirement for restraint of galley equip during certain operations?
12. Requirement for proper braking of galley equip during use?
13. Requirement for stowage of cargo in the cabin?
14. Specifics of the approved carry-on baggage programme?

G. CABIN STORAGE OF CARRY-ON AND CARGO

1. Policies for managing the boarding of carry-on baggage?
2. Proper location for storage of crew baggage?
3. Approved storage areas for carry-on baggage?
4. Storage methods and areas for canes?
5. Prohibition against storage of carry-on in some areas? (flt deck, lavatories, etc.)
6. Requirement for tray table stowage during surface movement, takeoff, landing?
7. Requirement for seat backs to be in upright position for takeoff & landing?
8. Requirement to stow CC seat restraint systems when not in use?
9. Requirement to ready the doors for movement on the surface?
10. Provision for ensuring that one door is ready for passenger egress at the gate?
11. Procedure when occupants are using devices which are not allowed?
12. Prohibition against the carriage of drugs?
13. Prohibition against the use of drugs?
14. Instructions for identification of dangerous goods?
15. Instructions for use of flashlight holders and how used?
16. Requirement for each crewmember to have a workable flashlight?
17. Instructions for cabin light settings for takeoff and landing?
18. Instructions for cabin light settings for forewarned emergency evacuation?

H. ABNORMAL SITUATIONS

1. Procedures for crew coordination in turbulence?
2. These procedures correspond to those listed in FOM?
3. Policy regarding service procedures during turbulence? (hot liquids)
4. Policy for passenger seat belt discipline during turbulence?
5. Information about survival in situations appropriate to operations?
6. Procedures to use in event of hijacking?
7. Methods of communications with other crewmembers during hijacking?
8. Security regulations & procedures for the carriage of weapons?
9. Instructions regarding the contents and use of first aid kit?
10. Instructions regarding the contents and use of the medical kit?
11. Instructions for the recognition of common medical problems?
12. Instructions for first aid, considering limited space in aircraft cabins?
13. Instructions regarding the recognition and effects of hypoxia?
14. Procedures in event of rapid depressurization?
15. Description of use of each type of portable oxygen bottle and mask?
16. Procedures for CC to administer oxygen to self?
17. Procedures for use of medical (passenger-supplied) oxygen?
18. Prohibition against smoking while oxygen administered?

I. FIRE PREVENTION AND CONTROL

1. Requirement to check lavatories before takeoff and periodically?
2. Requirement for periodic cabin checks?
3. Instructions for use of circuit breakers, including no-reset policy?
4. Fire control procedures on the ground?
5. Fire control procedures during flight?
6. Instructions for use of protective breathing equipment?
7. Instructions regarding the type of fire extinguishers for type of fire?
8. Procedures for light ballast fires?
9. Procedures for fire in lavatory or other confined spaces?
10. Procedures for fire in the galley?
11. Procedures for fire control when volatile fuel is involved?

J. EVACUATION PROCEDURES

1. Instructions for crew coordination and signals?
2. Instructions regarding the commands to give to people?
3. Instructions describing the acceptable brace for impact positions?
4. Instructions for ensuring the aircraft has come to a complete stop?
5. Instructions for assessing the conditions in and outside the aircraft
6. prior action?
7. Instructions for redirecting passenger flow?
8. Specific wording of forewarned emergency evacuation?
9. Instructions for stopping an unwarranted evacuation?

K. AIRCRAFT DESCRIPTION

1. Diagram of each different aircraft configurations?
2. Designation of takeoff and landing location for each required cabin crew?
3. Duties and duty station of each crewmember during an evacuation or ditching?
4. Cabin preflight check of specific safety equipment?
5. CC locations for performing safety demonstrations?

L. AIRCRAFT EMERGENCY EQUIPMENT LOCATION & USE

1. Each first aid kit?
2. Each medical kit?

CHAPTER-69 [RESERVED FOR THE TIME BEING]

CHAPTER-70

STRUCTURED REGULATORY REQUIREMENTS FOR COMPLIANCE BY AN OPERATOR

Note:

1. Appended below are the 'Structured Regulatory Requirements for Compliance by an Operator'.

2. In addition to the diversified regulatory requirements to be complied by an operator, the contents outlined in this Chapter shall be used by the CAAB Operations Inspectors during Air Operator System and Manual Inspection for issue of AOC as well as for continued compliance by the Air Operator.

3. Operations Inspectors of CAAB are hereby advised to ensure that all prospective applicants of AOC and holders of AOC are familiar with the contents of AOG 6-1, publicly displayed in the official website of CAAB www.caab.gov.bd wherein lays the 'Structured Regulatory Requirements for Compliance by an Operator'. Applicants and holders of AOC have been advised through the publication of the AOG 6-1 issued by CAAB to comply with the CAAB Regulatory requirements at all times.

70.1 The Operations Inspectors of CAAB will ensure that an Operator shall establish requirements regarding documents to be carried on board an aircraft in compliance with CAAB requirements and implement the same. In compliance with this requirement the operator shall ensure the following:

(a) Operator's list of the required documents to be carried on board as per CAAB requirements;
(b) Operator's evidence on the aircraft library documents to be up to date and current.

70.2 The Operations Inspectors of CAAB will ensure that an Operator shall establish and implement requirements that every aircraft engaged in air navigation shall maintain a journey log book. In compliance with this requirement the operator shall ensure the following:
(a) Operator's list of the required documents to include carriage and maintenance of journey log book;
(b) Operator's evidence of maintenance of journey log book up to date.

70.3 The Operations Inspectors of CAAB will ensure that an Operator shall establish and implement requirements for competency of the designated examiners for flight and cabin crew checks, as required by CAAB and implement the same. In compliance with this requirement the operator shall ensure the following:
(a) Operator's documentary evidence of competency requirements for each delegated entity as required by CAAB;
(b) Operator's documentary evidence on the establishment of competency by each delegated entity;
(c) Operator's documentary evidence on the establishment of minimum qualifications and experience requirements for each delegated entity as required by CAAB.

70.4 The Operations Inspectors of CAAB will ensure that an Operator shall establish and implement requirements that it clearly defines the delegated tasks by CAAB for the designated examiners for flight and cabin crew checks and implement the same. In compliance with this requirement the operator shall ensure the following:
(a) Establishment of Operator's documentation that clearly defines delegated tasks by CAAB (e.g. letter of agreement, letter of designation of examiners, etc.).

70.5 The Operations Inspectors of CAAB will ensure that if CAAB delegates any of its inspection or supervision responsibilities (such as competency checks, route checks, instrument ratings checks, conversion checks or upgrading checks) to designated inspectors and/or examiners of the Operator, the Operator shall develop and implement a delegation procedure. In compliance with this requirement the operator shall ensure the following:
(a) Establishment of Operator's delegation procedure as required by CAAB which complies with:
    1. Selection criteria;
    2. Examinations or tests; and
    3. Application process.
(a) Operator's evidence to confirm effective implementation.

70.6 The Operations Inspectors of CAAB will ensure that if CAAB delegates any of its inspection or supervision responsibilities (such as competency checks, route checks, instrument ratings checks, conversion checks or upgrading checks) to designated inspectors and/or examiners of the Operator, the Operator shall develop and implement procedures for renewal of approval for designated examiners. In compliance with this requirement the operator shall ensure the following:

(a) Establishment of Operator's delegation procedure as required by CAAB which complies with:
    1. Selection criteria;
    2. Examinations or tests; and
    3. Application process.
(b) Establishment of Operator's specific conditions for renewal (e.g. minimum activity, training, etc.);
(c) Operator's evidence to confirm effective implementation.

70.7 The Operations Inspectors of CAAB will ensure that an Operator shall develop the contents of its operations manual in compliance with the requirements of the relevant CAAB CAR, ANO and Appendix 2 of Annex 6 of ICAO and implement the same. In compliance with this requirement the operator shall ensure the following:
(a) Operator's procedures developed for the approval or acceptance of an air operator's Operations Manual.
(b) Operator's guidance material produced to cover the following, as applicable:
    1. A statement that the operations manual complies with applicable laws, the air operator certification conditions and corresponding operations specifications;
    2. A list and a summarized description of the different parts of the manual, their contents, applicability and utilization;
    3. A statement that the operations manual contains operating instructions which must be followed by all personnel;
    4. A registration sheet for amendments and revisions, including dates of registration and validity;
    5. A list of effective pages; and,
    6. Amendment and revision changes indicated by marks or signs in text, graphics and diagrams.

70.8 The Operations Inspectors of CAAB will ensure that an Operator shall develop an operations manual and structure the same according to provisions as laid down by CAAB CAR, ANO and Appendix 2 of Annex 6 of ICAO. In compliance with this requirement the operator shall ensure the following:
(a) Operator's authentication on the Statement of compliance that the Operations Manual has the following components:
    1. General,
    2. Aircraft operating information,
    3. Routes and aerodromes, and
    4. Training.

70.9 The Operations Inspectors of CAAB will ensure that an Operator shall establish and maintain a flight safety documents system as required by CAAB. In compliance with this requirement the operator shall ensure the following:
(b) Operators' written procedure for the establishment of flight safety documents system;

70.10 An Operator shall maintain the validity of its manuals at all times. In compliance with this requirement the operator shall ensure the following:

(a) Operator to authenticate with evidence to confirm implementation (e.g. distribution of manuals, update to the manuals when the regulation changes, etc.).

70.11 The Operations Inspectors of CAAB will ensure that the organizational structure of the Operator shall specify the following. In compliance with this requirement the operator shall ensure the following:

(a) Duties, responsibilities and authorities of its officials and staff are clearly defined, and
(b) Functional tasks and lines of reporting are clearly delineated and duly documented.
(c) Operator's Safety Management, Quality Assurance Management and Emergency Management Systems have been:
    1. Developed;
    2. Documented; and
    3. Implemented.

70.12 The Operations Inspectors of CAAB will ensure that an operator shall outline, in its operations manual, the responsibilities of operations personnel regarding the conduct of flight operations and implement the same. In compliance with this requirement the operator shall ensure the following:

(c) Contents in the OM about the responsibilities of operations personnel regarding the conduct of flight operations of the operator;
(d) Evidences that responsibilities are being accomplished;
(e) Evidences of appropriate implementation.

70.13 The Operations Inspectors of CAAB will ensure that an operator shall outline, in its operations manual, standard operating procedures (SOPs) for each phase of flight and implement the same. In compliance with this requirement the operator shall ensure the following:

(a) SOPs for each phase of flight have been outlined in the OM;
(b) Incorporated in the Normal Checklist or not;
(c) Evidences that SOPs are being adhered to.

70.14 The Operations Inspectors of CAAB will ensure that an Operator shall sought approval, established and implemented its proposed aerodrome operating minima as determined by CAAB. In compliance with this requirement the operator shall ensure the following:

(a) Documentary evidence of approval sought;
(b) OM content adequacy on the establishment of proposed aerodrome operating minima as determined by CAAB;
(c) Adherence to the aerodrome operating minima as determined by CAAB.

70.15 The Operations Inspectors of CAAB will ensure that an Operator shall seek approval, establish and implement its proposed Helicopter operating minima as determined by CAAB. In compliance with this requirement the operator shall ensure the following:

(a) Documentary evidence of approval sought;
(b) OM content adequacy on the establishment of proposed aerodrome operating minima as determined by CAAB;
(c) Adherence to the aerodrome operating minima as determined by CAAB.

70.16 The Operations Inspectors of CAAB will authenticate that an Operator shall ensure the following:

(a) Develop and implement checklists as an integral part of its standard operating procedures (SOPs); and,

(b) Instruct its flight and cabin crew on how to use them and implement the same. In compliance with this requirement the operator shall ensure the following:

1. Operators' checklists to verify compliance;
2. Whether Operator's SOPs include instructions on the use of checklists;
3. Operator's training mechanism for Flight Crew on the implementation of SOPs;
4. Operator's training mechanism for Cabin Crew on the implementation of SOPs;

70.17 The Operations Inspectors of CAAB will ensure that an Operator shall include crew briefings as an integral part of its standard operating procedures (SOPs) and implement the same. In compliance with this requirement the operator shall ensure the following:

(a) Operators' checklists to verify compliance;

(b) Whether Operator's Checklists include Crew Briefings as an integral part of its standard operating procedures (SOPs);

(c) Operator's training mechanism for Crew Briefings to be integral part of its standard operating procedures (SOPs);

70.18 The Operations Inspectors of CAAB will ensure that an Operator shall outline, in its operations manual, instructions and implement the same on the clarification and acceptance of air traffic control (ATC) clearances, particularly where terrain clearance is involved. In compliance with this requirement the operator shall ensure the following:

(a) Mechanism for clarification and acceptance of air traffic control (ATC) clearances;

(b) Mechanism for clarification and acceptance of air traffic control (ATC) clearances particularly where terrain clearance is involved;

(c) Evidences of Implementation on the clarification and acceptance of air traffic control (ATC) clearances.

70.19 The Operations Inspectors of CAAB will ensure that an Operator shall include in its operations manual and implement the following:

(a) Instructions and training requirements on the avoidance of CFIT, and

(b) Policy on the use of GPWS. In compliance with this requirement the operator shall ensure the following:

1. Mechanism on the instructions and training requirements on the avoidance of CFIT;
2. Mechanism for the policy on the use of GPWS;
3. Evidences of Implementation on the instructions and training requirements on the avoidance of CFIT;
4. Evidences of Implementation for the Policy on the use of GPWS.

70.20 The Operations Inspectors of CAAB will ensure that an Operator shall lay down, in its operations manual, policy, instructions, procedures and training requirements on the avoidance of collisions and the use of the ACAS and implement the same. In compliance with this requirement the operator shall ensure the following:

(a) Operator's Policy, Instructions and procedures for the avoidance of collisions of the ACAS;

(b) Operator's Training requirements on the avoidance of collisions and the use of the ACAS;
(c) Operator's ACAS Approval Procedures are in accordance with:
    1. PANS-OPS (Doc 8168), Volume I, Part VIII, Chapter 3, and
    2. PANS-ATM (Doc 4444), Chapters 12 and 15.

70.21 The Operations Inspectors of CAAB will ensure that an Operator shall include in its operations manual, instructions for the preservation of flight recorder records and, if necessary, associated flight recorders to the extent possible, in the event that the aeroplane becomes involved in an accident or incident and implement the same. In compliance with this requirement the operator shall ensure the following:
(a) Operator's Instructions for the preservation of flight recorder records;
(b) Operator's Instructions for the preservation of flight recorder records in the event that the aeroplane becomes involved in an accident or incident;
(c) Operator's Procedure for the preservation of flight recorder records;
(d) Evidences of the Operator's Implementation on the preservation of flight recorder records (if any).

70.22 The Operations Inspectors of CAAB will ensure that an Operator shall establish procedures for the retention of flight recorder records and flight recorders in safe custody pending their disposition as determined in accordance with Annex 13/CAAB and implement the same. In compliance with this requirement the operator shall ensure the following:
(a) Operator's established procedures for the retention of flight recorder records in safe custody pending their disposition as determined in accordance with Annex 13/CAAB;
(b) Evidences of the Operator's Implementation on the retention of flight recorder records in safe custody pending their disposition (if any).

70.23 The Operations Inspectors of CAAB will ensure that an Operator shall establish procedures and implement an organizational and management system for the operational control of all flights in accordance with specific operating regulations applicable to aircraft operations. In compliance with this requirement the operator shall ensure the following:
(a) Operator's establishment of operational control structure;
(b) Operator's adequacy of manpower for the operational control of all flights in accordance with specific operating regulations applicable to aircraft operations;
(c) Operator's delegation of authorities for the operational control;
(d) Operator's Definition of Responsibilities;
(e) Operator's established method of control and supervision of flight operations when it is used.

70.24 The Operations Inspectors of CAAB will ensure that an Operator shall outline in its operations manual, responsibilities for operational control and develop related policies, processes, standards and procedures and implement the same. In compliance with this requirement the operator shall ensure the following:
(f) Operator's establishment of:
    1. Responsibilities;
    2. Policies;
    3. Processes;
    4. Standards; and
    5. Procedures.

(g) Operator's Procedure for the:
1. Initiation of flights;
2. Continuation of flights;
3. Diversion of flights, and
4. Termination of flights,

(f) The operations manual contains functions and responsibilities for flight dispatch in respect of:
1. Flight crew; and
2. Flight operations officers/flight dispatchers.

70.25 The Operations Inspectors of CAAB will ensure that an Operator shall establish policy and procedures and implement the same for flight crew to record and report on:
(a) Routine meteorological observation during:
1. en-route, and
2. climb-out phases of the flight; and
(b) Special and other non-routine observations during any phase of the flight; and
(c) Volcanic activity.

In compliance with this requirement the operator shall ensure the following:

(h) Operator's established policy and procedures for flight crew to record and report on:
1. Routine meteorological observation during:
2. En-route and climb-out phases of the flight;
3. Special and other non-routine observations during any phase of the flight; and,
4. Volcanic activity.
5. Operator's compliance through an applicable process in operations manuals (such as a template of air report).

70.26 The Operations Inspectors of CAAB will ensure that an Operator shall make available and implement the same to flight crew and operational personnel, at any aerodrome authorized in its AOC and corresponding operations specifications, pre-flight aeronautical information essential for the safety, regularity and efficiency of air navigation. In compliance with this requirement the operator shall ensure the following:
(a) Confirm operators' establishment of required procedures.
(b) Operator's compliance on the Provision of pre-flight information; and,
(c) Operator's pre-flight information includes Elements of the Integrated Aeronautical Information Package; and,
(d) Maps and Charts.

70.27 The Operations Inspectors of CAAB will ensure that an Operator shall establish and implement procedures for the preparation and dissemination of NOTAMs to flight crew and operations personnel. In compliance with this requirement the operator shall ensure the following:
(a) Operator's established procedures to prepare and disseminate NOTAMs to flight crew and operations personnel;
(b) Operator's compliance through appropriate evidences.

70.28 The Operations Inspectors of CAAB will ensure that an Operator shall establish and implement procedures for the preparation and dissemination of the information contained in the AIP, the Aeronautical Information Circular (AIC), and the Aeronautical Information Regulation and Control (AIRAC) to flight crew and operations personnel. In compliance with this requirement the operator shall ensure the following:

(a) Verify the procedures involve the preparation and dissemination of the following:

(b) AIP, AIC and AIRAC;

(c) Verify air operator's compliance by confirming through evidences the implementation of the required procedures.

70.29 The Operations Inspectors of CAAB will ensure that an Operator shall establish and implement the organizational structure which includes the responsibilities and authority for the management of all ground handling functions. In compliance with this requirement the operator shall ensure the following:

(a) Operator's procedures to confirm establishment of an organizational structure for ground handling functions;

(b) Operator's procedure that contents the description of related responsibilities and authorities.

(c) Operator's implementation action on:

1. Ground handling structure, and
2. Lines of responsibilities associated with the following, when applicable:
    a. Ramp operations,
    b. Passenger services,
    c. Baggage services,
    d. Cabin services,
    e. Weight and balance control,
    f. Ground support equipment, and
    g. Fuel services.

70.30 The Operations Inspectors of CAAB will ensure that an Operator shall develop aircraft ground handling training requirements, subcontracting policies, handling processes, procedures and practices for all ground handling operations and implement the same. In compliance with this requirement the operator shall ensure the following:

(a) Operator's procedures include the following for aircraft ground handling:

1. Training requirements;
2. Subcontracting policies;
3. Handling processes; and
4. Procedures and practices for all ground handling operations.

(b) Operator's evidences to confirm effective implementation (e.g. operations manual, weight and balance manual, handling manual, and training program for ground handlers).

70.31 The Operations Inspectors of CAAB will ensure that an Operator shall maintain permanently its ground handling responsibility, when all or part of the functions and tasks related to ground handling services have been contracted to a service provider and implement the same. In compliance with this requirement the operator shall ensure the following:

(a) Operator's compliance to ground handling responsibilities.
(b) Operator's effective implementation through evidences of ground handling responsibilities.

70.32 The Operations Inspectors of CAAB will ensure that an Operator shall establish SMS and implement the same. In compliance with this requirement the operator shall ensure the following:
(a) Operator's response to AOC Certification & Renewal Checklist developed by CAAB on SMS;
(b) Operator's establishment of SMS through evidences.
(c) Operator's statements of safety policy and responsibility of personnel;
(d) Operator's Implementation of SMS through evidences.

70.33 The Operations Inspectors of CAAB will ensure that an Operator shall nominate a post holder to be responsible for the development and establishment of the air operator's SMS, and his/her functions and responsibilities shall be clearly defined and documented in the flight safety documents system and implement the same. In compliance with this requirement the operator shall ensure the following:
(a) Nomination of a post holder responsible for the development and establishment of the SMS;
(b) Post holder's functions and responsibilities;
(c) Documentation of the post holder's functions and responsibilities in the flight safety document system;
(d) Effective implementation of processes and procedures outlined in air operators' operations manuals.

70.34 The Operations Inspectors of CAAB will ensure that an Operator shall establish and maintain a flight data analysis program as part of its SMS and implement the same. In compliance with this requirement the operator shall ensure the following:
(a) Evidence to ensure that, as part of their SMS, air operators have established and maintain a flight data analysis program;
(b) Evidence to ensure effective implementation.

70.35 An Operator shall ensure that the flight data analysis program is non-punitive and that it contains safeguards to protect the source(s) of the data. In compliance with this requirement the operator shall ensure the following:
(a) Evidence to ensure that the air operators' flight data analysis program is non-punitive;
(b) Evidence to ensure that the air operators' flight data analysis program contains safeguards to protect data source(s);
(c) Evidence to confirm effective implementation.

70.36 The Operations Inspectors of CAAB will ensure that an Operator shall develop and implement requirements in its operations manual, to establish flight time, flight duty period, duty and rest period limitations for all its crew members in accordance with requirements outlined by CAAB. In compliance with this requirement the operator shall ensure the following:
(a) Evidence on the establishment of flight time, flight duty period, duty and rest period limitations for all its crew members in accordance with requirements outlined by CAAB;
(b) Evidence on the implementation of flight time, flight duty period, duty and rest period limitations for all its crew members;

(c) Evidences on the breech of the Regulation and Enforcement action taken by CAAB.

70.37 The Operations Inspectors of CAAB will ensure that an Operator shall maintain current records of flight time, flight duty periods, duty periods and rest periods of flight and cabin crew members. In compliance with this requirement the operator shall ensure the following:

(a) Evidences on the maintenance of records of flight time, flight duty periods, duty periods and rest periods for flight and cabin crew.

70.38 The Operations Inspectors of CAAB will ensure that an Operator shall obtain an approval of the variations to the prescriptive Fatigue Management Regulations. In compliance with this requirement the operator shall ensure the following:

(a) Evidences on the implementation of the variation based on the assessment by the regulator of the comprehensive risk assessment provided by the operator to support their application for a variation;
(b) Evidence of the application that is within the definition of the "exceptional circumstances" determined by the regulator;
(c) Evidence on the effective implementation by verifying records of variation approval.
(d) Evidence to verify inclusion of the risk assessment results in the records;
(e) Evidence to verify effective implementation that the air operator's variation is in accordance with the approval issued by CAAB.

70.39 The Operations Inspectors of CAAB will ensure that an Operator shall use a Fatigue Risk Management System (FRMS), promulgated by CAAB. In compliance with this requirement the operator shall ensure the following:

(a) Evidences to verify that FRMS regulations have been implemented for pilots and for cabin crew.

70.40 The Operations Inspectors of CAAB will ensure that an Operator shall use Fatigue Risk Management System (FRMS), that complies with the procedures and guidance material describing the approval process by CAAB. In compliance with this requirement the operator shall ensure the following:

(a) Evidences to verify that the air Operator has provided CAAB the records on the use of FRMS for proper follow up.
(b) Evidences to verify that FRMS approval cover CAAB requirement including but not limited to:
    1. FRMS policy and documentation;
    2. Fatigue risk management process;
    3. FRMS safety assurance processes; and,
    4. FRMS promotion processes;
    5. Evidences to verify that there are procedures for coordination of the implementation plan.

70.41 The Operations Inspectors of CAAB will ensure that an Operator shall use Fatigue Risk Management System (FRMS), duly reviewed, monitored and approved by CAAB and shall follow an established plan and process. In compliance with this requirement the operator shall ensure the following:

(a) Evidences to verify that the FRMS include:

1. Requirement that the operator establishes maximum values for flight times and/or flight duty periods(s) and duty period(s), and minimum values for rest periods;
2. Requirement for decrease in maximum values or increase in minimum values in case operator's data indicate these values are too high or too low, respectively; and,
3. A process to approve any increase in maximum values or decrease in minimum values only after evaluating the operator's justification for such changes.

(b) Evidences to confirm effective implementation by reviewing the FRMS approval documentation.

(c) Evidences to verify that the following steps outlined have been met:

1. Risk assessment of the operator;
2. Acceptance of FRMS plan, policy and documentation;
3. Acceptance of initial FRMS processes; and,
4. Approval of FRMS.

70.42 The Operations Inspectors of CAAB will ensure that an Operator may be given a trial period for its FRMS before issuing the approval by CAAB. In compliance with this requirement the operator shall ensure the following:

(a) Evidence to verify that the a trial period, e.g. check meeting minutes held during this period.

(b) Evidence to verify that the authority has monitored all activities during the trial period and, in particular, the safety assurance processes and a fully functioning FRMS.

70.43 An Operator shall establish a procedure for the crew to evaluate a traveller with a suspected communicable disease, based on the presence of a fever and certain other signs or symptoms. In compliance with this requirement the operator shall ensure the following:

(a) Evidence to verify air operators' related procedures.

(b) Evidence to confirm effective implementation by verifying that an air operator's operations manual or cabin crew manual contains related procedures;

(c) Evidence to check that the procedure includes the transmission, as required, of a General Declaration form of CAAB or the Government.

70.44 The Operations Inspectors of CAAB will ensure that an Operator shall establish procedures for the pilot-in-command to report promptly to air traffic control (ATC) a suspected communicable disease, with transmission of the following information:

(a) Aircraft identification;
(b) Departure aerodrome;
(c) Destination aerodrome;
(d) Estimated time of arrival;
(e) Number of persons on board;
(f) Number of suspected case(s) on board; and,
(g) Nature of the public health risk, if known.

In compliance with this requirement the operator shall ensure the following:

(a) Evidence of air operators' related procedures;

(b) Evidences to confirm effective implementation by verifying that an air operator's operations manual has procedures for reporting by the pilot-in-command suspected communicable diseases, including transmission of the following information:
   1. Aircraft identification;
   2. Departure aerodrome;
   3. Destination airport;
   4. Estimated time of arrival;
   5. Number of persons on board;
   6. Number of suspected case(s) on board; and,
   7. Nature of the public health risk, if known.

(c) Evidences of such reports by the pilot-in command.

70.45 The Operations Inspectors of CAAB will ensure that an Operator shall establish a system to provide its operations staff and flight crew with aircraft operating information, including mandatory revisions. In compliance with this requirement the operator shall ensure the following:

(a) Operator's evidence of having established procedures related to aircraft operating information system of air the operator.

(b) Operator's sample of aircraft operating information to verify inclusion of the following:
   1. Organization, update and revision system;
   2. Certification limitations and operating limitations;
   3. The normal, abnormal and emergency procedures to be used by the flight crew, related checklists, crew coordination and assignment;
   4. Instructions for aircraft loading;
   5. Data for mass and balance calculations;
   6. Aircraft systems, associated controls and instructions for their use;
   7. Emergency evacuation procedures, including type-specific procedures, crew coordination and assignment.

70.46 The Operations Inspectors of CAAB will ensure that an Operator shall include certification limitations and operating limitations in its aircraft operating manual. In compliance with this requirement the operator shall ensure the following:

(a) Operator's evidence of having established in its aircraft operating manual procedures related to certification limitations and operating limitations;

(b) Operator's means of ensuring that the certification and operating limitations are adhered to by all concerned of the operator.

70.47 The Operations Inspectors of CAAB will ensure that an Operator shall develop Minimum Equipment Lists (MELs) and configuration deviation lists (CDLs) which form part of the air operator's manual that need to be approved by CAAB. In compliance with this requirement the operator shall ensure the following:

(a) Operator's evidence of having developed Minimum Equipment Lists (MELs) and configuration deviation lists (CDLs);

(b) Operator's evidence to verify that the operator is in possession of approved MEL/CDL.

70.48 The Operations Inspectors of CAAB will ensure that an Operator shall ensure that the operating information include approved MEL/configuration deviation list (CDL) for the aeroplane types operated and specific operations authorized. In compliance with this requirement the operator shall ensure the following:

(a) Operator's evidence of having included approved MEL/CDL for the aeroplane types;
(b) Operator's evidence to verify issue of the initial approval and approval of subsequent amendments.
(c) Operator's evidence on effective implementation regarding applicable specific operations authorized (e.g. ETOPS, all weather operations, RVSM, RNP, etc.).
(d) Operator's evidence on effective implementation that the amendments of the MEL are used within the air operator religiously;
(e) Evidences of all the concessions and/or dispensations requested or accorded by CAAB during the period of Audit assessment.
(i)

70.49 The Operations Inspectors of CAAB will ensure that an Operator shall establish a route guide to be used by its flight crew for each flight. The operator shall have the evidence to ensure that it maintains current and updated route guide and disseminates the route guide to concerned personnel and aircraft. In compliance with this requirement the operator shall ensure the following:

(a) Operator's evidence of having established a route guide to be used by its flight crew for each flight;
(b) Evidence to ensure that the operator maintains current and updated route guide;
(c) Evidence to ensure that the operator disseminates the route guide to concerned personnel and aircraft;
(d) Operator's evidence of the route guide to ensure that it contains information relating to communication facilities, navigation aids, aerodromes, instrument approaches, instrument arrivals and instrument departures, as applicable, for the operation, and such other information as the air operator may deem necessary for the proper conduct of flight operations.

70.50 The Operations Inspectors of CAAB will ensure that an Operator shall develop and maintain training programs, as part of the flight safety documents system, which include initial, recurrent, transition (conversion), re-qualification, upgrade, recency of experience, familiarization, differences, safety management and other specialized training, as applicable. In compliance with this requirement the operator shall ensure the following:

(a) Operator's evidence of having developed and maintained training programs, as part of the flight safety documents system;
(b) Operator's evidence of having maintained training programs;
(c) Operator's evidence of having included in its training programs the initial, recurrent, transition (conversion), re-qualification, upgrade, recency of experience, familiarization, differences, safety management and other specialized training, as applicable;
(d) Operator's evidence of having implemented the various training programs.

70.51 The Operations Inspectors of CAAB will ensure that an operator shall provide ground and flight training facilities, simulators and/or cockpit procedure training devices (e.g. fixed-based simulator, computer based training, etc.) and syllabus materials as applicable. In compliance with this requirement the operator shall ensure the following:

(a) Operator's evidence to provide ground and flight training facilities, simulators and/or cockpit procedure training devices (e.g. fixed-based simulator, computer based training, etc.) and syllabus materials;
(b) Operator's evidence having implemented the:
1. Air operator's training program;
2. List of approved training facilities (including approval of flight simulation training devices); and,
3. Training records.

70.52 The Operations Inspectors of CAAB will ensure that an operator shall outline, in its training programs, not only details of the initial and recurrent flight crew training, but also transition (conversion), re-qualification, upgrade, recency of experience, familiarization, differences and other specialized training, as applicable. In compliance with this requirement the operator shall ensure the following:

(a) Operator's evidence of having outlined, in its training programs, not only details of the initial and recurrent flight crew training, but also transition (conversion), re-qualification, upgrade, recency of experience, familiarization, differences and other specialized training, as applicable;
(b) Evidence of air operator's implementation of the training programs to confirm inclusion of all required types of training.

70.53 The Operations Inspectors of CAAB will ensure that an operator shall develop an ACAS training program on ACAS-equipped aircraft for its pilots. In compliance with this requirement the operator shall ensure the following:

(a) Operator's evidence on the development of ACAS training program on ACAS-equipped aircraft for its pilots;
(b) Operator's evidence of having adopted the Advisory Circular of CAAB on ACAS procedures;
(c) Operator's evidence of being in compliance with the requirement of ICAO Doc-4444 on ACAS Procedure;
(d) Operator's evidence of having imparted and implemented to its crew the ACAS training program during Simulator Training Programs.

70.54 The Operations Inspectors of CAAB will ensure that an operator shall develop a flight dispatch/flight operations officers' training program. In compliance with this requirement the operator shall ensure the following:

(a) Operator's evidence of having developed a flight dispatch/flight operations officers' training program;
(b) Operator's evidence of having included the following in training programs:
1. CAAB air law and regulations;
2. Aviation instruction;
3. Use of operations manual;
4. Aircraft performance;
5. Navigation;
6. Flight planning and monitoring;
7. Rules of the air, communication and air traffic management;
8. Meteorology;
9. Mass and balance control;

10. Use of minimum equipment list (MEL)/configuration deviation list (CDL);
11. Transport of dangerous goods by air;
12. Security procedures;
13. Emergency response plan;
14. Flight observation; and
15. Recurrent training program;

(c) Operator's evidence of the Training folder for the flight dispatch/flight operations officers' implementation of the training program.

70.55 The Operations Inspectors of CAAB will ensure that an operator shall select and appoint flight dispatch/flight operations officer's ground instructors who meet at least the minimum requirements in terms of experience and knowledge as specified by CAAB. In compliance with this requirement the operator shall ensure the following:

(a) Operator's evidence of selection and appointment of flight dispatch/flight operations officer's ground instructors who meet at least the minimum requirements in terms of experience and knowledge as specified by CAAB;
(b) Operator's evidence of having developed the training program for the flight dispatch/flight operations officer ground instructor's training program;
(c) Operator's evidence of having implemented the training program for the flight dispatch/flight operations officer ground instructor's training program;
(d) Operator's evidence of training records of such personnel justifying authenticity.

70.56 The Operations Inspectors of CAAB will ensure that an operator shall maintain, on a recurrent basis, the knowledge, skills and qualifications of flight dispatch/flight operations officers ground instructors. In compliance with this requirement the operator shall ensure the following:

(a) Operator's evidence of maintenance, on a recurrent basis, the knowledge, skills and qualifications of flight dispatch/flight operations officers ground instructors;
(b) Operator's evidence of having developed the recurrent training program for the flight dispatch/flight operations officer ground instructors;
(c) Operator's evidence of having implemented the recurrent training program for the flight dispatch/flight operations officer ground instructor;
(d) Operator's evidence of recurrent training records of such personnel justifying authenticity.

70.57 The Operations Inspectors of CAAB will ensure that an operator shall outline details of the cabin crew's safety duties and functions in the cabin crew training program. In compliance with this requirement the operator shall ensure the following:

(a) Operator's evidence of the details of the cabin crew's safety duties and functions in the cabin crew training program;
(b) Operator's evidence of having imparted the cabin crew's safety duties and functions;
(c) Operator's evidence of training records of such personnel justifying authenticity.

70.58 The Operations Inspectors of CAAB will ensure that an operator shall develop a cabin crew training program as per the requirement of CAAB. In compliance with this requirement the operator shall ensure the following:

(a) Operator's evidence of having developed a cabin crew training program as per the requirement of CAAB;

(b) Operator's evidence of cabin crew training program executed that shall include theoretical and practical training addressing the following:
   1. Basic instructions on the different functions, duties and responsibilities of cabin crew members;
   2. Introduction to aircraft systems and limitations;
   3. Aircraft emergency evacuation, life-safety equipment and related information to passengers;
   4. Cabin crew members assignment, coordination and two-way communication;
   5. Knowledge and skills related to the transport of dangerous goods;
   6. Security procedures; and,
   7. Recurrent training program including an examination to determine competence.

70.59 The Operations Inspectors of CAAB will ensure that an operator shall select and appoint cabin crew instructors and examiners who meet at least minimum experience and knowledge requirements. In compliance with this requirement the operator shall ensure the following:
(a) Operator's evidence of selection and appointment of cabin crew instructors or examiners (ground or in flight test) who meet at least the minimum requirements in terms of experience and knowledge as specified by CAAB;
(b) Operator's evidence of having developed the training program for the cabin crew instructors or examiners (ground or in flight test) training program;
(c) Operator's evidence of having implemented the training program for the cabin crew instructor's training program;
(d) Operator's evidence of training records of such personnel justifying authenticity.

70.60 The Operations Inspectors of CAAB will ensure that an operator shall ensure that cabin crew instructors and examiners maintain their knowledge, skills and qualifications. In compliance with this requirement the operator shall ensure the following:
(a) Operator's procedure document to indicate that the air operator's cabin crew instructors and examiners maintain their knowledge, skills and qualifications;
(b) Operator's procedure document should authenticate the initial and recurrent training being imparted on a regular basis;
(c) Operator's evidence through training records for all these personnel to confirm effective implementation of the contents of the manuals.

70.61 The Operations Inspectors of CAAB will ensure that an operator shall ensure that the appointed instructors and examiners for cabin crew maintain their competency with respect to their delegated tasks. In compliance with this requirement the operator shall ensure the following:
(a) Operator's procedure document on the allocation of the delegated tasks for the cabin crew instructors and examiners (ground or in flight test);
(b) Operator's evidence through records of activity to confirm maintenance of competency is addressed.

70.62 The Operations Inspectors of CAAB will ensure that an operator shall establish a policy and procedures to enable cabin crew to discreetly communicate to flight crew in the event of suspicious activity or security breaches in the passenger cabin. In compliance with this requirement the operator shall ensure the following:

(a) Operator's evidence on having established a policy and procedures to enable cabin crew to discreetly communicate to flight crew in the event of suspicious activity or security breaches in the passenger cabin;
(b) Operator's evidence of having imparted the requisite training and technique to the flight and cabin crew on the issue;
(c) Operator's implementation action to be evidenced through the training records of both cockpit and cabin crew.

70.63 The Operations Inspectors of CAAB will ensure that an operator shall establish policy and procedures with respect to flight crew compartment access. In compliance with this requirement the operator shall ensure the following:
(a) Operator's establishment of policy and procedure with respect to flight crew compartment access;
(b) Operator's implementation action to be evidenced through the dissemination of knowledge of the OM and Security Manuals to the relevant personnel;

70.64 The Operations Inspectors of CAAB will ensure that an operator shall have, on board all its aircraft, a checklist of the procedures to be followed:
a) In searching for a bomb, and
b) For inspecting an aircraft for concealed weapons, explosives and other dangerous devices

In compliance with this requirement the operator shall ensure the following:

(a) Operator's development of the document that contains a checklist of the procedures to be followed as below:
1. Searching for a bomb; and,
2. Inspecting an aircraft for concealed weapons, explosives and other dangerous devices;
3. Operator's implementation action to be evidenced through the training records of concerned personnel;
(b) Operator's implementation action to be evidenced through the dissemination of knowledge of the OM and Security Manuals to the relevant personnel.

70.65 The Operations Inspectors of CAAB will ensure that an operator shall supplement the checklist on aeroplane search procedures with guidance on the appropriate course of action to be taken in case a bomb or suspicious object is found. In compliance with this requirement the operator shall ensure the following:
(a) Operator's documented procedure in the form of checklist on aeroplane search procedures with guidance on the appropriate course of action to be taken in case a bomb or suspicious object is found;
(b) Operator's documented evidences of appropriate training being given to relevant personnel and/or appropriate instructions being provided to the relevant agents on the issue.

70.66 The Operations Inspectors of CAAB will ensure that an operator shall establish a security training program for flight and cabin crew and approved by CAAB. In compliance with this requirement the operator shall ensure the following:
(a) Operator's evidence on the establishment of a security training program for flight and cabin crew;

(b) Operator's evidence of the security training program for flight and cabin crew being approved by CAAB;
(c) Operator's evidence on the security training program which shall address the following:
1. Security of the flight crew compartment;
2. Aircraft search procedure checklist;
3. Determination of the seriousness of any occurrences;
4. Crew communication and coordination;
5. Appropriate self-defence responses;
6. Use, as authorized by the CAAB of non-lethal protective devices assigned to crew members;
7. Understanding of behaviour of terrorists;
8. Live situational training exercises regarding various threat conditions; and,
9. Post-flight concerns for the crew.

70.67 The Operations Inspectors of CAAB will ensure that an operator shall apply for special authorization to operate a single-engine turbine powered aeroplane at night and/or in Instrument Meteorological Conditions (IMC). In compliance with this requirement the operator shall ensure the following:
(a) Operator's documented procedure on special authorization to operate a single-engine turbine powered aeroplane at night and/or in Instrument Meteorological Conditions (IMC);
(b) Operator's documented application to CAAB for the special authorization to operate a single-engine turbine powered aeroplane at night and/or in Instrument Meteorological Conditions (IMC);
(c) Operator's documented procedure on the additional requirements, such as engine trend monitoring system, redundant electrical generating systems, radio altimeter, airborne weather radar, etc. to seek for such special authorization;
(d) Operator's practice and implementation regarding engine trend monitoring system, redundant electrical generating systems, radio altimeter, airborne weather radar, etc. for compliance.

70.68 The Operations Inspectors of CAAB will ensure that an operator shall take into account, review and implement all regulations related to the contents of the operations manual, as part of the flight safety documents system. In compliance with this requirement the operator shall ensure the following:
(a) Operator's OM contents for adequacy of all applicable regulations of CAAB;
(b) Operator's statement of compliance that the contents of the operations manual shall form part of the flight safety documents system.

70.69 The Operations Inspectors of CAAB will ensure that an operator shall take into account, review and implement all regulations before operations specifications are granted. In compliance with this requirement the operator shall ensure the following:
(a) Operator's status on the contents of Manuals for adequacy of all applicable regulations of CAAB prior to the grant of operations specifications;
(b) Operator's evidences on the accomplishment of the certification process wherein the following have been accommodated in relation to the air operators' procedures in the OPS SPECs for RVSM; ETOPS (EDTOs); RNP; MNPS; Other.

70.70 The Operations Inspectors of CAAB will ensure that in the event CAAB grants exemptions from the regulations, the Operator shall ensure that it uses formal procedures that take into consideration the impact to safety. In compliance with this requirement the operator shall ensure the following:

(a) Operator's evidence for provision for obtaining exemptions from the regulations;
(b) In presence of seeking provisions for exemptions, whether these exemptions have been sought using formal procedures that take into consideration the impact to safety;
(c) Operator's evidences on the exemptions received;
(d) Operator's evidences to the extent the impact on safety has been considered.
(e) Operator's record of any evidences of non-compliance ascertained by CAAB.

70.71 The Operations Inspectors of CAAB will ensure that an operator shall go thorough technical evaluations that lead to approval/acceptance of required procedures, documents and operations. In compliance with this requirement the operator shall ensure the following:

(a) Operator's evidence on the request for technical evaluations that lead to approval/ acceptance of required procedures, documents and operations Manuals;
(b) Operator's evidence on the outcome of such technical evaluations;
(c) Operator's evidence of any changes of operations beyond the margin of the evaluation made.

70.72 The Operations Inspectors of CAAB will ensure that an operator shall go through ramp inspections of aircraft based on risk. In compliance with this requirement the operator shall ensure the following:

(a) Operator's evidence during ramp inspections that took into account both high-risk items and all other items over a series of inspections, such as:
    1. Flight deck — general (e.g. condition, emergency exit, equipment);
    2. Flight deck — documentation (e.g. manuals, checklists, route guide, MEL, documents to be carried on board, flight deck safety equipment);
    3. Cabin/Safety;
    4. Aircraft external condition, e.g. previous structural repairs; obvious damage; leakage (e.g. apparent corrosion);
    5. Cargo (condition of cargo compartment and containers, dangerous goods; safety of cargo on board); and,
    6. General (additional remarks, refueling, language for communication).

70.73 The Operations Inspectors of CAAB will ensure that an operator shall resolve identified safety issues, to make it possible to track past deficiencies and regulatory non-compliance. In compliance with this requirement the operator shall ensure the following:

(a) Operator's documented evidences on the monitoring system that takes into account past deficiencies;
(b) Operator's documented evidences on the system to identify risks and perform risk assessment;
(c) Operator's documented evidences on the mitigation management of assessed risks.

70.74 The Operations Inspectors of CAAB will ensure that an operator shall be issued approvals for the transport of dangerous goods by air. In compliance with this requirement the operator shall ensure the following:

(a) Statement of declaration in Operator's Manual regarding transport of dangerous goods by air by the operator.

70.75 The Operations Inspectors of CAAB will ensure that an operator shall apply for approval of the dangerous goods training program which shall be approved by CAAB and Grant of authorization shall be accorded to transport dangerous goods by air. In compliance with this requirement the operator shall ensure the following:

(a) Operator's evidence for approval of the dangerous goods training program;
(b) Operator's evidence of the dangerous goods training program been approved by CAAB;
(c) Evidences of Operator's procedure for the transportation of dangerous goods by air;
(d) Evidences of Operator's Training programs for the transportation of dangerous goods by air;
(e) Evidences of Operator's implementation of Training programs (Initial and recurrent) for the transportation of dangerous goods by air to be evidenced through training records.

70.76 The Operations Inspectors of CAAB will ensure that an operator shall will be informed that the dangerous goods training programs of the air operators shall be reviewed and approved by CAAB. In compliance with this requirement the operator shall ensure the following:

(a) Operator's evidences of the dangerous goods training programs been reviewed and approved by CAAB;
(b) Operator's evidences to indicate that the air operator's training program covers all employees;
(c) Operator's evidences of the training records to confirm implementation.

70.77 The Operations Inspectors of CAAB will ensure that an operator shall develop and use an acceptance checklist to prevent acceptance of dangerous goods for transport by air unless they are accompanied by a completed dangerous goods transport document, and their marking, package, over pack or freight container have been inspected in accordance with the acceptance procedure contained in the Technical Instructions (TI Doc 9284) or as adopted by CAAB. In compliance with this requirement the operator shall ensure the following:

(a) Operator's Manual contents on the development and use an acceptance checklist to prevent acceptance of dangerous goods for transport by air unless they are accompanied by a completed dangerous goods transport document; and,
(b) Operator's Manual contents on the procedure for marking, package, over pack or freight container been inspected in accordance with the acceptance procedure contained in the Technical Instructions (TI Doc 9284) or as adopted by CAAB;
(c) Operator's evidences on the training provided to all concerned;
(d) Operator's evidences on the maintenance of training records;
(e) Operator's evidences of having developed appropriate checklists to be used by authorized air operators;
(f) Operator's evidences of having completed such checklists while transporting dangerous goods.

70.78 The Operations Inspectors of CAAB will ensure that an operator shall ensure that it will not load dangerous goods into the aircraft unless the appropriate loading, segregation and inspection for damage or leakage procedures are followed. In compliance with this requirement the operator shall ensure the following:

(a) Operator's Evidences in the contents of the Manual to ensure that the operator will not load dangerous goods into the aircraft unless the appropriate loading, segregation and inspection for damage or leakage procedures are followed;
(b) Operator's evidences of having developed appropriate checklists to be used by authorized air operators;
(c) Operator's evidences of having completed such checklists while transporting dangerous goods.

70.79 The Operations Inspectors of CAAB will ensure that an operator of an aircraft in which dangerous goods are carried provides the pilot-in-command with written information (e.g. Notification to Captain or NOTOC), as specified in the Technical Instructions (TI or Doc 9284) as adopted by CAAB. In compliance with this requirement the operator shall ensure the following:

(a) Operator's Evidences in the contents of the Manual specifies that an aircraft in which dangerous goods will be carried shall provide the pilot-in-command with written information (e.g. Notification to Captain or NOTOC), as specified in the Technical Instructions (TI or Doc 9284) as adopted by CAAB;
(b) Operator's evidences of documentation;
(c) Operator's evidences of having developed appropriate checklists to be used by authorized air operators;
(d) Operator's evidences of having completed such checklists while transporting dangerous goods.

70.80 The Operations Inspectors of CAAB will ensure that an Operator has procedures for retaining the Notification to Captain (NOTOC) on the ground and readily accessible to the aerodromes of last departure and next scheduled arrival for each of its flights on which dangerous goods are carried. In compliance with this requirement the operator shall ensure the following:

(a) Evidences of operator's procedures for retaining the Notification to Captain (NOTOC) on the ground and readily accessible to the aerodromes of last departure and next scheduled arrival for each of its flights on which dangerous goods are carried;
(b) Evidences of operator's Manual contents for adequacy of all applicable regulations of CAAB;
(c) Evidences of operator's documented mechanism used by authorized air operators to confirm implementation.

70.81 The Operations Inspectors of CAAB will ensure that an operator authorized to transport dangerous goods has established in-flight procedures for emergency response for aircraft incidents involving dangerous goods. In compliance with this requirement the operator shall ensure the following:

(a) Evidences of operator's establishment of in-flight procedures for emergency response for aircraft incidents involving dangerous goods;
(b) Evidences of operator's documented implementation of the procedure.

70.82 The Operations Inspectors of CAAB will ensure that an operators which choose not to transport dangerous goods, shall provide the dangerous goods training programs intended to help the ground and flight personnel to recognize and refuse dangerous goods, review and approve by the organization/individual responsible for the transport of dangerous goods by air. In compliance with this requirement the operator shall ensure the following:

(a) Evidences that the operator does not intend to transport DG;

(b) Operator's Manual that should content dangerous goods training programs for air operators which choose not to transport dangerous goods;
(c) Evidences of Operator's DG training program which is intended to help the ground and flight personnel recognize and refuse dangerous goods;
(d) Evidences of Operator's methods for review and approve by the organization/individual responsible for the transport of dangerous goods by air;
(e) Evidences of Operator's DG training program being implemented to be evidenced in the training folders.

70.83 The Operations Inspectors of CAAB will ensure that the dangerous goods procedures of air operators fall as part of the flight safety documents system of the air operator. Are dangerous goods procedures of air operators fall as part of the flight safety documents system of the air operator. In compliance with this requirement the operator shall ensure the following:

(a) Operator's statement indicates that the dangerous goods procedures of the air operator falls as part of the flight safety documents system;
(b) Operator's evidences signify implementation of dangerous goods inspection procedures to ensure:
    1. Exceptions related to passengers are covered;
    2. That air operator, not authorized to transport dangerous goods, have a policy not to transport spare parts for maintenance purposes that should be categorized as dangerous goods (Company Material [COMAT]); and,
(c) Procedures to report incident involving undeclared dangerous goods have been covered. Operator's statement indicates that the dangerous goods procedures of the air operator falls as part of the flight safety documents system;
(d) Operator's evidences signify implementation of dangerous goods inspection procedures to ensure:
    1. Exceptions related to passengers are covered;
    2. That air operator, not authorized to transport dangerous goods, have a policy not to transport spare parts for maintenance purposes that should be categorized as dangerous goods (Company Material [COMAT]); and,
    3. Procedures to report incident involving undeclared dangerous goods have been covered.

70.84 The Operations Inspectors of CAAB will ensure that the dangerous goods procedures and training programs are incorporated by the operator in either the operations manual or a separate document as part of the flight safety documents system. In compliance with this requirement the operator shall ensure the following:

(a) Operator's Manual evidence shall signify whether the dangerous goods procedures and training programs are incorporated in either the operations manual or a separate document;
(b) Operator's Manual evidence shall also signify whether the dangerous goods procedures and training programs are part of the flight safety documents system;
(c) Operator's Manual evidence shall contain the necessary training program; and,
(d) Evidences of the training records of the operator.

70.85 The Operations Inspectors of CAAB will ensure that an operator has developed procedures to convey information to emergency services and to appropriate authorities in the event of an incident or accident of an aircraft carrying dangerous goods. In compliance with this requirement the operator shall ensure the following:

70.86 The Operations Inspectors of CAAB will ensure that operator develops procedures to convey information to emergency services and to appropriate authorities in the event of an incident or accident of an aircraft carrying dangerous goods. In compliance with this requirement the operator shall ensure the following:

(a) Operator's Manual evidence shall contain the Operator's developed procedures to convey information to emergency services and to appropriate authorities in the event of an incident or accident of an aircraft carrying dangerous goods;
(b) Operator's Manual evidence to indicate that appropriate training has been imparted to all concerned;
(c) Operator's evidence on the training records.

70.87 The Operations Inspectors of CAAB will ensure that an operator develops procedures that passengers shall be warned as to the types of dangerous goods that they are prohibited or restricted from transporting aboard an aircraft. In compliance with this requirement the operator shall ensure the following:

(a) Operator's Manual contents to have provision to ensure that passengers are warned as to the types of dangerous goods that they are prohibited or restricted from transporting aboard an aircraft;
(b) Operator's Manual evidence to indicate that appropriate training has been imparted to all concerned;
(c) Operator's evidence on the training records;
(d) Operator's evidence in Manuals on the passenger awareness system.

70.88 The Operations Inspectors of CAAB will ensure that an operator establishes procedures to confirm compliance with dangerous goods regulations. In compliance with this requirement the operator shall ensure the following:

(a) Evidence of Operator's established procedures to confirm compliance with dangerous goods regulations of CAAB;
(b) Operator's training program should include a review of training programs as well as regular and random on-site inspections of all entities established in Bangladesh as being involved in the transport of dangerous goods by air (shippers and cargo handling companies in particular);
(c) Evidences of operator's development of checklist for each kind of identification of DG;
(d) Evidences of operator's inspection policy and frequency of inspection;
(e) Evidences of operator's inspection records.

70.89 The Operations Inspectors of CAAB will ensure that an operator ensure that initial and recurrent dangerous goods training programs have been established and implemented by the organizations or agencies which are involved in the transport of dangerous goods by air. In compliance with this requirement the operator shall ensure the following:

(a) Operator's evidences to ensure that initial and recurrent dangerous goods training programs have been established and implemented by the organizations or agencies which are involved in the transport of dangerous goods by air;
(b) Operator's evidences of the training records to confirm implementation.

70.90 The Operations Inspectors of CAAB will ensure that an operator shall establish and implement.

a) Procedures to take appropriate actions in case of violation, and
b) A system to track identified deficiencies and to ensure timely resolution.

In compliance with this requirement, the operator shall ensure the following:

(a) Operator's Manual contents should indicate:
    1. Procedures to take appropriate actions in case of violation; and,
    2. A system to track identified deficiencies and to ensure timely resolution;
(b) Operator's evidences on the system of the detected deficiencies;
(c) Operator's evidences on how their corrective action is planned and assessed; and,
(d) Operator's evidences of discrepancies or violations and the actions taken by the CAAB.

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