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Introduction

1 Purpose

The ISSA Standards Manual (ISSM) is published in order to provide the standards, recommended practices (ISARPs), associated guidance material and other supporting information necessary for an operator to successfully prepare for an assessment.

The ISSM may also be used as a guide for any operator desiring to structure its operational management and control systems in conformity with the latest industry operational practices.

The ISSM is the sole source of assessment criteria to be utilized by auditors when conducting an assessment against the ISARPs.

2 Structure

The ISSM is organized as follows:

Section 1 \rightarrow Organization and Management System (ORG);

Section 2 \rightarrow Flight Operations (FLT);

Section $3 \rightarrow$ Operational Control and Flight Dispatch (DSP);

- Section 4 \rightarrow Aircraft Engineering and Maintenance (MNT);
- Section $5 \rightarrow$ Cabin Operations (CAB);
- Section $6 \rightarrow$ Ground Handling Operations (GRH);
- Section 7 \rightarrow Cargo Operations (CGO);
- Section 8 \rightarrow Security Management (SEC).

Each section in this Manual has been assigned an associated 3-letter identifier (in parentheses above). The reference number for every standard or recommended practice within a section will include the specific 3-letter identifier for that section.

3 Sources for ISSM Standards and Recommended Practices (ISARPs)

The safety and security requirements published in the Annexes to the Convention on International Civil Aviation (ICAO Annexes) are the primary source for specifications contained the ISARPs. Safety and security requirements in the ICAO Annexes used as the basis for ISARPs are those that are applicable either directly or indirectly to the air operator.

4 Applicability of ISARPs

Applicability Guidance

The applicability of individual standards or recommended practices is always determined by the auditor. As a means to assist with the interpretation of individual application, many ISARPs begin with a *conditional phrase* as described below.

Systemic Applicability

When making a determination as to the applicability of individual ISARPs, it is important to take into account operations (relevant to the individual standard or recommended practice) that are conducted, not only at the home station, but at all stations and other locations throughout the operator's entire system.

Aircraft Applicability

The ISARPs as published in this version of the ISSM are applicable only for the assessment of an operator that meets the eligibility criteria below:

- Commercial passenger and/or cargo operations;
- Aircraft with one or more turbine powered and/or multiple reciprocating engines;
- One- or two-pilot operations;



- IFR and/or VFR operations;
- Aircraft below 5,700 Kg MTOW;

Note: Aircraft above 5,700 Kg MTOW will be eligible for one ISSA initial assessment, afterwards the operator needs to pursue an IOSA registration initial audit to stay on an IATA Audit registry.

ISARPs may not be applied or used for the assessment of operations that are conducted with:

- Aircraft with single reciprocating engines;
- Helicopters;
- Seaplanes;
- Any operator who is currently on the IOSA Registry;
- Operators with no aircraft on the AOC (only wet-lease operations).

During an assessment, ISARPs are applied only to those aircraft that are of the type authorized in the Air Operator Certificate (AOC) (or equivalent document) and utilized in commercial passenger and/or cargo operations. Certain ISARPs are also applicable to non-commercial operations, and such application is indicated in a note that is part of the standard or recommended practice.

Other owned or leased aircraft that are not of the type authorized in the AOC and/or not utilized in commercial air transport operations will not be evaluated during an assessment. However, the existence of such aircraft will be referenced with an explanation in the ISSA Assessment Report (IAR).

5 Explanation of ISARPs

ISARPs contained in this manual have been developed solely for use under the ISSA program and contain the operational criteria upon which the assessments are based. ISARPs are not regulations.

Standards

ISSA Standards are specified systems, policies, programs, processes, procedures, plans, sets of measures, facilities, components, types of equipment or any other aspect of operations under the scope of ISSA that have been determined to be an operational necessity, and with which an operator will be expected to be in conformity at the conclusion of an assessment. Standards always contain the word "shall" (e.g., "The Operator shall have a process...") in order to denote conformance is a requirement for ISSA registration.

During an assessment, determination of nonconformity with specifications contained in an ISSA Standard results in a Finding, which in turn results in the generation of a Corrective Action Report (CAR).

To close a Finding, an operator will develop a Corrective Action Plan (CAP), and then implement corrective action in accordance with the CAP.

Recommended Practices

ISSA Recommended Practices are specified systems, policies, programs, processes, procedures, plans, sets of measures, facilities, components, types of equipment or any other aspects of operations under the assessment scope of ISSA that have been determined to be operationally desirable, but conformity is optional by an operator. Recommended Practices always contain the italicized word "should" (e.g., "The Operator should have a policy...") to denote conformance is optional.

During an assessment, a determination of nonconformity with specifications contained in an ISSA Recommended Practice results in an Observation, which in turn results in the generation of a CAR.

An operator is not obliged to close an observation with corrective action but, as a minimum, must provide the root cause analysis (RCA) portion of the CAP. However, if an operator chooses to close an Observation, it will require subsequent implementation of corrective action the same as is required to close a Finding.

Conditional Phrase

Certain provisions (i.e. standards or recommended practices, or sub-specifications within certain provisions), begin with a conditional phrase. The conditional phrase states the conditions (one or more) that serve to define the applicability of the provision or sub-specification to the individual operator being assessed. A conditional phrase begins with the words "If the Operator..."



When assessing an operator against a provision or sub-specification that begins with a conditional phrase, the Auditor will first determine if an operator meets the condition(s) stated in the conditional phrase. If the operator meets the stated condition(s), the provision or sub-specification is applicable to the operator and must be assessed for conformity. If the operator does not meet the condition(s), the provision or sub-specification is not applicable to that operator, and such non-applicability will be recorded as N/A.

Parallel Conformity Option

A Parallel Conformity Option (PCO) may be included in a limited number of provisions in this ISSM.

A PCO provides an optional means for an operator to be in conformity with an ISSA provision that contains a basic operational specification (typically derived from ICAO standards), which, due to technical or logistical factors, has been determined to be generally not achievable by the industry.

Where a PCO is included in an ISSA provision, it will be clearly identified and, if applicable, include an expiration date. The provision will always state the basic operational specification first, followed by the PCO as an "or" alternative.

Each PCO is subject to approval under the ISSA Standards Change Management Process. If a PCO includes an expiration date, such date will be reviewed on a regular basis to determine if an extension is required. Such review will include an investigation of industry capability to meet the basic operational specification. At the point it can be determined the industry will have the capability to meet the basic operational specification, a PCO will be allowed to expire.

Notes and Symbols

An italicized note (Note:...) immediately following a provision contains information relevant to the specification(s) in the provision, and is to be considered as part of the provision.

A **<PA>** symbol in the reference number of an ISSA provision indicates that the provision is applicable only to an operator that conducts passenger flights and uses a cabin crew in the passenger cabin.

An **<AC>** symbol in the reference number of an ISSA provision indicates that the provision is applicable only to an operator that conducts cargo flights utilizing all-cargo aircraft.

A provision with neither **<PA>** nor **<AC>** in the reference number is applicable to the operations associated with both passenger and cargo aircraft.

An **[SMS]** symbol in bold text immediately following the last sentence of an ISSA provision indicates the provision specifies one or more of the elements of a safety management system (SMS). (SMS is addressed in subsection 8 below.)

A **(GM**) symbol in bold text at the end of a provision indicates the existence of associated guidance material. (Guidance Material is addressed in subsection 6 below.)

6 Guidance Material

Guidance material is informational in nature and supplements or clarifies the meaning or intent of certain ISARPs. ISARPs that are self-explanatory do not have associated guidance material.

Guidance material is designed to ensure a common interpretation of specifications in ISARPs and provides additional detail that assists an operator to understand what is required in order to achieve conformity. Where applicable, guidance material also presents examples of acceptable alternative means of achieving conformity.

Guidance material is co-located with the relevant ISARPs, and is preceded by the bold sub-heading **Guidance**.

Assessment specifications are contained only in the ISARPs, and never in the guidance material.



7 Operational Assessment

During an assessment, an operator is assessed against the ISARPs contained in this manual. To determine conformity with any standard or recommended practice, an auditor will gather evidence to assess the degree to which specifications are documented and implemented by the operator. In making such an assessment, the following information is applicable.

Documented

Documented shall mean the specifications in the ISARPs are published and accurately represented by an operator in a controlled document. A controlled document is subject to processes that provide for positive control of content, revision, publication, distribution, availability and retention.

Documentation is necessary for an operator to ensure systems, programs, policies, processes, procedures and plans are implemented in a standardized manner, and to further ensure such standardized implementation is sustained on an on-going basis. Documentation provides the standards that govern the way personnel perform tasks within the management system and in operations. Such documented standards are necessary for an operator to:

- Provide continuity in the flow of information to personnel;
- Ensure personnel are properly trained;
- Conduct evaluations (e.g. audits, inspections, performance assessments).

Implemented

Implemented shall mean the specification(s) in the ISARPs are established, activated, integrated, incorporated, deployed, installed, maintained and/or made available, as part of the operational system, and is (are) monitored and evaluated, as necessary, for continued effectiveness.

The continuity of implementation is directly linked to documentation. To ensure standardization within the management system and in the conduct of operations, an operator must ensure specified systems, programs, policies, processes, procedures and plans are implemented as published in its controlled documents.

The requirement for specifications to be documented and implemented by an operator is inherent in ISARPs unless indicated otherwise.

Inactive Approved Operations

It is not unusual for an operator to elect not to conduct certain types of operations for which it has regulatory approval (e.g. transport of dangerous goods). In such cases, ISSA provisions with specifications that address such inactive operations would not be applicable to the operator during an assessment if it is stated clearly in a controlled document (e.g. Operations Manual) that the specified operations are not conducted by the operator.

Outsourced Functions

Where an operator has chosen to outsource operational functions specified in ISSA provisions to external service providers, conformity with those provisions will be based on evidence provided by the operator that demonstrates acceptable processes are in place (i.e. processes are documented and implemented) for monitoring such external service providers to ensure fulfillment of applicable operator and regulatory requirements affecting the safety and security of operations. Auditing is recommended as an effective method for an operator to monitor external service providers.

Active Implementation

Certain ISSA Standards may be designated as eligible for the application of Active Implementation (see Notes and Symbols above), which is a concept that permits an operator to be in conformity with a standard based on a demonstration of active and real progress toward completion of an acceptable Implementation Action Plan (IAP).

An acceptable IAP defines and maps out the satisfaction of all requirements for an operator to achieve conformity with the designated ISSA Standard. As a minimum, an acceptable IAP shall specify:

- A detailed schedule of all work or activities necessary to complete the IAP;
- All equipment, components, material or other physical resources necessary to complete the IAP;



- A series of milestone dates against which progress toward completion of the plan can be measured;
- A date when the plan is projected to be completed.

Designation of any ISSA Standard for the application of Active Implementation will always be predicated on an up-front risk analysis that indicates application of AI would not pose an unacceptable safety risk. Additionally, such designation may include prerequisite conditions that must be satisfied by an operator in order to be eligible for AI.

An ISSA Standard that has been designated for application of AI will be clearly identified in this manual, along with prerequisite conditions, if any.

To conform to a standard based on Active Implementation, an operator must be able to provide evidence that execution of an acceptable IAP is underway and material or physical progress toward completion of the plan is consistent with the planned schedule, as measured against published milestones. If applicable, an operator must also demonstrate satisfaction of any associated prerequisite conditions.

An operator that provides only an IAP without other demonstrable evidence of having materially or physically begun execution of the plan does not meet the criteria for conformity based on Active Implementation.

8 Safety Management Systems (SMS)

The components and elements of an SMS for air operators are published in the ICAO Framework for Safety Management Systems (SMS) as published in ICAO in Annex 19. Guidance supporting the Framework may be found in the ICAO Safety Management Manual (SMM), Doc 9859. All SMS components and elements contained in the ICAO Framework are addressed in the ISARPs.

Specific SMS requirements for an operator will always be mandated by the State in accordance with its individual State Safety Plan (SSP). Not all states will mandate SMS immediately, and some states could take several years before making SMS mandatory for its operators. Additionally, some elements of SMS are quite complex, thus full implementation of an SMS by an operator will typically take several years. Therefore, given these factors, most SMS provisions are initially presented in the ISARPs as recommended practices (i.e. "should"). SMS standards and recommended practices are identified by a bold [SMS] symbol immediately following the last sentence of the provision.

An operator that is assessed and found to be in conformity with all ISARPs (applicable to that operator) identified by the **[SMS]** symbol, is considered to have a baseline SMS in place.

Such baseline SMS might not meet the SMS requirements of all states because certain states, in accordance with their individual SSP, could add requirements above those contained in the ICAO framework. Additionally, some states might mandate operators to implement SMS using a multiphase approach. In either case, having the basic SMS elements implemented in accordance with the ISSA standards should facilitate compliance with individual state SMS requirements.

SMS Upgrades

In accordance with the IATA SMS Strategy, all ISSA SMS recommended practices are being incrementally upgraded to standards such that, with the ISSM revision that will be effective on 1 November 2019, all ISSA SMS provisions will have been upgraded to standards (i.e. "shall").

9 ISSA Documentation System

The ISSM is used in association with the following related manuals:

- ISSA Program Manual (ISPM);
- IOSA Program Manual (IPM);
- IATA Reference Manual for Audit Programs (IRM);
- IOSA Audit Handbook (IAH).

The ISPM, IPM, IRM and IAH comprise the ISSA documentation system.



10 English Language

English is the official language of the ISSA Program; documents comprising the ISSA Documentation System are written in International English* in accordance with IATA policy.

The ISSA Program Manual requires auditors to ensure the English language version of this ISSM and/or ISSA Checklists is always used as the basis for a final determination of conformity or nonconformity with ISARPs during the conduct of an assessment. Versions of the ISSM or ISSA Checklists that have been translated into another language are subject to misinterpretation; therefore, any translated ISSA document is considered an unofficial reference.

* The official reference for International English in accordance with IATA policy is the online Merriam-Webster Dictionary (http://www.merriam-webster.com).

11 Manual Revisions

The ISSM is normally revised annually. In accordance with IATA policy, a revision to the ISSM (other than a temporary revision) will always result in a new edition of the ISSM.

The time period between the issuance of a new edition of the ISSM and the effective date of such new edition is typically four full months.

Should critical issues arise that affect the content of the ISSM, a temporary revision (TR) will be issued.

Usable Edition

For an initial ISSA registration or ISSA registration renewal audit, the operator, in conjunction with the audit organization (AO), normally determines the edition of the ISSM that will be used for an assessment.

The Operator has the option to select either:

- The edition that is effective on the day before the on-site phase of the assessment is scheduled to begin, or
- An edition that has been published prior to the day the on-site phase of the assessment is scheduled to begin, but has not yet become effective.

12 Conflicting Information

Manuals within the ISSA documentation system are not revised concurrently, thus creating the possibility of conflicting information in different manuals.

In the case of conflicting information in different ISSA manuals, the information contained in the manual with the most recent revision date can be assumed to be valid.

13 Definitions

The IATA Reference Manual for Audit Programs (IRM) contains the Glossary of Terms and the List of Abbreviations that are associated with the audit programs.

14 Authority

The ISSA Program operates under the authority of the IATA Operations Committee (OPC) with reference to the IATA Board of Governors (BoG).



Section 1 — Organization and Management System (ORG)

Applicability

Section 1 addresses the organization and management system of an operator for the purpose of ensuring the safety and security of aircraft operations.

Individual provisions or sub-specifications within a provision that:

- Begin with a conditional phrase ("If the Operator...") are applicable if the operator meets the condition(s) stated in the phrase.
- Do not begin with a conditional phrase are applicable to all operators unless determined otherwise by the Auditor.

General Guidance

Definitions of technical terms used in this manual, as well as the meaning of abbreviations and acronyms, are found in the IATA Reference Manual for Audit Programs (IRM).

1 Management and Control

1.1 Organization and Accountability

ORG 1.1.1 The Operator shall have a management system that has continuity throughout the organization and ensures control of operations and management of safety and security outcomes. **(GM)**

Guidance

Refer to the IRM for the definitions of Operations, Operator, Safety (Operational), Security (Aviation) and State.

A management system is documented in controlled company media at both the corporate and operational levels. Manuals or controlled electronic media are acceptable means of documenting the management system.

Documentation provides a comprehensive description of the scope, structure and functionality of the management system and depicts lines of accountability throughout the organization, as well as authorities, duties, responsibilities and the interrelation of functions and activities within the system for ensuring safe and secure operations.

Acceptable means of documentation include, but are not limited to, organograms (organization charts), job descriptions and other descriptive written material that define and clearly delineate the management system.

Documentation also reflects a functional continuity within the management system that ensures the entire organization works as a system and not as a group of independent or fragmented units (i.e., silo effect).

An effective management system is fully implemented and functional with a clear consistency and unity of purpose between corporate management and management in the operational areas.

The management system ensures compliance with all applicable standards and regulatory requirements. In addition to internal standards and regulations of the State, an operator may also be required to comply with authorities that have jurisdiction over operations that are conducted over the high seas or within a foreign country.

ORG 1.1.2 (Intentionally open)

ORG 1.1.3 The Operator shall identify one senior management official as the Accountable Executive who is accountable for performance of the management system as specified in ORG 1.1.1 and:

- Irrespective of other functions, has ultimate responsibility and accountability on behalf of the Operator for the implementation and maintenance of the safety management system (SMS) throughout the organization;
- (ii) Has the authority to ensure the allocation of resources necessary to manage safety and security risks to aircraft operations;
- (iii) Has overall responsibility and is accountable for ensuring operations are conducted in accordance with conditions and restrictions of the Air Operator Certificate (AOC), and in compliance with applicable regulations and standards of the Operator. **[SMS] (GM)**

Guidance

Refer to the IRM for the definitions of Accountability, Accountable Executive, Authority, Aircraft Operations, Responsibility, Safety Risk Management and Senior Management.

The requirement for an Accountable Executive is an element of the Safety Policy and Objectives component of the SMS framework.

The designation of an Accountable Executive means the accountability for safety and security performance is placed at a level in the organization having the authority to take action to ensure the management system is effective. Therefore, the Accountable Executive is typically the chief executive officer (CEO), although, depending on the type and structure of the organization, it could be a different senior official (e.g. chairperson/member of the board of directors, company owner).

The Accountable Executive has the authority, which includes financial control, to make policy decisions, provide adequate resources, resolve operational quality, safety and security issues and, in general, ensure necessary system components are in place and functioning properly.

In an SMS, the Accountable Executive would typically have:

- Ultimate responsibility and accountability for the safety of the entire operation together with the implementation and maintenance of the SMS;
- Responsibility for ensuring the SMS is properly implemented in all areas of the organization and performing in accordance with specified requirements.

The Accountable Executive also is responsible for ensuring the organization is in compliance with requirements of applicable authorities (i.e. regulations), as well as its own policies and procedures, which may exceed existing regulations or address areas that are not regulated (e.g. ground handling operations). An operator's policies and procedures are typically published in its Operations Manual (OM).

To ensure that the operator continues to meet applicable requirements, the Accountable Executive might designate a manager with the responsibility for monitoring compliance. The role of such manager would be to ensure that the activities of the operator are monitored for compliance with the applicable regulatory requirements, as well as any additional requirements as established by the operator, and that these activities are being carried out properly under the supervision of the relevant head of functional area.

Expanded guidance may be found in the ICAO SMM, Document 9859.

ORG 1.1.4–1.1.9 (Intentionally open)

Safety Management System

ORG 1.1.10A The Operator *should* have an SMS that is implemented and integrated throughout the organization to ensure management of the safety risks associated with aircraft operations. **[SMS] (GM)**

Note: Conformity with this ORG recommended practice is possible only when the Operator is in conformity with all standards and recommended practices that are identified by the **[SMS]** symbol.

Note: Effective 1 November 2019, this recommended practice will be upgraded to a standard (see ORG 1.1.10B).



Guidance

Refer to the IRM for the definitions of Safety Management System (SMS) and State Safety Program (SSP).

The specifications for an operator's SMS in this recommended practice are derived from the SMS Framework, which is published in Annex 19 to the Convention on International Civil Aviation (ICAO Annex 19). The SMS Framework specifies the four major components and 12 elements that make up the basic structure of an SMS.

Where applicable, an SMS is designed and implemented in accordance with the State Safety Program (SSP). The manner in which the elements of SMS are implemented typically reflects the size and complexity of the operator's organization.

In general, an SMS is designed and implemented to:

- Identify safety hazards in operations;
- Ensure remedial action is implemented to control safety risks;
- Provide for ongoing monitoring and assessment of safety performance;
- Make continual improvement to the level of safety in operations.

The specific requirements for each operator's SMS will normally be found in the regulations associated with the SSP. In addition, states would typically publish guidance designed to assist operators in the implementation of SMS.

A description of an operator's SMS is contained in documentation as specified in ORG 2.1.5.

Expanded guidance may be found in the ICAO Safety Management Manual (ICAO SMM), Document 9859.

ORG 1.1.10B Effective 1 November 2019, the Operator shall have an SMS that is implemented and integrated throughout the organization to ensure management of the safety risks associated with aircraft operations. **[SMS] (GM)**

Guidance

Refer to the guidance associated with ORG 1.1.10A.

ORG 1.1.11 (Intentionally open).

ORG 1.1.12A The Operator *should* designate a manager who is responsible for the implementation, maintenance and day-to-day administration of the SMS throughout the organization on behalf of the Accountable Executive and senior management. **[SMS] (GM)**

Note: Effective 1 November 2017, this recommended practice will be upgraded to a standard (see ORG 1.1.12B).

Guidance

The requirement for a manager that focuses on the administration and oversight of the SMS on behalf of the accountable executive is an element of the Safety Policy and Objectives component of the SMS framework.

The individual assigned responsibility for organizational implementation of an SMS is ideally a management official that reports to the accountable executive. Also, depending on the size, structure and scope of an operator's organization, such individual may be assigned functions in addition to those associated with the SMS manager position.

The title assigned to the designated manager will vary for each organization. Regardless of title, the manager is the designated organizational focal point for the day-to-day development, administration and maintenance of the SMS (i.e. functions as the SMS *champion*). It is important that such manager has the necessary degree of authority when coordinating and addressing safety matters throughout the organization.

Whereas the designated manager has responsibility for day-to-day oversight of the SMS, overall accountability for organizational safety rests with the accountable executive. Likewise, nominated officials (refer to ORG 1.1.4) or operational managers always retain the responsibility (and thus are accountable) for ensuring safety in their respective areas of operations.

Expanded guidance may be found in the ICAO SMM, Document 9859.

ORG 1.1.12B Effective 1 November 2017, the Operator shall designate a manager who is responsible for the implementation, maintenance and day-to-day administration of the SMS throughout the organization on behalf of the Accountable Executive and senior management. **[SMS] (GM)**

Guidance

Refer to the guidance associated with ORG 1.1.12A.

1.2 Management Commitment

ORG 1.2.1 The Operator shall have a corporate safety policy that:

- (i) Reflects the organizational commitment regarding safety;
- Includes a statement about the provision of the necessary resources for the implementation of the safety policy;
- (iii) Is communicated throughout the organization. [SMS] (GM)

Guidance

The requirement for an operator to have a defined safety policy is an element of the Safety Policy and Objectives component of the SMS framework.

The safety policy typically also reflects the commitment of senior management to:

- Compliance with applicable regulations and standards of the Operator;
- Ensuring the management of safety risks to aircraft operations;
- The promotion of safety awareness;
- Continual improvement of operational performance.

The safety policy is typically reviewed periodically to ensure continued relevance to the organization.

Such policy might be documented in the operations manual or other controlled document, and, to enhance effectiveness, is communicated and made visible throughout the organization through dissemination of communiqués, posters, banners and other forms of information in a form and language which can be easily understood. To ensure continuing relevance, the corporate policy is normally reviewed for possible update a minimum of every two years.

Consistent with the structure and complexity of the operator's organization, the corporate safety policy may be issued as a stand-alone policy or combined with either or both of the policies specified in ORG 1.2.2 and ORG 1.2.3.

Expanded guidance may be found in the ICAO SMM, Document 9859.

ORG 1.2.2 (Intentionally open)

ORG 1.2.3A The Operator *should* have a corporate safety reporting policy that encourages personnel to report hazards to aircraft operations and, in addition, defines the Operator's policy regarding disciplinary action, to include:

- (i) Types of operational behaviors that are unacceptable;
- (ii) Conditions under which disciplinary action would not apply. [SMS] (GM)

Note: Effective 1 November 2016, this recommended practice will be upgraded to a standard (see ORG 1.2.3B).

Guidance

The requirement for an operator to have a safety reporting policy is an element of the Safety Policy and Objectives component of the SMS framework.

Safety reporting is a key aspect of SMS hazard identification and risk management.

Such a policy is typically documented in operations manuals or other controlled documents.

Consistent with the structure and complexity of the operator's organization, the safety reporting policy may be issued as a stand-alone policy or combined with the safety policy specified in ORG 1.2.1.



A safety reporting policy encourages and perhaps even provides incentive for individuals to report hazards and operational deficiencies to management. It also assures personnel that their candid input is highly desired and vital to safe and secure operations.

The safety reporting policy is typically reviewed periodically to ensure continuing relevance to the organization.

Refer to ORG 3.1.3, 3.1.4 and 3.1.5, each of which specifies types of safety reporting.

ORG 1.2.3B Effective 1 November 2016, the Operator shall have a corporate safety reporting policy that encourages personnel to report hazards to aircraft operations and, in addition, defines the Operator's policy regarding disciplinary action, to include:

- (i) Types of operational behaviors that are unacceptable;
- (ii) Conditions under which disciplinary action would not apply. [SMS] (GM)

Guidance

Refer to the guidance associated with ORG 1.2.3A.

1.3 Accountabilities, Authorities and Responsibilities

ORG 1.3.1 The Operator shall ensure the management system defines the safety accountabilities, authorities and responsibilities of management and non-management personnel throughout the organization, and specifies:

- (i) The levels of management with the authority to make decisions that affect the safety and/or security of aircraft operations;
- (ii) Responsibilities for ensuring operations are conducted in accordance with applicable regulations and standards of the Operator;
- (iii) Accountabilities of members of management, irrespective of other functions, as well as of non-management personnel, with respect to the safety performance of the organization. [SMS] (GM)

Guidance

The definition of authorities and responsibilities of management and non-management personnel is an element of the Safety Policy and Objectives component of the SMS framework.

In the context of an SMS, accountability means being responsible for taking corrective actions, either to address hazards and/or errors identified through reporting or from other sources, or in response to events, such as accidents and incidents.

An effective management system has lines of authority and responsibility that flow from corporate senior management into all operational areas of the organization.

Delegation of authority and assignment of responsibility is described and communicated such that it is understood throughout the organization. As a minimum, organization charts, or organograms, are acceptable means for documenting the structure of a management system.

Management positions critical to operational safety or security may require enhanced job descriptions or terms of reference that reflect specialized requirements inherent in certain key positions. Such specialized requirements would include any delegation of authority exercised by personnel on behalf of an authority (e.g., designated or authorized flight examiner).

Compliance with regulatory requirements, as well as internal policies and procedures, is an essential element of a safe and secure operational environment. The responsibility for ensuring compliance with both regulatory and internal requirements is specified and assigned within the management system. Job descriptions, terms of reference and operating manuals are examples of appropriate locations for documenting management system responsibilities.

Expanded guidance may be found in the ICAO SMM, Document 9859.



1.4 Communication

ORG 1.4.1 (Intentionally open)

ORG 1.4.2A The Operator *should* have processes for the communication of safety information throughout the organization to ensure personnel maintain an awareness of the SMS and current operational safety issues. **[SMS] (GM)**

Note: Effective 1 November 2016, this recommended practice will be upgraded to a standard (see ORG 1.1.12B).

Guidance

Safety communication is an element of the Safety Promotion component of the SMS framework.

The general intent of safety communication is to foster a positive safety culture in which all employees receive ongoing information on safety issues, safety metrics, specific hazards existing in the workplace, and initiatives to address known safety issues. Such communication typically conveys safety-critical information, and explains why particular safety actions are taken and why safety procedures are introduced or changed.

Expanded guidance may be found in the ICAO SMM, Document 9859.

ORG 1.4.2B Effective 1 November 2016, the Operator shall have processes for the communication of safety information throughout the organization to ensure personnel maintain an awareness of the SMS and current operational safety issues. **[SMS] (GM)**

Guidance

Refer to the guidance associated with ORG 1.4.2A.

1.5 Management Review

ORG 1.5.1 (Intentionally open)

ORG 1.5.2A The Operator *should* have processes to review and ensure continual improvement of the SMS throughout the organization, to include:

- (i) Identification of the cause(s) of substandard performance of the SMS;
- (ii) Determination of the implications of substandard performance of the SMS in operations;
- (iii) Elimination or mitigation of such cause(s) of substandard performance. [SMS] (GM)

Note: Effective 1 November 2017, this recommended practice will be upgraded to a standard (see ORG 1.5.2B).

Guidance

Refer to the IRM for the definitions of Safety Assurance, Safety Action Group (SAG), Safety Review Board (SRB) and Substandard Performance.

Continual improvement of the SMS is an element of the Safety Assurance component of the SMS framework.

Continual improvement would normally be overseen by a strategic committee of senior management officials that are familiar with the workings and objectives of the SMS. Such committee is typically referred to as a Safety Review Board (SRB), which is a very high level, strategic committee chaired by the accountable executive and composed of senior managers, including senior line managers responsible for functional areas in operations (e.g. flight operations, engineering and maintenance, cabin operations).

To ensure front line input as part of the SMS review process, an operator would form multiple units of specially selected operational personnel (e.g. managers, supervisors, front line personnel) that function to oversee safety in areas where operations are conducted. Such units are typically referred to as Safety Action Groups (SAGs), which are tactical committees that function to address implementation issues in front line operations to satisfy the strategic directives of the SRB.

In a situation where an operator might have SMS only partially implemented, the operator would demonstrate that the processes specified in this provision are being applied to ensure continual



improvement of the SMS elements that have been implemented and, as feasible, elements in the process of being implemented.

Expanded guidance may be found in the ICAO SMM, Document 9859.

ORG 1.5.2B Effective 1 November 2017, the Operator shall have processes to review and ensure continual improvement of the SMS throughout the organization, to include:

- (i) Identification of the cause(s) of substandard performance of the SMS;
- (ii) Determination of the implications of substandard performance of the SMS in operations;
- (iii) Elimination or mitigation of such cause(s) of substandard performance. [SMS] (GM)

Guidance

Refer to the guidance associated with ORG 1.5.2A.

1.6 Provision of Resources

ORG 1.6.1–1.6.4 (Intentionally open)

ORG 1.6.5A The Operator *should* have a program that ensures personnel throughout the organization are trained and competent to perform SMS duties. The scope of such training *should* be appropriate to each individual's involvement in the SMS. **[SMS] (GM)**

Note: Effective 1 November 2017, this recommended practice will be upgraded to a standard (see ORG 1.6.5B).

Guidance

SMS training is an element of the Safety Promotion component of the SMS framework.

Within an SMS both management personnel (including the accountable executive) and non-management personnel are expected to complete SMS training. The content of such training is appropriate to the individual's responsibilities and involvement in the SMS

A training curriculum typically includes modules that provide an overview of the elements of SMS, such as:

- Event investigation and analysis techniques;
- Hazard identification;
- Risk assessment and mitigation;
- Audit principles and methodology;
- Communication techniques;
- Safety reporting;
- SMS implementation, analysis and continual improvement;
- Emergency response preparedness.

Expanded guidance may be found in the ICAO SMM, Document 9859.

ORG 1.6.5B Effective 1 November 2017, the Operator shall have a program that ensures personnel throughout the organization are trained and competent to perform SMS duties. The scope of such training shall be appropriate to each individual's involvement in the SMS. **[SMS] (GM)**

Guidance

Refer to the guidance associated with ORG 1.6.5A.



- 1.7 (Intentionally Open)
- 1.8 (Intentionally Open)

2 Documentation and Records

2.1 Documentation System

ORG 2.1.1 The Operator shall have a system for the management and control of documentation and/or data used directly in the conduct or support of operations. Such system shall comprise the elements specified in Table 1.1. **(GM)**

Guidance

Refer to the IRM for the definition of Documentation and Electronic Documentation.

The primary purpose of document control is to ensure necessary, accurate and up-to-date documents are available to those personnel required to use them, to include, in the case of outsourced operational functions, employees of external service providers.

Examples of documents that are controlled include, but are not limited to, operations manuals, checklists, quality manuals, training manuals, process standards, policy manuals, and standard operating procedures.

Documentation received from external sources would include manuals and other types of relevant documents that contain material that is pertinent to the safety of operations conducted by the operator (e.g. regulations, operating standards, technical information and data).

An electronic system of document management and control is an acceptable means of conformance. Within such a system, document files are typically created, maintained, identified, revised, distributed, accessed, presented, retained and/or deleted using computer systems (e.g. a web-based system). Some systems specify immediate obsolescence for any information or data that is downloaded or otherwise extracted (e.g. printed on paper) from the electronic files. Document control might include:

- Retention of a master copy;
- Examination and approval prior to issue;
- Review and update, to include an approval process;
- Version control (electronic documents);
- Identification of revision status;
- Identification and retention of revisions as history;
- Identification and retention of background or source references as history;
- Distribution to ensure appropriate availability at points of use;
- Checking of documents to verify they remain legible and readily identifiable;
- As required, identification, update, distribution and retention of documents of external origin;
- As applicable, identification and retention of obsolete documents;
- As applicable, disposal of documents.

Additionally, control of operational manuals might include:

- Assignment of an individual with responsibility for approval for contents;
- A title page that generally identifies the operational applicability and functionality;
- A table of contents that identifies parts and sub-parts;
- A preface or introduction outlining the general contents of the manual;
- Reference numbers for the content of the manual;
- A defined distribution method and identification of recipients;
- Identification of responsibility for authorizing the manual;
- A record of revisions, both temporary and permanent;



- A list of effective pages within the manual;
- Identification of revised content.

Each "loose" documented procedure that is not held within a manual typically includes:

- A title page that identifies the operational applicability and functionality;
- Identification of the date(s) of issue and date of effectiveness;
- Reference numbers for the content;
- A distribution list;
- Identification of responsibility for authorizing the document.

ORG 2.1.2–2.1.4 (Intentionally open)

ORG 2.1.5A The Operator should have SMS documentation that includes a description of:

- The safety policy and objectives, SMS requirements, SMS processes and procedures, the accountabilities, authorities and responsibilities for processes and procedures, and the SMS outputs;
- (ii) Its approach to the management of safety, which is contained in a manual as a means of communication throughout the organization. **[SMS] (GM)**

Note: Effective 1 November 2017, this recommended practice will be upgraded to a standard (see ORG 2.1.5B).

Guidance

SMS documentation is an element of the Safety Policy and Objectives component of the SMS framework.

SMS documentation is typically scaled to the size and complexity of the organization, and describes both the corporate and operational areas of safety management to show continuity of the SMS throughout the organization. Typical documentation would include a description of management positions and associated accountabilities, authorities, and responsibilities within the SMS.

Requirements for SMS documentation will vary according to the individual state safety program (SSP).

SMS documentation typically addresses:

- Scope of the SMS;
- Safety policy and objectives;
- Safety accountabilities;
- Key safety personnel;
- Documentation control procedures;
- Coordination of emergency response planning;
- Hazard identification and risk management schemes;
- Safety assurance;
- Safety performance monitoring;
- Safety auditing (safety and quality auditing may be combined);
- Management of change;
- Safety promotion;
- Outsourced services.

To ensure personnel throughout the organization are informed, SMS documentation includes a description of the operator's approach to safety management. Such descriptive information would be contained in a manual and presented in a manner that ensures the SMS information is clearly identifiable. The exact title and structure of such manual will vary with each operator.

SMS documentation supports the management of operations and would be subject to management and control as specified in ORG 2.1.1.

For an operator that is in the process of working toward full SMS implementation, documentation would typically include an SMS implementation plan that details the way the operator will structure its organization, resources and processes to effectively manage safety in operations. It is a realistic strategy for implementation of SMS with a realistic timeline of activities.

The SMS implementation plan may be a stand-alone document or it can be a distinct SMS section or chapter within an existing organizational document that is approved by the Authority. Where details of the organization's SMS processes are already addressed in existing documents, appropriate cross referencing to such documents is sufficient.

The SMS implementation plan is kept up to date by the operator. When significant amendments are made, acceptance by the Authority might be required.

Expanded guidance may be found in the ICAO SMM, Document 9859.

ORG 2.1.5B Effective 1 November 2017, the Operator shall have SMS documentation that includes a description of:

- The safety policy and objectives, SMS requirements, SMS processes and procedures, the accountabilities, authorities and responsibilities for processes and procedures, and the SMS outputs;
- (ii) Its approach to the management of safety, which is contained in a manual as a means of communication throughout the organization. **[SMS] (GM)**

Guidance

Refer to the guidance associated with ORG 2.1.5A.

2.2 Records System

ORG 2.2.1 The Operator shall have a system for the management and control of operational records to ensure the content and retention of such records is in accordance with requirements of the Authority, as applicable, and to ensure operational records are subjected to standardized processes for:

- (i) Identification;
- (ii) Legibility;
- (iii) Maintenance;
- (iv) Retrieval;
- (v) Protection and security;
- (vi) Disposal, deletion (electronic records) and archiving. (GM)

Guidance

The system addresses the management and control of all records associated with operations, which includes personnel training records, and also includes any other records that document the fulfillment of operational requirements (e.g. aircraft maintenance, operational control, operational security).

3 Safety Management

3.1 Safety Risk Management

ORG 3.1.1A The Operator *should* have a hazard identification program that is implemented and integrated throughout the organization, to include:

- (i) A combination of reactive and proactive methods for safety data collection;
- (ii) Processes for safety data analysis that identify existing hazards and predict future hazards to aircraft operations. **[SMS] (GM)**

Note: Effective 1 November 2018, this recommended practice will be upgraded to a standard (see ORG 3.1.1B).



Guidance

Refer to the IRM for the definitions of Hazard (Aircraft Operations) and Safety Risk. Hazard identification is an element of the Safety Risk Management component of the SMS framework.

The methods used to identify hazards will typically depend on the resources and constraints of each particular organization. Some organizations might deploy comprehensive, technology-intensive hazard identification processes, while organizations with smaller, less complex operations might implement more modest hazard identification processes. Regardless of organizational size or complexity, to ensure all hazards are identified to the extent possible, hazard identification processes are necessarily formalized, coordinated and consistently applied on an on-going basis in all areas of the organization where there is a potential for hazards that could affect aircraft operations.

To be effective, reactive and proactive processes are used to acquire information and data, which are then analyzed to identify existing or predict future (i.e. potential) hazards to aircraft operations. Examples of processes that typically yield information or data for hazard identification include:

- Confidential or other reporting by personnel;
- Investigation of accidents, incidents, irregularities and other non-normal events;
- Flight data analysis;
- Observation of flight crew performance in line operations and training;
- Quality assurance and/or safety auditing;
- Safety information gathering or exchange (external sources).

Processes would be designed to identify hazards that might be associated with organizational business changes (e.g. addition of new routes or destinations, acquisition of new aircraft type(s), the introduction of significant outsourcing of operational functions).

Typically hazards are assigned a tracking number and recorded in a log or database. Each log or database entry would normally include a description of the hazard, as well as other information necessary to track associated risk assessment and mitigation activities.

Expanded guidance may be found in the ICAO SMM, Document 9859.

ORG 3.1.1B Effective 1 November 2018, the Operator shall have a hazard identification program that is implemented and integrated throughout the organization, to include:

- (i) A combination of reactive and proactive methods for safety data collection;
- (ii) Processes for safety data analysis that identify existing hazards and predict future hazards to aircraft operations. **[SMS] (GM)**

Guidance

Refer to the guidance associated with ORG 3.1.1A.

ORG 3.1.2A The Operator *should* have a safety risk assessment and mitigation program that includes processes implemented and integrated throughout the organization to ensure:

- (i) Hazards are analyzed to determine corresponding safety risks to aircraft operations;
- (ii) Safety risks are assessed to determine the requirement for risk mitigation action(s);
- (iii) When required, risk mitigation actions are developed and implemented in operations. **[SMS] (GM)**

Note: Effective 1 November 2018, this recommended practice will be upgraded to a standard (see ORG 3.1.2B).

Guidance

Risk assessment and mitigation is an element of the Safety Risk Management component of the SMS framework.

To be completely effective, a risk assessment and mitigation program would typically be implemented in a manner that:

- Is active in all areas of the organization where there is a potential for hazards that could affect aircraft operations;
- Has some form of central coordination to ensure all existing or potential hazards that have been identified are subjected to risk assessment and, if applicable, mitigation.

The safety risks associated with an identified existing or potential hazard are assessed in the context of the potentially damaging consequences related to the hazard. Safety risks are generally expressed in two components:

- Likelihood of an occurrence;
- Severity of the consequence of an occurrence.

Typically, matrices that quantify safety risk acceptance levels are developed to ensure standardization and consistency in the risk assessment process. Separate matrices with different risk acceptance criteria are sometimes utilized to address long-term versus short-term operations.

A risk register is often employed for the purpose of documenting risk assessment information and monitoring risk mitigation (control) actions.

Expanded guidance may be found in the ICAO SMM, Document 9859.

ORG 3.1.2B Effective 1 November 2018, the Operator shall have a safety risk assessment and mitigation program that includes processes implemented and integrated throughout the organization to ensure:

- (i) Hazards are analyzed to determine corresponding safety risks to aircraft operations;
- (ii) Safety risks are assessed to determine the requirement for risk mitigation action(s);
- (iii) When required, risk mitigation actions are developed and implemented in operations. **[SMS] (GM)**

Guidance

Refer to the guidance associated with ORG 3.1.2A.

Operational Reporting

ORG 3.1.3 The Operator shall have an operational safety reporting system that is implemented throughout the organization in a manner that:

- (i) Encourages and facilitates personnel to submit reports that identify safety hazards, expose safety deficiencies and raise safety concerns;
- (ii) Ensures mandatory reporting in accordance with applicable regulations;
- (iii) Includes analysis and management action as necessary to address safety issues identified through the reporting system. **[SMS] (GM)**

Guidance

Operational reporting is considered a *proactive* hazard identification activity in an SMS.

Frontline personnel, such as flight or cabin crew members and maintenance technicians, are exposed to hazards and face challenging situations as part of their everyday activities. An operational reporting system provides such personnel with a means to report these hazards or any other safety concerns so they may be brought to the attention of relevant managers.

To build confidence in the reporting process and encourage more reporting, an acknowledgement of receipt is typically provided to each person that submits a report.

An effective system provides for a review and analysis of each report to determine whether a real safety issue exists, and if so, ensure development and implementation of appropriate action by responsible management to correct the situation.

Expanded guidance may be found in the ICAO SMM, Document 9859.



3.2 Safety Assurance

ORG 3.2.1A The Operator *should* have processes for setting performance measures as a means to monitor the operational safety performance of the organization and to validate the effectiveness of safety risk controls. **[SMS] (GM)**

Note: Effective 1 November 2019, this recommended practice will be upgraded to a standard (see ORG 3.2.1B).

Guidance

Refer to the IRM for the definition of Performance Measures.

Setting measurable safety objectives is an element of the Safety Assurance component of the SMS framework.

By setting performance measures, an operator is able to track and compare its operational performance against a target (i.e. the performance objective, typically expressed as a rate or number reduction) over a period of time (e.g. one year). Achievement of the target (or objective) would represent an improvement in the operational performance. The use of performance measures is an effective method to determine if desired safety outcomes are being achieved, and to focus attention on the performance of the organization in managing operational risks and maintaining compliance with relevant regulatory requirements.

In addressing operational performance, meaningful measures typically focus on lower level (i.e. lower consequence) occurrences or conditions that are considered by the operator to be precursors to serious events. Performance measures may be specific to a certain area of operations or may be broad and apply to the entire system.

In addressing compliance, meaningful measures, as a minimum, would focus on compliance with significant regulatory requirements (as determined by the operator) in all operational areas.

Ideally, performance measures are designed to be challenging, which, in turn, enhances the effectiveness of the risk management system.

Performance measures may be set in almost any operations or maintenance area. Some possible examples include:

- Flight operations (e.g., landing tail strikes, unsatisfactory line or training evaluations);
- Operational control (e.g., fuel diversions due to fuel);
- Engineering and maintenance (in-flight engine shutdowns, aircraft component/equipment failures);
- Cabin operations (inadvertent slide deployments);
- Ground handling (aircraft damages due to vehicles or equipment);
- Cargo operations (dangerous goods spills);
- Operational security (unauthorized interference or access events).

Expanded guidance may be found in the ICAO SMM, Document 9859.

ORG 3.2.1B Effective 1 November 2019, the Operator shall have processes for setting performance measures as a means to monitor the operational safety performance of the organization and to validate the effectiveness of safety risk controls. **[SMS] (GM)**

Guidance

Refer to the guidance associated with ORG 3.2.1A.

ORG 3.2.2A The Operator *should* have a process to identify changes within or external to the organization that have the potential to affect the safety of aircraft operations, and:

- For internal changes, ensure safety risk is considered before such changes are implemented;
- (ii) For external changes, evaluate the adequacy of existing risk controls when such changes will affect the operational environment. **[SMS] (GM)**

Note: Effective 1 November 2019, this recommended practice will be upgraded to a standard (see ORG 3.2.2B).

Guidance

Refer to the IRM for the definition of Change Management.

Change management is an element of the Safety Assurance component of the SMS framework.

Change management is considered a proactive hazard identification activity in an SMS.

Change may affect the appropriateness or effectiveness of existing safety risk mitigation strategies. In addition, new hazards and related safety risks may be inadvertently introduced into an operation whenever change occurs.

A change management process is designed to ensure risk management is applied to any internal or external changes that have the potential to affect established operational processes, procedures, products and services.

Internal changes typically include organizational expansion, contraction or consolidation, new initiatives, business decisions, as well as the introduction of new or the modification of existing systems, equipment, programs, products or services.

External changes could include new regulatory requirements or changes to the operating environment (e.g. new security regulations, amendments to the dangerous goods regulations, changes to the air traffic control system).

Expanded guidance may be found in the ICAO SMM, Document 9859.

ORG 3.2.2B Effective 1 November 2019, the Operator shall have a process to identify changes within or external to the organization that have the potential to affect the safety of aircraft operations, and:

- For internal changes, ensure safety risk is considered before such changes are implemented;
- (ii) For external changes, evaluate the adequacy of existing risk controls when such changes will affect the operational environment. **[SMS] (GM)**

Guidance

Refer to the guidance associated with ORG 3.2.2A.

3.3 Flight Safety Analysis Program

ORG 3.3.1 The Operator shall have a flight safety analysis program that provides for the identification of hazards and the analysis of information and data associated with aircraft operations, to include:

- (i) Implementation of systematic processes for identifying and analyzing hazards and potentially hazardous conditions;
- (ii) Production of relevant analytical information and data for use by operational managers in the prevention of accidents and incidents. **[SMS] (GM)**

Guidance

Refer to the IRM for the definition of Flight Safety Analysis Program.

A primary function of a flight safety analysis program is hazard identification, which is an element of the Safety Risk Management component of the SMS framework.

In many organizations the flight safety analysis program is typically known as the flight safety program.

The flight safety analysis program primarily provides operational hazard identification and data analysis services for use by operational managers.

In some operators the flight safety analysis program is part of an independent corporate safety structure, which typically has a direct line of reporting to senior management. This type of structure allows an effective and fully integrated system of prevention and safety across all relevant operational disciplines of the organization.



Other operators choose to have a flight safety analysis program reside within an operational unit (e.g., flight operations). In this type of system, to ensure objectivity in addressing safety matters and independence from frontline operational managers, the program manager would not only have a direct reporting line to the head of that operational unit, but also an indirect reporting line to senior management.

Other operators choose to have a flight safety analysis program reside within an operational unit (e.g., flight operations). In this type of system, to be effective in addressing safety matters and independent from frontline operational managers, the program manager would not only have a direct reporting line to the head of that operational unit, but also an indirect reporting line to senior management.

Documentation of the program typically includes a description of the structure, individual responsibilities, available resources and core processes associated with the program. Expanded guidance may be found in the ICAO SMM, Document 9859.

ORG 3.3.2–3.3.9 (Intentionally open)

Program Elements

ORG 3.3.10 The Operator shall have a process for the investigation of aircraft accidents and incidents, to include reporting of events in accordance with requirements of the State. **[SMS] (GM)**

Guidance

Accident and incident investigation is considered a *reactive* hazard identification activity in an SMS. A primary purpose of accident and incident investigation is hazard identification, which is an element of the Safety Risk Management component of the SMS framework.

Investigations typically result in a report that describes the factors that contributed to the event, which is then made available to responsible senior operational managers to permit them to evaluate and implement appropriate corrective or preventive action.

An effective investigation process typically includes:

- Qualified personnel to conduct investigations (commensurate with operation size);
- Procedures for the conduct of investigations;
- A process for reporting investigative results;
- A system for implementing any corrective or preventive action;
- An interface with relevant external investigative authorities (when applicable);
- A process for the dissemination of information derived from investigations.

To ensure awareness among operational personnel, information derived from investigations is disseminated to relevant areas throughout the organization.

In the event of a major accident, an operator responds to and possibly participates in an investigation in accordance with provisions contained in ICAO Annex 13. Such capability requires an operator to maintain an ongoing interface with relevant investigative authorities to ensure preparedness in the event a major accident occurs.

Expanded guidance may be found in the ICAO SMM, Document 9859.

ORG 3.3.11–3.3.12 (Intentionally open)

ORG 3.3.13 The Operator shall have a flight data analysis (FDA) program that is non-punitive and contains adequate safeguards to protect data sources. The program shall include *either*:

- (i) For aircraft of a maximum certified takeoff mass in excess of 27,000 kg (59,525 lb), a systematic download and analysis of electronically recorded aircraft flight data, *or*
- (ii) For all aircraft, a systematic acquisition, correlation and analysis of flight information derived from a combination of some or all of the following sources:
 - (a) Aircraft flight data recorder (FDR) readouts;
 - (b) Confidential flight and cabin crew operational safety reports;

- (c) Flight and cabin crew interviews;
- (d) Quality assurance findings;
- (e) Flight and cabin crew evaluation reports;
- (f) Aircraft engineering and maintenance reports. [SMS] (GM)

Note: Item ii) is a Parallel Conformity Option in effect until 31 December 2016.

Guidance

Refer to the IRM for the definition of Flight Data Analysis (FDA) Program.

Flight data analysis is considered a *reactive* and *proactive* hazard identification activity in an SMS. A primary purpose of an FDA program is hazard identification, which is an element of the Safety Risk Management component of the SMS framework.

The systematic download and analysis of recorded flight data has been used by international airlines for many years to identify hazards, evaluate the operational environment, validate operating criteria and establish training effectiveness.

As a minimum, an acceptable program for the analysis of recorded aircraft flight data includes the following elements:

- A manager and staff of flight operations experts, commensurate with the size of the operation, to provide verification and analysis of the data collected from the aircraft fleet under the operator's program;
- Aircraft designated within the operator's fleet that provide downloadable flight data from onboard recording systems, such as the flight data recorder (FDR) or quick access recorder (QAR);
- A system for downloading and transferring recorded data from the aircraft to a data analysis system;
- A data analysis system that transforms raw digital data into a usable form of information that can then be verified, processed, categorized and analyzed by flight operations experts for flight safety purposes;
- A process for applying the output from flight data analysis to the management of risk and assessment of flight operations performance;
- A process for management of the data, to include security and retention.

All or certain of the elements could be outsourced to an external party; however, the operator would retain overall responsibility for the maintenance of the program.

The most comprehensive approach to flight data analysis would be a program that includes not only systematic download and analysis of electronically recorded aircraft flight data (as described above), but also acquisition, correlation and analysis of flight information derived from other sources (as described below).

Further guidance may be found in the ICAO Safety Management Manual (Doc 9859).

Parallel Conformity Option

If an operator does not have a process for the regular download and analysis of recorded flight data, then as an alternative the operator may have a systematic process for acquiring and correlating flight information from other sources that can be analyzed to identify hazards or potential hazards to flight.

Useful information can be derived from external sources to supplement flight data derived internally. Other such sources include:

- Regulatory authorities;
- Investigative bodies;
- Safety organizations;
- Manufacturers;
- Other operators.

Flight information is analyzed collectively to identify hazards, system weaknesses, process breakdowns, regulatory violations and other trends or conditions that could potentially lead to



accidents or serious incidents. The process includes a method of risk analysis and prioritization to enable the development and implementation of effective corrective or preventive action.

3.4 Quality Assurance Program

ORG 3.4.1 The Operator shall have a quality assurance program that provides for the auditing and evaluation of the management system, and of operations and maintenance functions, to ensure the organization is:

- (i) Complying with applicable regulations and standards of the Operator;
- (ii) Satisfying stated operational needs;
- (iii) Identifying areas requiring improvement;
- (iv) Identifying hazards to operations. [SMS] (GM)

Guidance

Refer to the IRM for the definition of Quality Assurance.

A quality assurance program serves to monitor, evaluate and continually improve operational safety performance, which are elements of the Safety Assurance component of the SMS framework.

Information gained from quality assurance audits can be used in the management of operational risk. Additionally, the quality assurance program could be structured to serve as a safety performance monitoring and measuring activity in an SMS. In some organizations the quality assurance program may have a different name (e.g. internal evaluation program).

A robust program ensures a scope of auditing that encompasses all areas of the organization that impact operational safety or security. The incorporation of ISSA Standards and Recommended Practices (ISSARPs) ensures appropriate management and operational areas are audited.

An effective audit program includes:

- Audit initiation, including scope and objectives;
- · Planning and preparation, including audit plan and checklist development;
- Observation and gathering of evidence to assess documentation and implementation;
- Analysis, findings, actions;
- Reporting and audit summary;
- Follow-up and close out.

To ensure auditors gather sufficient evidence to produce realistic assessments during an audit, the program typically includes guidance that defines the various sampling techniques that are expected to be used by auditors in the evidence collection phase of the audit.

The audit process typically includes a means whereby the auditor and responsible personnel from the audited area have a comprehensive discussion and reach agreement on the findings and corresponding corrective actions. Clear procedures are established to resolve any disagreement between the auditor and audited area.

All action items require follow-up to ensure closeout within an appropriate period of time.

ORG 3.4.2 The Operator shall have a designated manager with appropriate qualifications, authority and independence that is responsible for:

- (i) The performance of the quality assurance program;
- (ii) Ensuring communication and coordination with operational managers in the management of operational risk. (GM)

Guidance

Refer to the IRM for the definition of Quality Assurance Manager.

The designated manager (or multiple managers if an operator does not have a centralized program) is appointed to oversee the implementation of the activities and processes associated with the quality assurance program.

The exact title of the manager(s) designated as responsible for the quality assurance program may vary depending on the organization.

Operational managers have direct responsibility for the safety and security of operations, and therefore always have the authority to develop and implement corrective action as necessary to address audit findings in their respective areas of operations.

The manager of the quality assurance program is "operationally independent" in a manner that ensures objectivity is not subject to bias due to conflicting responsibilities.

To be effective, an individual designated as manager of the quality assurance program has appropriate qualifications for the position, which may include:

- Formal training or certification as a quality auditor;
- Relevant operational and auditing experience;
- Formal training in risk management.

Quality assurance audit activities may be centrally controlled or controlled within each relevant operational function as long as independence is maintained.

Typically, the manager of the quality assurance program has direct lines of communication to senior management to ensure the efficient reporting of safety and security issues, and to ensure such issues are appropriately addressed.

ORG 3.4.3 The Operator shall have a process for addressing findings that result from audits conducted under the quality assurance program, which ensures:

- (i) Identification of root cause(s);
- (ii) Development of corrective action as appropriate to address findings;
- (iii) Implementation of corrective action in appropriate operational area(s);
- (iv) Evaluation of corrective action to determine effectiveness.

ORG 3.4.4–3.4.9 (Intentionally open)

Program Elements

ORG 3.4.10 The Operator shall have an audit planning process and sufficient resources, including auditors as specified in ORG 3.4.12 to ensure audits are:

- (i) Scheduled at intervals to meet regulatory and management system requirements;
- (ii) Completed within a specified time period. (GM)

Guidance

The planning process produces a schedule of all audit modules to be conducted within the planning period (e.g., calendar year) and reflect the status of each audit module, to include the applicable audit interval (e.g., 12, 24, 36 months), the date of the previous audit and the scheduled due date for the next audit.

ORG 3.4.11 (Intentionally open)

ORG 3.4.12 The Operator shall ensure the quality assurance program utilizes auditors that:

- (i) Have been appropriately trained and qualified;
- (ii) Are impartial and functionally independent from the operational activities to be audited. (GM)

Guidance

A quality assurance program is independent in a manner that permits the scheduling and conduct of audits as deemed appropriate for the size and scope of operations. Functional independence ensures auditors are not put in a position where their objectivity may be subject to bias due to conflicting responsibilities. Quality audit principles forbid an auditor from auditing his or her own work area.

To be effective, auditors receive an appropriate level of formal training that develops competency in quality auditing skills and techniques.



A code of conduct may be used to enhance the impartiality and independence of auditors. An effective auditor code of ethics would require auditors:

- To act in a strictly trustworthy and unbiased manner in relation to both the organization to which they are employed, contracted or otherwise formally engaged and any other organization involved in an audit performed by them or by personnel under their direct control;
- To disclose to their employer any relationship they may have with the organization to be audited before undertaking any audit function in respect of that organization;
- Not to accept any gift, commission, discount or any other profit from the organization audited, from their representatives, or from any other interested person nor knowingly allow personnel for whom they are responsible to do so;
- Not to disclose the findings, or any part of them, nor to disclose any other information gained in the course of the audit to any third party, unless authorized in writing by both the auditee and the audit organization, if applicable;
- Not to act in any way prejudicial to the reputation or interest of the audit organization; and
- In the event of any alleged breach of this code, to co-operate fully in any formal enquiry procedure.

An auditor may be considered functionally independent from the operational activities to be audited when he/she is not responsible for the activity being audited (at the time of the audit).

ORG 3.4.13 (Intentionally open)

ORG 3.4.14 The Operator *should* have an electronic database to ensure effective management of data derived from the quality assurance program. **(GM)**

Guidance

Refer to the IRM for the definition of Database.

Use of an electronic database provides the capability to record and retain audit data in an organized and usable manner.

3.5 Outsourcing Quality Control

ORG 3.5.1 The Operator shall have processes to ensure a contract or agreement is executed with external service providers that conduct outsourced operations, maintenance or security functions for the Operator. Such contract or agreement shall identify measurable specifications that can be monitored by the Operator to ensure requirements that affect the safety and/or security of operations are being fulfilled by the service provider. **(GM)**

Guidance

Refer to the IRM for the definitions of Outsourcing and Service Level Agreement.

An operator would always retain full responsibility for ensuring an outsourced function is performed properly by an external provider, even if such provider is the parent organization or an affiliate of the operator.

A contract or agreement is necessary to ensure details of the outsourced functions to be performed by the external service provider are formally documented. Inclusion of measurable specifications, usually contained in a service level agreement, would provide the basis for a monitoring process.

3.6 **Product Quality Control**

ORG 3.6.1 The Operator *should* have processes to ensure equipment or other operational products relevant to the safety or security of aircraft operations that are purchased or otherwise acquired from an external vendor or supplier meet the product technical requirements specified by the Operator prior to being used in the conduct of operations or aircraft maintenance. **(GM)**



Guidance

This provision applies only to *products* that are purchased or otherwise acquired from an external supplier or vendor. Whereas purchasing might be the most typical means of acquiring such products, other means might be also be used (e.g. lease, barter).

This provision does not apply to outsourced *operational functions* or *services* that are provided by an external organization or service provider (this is addressed in ORG 3.5.1 and 3.5.2).

This provision does not apply to electronic navigation data products utilized in flight (e.g., FMS database) or for operational control (e.g. flight planning database). The acquisition of such navigation data products require control procedures, as specified in Section 2 (FLT) of this manual.

Following are some examples of products that could have a negative effect on operations if put into service with substandard quality (i.e. the operator's technical standards are not met):

- Training devices (e.g. simulators, door mock-ups);
- Cabin safety cards or videos;
- Cabin service carts or trolleys;
- Onboard safety equipment (e.g. PBE, life jackets);
- Ground support equipment;
- Operational software, databases (non-navigation);
- Security screening equipment;
- Unit load devices (ULDs).

Part of the process is a method for identifying products that have a direct effect on the safety or security of operations.

To ensure technical specifications are met, a process may focus on the supplier, the product or a combination of both.

The process may include an evaluation of suppliers, with the selection of suppliers based on their ability to supply products in accordance with the operator's requirements and technical specifications.

The use of formal industry supplier audit or evaluation programs is one means for assessing the abilities of suppliers to deliver quality products, such as the Coordinating Agency for Supplier Evaluation (CASE).

Implementation of a rigorous receiving inspection process (or equivalent activity) provides another means of verifying that operationally critical products meet specified technical requirements prior to such products being put into service.

4 Emergency Response

4.1 Emergency Response Plan

ORG 4.1.1 The Operator shall have a corporate emergency response plan (ERP) for the central management and coordination of all activities should it be necessary to respond to a major aircraft accident or other type of adverse event that results in fatalities, serious injuries, considerable damage and/or a significant disruption of operations. **[SMS] (GM)**

Guidance

Refer to the IRM for the definition of Emergency Response Plan (ERP).

Emergency response planning is an element of the Safety Policy and Objectives component of the SMS framework.

An emergency (or crisis) response plan is based upon an assessment of risk appropriate to the size and type of operations, and includes consideration of a major aircraft accident and other potential aircraft and/or non-aircraft events that would require a full corporate emergency response.

In some states, emergency or crisis response is assumed by a governmental authority rather than by the operator. In such case, an emergency response plan focuses on and addresses interaction with and/or participation in the governmental response to an emergency or crisis.



An effective ERP includes industry best practices and ensure community expectations are addressed. Additionally, an ERP:

- Specifies general conditions for implementation;
- Provides a framework for an orderly implementation;
- Ensures proper coordination with external entities at all potential locations as specified in ORG 4.1.4;
- Addresses all potential aspects of an event, including casualties;
- Ensures regulatory requirements associated with specific events are satisfied;
- Provides a scenario for the transition back to normal operations;
- Ensures regular practice exercises as a means to achieve continual improvement.

ORG 4.1.2–4.1.3 (Intentionally open)

ORG 4.1.4A The Operator *should* ensure the ERP as specified in ORG 4.1.1 includes provisions for the appropriate coordination with the emergency response plans of other applicable organizations relevant to the particular event or crisis. **[SMS] (GM)**

Note: Effective 1 November 2018, this recommended practice will be upgraded to a standard (see ORG 4.1.4B).

Guidance

ERP transition and reporting is an element of the Safety Policy and Objectives component of the SMS framework.

Expanded guidance may be found in the ICAO SMM, Document 9859.

ORG 4.1.4B Effective 1 November 2018, the Operator shall ensure the ERP as specified in ORG 4.1.1 includes provisions for the appropriate coordination with the emergency response plans of other applicable organizations relevant to the particular event or crisis.

Guidance

Refer to the guidance associated with ORG 4.1.4A.

	Elements	of Documentation and Electronic Documentation. Documentation Types		
		Type 1	Type 2	Туре 3
(i)	Identification of the version and effective date of relevant documents and/or data.	Recommended	Recommended	Required–See Note
(ii)	Identification of the title and, if applicable, sub-titles of relevant documents and/or data.	Recommended	Recommended	Required–See Note
(iii)	Distribution and/or dissemination that ensures all users are provided relevant documents and/or data on or before the effective date: (a) Throughout appropriate areas of the organization;	Required–See Required–See Re Note Note		Required–See Note
	 (b) To external service providers that conduct outsourced operational functions. 			
(iv)	Definition of the specific media type(s) designated for presentation or display of the controlled version of relevant documents and/or data.	Required–See Note	Required–See Note	Required–See Note
(v)	Definition of documentation and/or data that is considered to be reproduced and/or obsolete.	Required–See Note	Required–See Note	Required–See Note
(vi)	Review and revision to maintain the currency of relevant documents and/or data.	Required–See Note	Required–See Note	Required–See Note
(vii)	Retention that ensures access to the content of relevant documents and/or data for a minimum period as defined by the Operator.	Required–See Note	Required–See Note	Required–See Note
(viii)	Provision for a scheduled back up by copying and archiving relevant documents and/or data, to include validation of the documents or data being backed up.	Required–See Note	Required–See Note	Required–See Note
(ix)	Identification and allocation of documentation access/user and modification rights	Required–See Note	Required–See Note	Required–See Note
 Dissemination and/or accessibility of documentation received from external sources such as regulatory authorities and original equipment manufacturers 		Required–See Note	Required–See Note	Required-Se Note



Section 2 — Flight Operations (FLT)

Applicability

Section 2 addresses safety and security requirements for eligible operators.

To be eligible, an Operator must meet the following criteria:

- Commercial passenger and/or cargo operations
- Aircraft with one or more turbine powered and/or multiple reciprocating engines
- One- or two-pilot operations;
- IFR and/or VFR operations
- Aircraft below 5,700 Kg MTOW

Note: Aircraft above 5,700 Kg MTOW will be eligible for one ISSA initial assessment; thereafter, the operator needs to pursue an IOSA registration to be on an IATA Audit registry.

The standards and recommended practices in Section 2 are applicable only to those aircraft that are of the type authorized in the Air Operator Certificate (AOC) or equivalent document, and are utilized in commercial passenger and/or cargo operations unless applicability is extended to encompass non-commercial operations as stated in a note immediately under the body of the provision.

Individual provisions or sub-specifications within a provision that:

- Begin with a conditional phrase ("If the Operator...") are applicable if the operator meets the condition(s) stated in the phrase.
- Do not begin with a conditional phrase are applicable unless determined otherwise by the Auditor. Individual provisions:
 - Identified by a **<PA>** in the reference number are applicable only to an operator that operates passenger aircraft (including combi aircraft) *and* uses a cabin crew in the passenger cabin.
 - Identified by an **<AC>** in the reference number are applicable only to an operator that operates cargo aircraft.
 - Containing none of the above identifiers in the reference number are applicable to all operators except when applicability is limited by a conditional phrase.

Where an operator outsources flight operations functions to external service providers, an operator retains responsibility for the conduct of such functions and must demonstrate processes for monitoring applicable external service providers in accordance with ORG 3.5.2 located in Section 1 of this manual.

Some cabin safety specifications applicable to functions or equipment within the scope of flight operations are located in Section 5 (CAB) of this manual.

General Guidance

The definitions of technical terms used in this manual, as well as the list of abbreviations and acronyms, are found in the IATA Reference Manual for Audit Programs (IRM).

1 Management and Control

1.1 (Intentionally Open)

1.2 State Requirements

FLT 1.2.1 The Operator shall have a valid Air Operator Certificate (AOC) or equivalent document issued by the State of the Operator (hereinafter, the State) that authorizes the Operator to conduct commercial air transport operations in accordance with specified conditions and limitations. The AOC and/or associated documents shall include:

- (i) Operator identification (name and location);
- (ii) Date of issue and period of validity;



- (iii) Description of types of operations authorized;
- (iv) Type(s) of aircraft authorized for use;
- (v) Authorized areas of operation or routes;
- (vi) If applicable, exemptions, deviations and waivers (listed by name);
- (vii) If applicable, special authorizations. (GM)

Guidance

Refer to the IRM for the definition of Electronic Flight Bag (EFB), EDTO (Extended Diversion Time Operations), Enhanced Visual System (EVS), Head-up Display (HUD), Minimum Navigation Performance Specifications (MNPS), Area Navigation (RNAV), Required Navigation Performance (RNP), Reduced Vertical Separation Minima (RVSM) and State.

The specifications of this provision require the conditions and limitations of any State-approved or State-accepted air transport operations, conducted by the operator, to be described in the AOC or in other equivalent document(s) that are issued by the State.

The AOC is produced (by the State) in a manner consistent with local conditions for State approval or acceptance. This should not preclude the operator from describing authorized operations, including conditions and limitations for such operations, in associated documents and in a manner that is consistent with the specifications of this provision. Such documents typically include the OM or any operational document that describes the conditions and limitations of authorized operations.

The exemptions, deviations, waivers and special authorizations in specifications vi) and vii) may be described in State-approved or State-accepted documents other than the AOC.

Operators subject to laws or regulations of the State that prevent the issuance of an AOC consistent with the specifications of this provision and/or prohibit the description of authorized operations in a manner consistent with the specifications of this provision may demonstrate an equivalent method of ensuring the specifications of this provision are satisfied.

The period of validity is designated on the AOC or determined by reference to the dates of issuance and expiration.

The specification in item vii) e) refers to aircraft operated on routes where the diversion time from any point on the route to an en route alternate airport exceeds the threshold time but is within the maximum diversion time as established by the State.

Threshold times for EDTO/ETOPS are calculated in ISA and still air conditions at the one-engine inoperative cruise speed for aircraft with two turbine engines and at the all-engine operating cruise speed for aircraft with more than two turbine engines.

The approvals in item vii) e) also typically address the most limiting EDTO/ETOPS significant system time limitation, if any, and any applicable EDTO certification requirements.

The specification in item vii) h) refers to approvals for special operations, which typically include:

- Low visibility takeoff (LVTO);
- CAT II and/or III approaches;
- Head-up displays (HUD) and enhanced vision systems (EVS) operations (if such systems are used to gain operational benefit);
- GPS approaches;
- EDTO/ETOPS;
- RVSM operations;
- MNPS operations;
- RNAV/RNP operations, to include approved applications and, when applicable, the associated approved RNP levels required to operate within a defined airspace;
- Transport of dangerous goods (if AOC authorization is required for the transport of dangerous goods);
- Electronic Flight Bag (EFB) operations (if approval for such operations is required by the Authority)



1.3–1.6 (Intentionally Open)

1.7 **Operations Manual**

FLT 1.7.1 The Operator shall have an Operations Manual (OM) for the use of personnel in the flight operations organization, which may be issued in separate parts, and which contains or references the policies, procedures, checklists and other guidance or information necessary for compliance with applicable regulations, laws, rules and Operator standards. As a minimum, the OM shall be managed and controlled in accordance with ORG 2.1.1 and be in accordance with specifications contained in Table 2.2. (GM)

Guidance

The intent of this provision is to ensure the flight crew will find all information necessary to perform its functions within the OM, or within another document that is referenced in the OM. The OM is identified as a source of operational information approved or accepted for the purpose by the operator or the State.

Guidance and procedures in the OM enable the flight crew to comply with the conditions and limitations specified in the AOC.

Human factors are considered in the design of the OM to achieve the following:

- Preparation of documentation in a useable format for information presentation, at the appropriate reading level and with the required degree of technical sophistication and clarity.
- Improving user performance through the use of effective and consistent labels, symbols, colors, terms, acronyms, abbreviations, formats and data fields.
- Ensuring the availability and usability of information to the user for specific tasks, when needed, and in a form that is directly usable.
- Designing operational procedures for simplicity, consistency and ease of use.
- Enabling operators to perceive and understand elements of the current situation and project them to future operational situations.
- Minimizing the need for special or unique operator skills, abilities, tools or characteristics.
- Assessing the net demands or impacts upon the physical, cognitive and decision-making resources of the operator, using objective and subjective performance measures.

1.8–1.10 (Intentionally Open)

1.11 (Intentionally Open)

2 Training and Qualification

2.1 Training and Evaluation Program

General

FLT 2.1.1 The Operator shall have a training and evaluation program, approved or accepted by the Authority, that consists of ground and flight training and, when applicable, evaluations to ensure flight crew members are competent to perform assigned duties. The program shall address traditional and, if applicable, advanced (or alternative) training and qualification, and ensure training and evaluation is conducted for each type of aircraft in the fleet. Such program shall also, as a minimum, address:

- (i) Initial qualification;
- (ii) Continuing qualification;
- (iii) Re-qualification;
- (iv) As applicable, aircraft transition or conversion;



- (v) If applicable, upgrade to PIC;
- (vi) As applicable, other specialized training requirements;
- (vii) As applicable, each traditional training program requirement that is replaced by a requirement under an Advanced Qualification Program (AQP) or Alternative Training and Qualification Program (ATQP) as approved or accepted by the Authority. (GM)

Guidance

Refer to the IRM for the definitions of Advanced Qualification Program (AQP), Alternative Training and Qualification Program (ATQP) and Training.

The intent of this provision is to ensure an operator's training program contains the elements necessary to ensure flight crew members are continuously competent to perform assigned duties.

The initial qualification process provided to newly hired crew members includes company indoctrination and initial endorsement on company aircraft types. This presupposes that the newly hired crew member already holds a commercial flying license.

Initial endorsement training may not be required as part of initial qualification if a newly hired crew member already holds a type endorsement acceptable to both the State and the operator. Company indoctrination training, however, is always considered a part of initial qualification.

Continuing qualification includes recurrent or refresher training and also includes any training necessary to meet recency-of-experience requirements.

Transition (conversion) training refers to an aircraft type qualification training and evaluation program for each type of aircraft in the fleet and is not required when an operator only utilizes one type of aircraft.

Specialized training could include training on a specific type of new equipment (e.g., ACAS) or training for specific operations to meet requirements of the Authority.

AQP/ATQP incorporate the elements and specifications contained in Table 2.6 and Table 2.7.

Training could be outsourced, in which case services typically range from simple dry lease of a training device to delegation of all training to an external organization (e.g., Authorized Flight Training School).

FLT 2.1.2–2.1.9 (Intentionally open)

Training Manual

FLT 2.1.10 The Operator shall have a Training Manual for the use of flight operations personnel, which may be issued in separate parts, that contains the details of all relevant training programs, policies, procedures, requirements and other guidance or information necessary to administer the Operator's Training Program. The Training Manual shall be approved or accepted by the State and the content of the Training Manual shall, as a minimum, be in accordance with specifications in Table 2.2. (GM)

Guidance

The training manual applies to instructors, evaluators, line check airmen, flight crew members, training schedulers, simulator operations personnel, administrative support personnel and other applicable flight operations personnel.

The training manual may be split among several publications with the relevant parts made easily accessible to the appropriate personnel.

FLT 2.1.11–2.1.44 (Intentionally open)

2.2 Training Elements

FLT 2.2.1–2.2.11 (Intentionally open)

FLT 2.2.12 If the Operator transports dangerous goods as cargo, the Operator shall ensure flight crew members complete training and an evaluation in dangerous goods during initial ground training and subsequently once during recurrent training within the 24-month period from the previous



training in dangerous goods or, if applicable, in accordance with the initial and continuing qualification curriculum as defined in the Operator's AQP/ATQP. Such training shall include:

- (i) General philosophy;
- (ii) Limitations;
- (iii) List of dangerous goods;
- (iv) Labeling and marking;
- (v) Recognition of undeclared dangerous goods;
- (vi) Storage and loading procedures;
- (vii) Pilot's notification;
- (viii) Provisions for passengers and crew;
- (ix) Emergency procedures. (GM)

Guidance

Training and evaluation is applicable to all flight crew members.

Recurrent training in dangerous goods is typically completed within a validity period that expires 24 months from the previous training to ensure knowledge is current, unless a shorter period is defined by a competent authority. However, when such recurrent training is completed within the final 3 months of the 24-month validity period, the new validity period may extend from the month on which the recurrent training was completed until 24 months from the expiry month of the current validity period. If such recurrent training is completed *prior* to the final three months (or 90 days) of the validity period, the new validity period would extend 24 months from the month the recurrent training was completed.

Guidance may be found in the IATA Dangerous Goods Regulations (DGR) 1.5, Table 1.5.A.

FLT 2.2.13 If the Operator does not transport dangerous goods as cargo, the Operator shall ensure flight crew members complete training and an evaluation in dangerous goods during initial ground training and subsequently once during recurrent training within the 24-month period from the previous training in dangerous goods or, if applicable, in accordance with the initial and continuing qualification curriculum as defined in the Operator's AQP/ATQP. Such training shall include:

- (i) General philosophy;
- (ii) Limitations;
- (iii) Labeling and marking;
- (iv) Recognition of undeclared dangerous goods;
- (v) Provisions for passengers and crew;
- (vi) Emergency procedures. (GM)

Guidance

Training and evaluation is applicable to all flight crew members.

Recurrent training in dangerous goods is typically completed within a validity period that expires 24 months from the previous training to ensure knowledge is current, unless a shorter period is defined by a competent authority. However, when such recurrent training is completed within the final 3 months of the 24-month validity period, the new validity period may extend from the month on which the recurrent training was completed until 24 months from the expiry month of the current validity period. If such recurrent training is completed *prior* to the final three months (or 90 days) of the validity period, the new validity period would extend 24 months from the month the recurrent training was completed.

Guidance may be found in DGR 1.5, Table 1.5.B.

FLT 2.2.14–2.2.15 (Intentionally open)

FLT 2.2.16A The Operator shall ensure flight crew members complete training and an evaluation in subjects associated with adverse weather and/or environmental conditions during initial ground training and subsequently during recurrent training once every three (3) calendar years or, if

applicable, in accordance with the initial and continuing qualification curriculum as defined in the Operator's AQP/ATQP. Such training and evaluation shall address, as applicable:

- (i) Cold weather operations, to include de-/anti-icing policies and procedures;
- (ii) Contaminated runway operations;
- (iii) Thunderstorm avoidance. (GM)

Guidance

Training and evaluation is applicable to all flight crew members.

The intent of this provision is to ensure flight crew members receive recurrent training and an evaluation in the subjects associated with the adverse weather or environmental conditions they may encounter in operations.

FLT 2.2.16B-2.2.25 (Intentionally open)

FLT 2.2.26 The Operator shall ensure flight crew members complete training in normal and nonnormal procedures and maneuvers during initial training and subsequently during recurrent training once every calendar year or once every two (2) calendar years or, if applicable, in accordance with the initial and continuing qualification curriculum as defined in the Operator's AQP/ATQP. Such training shall address, as a minimum:

- If applicable, Pilot Monitoring (PM)/Pilot Flying (PF) and other flight crew division of duties (task sharing);
- (ii) If applicable, positive transfer of aircraft control;
- (iii) Consistent checklist philosophy;
- (iv) Emphasis on a prioritization of tasks (e.g. "aviate, navigate, communicate");
- (v) Proper use of all levels of flight automation. (GM)

Guidance

Refer to the IRM for the definitions of Pilot Flying (PF) and Pilot Monitoring (PM).

Training is applicable to all flight crew members.

The intent of this provision is to set a training interval for normal and non-normal procedures, and additionally to ensure the training manual, curricula, lesson plans, or other guidance associated with such training addresses the specifications in items i) through v).

Elements of training may be accomplished as part of ground, simulator, aircraft or line training.

The term *Pilot Monitoring (PM)* has the same meaning as the term *Pilot Not Flying (PNF)* for the purpose of applying the specifications of this provision to two-pilot operations.

The specification in item iv) refers to the following prioritization of tasks during any normal or abnormal situation or maneuver:

- Aviate: fly the aircraft in accordance with restrictions and limitations set forth in the OM;
- Navigate: guide the aircraft along the intended or appropriate route;
- Communicate: verbalize intentions to other crew members and ATC, as applicable.

FLT 2.2.27 The Operator shall ensure flight crew members complete training and, when applicable, an evaluation, that includes a demonstration of competence in normal and non-normal procedures and maneuvers, to include, as a minimum, rejected takeoff, emergency evacuation, engine failure and/or those procedures and maneuvers specified in the Operator's AQP/ATQP as approved or accepted by the Authority. Such training and, when applicable, evaluation shall be accomplished *either*.

- (i) During initial training and subsequently during recurrent training once every calendar year, or
- In accordance with an AQP/ATQP approved by the Authority that requires evaluations to be satisfactorily completed within the maximum evaluation period delineated in Table 2.7, and includes a demonstration of competence in normal and non-normal procedures and maneuvers. (GM)





Guidance

The intent of this provision is to define the basic initial and subsequent recurrent training and evaluation cycles that ensure flight crew members are competent to perform normal and non-normal procedures and maneuvers. It is understood that competence in all potential normal and non-normal procedures may not be demonstrated annually but in accordance with a schedule that is acceptable to the Authority.

Training and, when applicable, a demonstration of competence in specified normal and non-normal procedures and maneuvers is applicable to all *pilot* crew members.

Training and, when applicable, evaluation is to be accomplished as part of ground, simulator/aircraft and line training.

Line training is in normal procedures/maneuvers only.

Such evaluation of competence in the normal and non-normal procedures and maneuvers specified is applicable when such procedures and/or maneuvers are stipulated by the operator and/or State in conjunction with State-approved or State-accepted training courses that require a method of evaluation. Such courses typically include:

- Type qualification;
- Transition (conversion);
- If applicable, upgrade to PIC;
- Re-qualification;
- Recurrent training.

Operators that conduct training flights and cannot safely train/evaluate a non-normal procedure or maneuver in an aircraft or in a representative flight training device may demonstrate an alternative means of conformance.

All pilot flight crew members who receive training in the normal and non-normal procedures and maneuvers specified in this provision also demonstrate competence in such procedures and maneuvers in accordance with the applicable specifications of FLT 2.3.2.

FLT 2.2.28–2.2.29 (Intentionally open)

FLT 2.2.30 The Operator shall ensure flight crew members complete training in CRM skills, which may be accomplished as part of simulator, aircraft and/or line training, as applicable. Such training shall be completed during initial training and subsequently during recurrent training once every calendar year or, if applicable, in accordance with the initial and continuing qualification curriculum as defined in the Operator's AQP/ATQP. **(GM)**

Guidance

Training is applicable to all flight crew members.

This specification is intended to ensure CRM skills are emphasized during and integrated into simulator or aircraft training, as applicable, and line training.

FLT 2.2.31 (Intentionally open)

FLT 2.2.32 The Operator shall ensure flight crew members complete training and, when applicable, an evaluation, that includes a demonstration of competence, in windshear avoidance and recovery from predictive and actual windshear. Such training shall be completed during initial ground and simulator training, and subsequently during recurrent simulator training once every three (3) calendar years or, if applicable, in accordance with the initial and continuing qualification curriculum as defined in the Operator's AQP/ATQP. **(GM)**

Guidance

Refer to the IRM for the definition of Windshear.

The intent of this provision is to ensure training and evaluation occurs, as applicable, in the maneuvers specified within the intervals specified. Such training and evaluation can occur in conjunction with any State-approved or State-accepted training course.

Training and, when applicable, an evaluation in the specified normal and non-normal procedures and maneuvers is applicable to all *pilot* crew members.

Training is accomplished in a representative flight simulator approved for the purpose by the State.

Such evaluation of competence in the normal and non-normal procedures and maneuvers specified is applicable when such procedures and/or maneuvers are stipulated by the operator and/or State in conjunction with State-approved or State-accepted training courses that require a method of evaluation. Such courses typically include:

- Type qualification;
- Transition (conversion);
- If applicable, upgrade to PIC;
- Re-qualification;
- Recurrent training.

Operators that cannot conform to the specifications of this provision due to the non-existence of a representative flight training device may demonstrate an alternative means of conforming to these specifications.

The additional ground and line training and evaluation used to satisfy the specifications of this provision typically include a review of:

- Conditions conducive to windshear;
- Effects on aircraft performance;
- Indications of windshear presence;
- Avoidance and recovery techniques;
- Windshear case studies or scenarios.

FLT 2.2.33 The Operator shall ensure flight crew members complete training and an evaluation, which includes a demonstration of competence in terrain awareness procedures and maneuvers. Such training shall be completed during initial ground and simulator training and subsequently during recurrent simulator training once every three (3) calendar years or, if applicable, in accordance with the initial and continuing qualification curriculum as defined in the Operator's AQP/ATQP. Such training and evaluation shall include:

- (i) Knowledge and conduct of associated procedures;
- (ii) Response to GPWS alerts and warnings;
- (iii) The avoidance of Controlled Flight Into Terrain (CFIT). (GM)

Guidance

The intent of this provision is to ensure training and evaluation occurs, as applicable, in the maneuvers specified within the intervals specified. Such training and evaluation can occur in conjunction with any State-approved or State-accepted training course.

Training and evaluation in the specified normal and non-normal procedures and maneuvers in a representative flight simulator approved for the purpose by the State is applicable to *pilot* crew members.

Training and evaluation of the non-normal procedures and maneuvers specified in this provision cannot be safely accomplished in an aircraft on a training flight.

Operators that cannot conform to the specifications of this provision due to the non-existence of a representative flight training device may demonstrate an alternative means of conforming to these specifications.

The additional ground and line training and evaluation used to satisfy the specifications of this provision typically includes a review of:

- CFIT avoidance techniques;
- CFIT recovery techniques and maximizing aircraft performance;
- GPWS alerts and warnings;
- CFIT case studies or scenarios.



FLT 2.2.34 If the Operator conducts low visibility operations, the Operator shall ensure flight crew members complete training and an evaluation that includes a demonstration of competence in such operations, as well as operations with inoperative ground based and/or aircraft equipment. Such training shall be completed during initial ground and simulator training and subsequently during recurrent simulator training once every calendar year or, if applicable, in accordance with the initial and continuing qualification curriculum as defined in the Operator's AQP/ATQP. (GM)

Guidance

Training and evaluation in the specified normal and non-normal procedures and maneuvers is applicable to *all* pilot crew members.

Low visibility operations are considered in effect when the Runway Visual Range (RVR) is below 400 m for takeoff and/or below Category I limits for landing.

Operators that conduct training flights and cannot safely train/evaluate the specified procedures in an aircraft or in a representative flight training device as specified in FLT 2.2.38 may demonstrate an alternative means of conformance.

FLT 2.2.35 The Operator shall ensure flight crew members with duties and responsibilities related to TCAS/ACAS alerting equipment complete training and an evaluation that includes a demonstration of competence in procedures for the proper response to TCAS/ACAS alerts. Such training and evaluation shall be completed during initial ground and simulator training and subsequently during recurrent simulator training once every three (3) calendar years or, if applicable, in accordance with the initial and continuing qualification curriculum as defined in the Operator's AQP/ATQP. **(GM)**

Guidance

The intent of this provision is to ensure training and evaluation occurs, as applicable, in the maneuvers specified within the intervals specified. Such training and evaluation can occur in conjunction with any State-approved or State-accepted training course.

Training is accomplished in a representative flight simulator approved for the purpose by the State.

TCAS training may be performed without demonstrating capability in a simulator (since many simulators do not have TCAS capability).

Training and evaluation of the non-normal procedures and maneuvers specified in this provision cannot be safely accomplished in an aircraft on a training flight.

Operators that cannot conform to the specifications of this provision due to the non-existence of a representative flight training device may demonstrate an alternative means of conforming to these specifications.

The additional ground and line training and evaluation used to satisfy the specifications of this provision typically include a review of:

- TCAS procedures and alert responses;
- TCAS alerts;
- TCAS case studies or scenarios.

2.3 Line Qualification

FLT 2.3.1 The Operator shall have a line qualification program consisting of line training and, where applicable, evaluations, approved or accepted by the State, which ensures flight crew members are qualified to operate in areas, on routes or route segments and into the airports to be used in operations for the Operator. Such program shall:

- (i) Be published in the Training Manual or equivalent documents;
- (ii) Ensure each pilot flight crew member has adequate knowledge of the elements specified in Table 2.5, as applicable to the areas, routes and route segments of intended operation;
- (iii) Specify qualification requirements for operations in all areas, on all routes or route segments, and into all airports of intended use;



- (iv) Ensure line training and evaluation for each pilot crew member is completed during initial qualification or, if applicable, in accordance with the initial and continuing qualification curriculum as defined in the Operator's AQP/ATQP;
- (v) Ensure line training and evaluation is completed prior to a pilot crew member being used as a PIC in operations. **(GM)**

Guidance

The intent of this provision is to ensure flight crew members are qualified to conduct routine operations within each theater of operation as defined by the operator. It does not address the additional and specialized knowledge required to conform to FLT 2.4.1.

Refer to FLT 2.4.1 and associated Guidance for additional specifications and information that addresses special areas, routes route segments and special airports.

This specification in item v) applies to all candidates for the position of PIC, to include SIC upgrade candidates and pilots hired directly into PIC positions in operations for the operator.

The training and evaluation specified in this provision is accomplished by pilot flight crew members as part of; ground training, simulator/aircraft training or line training.

3 Line Operations

3.1 (Intentionally Open)

3.2 (Intentionally Open)

3.3 Flight Crew Qualifications

FLT 3.3.1–3.3.3 (Intentionally open)

FLT 3.3.4 The Operator shall ensure flight crew members will not operate an aircraft unless issued a medical assessment in accordance with requirements of the State; such assessment shall not be valid for a period greater than 12 months. **(GM)**

Guidance

Requirements of the State and/or an applicable authority that are associated with medical classifications, aircraft types, flight crew positions and/or licensing could require a more restrictive assessment interval than specified in this provision. An applicable authority is one that has jurisdiction over international operations conducted by an operator over the high seas or the territory of a state that is other than the State of the Operator.

FLT 3.3.5–3.3.6 (Intentionally open)

3.4–3.8 (Intentionally Open)

3.9 Ground Handling

FLT 3.9.1–3.9.5 (Intentionally open)

FLT 3.9.6 If the Operator has a De-/Anti-icing Program in accordance with GRH 4.2.1, the Operator shall have de-/anti-lcing policies and procedures published in the OM or in other documents that are available to the flight crew during flight preparation and accessible to the flight crew during flight. Such policies and procedures shall address any flight crew duties and responsibilities related to de-/anti-lcing and include:

- (i) Holdover Time tables;
- (ii) A requirement for a member of the flight crew or qualified ground personnel to perform a visual check of the wings before takeoff, if any contamination is suspected;



- (iii) A requirement that takeoff will not commence unless the critical surfaces are clear of any deposits that might adversely affect the performance and/or controllability of the aircraft;
- (iv) A statement that delegates authority to the PIC to order De-/Anti-icing whenever deemed necessary. (GM)

Note: The specifications of this provision are applicable to commercial and/or non-commercial operations.

Guidance

Refer to the IRM for the definitions of De-/Anti-icing Program and Holdover Time.

The intent of this provision is to ensure flight crew members adhere to the clean aircraft concept prior to takeoff anytime there is a potential for the accretion of ice on aircraft critical surfaces during ground operations.

Refer to Guidance associated with GRH 4.2.1 located in ISM Section 6.

Qualified ground personnel specified in item ii) are typically used to perform a visual wing check in instances when the wings are not visible to the flight crew from the interior of the aircraft (e.g., cargo aircraft operations).

The surfaces specified in item iii) include: wings, flight controls, engine inlets, fuselage surfaces in front of engines or other areas defined in the AOM.

3.10 Airspace Rules

FLT 3.10.1 The Operator *should* require all commercial flights to be conducted under an IFR Flight Plan and in accordance with an IFR clearance. **(GM)**

Guidance

Refer to the IRM for the definition of Instrument Flight Rules (IFR) and Visual Flight Rules (VFR).

The intent of this provision is for an operator to file an IFR flight plan with the appropriate ATS unit and obtain an IFR clearance in order to ensure its flights are afforded all of the air traffic services applicable to aircraft operating under IFR within controlled airspace. Such services typically include:

- Maintenance of minimum separation standards;
- Traffic advisory information;
- Terrain or obstruction alerting;
- Low altitude alerting;
- Strategic route planning;

• Automatic flight plan closure at airports with functioning control towers.

The specifications of this provision do not preclude an operator from:

- Operating certain portions of a commercial flight under VFR (visual flight rules);
- Where possible, identifying portions of flights to be flown under VFR on the ATS flight plan (in lieu of filing a purely IFR Flight Plan);
- Operating non-commercial flights (e.g. maintenance, repositioning flights) under VFR.

3.11 In-flight Operations

FLT 3.11.1–3.11.58 (Intentionally open)

FLT 3.11.59 The Operator shall have a stabilized approach policy with associated guidance, criteria and procedures to ensure the conduct of stabilized approaches. Such policy shall specify:

- A minimum height for stabilization not less than 1000 feet AAL for approaches in IMC or not less than 500 ft. AAL for approaches in IMC as designated by the operator and/or State where a lower stabilization height is operationally required;
- (ii) A minimum height for stabilization not less than 500 feet AAL for approaches in VMC;



- (iii) Aircraft configuration requirements specific to each aircraft type (landing gear, wing flaps, speed brakes);
- (iv) Speed and thrust limitations;
- (v) Vertical speed limitations;
- (vi) Acceptable vertical and lateral displacement from the normal approach path. (GM)

Guidance

Refer to the IRM for the definition of Flight Data Analysis (FDA) Program.

The intent of this provision is for the operator to implement a stabilized approach policy, as well as have guidance, criteria and procedures that ensure the maintenance of the intended lateral and vertical flight path during visual approaches and/or as depicted in published approach procedures without excessive maneuvering. The parameters to be considered at the 1000 ft. AAL and 500 ft. gates as well as in the definition of a stabilized approach are listed in items iii) through vi) of the provision.

The specifications in item i) permit an operator, in accordance with operational requirements approved or accepted by the Authority, to establish stabilization criteria for heights lower than 1000 ft. AAL, but no lower than 500 ft. AAL (IMC or VMC), for approaches designated by the operator and/or State where:

- Lower minimum approach stabilization heights are authorized for turbo-propeller aircraft operations (e.g., 500 feet AAL on VMC/IMC approaches), **and/or**
- Maneuvering at a lower height AAL is required to meet instrument or other charted approach constraints (e.g. RNAV/RNP approaches, circling approaches and charted visual approaches), **and/or**
- Aircraft are required to comply with ATC speed constraints on final approach, and/or
- Deviations from selected approach stabilization criteria at a height lower than 1000 feet AAL, but above 500 feet AAL, are operationally required, and the operator can demonstrate pilot adherence to its stabilized approach policy via a continually monitored, managed and active flight data analysis (FDA) program.

The criteria used to conform to the specifications in item vi) also typically address the maneuvering that may be required in accordance with a charted visual or instrument approach procedure.

FLT 3.11.60 The Operator shall have a policy that requires the flight crew to execute a missed approach or go-around if the aircraft is not stabilized in accordance with criteria established by the Operator. **(GM)**

Guidance

The intent of this provision is for an operator's stabilized approach policy to address the actions to be taken by the flight crew in the event of deviations from the criteria that define a stabilized approach, and to designate the minimum altitude at which a go-around must be accomplished if the aircraft is not stabilized in accordance with the operator's stabilization criteria.

FLT 3.11.61 The Operator shall have a policy and procedures to ensure the flight crew maneuvers the aircraft so as to touchdown within the touchdown zone or other defined portion of the runway, as specified by the Operator or the Authority. **(GM)**

Guidance

The definition of the touchdown zone could vary, depending on the operator.

FLT 3.11.62 The Operator shall have a policy and procedures to ensure the flight crew will not continue an instrument approach to land at any airport beyond a point at which the limits of the operating minima specified for the approach in use would be infringed.



4 Operations Engineering Specifications

General Guidance

Refer to the IRM for the definition of Operations Engineering.

4.1–4.2 (Intentionally Open)

4.3 Aircraft Systems and Equipment Specifications

FLT 4.3.1–4.3.20 (Intentionally open)

FLT 4.3.21 The Operator *should* ensure all turbine engine aircraft in its fleet are equipped with an airborne collision avoidance system (ACAS II). **(GM)**

Guidance

Technical guidance for the operational requirements applicable to ACAS II is contained in ICAO Annex 10, Volume IV.

FLT 4.3.22–4.3.23 (Intentionally open)

FLT 4.3.24 The Operator shall ensure all turbine engine aircraft in its fleet with a maximum certificated takeoff mass in excess of 5,700 kg (12,566 lb), or authorized to carry more than nine passengers, are equipped with a ground proximity warning system (GPWS) that automatically provides a warning to the flight crew when the aircraft is in close proximity to the earth's surface with:

- (i) Excessive descent rate;
- (ii) Excessive terrain closure rate;
- (iii) Excessive altitude loss after takeoff or go-around;
- (iv) Unsafe terrain clearance while not in the landing configuration;
- (v) Excessive descent below the instrument glide path. (GM)

Guidance

Refer to the IRM for the definition of Ground Proximity Warning System (GPWS).

A GPWS provides a warning when it senses the aircraft is in close proximity to the earth's surface and not in the landing configuration, which typically means the landing gear is not down and locked, and/or the flaps are not in a landing position.

FLT 4.3.25 The Operator *should* ensure all turbine engine aircraft in its fleet with a maximum certificated takeoff mass in excess of 5,700 kg (12,566 lb), or authorized to carry more than nine passengers, are equipped with a GPWS as specified in FLT 4.3.24 that has a forward-looking terrain avoidance function. **(GM)**

Guidance

Refer to the IRM for the definition of GPWS with a Forward-Looking Terrain Avoidance (FLTA) Function.

Different systems are available and acceptable as a GPWS with a forward-looking terrain avoidance (FLTA) function, as specified in this provision. The following guidance is an overview only; it is not to be construed as technical specifications for an acceptable system.

A GPWS with a FLTA function could also be known as a predictive terrain awareness and warning system (TAWS), and provides:

- A forward-looking capability and terrain clearance floor;
- The flight crew, by means of visual and aural signals, and a terrain awareness display, with an alerting time necessary to prevent controlled flight into terrain events.



An acceptable system provides a forward-looking capability and terrain clearance floor protection in areas of operations and surrounding airports of intended use. Such systems generally have:

- A navigation system that provides accurate aircraft position (e.g. GPS or equivalent);
- A means of displaying aircraft and terrain information;
- A means of providing visual and aural signals;
- A terrain database(s) for all areas of potential operations and surrounding airports of intended use;
- If an obstacle database is commercially available and obstacle detection/display functionality is installed, an obstacle database for all areas of potential operations.

FLT 4.3.26 The Operator shall ensure all piston engine aircraft in its fleet with a maximum certificated takeoff mass in excess of 5,700 kg (12,566 lb), or authorized to carry more than nine passengers, are equipped with a GPWS that automatically provides a warning to the flight crew when the aircraft is in close proximity to the earth's surface with:

- (i) Excessive descent rate;
- (ii) Excessive terrain closure rate;
- (iii) Excessive altitude loss after takeoff or go-around.

FLT 4.3.27 The Operator *should* ensure aircraft in its fleet with a maximum certificated takeoff mass in excess of 5700 kg, or authorized to carry more than nine passengers, are equipped with a forward-looking windshear warning system. **(GM)**

Guidance

Refer to the IRM for the definition of Forward-Looking Windshear Warning System

4.4 Cargo Compartment Systems and Equipment Requirements

FLT 4.4.1 (Intentionally open)

FLT 4.4.2 If the Operator utilizes aircraft that have a cargo compartment, the Operator *should* ensure, on all aircraft over 5,700 kg (12,566 lb) MTOW for which the application for certification was submitted on or after 2 March 2004, each cargo compartment not accessible to a crew member is equipped with a built-in fire detection system and a built-in fire starvation or suppression system. Such suppression systems, including associated extinguishing agents, *should* be designed to account for a sudden and extensive fire that could be caused by an explosive or incendiary device, or by dangerous goods.



Table 2.1–(Intentionally Open)

		Table 2.2–Operations Manual (OM) Content Specifications			
This t	able co	ntains the fundamental OM content specifications required to achieve conformance with			
FLT 1	l. <mark>7.1</mark> ar	d FLT 2.1.10.			
		General Information			
(i)	Gene	eral Operations Manual (GOM), to include:			
	(a)	Non-aircraft type related and/or standard operating procedures for each phase of flight, policies, procedures, checklists, descriptions, guidelines, emergency procedures and other relevant information;			
	(b)	Authorities, duties and responsibilities associated with the operational control of flights;			
	(C)	If applicable, guidance that identifies and defines the common flight documents used by the flight crew, the FOO, FOA and/or other personnel responsible for operational control.			
		Aircraft Operating Information			
(ii)	Aircr	aft Operating Manual (AOM), to include:			
	(a) (b)	Normal, abnormal/non-normal and emergency procedures, instructions, and checklists; Aircraft systems descriptions, limitations and performance data.			
(iii)	• •	num Equipment List (MEL) and Configuration Deviation List (CDL);			
(iv)		aft specific weight/mass and balance instructions/data (including loadsheet);			
(v)		uctions for the computation of the quantities of fuel and oil (if required) to be carried.			
<u> </u>	Areas, Routes and Airport Information				
(vi)	Route and airport instructions and information (departure, destination, en route and destination alternates, to include:				
	(a)	Airway manuals and charts, including information regarding communication facilities and navigation aids;			
	(b)	Airport charts, including the method for determining airport operating minima;			
	(C)	FMS databases;			
	(d)	Airport and runway analysis manual or documents;			
	(e)	If applicable, supplemental oxygen requirements and escape routes used in the event of decompression in an area of high terrain;			
	(f)	If applicable, procedures for loss of communication between the aircraft and the FOO;			
	(g)	Instructions for the selection, designation (on the OFP) and protection of departure, en route and destination alternate airports;			
	(h)	Instructions to address departure if current meteorological reports and forecasts indicate that the destination airport or destination alternate will not be at or above operating minima;			
	(i)	Instructions to address the continuation of a flight towards an airport of intended landing if the latest available information indicates a landing cannot be accomplished at that airport or at least one destination alternate;			
	(j)	If applicable, flight following requirements and instructions to ensure the PIC notifies the operator of en route flight movement or deviations from the OFP;			
	(k)	If applicable, flight planning considerations that address the continuation of a flight after the failure of the critical engine on a two engine aircraft and/or the second engine on a three or four engine aircraft;			
	(I)	The essential information concerning the search and rescue services in the area over which the aircraft will be flown.			
	(m)	Information regarding RFFS capability available at airports of intended use.			



		Table 2.2–Operations Manual (OM) Content Specifications			
	Training Information				
(vii)	(vii) Training Manual, to include:				
	(a)	Details of all relevant training programs, policies, directives and requirements, including curricula and syllabi, as applicable, for basic operator familiarization, initial qualification, continuing qualification (including recency-of-experience), re-qualification, aircraft transition or conversion, upgrade to PIC and other specialized training requirements, as applicable;			
	(b)	Curricula to include: ground training, simulator training, aircraft training, evaluation and certification, line flying under supervision, and any specialized training;			
	(C)	Comprehensive syllabi to include lesson plans, procedures for training and the conduct of evaluations;			
	(d)	The training program for the development of knowledge and skills related to human performance (Crew Resource Management/Dispatch Resource Management, CRM/DRM).			
		Other Information			
(viii)	Cabin safety and emergency procedures relevant to the flight crew.				
(ix)	Dangerous Goods manual or parts relevant to the flight crew, to include information and instructions on the carriage of dangerous goods and action to be taken in the event of an emergency.				
(x)	Secu	rity Manual or parts relevant to the flight crew, including bomb search procedures.			
(xi)	Ground Handling Manual or parts relevant to the flight crew, if required for flight crew to accomplish assigned duties (recommendation only and only applicable to all-cargo operations).				



Table 2.3–(Intentionally Open)



Table 2.4–(Intentionally Open)



Table 2.5–Route and Airport Knowledge Requirements

Each pilot crew member, in order to conform to the specifications of FLT 2.3.1 and/or FLT 2.4.1, shall have adequate knowledge of the following elements related to areas, routes or route segments, and airports to be used in operations:

- (i) Terrain and minimum safe altitudes;
- (ii) Seasonal meteorological conditions;
- (iii) Meteorological, communication and air traffic facilities, services and procedures;
- (iv) Search and rescue services for the areas over which the aircraft will be flown;
- (v) Navigational facilities and procedures, including any long-range navigation procedures associated with the route along which the flight is to take place;
- (vi) Procedures applicable to flight paths over heavily populated areas and areas of high air traffic density;
- (vii) Airport obstructions, physical layout, lighting, approach aids and arrival, departure, holding and instrument approach procedures and applicable operating minima.

Note: That portion of an evaluation relating to arrival, departure, holding and instrument approach procedures may be accomplished in an appropriate training device that is adequate for this purpose.



Table 2.6–Elements of an Advanced Qualification Program (AQP) or Alternative Training and Qualification Program (ATQP)

The fo	llowin	g elements shall be included as part of an AQP/ATQP as specified in FLT 2.1.1B.		
(i)		ning program and curricula approved or accepted by the State.		
(ii)	Training and evaluation which is conducted to the maximum extent possible in a full flight deck crew environment (e.g. Captain and First Officer). Qualification and continuing qualification curricula must include a line operational evaluation (LOE), which consists of a full flight scenario systematically designed to target specific technical and crew resource management (CRM) skills.			
(iii)	Mandatory evaluation of CRM proficiency and substandard performance on CRM factors shall be corrected by additional training. A demonstration of proficiency in maneuver oriented technical skills is a necessary but insufficient condition for pilot qualification. For pass/fail purposes, pilots must also demonstrate proficiency in LOE's, which test both technical and CRM skills together.			
(iv)	Specific training for instructors and evaluators, together with explicit training and evaluation strategies to verify the proficiency and standardization of such personnel for crew oriented, scenario based training and evaluation tasks.			
(v)	Integrated use of advanced flight training equipment, including full flight simulators. Operators are encouraged to utilize a suite of equipment matched on the basis of analysis to the training requirements at any given stage of a curriculum.			
(vi)	Curr	iculum elements that are:		
	(a)	Defined;		
	(b)	Crew member-specific or personnel-specific;		
	(C)	Aircraft-specific. (See Note 1)		
memb must i	er pos nclude	In curriculum must specify the make, model and series aircraft (or variant) and each crew sition or other positions to be covered by that curriculum. Positions to be covered by the program e all flight crew member positions, instructors and evaluators and could include other positions, in attendants, aircraft dispatchers and other operations personnel.		
(vii)	Sep	arate curricula for indoctrination, qualification and continuing qualification.		
(viii)	CRN inclu	I Training/Evaluation and Data Collection (feedback) to determine program effectiveness to ide:		
	(a)	State-approved or -accepted Crew Resource Management (CRM) Training applicable to each position for which training is provided under the program;		
	(b)	State-approved or -accepted training on and evaluation of skills and proficiency of each person being trained under the program to use their crew resource management (CRM) skills and their technical (piloting or other) skills in an actual or simulated operations scenario. For flight crew members, this training and evaluation must be conducted in an approved flight training device or flight simulator;		
	(C)	Data collection procedures that will ensure the certificate holder provides information from its crew members, instructors and evaluators that will enable the State to determine whether the training and evaluations are working to accomplish the overall objectives of the curriculum;		
	(d)	Performance proficiency data collection on students, instructors, and evaluators and the conduct of airline internal analyzes of such information for the purpose of curriculum refinement and validation.		
(ix)	Defi	ned airman certification and licensing requirements.		
(x)		ning devices and simulators used under the program evaluated against published standards and pproved or accepted by the State to ensure adequacy for training/qualification performed.		
(xi)	Prog	gram approval to include:		
	(a)	A demonstration to the Authority of how the program will provide an equivalent or superior level of safety for each curriculum item that differs from traditional training programs approved or accepted by the State.		



Table 2.6–Elements of an Advanced Qualification Program (AQP) or Alternative Training and Qualification Program (ATQP)

- (b) A demonstration to the Authority for every requirement that is replaced by the program curriculum, of how the new curriculum provides an equivalent or superior level of safety for each requirement that is replaced. Each traditional training program requirement that is not specifically addressed in the program curriculum continues to apply to the Operator.
- (c) A requirement that training, qualification, or evaluation by a person who provides training by arrangement: "Training Centers" must be approved or accepted by the State.
- (xii) Records in sufficient detail to establish the training, qualification and certification of each person qualified under the program in accordance with the approved training, "qualification and certification requirements."



Table 2.7–Requirements of an Advanced Qualification Program (AQP) or Alternative Training and Qualification Program (ATQP)

The specifications in this table apply to an AQP/ATQP as specified in FLT 2.1.1B, and are in addition to those delineated in Table 2.6:

(i) **Proficiency objectives**

The Operator shall conduct an aircraft-specific job task analysis beginning with the development of a comprehensive task listing for each duty position. The task listing covers the full range of conditions and contingencies - internal to the aircraft, external to the aircraft, normal, abnormal, and emergency - to which the pilot could be exposed within the Operator's sphere of operations. Proficiency objectives are then extracted from the task and subtask analysis, respectively, for each duty position, and include identification of applicable performance, standards, and conditions. The documentation of proficiency objectives also identify the references used, respectively, in defining performance, standards, and conditions for each.

An operator may elect to categorize certain proficiency objectives as currency items. Currency items refer to flight activities on which proficiency is maintained by virtue of frequent exercise during routine operations. Such items do not need to be addressed for training or proficiency evaluation purposes in periodic training sessions. However, verification is required that proficiency on such items is being maintained. Such verification might be obtained during line checks.

An operator could also elect to categorize proficiency objectives, including currency items, as critical or non-critical, based on operational significance and the consequences of error. This categorization is employed to determine the time interval within which training and evaluation on such items must occur for continuing qualification curricula. Critical proficiency objectives are trained and evaluated during an evaluation period the initial duration of which cannot exceed thirteen months. Each such evaluation period includes at least one training session. Non-critical terminal proficiency objectives may be distributed over a continuing qualification cycle the initial duration of which cannot exceed twenty-six months.

(ii) First Look Evaluations

Performance on selected proficiency items will be evaluated prior to each formal training session and prior to any pre-briefing or practice. Such pre-evaluation data is used to determine the extent to which safety-critical skills might have decayed since previous training and/or checking, and provides a baseline for assessing degree of improvement attributable to subsequent training. Consistently poor pre-evaluation results occurring within the pilot group might indicate that curriculum modifications, including potentially the frequency and content of training, are warranted.

(iii) Continuing Qualification Cycles and Evaluation Periods

After initial qualification, which incorporates training and evaluation on all proficiency objectives, follow-on training will occur within a scheduling interval called a continuing qualification cycle. This is the time period during which all proficiency objectives are trained, validated, or evaluated for all crewmembers. The initial approval for a continuing qualification cycle is no more than 26 months in duration, divided into two 13-month evaluation periods. All critical proficiency objectives are accomplished during each evaluation period, and all currency proficiency objectives are accomplished during each continuing qualification cycle.

The initial duration of a continuing qualification cycle is 26 months but it may be subsequently and incrementally extended by the Authority to a maximum of 39 months, contingent upon the results of performance proficiency data from each such cycle.

(iv) Training Sessions

Each evaluation period shall include a minimum of one training session, but may include more. Initially, training sessions cannot be more than 13 months apart.

 Table 2.7–Requirements of an Advanced Qualification Program (AQP) or Alternative Training and Qualification Program (ATQP)

(v) **Proficiency Evaluations**

If applicable, for PICs, SICs, flight engineers, and other persons covered by an AQP/ATQP, a proficiency evaluation shall be completed during each evaluation period. Typically, the proficiency evaluation will occur during a required training session; however, if more than one training session is completed during an evaluation period, the proficiency evaluation may be divided among training sessions or otherwise allocated to one or more such sessions.



Section 3 — Operational Control and Flight Dispatch (DSP)

Applicability

Section 3 addresses the requirements for operational control of flights conducted by multi-engine aircraft, and is applicable to an operator that conducts such flights, whether operational control functions are conducted by the operator or conducted for the operator by an external organization (outsourced). Specific provisions of this section are applicable to an operator based on the operational system in use, the manner in which authority is delegated by the operator, and the responsibilities, functions, duties or tasks assigned to the personnel involved.

The standards and recommended practices in Section 3 are applicable only to those aircraft that are of the type authorized in the Air Operator Certificate (AOC) and utilized in commercial passenger and/or cargo operations, unless applicability is extended to encompass non-commercial operations as stated in a note immediately under the body of the provision.

Table 3.1 categorizes the personnel that are delegated the authority to exercise operational control, assigned the overall responsibility for the overall operational control of a flight, assigned the individual responsibility to carry out one or more functions, duties or tasks related to the operational control of a flight, or assigned the duty to provide administrative support to others with responsibilities related to operational control.

Table 3.5 defines the competencies of operational control personnel appropriate to the assignment of overall responsibility for operational control and/or to carry out one or more operational control functions, duties or tasks according to their specific competencies.

All personnel utilized to perform operational control functions as defined in Table 3.1, or that act in a manner consistent with the functional categories specified in Table 3.1 and the competencies specified in Table 3.5, irrespective of management or post holder title, are subject to specified training and qualification provisions in this section relevant to the operational control function performed.

Individual provisions, or individual sub-specifications within a provision, that:

- Begin with a conditional phrase ("If the Operator...") are applicable if the operator meets the condition(s) stated in the phrase. The conditional phrase serves to define or limit the applicability of the provision (e.g., "If the operator utilizes..." or "If an FOO or FOA is utilized...").
- Do not begin with a conditional phrase are applicable to all operators unless determined otherwise by the Auditor.

Individual provisions:

- Beginning with a conditional phrase that specifies the use of a Flight Operations Officer (FOO) by an operator are applicable when the operator assigns the FOO, as defined in the IRM and delegated authority in accordance with Table 3.1, responsibility to carry out operational control functions, duties or tasks related to *all* of the competencies of operational control as specified in Table 3.5.
- Beginning with a conditional phrase that specifies the use of a Flight Operations Assistant (FOA) by an operator are applicable when the operator assigns the FOA, as defined in the IRM, responsibility to carry out operational control functions, duties or tasks related to one or more, *but not all*, competencies of operational control as specified in Table 3.5.
- That are applicable to all systems of operational control, but with differences in application to each system, will have those differences explained in the associated Guidance Material (GM).
- Containing the phrase "personnel responsible for operational control" or "personnel with
 responsibility for operational control" refer to any suitably qualified personnel with responsibility for
 operational control as designated by the operator, to include the pilot-in-command (PIC) unless
 otherwise annotated.
- Containing training and qualification requirements are applicable to personnel, other than the PIC, that are assigned responsibilities related to the operational control of flights. PIC training and qualification requirements for all systems of operational control are specified in ISM Section 2 (FLT).

Where operational control functions, duties or tasks are outsourced to external service providers, an operator retains overall responsibility for operational control and will have processes to monitor applicable external service providers in accordance with ORG 3.5.2 located in Section 1 of this manual to ensure requirements that affect operational control are being fulfilled.

General Guidance

Authority and Responsibility

For the purposes of this section *authority* is defined as the delegated power or right to command or direct, to make specific decisions, to grant permission and/or provide approval, or to control or modify a process.

For the purposes of this section *responsibility* is defined as an obligation to perform an assigned function, duty, task or action. An assignment of responsibility typically also requires the delegation of an appropriate level of authority.

Operational Control

Operational control is defined as the exercise of authority to initiate, continue, divert or terminate a flight in the interest of the safety and security of the aircraft and its occupants. An operator may delegate the authority for operational control of a specific flight to qualified individuals, but typically retains overall authority to operate and control the entire operation. An operator may also assign the responsibility to carry out specific operational control functions, duties, or tasks related to the conduct of each flight to identifiable, qualified and knowledgeable individual(s), but always remains responsible (and accountable) for the conduct of the entire operation.

Any individuals delegated the authority to make specific decisions regarding operational control would also be responsible (and accountable) for those decisions. Additionally, individuals assigned the responsibility to carry out specific operational control functions, duties, or tasks related to the conduct of each flight are also responsible (and accountable) for the proper execution of those functions, duties, or tasks. In all cases, the authority and responsibility attributes of operational control personnel are to be clearly defined and documented by the operator, and communicated throughout the organization.

It is important to note that when an operator assigns the responsibility for functions, duties or tasks related to the initiation, continuation, diversion and termination of a flight to employees or external service providers, such operator retains full responsibility (and accountability) for the proper execution of those functions, duties or tasks by ensuring:

- The training and qualification of such personnel meets any regulatory and operator requirements;
- Personnel are performing their duties diligently;
- The provisions of the Operations Manual are being complied with;
- An effective means of oversight is maintained to monitor the actions of such personnel for the purpose of complying with operator guidance and policy, and regulatory requirements.

Authority for the Operational Control of Each Flight

In order to practically exercise operational control of flight operations, an operator typically delegates the authority for the initiation, continuation, diversion or termination of each flight to qualified individuals. Such delegation occurs in conjunction with an operator's overall system of operational control as follows:

 Shared systems, wherein operational control authority is shared between the pilot-in-command (PIC) and a flight operations officer/flight dispatcher (FOO) or designated member of management, such as the Director of Flight Operations (or other designated post holder);

For example: The FOO (or designated member of management, as applicable) has the authority to divert, delay or terminate a flight if in the judgment of the FOO, a designated member of management or the PIC, the flight cannot operate or continue to operate safely as planned or released.

Non-shared systems, wherein operational control authority is delegated only to the PIC.
 For example: Only the PIC has the authority to terminate, delay, or divert a flight if in the judgment of the PIC the flight cannot operate or continue to operate safely as planned.



Responsibility for Operational Control of Each Flight

While an operator always retains full responsibility (and accountability) for the entire operation, the responsibility for the practical operational control of each flight is typically assigned to qualified individuals. As with the delegation of authority, the assignment of responsibility related to the operational control of each flight occurs in conjunction with a system of operational control as follows:

Shared systems, wherein operational control responsibility for each flight is shared between the PIC and an FOO, or between the PIC and a designated member of management such as the Director of Flight Operations (or other designated post holder). In either shared system, the PIC, FOO or designated member of management, as applicable, may be assisted by other qualified personnel assigned the individual responsibility (by the operator) to carry out specific operational control functions, duties or tasks. Such personnel, however, typically do not share operational control responsibility with the PIC, FOO or designated member of management, as applicable.

For example: The FOO (or designated member of management) and the PIC are jointly responsible (and accountable) for the functions, duties or tasks associated with the operational control of a flight, such as pre-flight planning, load planning, weight and balance, delay, dispatch release, diversion, termination, etc. In such systems the FOO (or designated member of management) may carry out such responsibilities unassisted or be assisted by qualified personnel assigned the individual responsibility (by the operator) to carry out specific operational control functions, duties or tasks.

Non-shared systems, wherein the PIC is solely responsible for all duties, functions, or tasks
regarding operational control of each flight, and may carry out such responsibilities unassisted or be
assisted by qualified personnel assigned the individual responsibility (by the operator) to carry out
specific operational control functions, duties or tasks.

For example: The PIC is solely responsible (and accountable) for the duties, functions, duties or tasks associated with the operational control of a flight, and the PIC either acts unassisted or is assisted by qualified personnel in carrying out functions, duties or tasks such as preflight planning, load planning, weight and balance, delay, dispatch release, diversion, termination, etc.

Responsibility for Individual Operational Control Functions, Duties, or Tasks

It is important to note that, regardless of the system of operational control, and as illustrated by the examples in the previous paragraph, the assignment of responsibilities related to the operational control of each flight can be further subdivided among a number of qualified and specialized personnel. In such cases, the responsibility for individual or specific operational control functions, duties or tasks is typically assigned to FOA personnel who support, brief and/or assist the PIC, FOO personnel and/or designated member(s) of management, as applicable, in the safe conduct of each flight. Examples of such qualified personnel include Weather Analysts, Navigation Analysts/Flight Planning Specialists, Load Agents/Planners, Operations Coordinators/Planners, Maintenance controllers and Air Traffic Specialists.

Note: Some operators might choose to assign the responsibility for specialized operational control functions, such as those described in the example, to fully qualified FOO personnel. In such cases, an FOO, although qualified in all competencies of operational control, would be functionally acting as an FOA. Therefore, for the purpose of an audit, FOO personnel acting in this limited capacity are assessed as FOA personnel.

Administrative Support Personnel

FOA personnel are not to be confused with administrative personnel that lack any operational control authority, have very limited operational control responsibilities, and who simply provide, collect or assemble operational documents or data on behalf of the PIC, the FOO, designated member of management or the operator.

Administrative personnel may be present in any system of operational control, are excluded from the initial and recurrent training and qualification provisions of this section, and may be qualified as competent through on-the-job training (OJT), meeting criteria as specified in a job description, or through the mandatory use of written instruments such as task cards, guidelines, or checklists.

Table 3.1 categorizes all personnel that may be present in a system of operational control, defines their authority, identifies their responsibilities and illustrates the relationship of such responsibilities to the operation as a whole.



Table 3.5 defines the competencies of individuals assigned the responsibility for operational control and/or the responsibility to carry out individual operational control functions, duties or tasks.

Definitions, Abbreviations, Acronyms

Definitions of technical terms used in this manual, as well as the meaning of abbreviations and acronyms, are found in the IATA Reference Manual for Audit Programs (IRM).

1 Management and Control

1.1–1.2 (Intentionally Open)

1.3 Authorities and Responsibilities

DSP 1.3.1–1.3.3 (Intentionally open)

DSP 1.3.4 The Operator shall delegate the authority for operational control of each flight only to the PIC in a non-shared system of operational control, or to a combination of suitably qualified individuals in a shared system of operational control, to include the PIC and either:

- (i) An FOO in a shared system of operational control that requires the use of FOO personnel, or
- (ii) A designated member of management or Post Holder in a shared system of operational control that requires the use such management personnel. **(GM)**

Guidance

Refer to General Guidance in the beginning this section for the definition of *Authority* in the context of operational control.

The intent of this provision is to ensure an operator delegates the authority to initiate, continue, divert or terminate a flight in the interest of the safety and security of the aircraft and its occupants (operational control) only to appropriately qualified individuals.

Examples of operational control systems are provided in the following table as a means to identify how authority is typically delegated by an operator.

System of Operational Control	Location	System Description
Shared system (General)	(i), (ii)	Operational control authority is shared between the PIC and a flight operations officer/flight dispatcher (FOO) or a designated member of management.
Full Shared System (PIC and FOO)	(i)	The PIC and FOO have joint authority over the decisions functions, duties or tasks associated with the operational control of a flight. Such systems are characterized by the use of flight monitoring and a dedicated communications system (voice or electronic) separate from the ATC system in order to maintain shared authority.
Partial Shared System (PIC and FOO)		The PIC and FOO have joint authority over all preflight decisions, functions, duties or tasks associated with the operational control of a flight, but during flight the PIC has sole authority. Such systems are characterized by the use of flight monitoring if required by the Authority or desired by the Operator and typically lack the dedicated communications system necessary to maintain shared authority in flight.



System of Operational Control	Location	System Description
Shared System (PIC and Management)	(ii)	Functionally equivalent to a full-shared system except that the PIC and a designated member of management, often the Director of Flight Operations or any suitably qualified and knowledgeable member of management designated by the operator, have joint authority over the decisions, functions, duties or tasks associated with the operational control of a flight.
Non-shared system (General)	Main standard	Operational control authority is delegated only to the PIC who may or may not be assisted by other support personnel.
Non-shared System (PIC-only)	Main standard	The PIC has sole authority over any and all decisions and completes all tasks (unassisted) related to the operational control of each flight. This does not preclude administrative personnel from providing, collecting or assembling operational documents or data related to each flight on behalf of the PIC and as defined in Table 3.1. Such systems may employ flight monitoring if required by the Authority or desired by the operator.
Non-shared System (PIC-assisted)	Main standard	The PIC has sole authority over any and all decisions regarding operational control. However, the PIC is assisted by others (e.g. FOO, FOA or a member of management) that lack operational control authority, but are assigned the responsibility to carry out specific functions, duties or tasks, such as flight planning, flight support, briefing and in-flight monitoring. Such systems employ flight monitoring if required by the Authority or desired by the operator.

Note: An FOA can be utilized in combination with FOOs or designated members of management in all systems of operational control. If such personnel are delegated authority in a shared system, however, it would be limited to their specific area of competency.

Table 3.1 categorizes operational control personnel, defines their authority, identifies their responsibilities and illustrates the relationship of such responsibilities to the operation as a whole.

DSP 1.3.5 The Operator shall retain the overall responsibility for operational control of each flight and assign the responsibility to carry out functions, duties or tasks related to the operational control of each flight only to the PIC, or to a combination of suitably qualified personnel as defined in Table 3.1, to include the PIC and:

- (i) If the Operator has a shared system of operational control responsibility, *either* of the following:
 - (a) An FOO, who shares overall operational control responsibility with the PIC and/or supports, briefs and/or assists the PIC in the safe conduct of each flight, *or*
 - (b) A designated member of management or Post Holder who shares overall operational control responsibility with the PIC and/or supports, briefs and/or assists the PIC or FOO in the safe conduct of each flight.

Note: FOA and/or administrative personnel can be utilized in combination with FOOs and/or designated members of management in a shared system of operational control, but neither would share operational control responsibility with the PIC, FOO or designated member of management.



- (ii) If the Operator has a non-shared system of operational control responsibility, one or more of the following:
 - (a) An FOO who supports, briefs and/or assists the PIC in the safe conduct of each flight, or
 - (b) A designated member of management or Post Holder who supports, briefs and/or assists the PIC or FOO in the safe conduct of each flight, or
 - (c) FOA personnel who support, brief and/or assist the PIC or FOO in the safe conduct of each flight, and/or
 - (d) Administrative personnel who do not support, brief and/or assist the PIC or FOO, but provide, collect or assemble operational documents or data relevant to the conduct of each flight. **(GM)**

Note: An operator may choose to assign limited responsibilities to fully qualified FOO personnel, or to utilize them only to carry out individual or specific operational control functions, duties or tasks. In such cases, an FOO would be functionally acting as an FOA.

Guidance

Refer to General Guidance in the beginning this section for the definition of *Responsibility* in the context of operational control.

The intent of this provision is to specify the various ways operational control responsibilities can be assigned by an operator and to ensure only suitably trained and qualified individuals, in addition to the PIC, are assigned overall responsibility for operational control or the responsibility to carry out one or more functions, duties or tasks related to the operational control of each flight.

The specifications of this provision apply irrespective of post holder titles or whether personnel positions are described in the OM. If personnel are assigned the responsibility to carry out operational control functions, duties or tasks, and act in a manner consistent with the specifications of this provision or the descriptions found in Table 3.1, the specifications of this provision are applicable, as well as the specifications of ensuing provisions that require such personnel to be trained and qualified for the operational control responsibilities, functions, duties or tasks that they are performing.

System of Operational Control	Item	System Description
Shared systems (General)	(i) (a), (i) (b)	Operational control responsibility is shared between the PIC and an FOO or designated member of management.
Full Shared System (PIC and FOO)	(i) (a)	The PIC and FOO are jointly responsible for the decisions, functions, duties or tasks associated with the operational control of a flight. Such systems are characterized by flight monitoring and a dedicated communications system (voice or electronic) separate from the ATC system in order to maintain joint responsibility.
Partial Shared System (PIC and FOO)	(i) (a)	The PIC and FOO are jointly responsible for all preflight decisions, functions, duties or tasks associated with the operational control of a flight, but during flight the PIC has sole responsibility. Such systems are characterized by the use of flight monitoring if required by the Authority or desired by the Operator and typically lack the dedicated communications system necessary to maintain shared responsibility in flight.

Examples of operational control systems are provided in the following table as a means to identify how responsibility is typically assigned by an operator.



System of Operational Control	Item	System Description
Shared System (PIC and Management)	(i) (b)	Functionally equivalent to a full-shared system except that the PIC and a designated member of management, often the Director of Flight Operations or any suitably qualified and knowledgeable member of management designated by the operator are jointly responsible for the functions, duties or tasks associated with the operational control of a flight. The responsibility to carry out actual functions, duties or tasks such as flight planning, supporting/briefing the crew or flight monitoring is typically assigned to other non-management personnel (e.g. FOOs and/or FOAs).
Non-shared Systems (General)	(ii) (a) - (d)	Operational control responsibility is assigned only to the PIC who may or may not be assisted by other support personnel.
Non-shared System (PIC-only)	Parent provision and/or (ii) (d)	The PIC is solely responsible for completing all tasks (unassisted) related to the operational control of each flight. This does not preclude administrative personnel from providing, collecting or assembling operational documents or data related to each flight on behalf of the PIC as defined in Table 3.1. Such systems employ flight monitoring if required by the Authority or desired by the operator.
Non-shared System (PIC-assisted)	(ii) (a) - (c)	The PIC is solely responsible for all decisions regarding operational control. However, the PIC may be assisted by others, such as an FOA, or an FOO or member of management that functions as an FOA, who is assigned the responsibility to carry out specific functions, duties or tasks, such as flight planning, support, briefing and in-flight monitoring. Such systems employ flight monitoring if required by the Authority or desired by the operator.

Note:

- FOOs can be present in any system of operational control to support, brief and/or assist the PIC or designated member of management in all competencies of operational control.
- FOAs can be present in any system of operational control, but their responsibilities are limited to their area(s) of expertise.
- FOAs may be assigned specific flight responsibilities depending on area of expertise or general (non-flight specific) responsibilities in support of other operational control personnel or functions.
- The responsibilities of administrative personnel utilized in operational control functions are limited to the provision or collection of operational data.

Table 3.1 categorizes operational control personnel, defines their authority, identifies their responsibilities and illustrates the relationship of such responsibilities to the operation as a whole.

Table 3.5 defines the competencies of individuals assigned the responsibility for operational control and/or the responsibility to carry out individual operational control functions, duties or tasks.

When operational control functions are outsourced to external service providers, an operator retains overall responsibility for operational control and would ensure such service providers are subjected to contractual and monitoring processes as specified in ORG 3.5.1 and ORG 3.5.2 located in Section 1 of this manual.

FOO and/or FOA responsibilities for operational control typically begin when assigned a flight during flight preparation and end after flight termination.

1.4–1.6 (Intentionally Open)

1.7 **Operations Manual**

DSP 1.7.1 The Operator shall have an Operations Manual (OM) for the use of operational control personnel, which may be issued in separate parts, and which contains the policies, procedures and other guidance or information necessary for compliance with applicable regulations, laws, rules and Operator standards. As a minimum, the content of the OM shall be in accordance with the specifications in Table 3.2. (GM)

Guidance

Human factors are considered in the design of the OM to achieve the following:

- Preparation of documentation in a useable format for information presentation, at the appropriate reading level and with the required degree of technical sophistication and clarity.
- Improving user performance through the use of effective and consistent labels, symbols, colors, terms, acronyms, abbreviations, formats and data fields.
- Ensuring the availability and usability of information to the user for specific tasks, when needed, and in a form that is directly usable.
- Designing operational procedures for simplicity, consistency and ease of use.
- Enabling operators to perceive and understand elements of the current situation and project them to future operational situations.
- Minimizing the need for special or unique operator skills, abilities, tools or characteristics.
- Assessing the net demands or impacts upon the physical, cognitive and decision-making resources of the operator, using objective and subjective performance measures.

2 Training and Qualification

2.1 Training and Evaluation Program

General

DSP 2.1.1 The Operator shall have a training program, approved or accepted by the Authority, to ensure the operational control personnel specified in Table 3.1, as applicable, are competent to perform any assigned duties relevant to operational control in accordance with the applicable specifications of Table 3.5. Such program shall, as a minimum, address:

- (i) Initial qualification;
- (ii) Continuing qualification. (GM)

Guidance

Refer to the IRM for the definition of State Acceptance.

Not all states require the approval or acceptance of a training program for operational control personnel. In such cases, state acceptance is considered implicit.

A training program for operational control personnel typically addresses:

- For FOO and FOA personnel, initial and recurrent training in accordance with the specifications of Table 3.1 and Table 3.5;
- For FOO and FOA personnel, a method of qualification through written, oral and/or practical evaluation;
- For administrative support personnel as defined in Table 3.1, on-the-job training (OJT), job descriptions, task cards, guidelines, checklists, training materials or other written means to establish competence.





2.2 Training Elements

DSP 2.2.1 If an FOO or FOA is utilized in the system of operational control, the Operator shall ensure such personnel, prior to being assigned to operational control duties, receive initial training and demonstrate appropriate knowledge and/or proficiency in the applicable competencies of operational control as specified in Table 3.5. (GM)

Guidance

The specifications of this provision apply to FOO or FOA personnel who are delegated authority and/or assigned responsibilities in accordance with DSP 1.3.4 and/or DSP 1.3.5, respectively.

FOO personnel who have completed training programs conducted in accordance with ICAO Doc 7192-AN/857, Part D, Training Manual–Flight Operations Officers/Flight Dispatchers, Second Edition, meet the specifications of this provision.

FOO initial training programs contain all of the competencies in Table 3.5 that are relevant to the operations of the operator.

FOA initial training programs contain the competencies in Table 3.5 that are relevant to their job function as determined by the operator.

DSP 2.2.2 If an FOO or FOA is utilized in the system of operational control, the Operator shall ensure such personnel receive recurrent training in the applicable competencies of operational control, as specified in Table 3.5. Recurrent training shall be completed on a frequency in accordance with requirements of the Authority, if applicable, but not less than *once during every 36-month period plus or minus one calendar month from the original qualification anniversary date or base month.* (GM)

Guidance

The specifications of this provision apply to FOO or FOA personnel who are delegated authority and/or assigned responsibilities in accordance with DSP 1.3.4 and/or DSP 1.3.5, respectively.

The recurrent training program for FOO personnel addresses all of the competencies that are relevant to the operations of the operator as specified in Table 3.5.

The recurrent training program for FOA personnel addresses each of the competencies relevant to their specific job function and to the operations of the operator as specified in Table 3.5.

Different methods of conducting recurrent training are acceptable, including formal classroom study, home study, computer-based training, seminars and meetings.

3 Line Operations

3.1–3.5 (Intentionally Open)

3.6 Flight Monitoring and In-flight Management

DSP 3.6.1–3.6.2 (Intentionally open)

DSP 3.6.3 The Operator *should* have a system of operational control that includes flight monitoring for the duration of a flight and ensures timely notification to the Operator by the PIC of en route flight movement and/or significant deviation from the operational flight plan.



Table 3.1–Operational Control Personnel

This table categorizes operational control personnel, defines the scope of their authority, identifies their responsibilities and illustrates the relationship of such responsibilities to the operation as a whole. It shall be used for the purposes of applying relevant Section 3 provisions and is provided to ensure suitably qualified persons are designated, where applicable, to support, brief and/or assist the pilot-in-command (PIC) or FOO or designated member of management in the safe conduct of each flight. The terms used in the table to identify operational control personnel are generic and might vary. Personnel, however, employed in operational control functions that are delegated the authority and/or assigned the responsibility to carry out functions, duties or tasks, as outlined in the table, are subject to the training and qualification requirements commensurate with their position.

Operational Control ➡ ↓	Authority (DSP 1.3.4)	Responsibilities, Including the Assignment of Functions, Duties or Tasks. (DSP 1.3.5 and 1.3.6)	Training and Qualification Operator shall designate responsibilities and ensure personnel are competent to perform the job function.
Administrative Support Personnel ¹ (e.g. gate agent)	None Do not make recommendations or decisions regarding the operational control of a flight.	Provide, collect or assemble operational documents or data only.	Not subject to initial and recurrent training in the competencies of operational control in Table 3.5 and are qualified via On the Job Training (OJT), job descriptions, task cards, guidelines, checklists, training materials or other written means to establish competence.
	None or limited to area(s) of expertise	Support, brief and/or assist the PIC or FOO.	For each area of expertise or specialization ³
Flight Operations Assistant (FOA) ⁴ (e.g. Weather Analysts, Navigation Analysts/Flight Planning Specialists, Load Agents/Planners, Operations Coordinators/Planners, Maintenance controllers, Air Traffic Specialists)	May be authorized to make decisions or recommendations in area(s) of expertise. ⁵ (e.g., maintenance controller grounds aircraft.)	Specializes in one or more of the elements of operational control. ³ Collects, provides filters, evaluates and applies operational documents or data relevant to specific elements of operational control. Makes recommendations or decisions in area(s) of expertise.	Subject to initial and recurrent training in accordance with DSP 2.2.1 and 2.2.2 and specific competencies of Table 3.5 relevant to the job function and operations of the Operator.



Table 3.1–Operational Control Personnel				
Flight Dispatcher or Flight Operations Officer (FOO) ⁴ or	None or limited or shared ² May share operational control authority with the PIC. ² May be authorized to	May share operational control responsibility with the PIC. ² Support, brief, and/or assist the PIC. Collects, provides,	Subject to initial and recurrent training in accordance with DSP 2.2.1 and 2.2.2 and <u>all</u> competencies of Table 3.5 relevant to the operations of	
Designated Member of Management (e.g. Director of Operations or other nominated Post Holder)	make recommendations or decisions. ⁵	filters, evaluates and applies operational documents or data relevant to all elements of operational control. ³	the Operator.	
		Makes recommendations or decisions.		
	Full/shared ²	Full/shared ²	Subject to training and	
	Has final authority to ensure the safe	Responsible for safe conduct of the flight.	qualification requirements specified in ISM Section 2.	
Pilot in Command (PIC)	operation of the aircraft. May share authority and responsibility for operational control.	Collect, provide, filter, evaluate and applies operational documents or data relevant to all competencies of operational control. ³		
	1 - Personnel lacking any authority or responsibility for operational control are identified in the table for the purposes of excluding them from the training and qualification provisions of this section.			
	2 - FOO personnel used in conjunction with a shared system of operational share authority and responsibility with the PIC.			
Legend	3 - The competencies of operational control are contained in Table 3.5. FOA personnel that specialize in one competency of operation control may be referred to as Weather Analysts, Navigation Analysts/Flight Planning Specialists, Load Agents, Operations Coordinators/Planners, Maintenance controllers, Air Traffic Specialists.			
	4 - The terms used in this table to identify operational personnel are generic and may vary. Personnel utilized in operational control functions and assigned the responsibilities delineated in the table are subject to the relevant qualification and training provisions in this section.			
	5 - Authority limited in sco	pe to decision making in	area of expertise.	



		Table 3.2–Operations Manual (OM) Content Specifications	
1.7.1 to pe	I. It a ersor	e contains the fundamental OM content specifications required to achieve co llso specifies Section 2 (FLT) provisions that must be addressed in the section and with responsibilities related to the operational control of flights.	nformity with DSP ons of the OM relevant
relev	/ant i	ecific policies, guidance, data and/or procedures that must be addressed in a to operational control personnel can be found in individual Section 3 provisio d in the table.	
Gen	eral	Information	ISSARP
(i)	Ger	neral Operations Manual (GOM), to include:	DSP 1.7.1
	(a)	Non-aircraft type related and/or standard operating procedures for each phase of flight, policies, procedures, checklists, descriptions, guidelines, emergency procedures and other relevant information;	DSP 1.7.1
	(b)	Authorities, duties and responsibilities associated with the operational control of flights;	DSP 1.3.1, 1.3.4, 1.3.5, 1.3.6, 1.3.7, 1.3.8
	(C)	The requirement for commercial flights to be conducted under an IFR flight plan and in accordance with an IFR flight plan.	FLT 3.10.1
Airc	raft	Operating Information	ISSARP
(ii)		eraft Operating Manual (AOM), to include:	DSP 1.7.1
	(a)	Normal, abnormal/non-normal and emergency procedures. instructions and checklists;	DSP 1.7.1
	(b)	Aircraft systems descriptions, limitations and performance data.	DSP 1.7.1
(iii)	bet	L and CDL, to include applicability and a description of the relationship ween the Minimum Equipment List (MEL) and the Master Minimum ipment List (MMEL);	DSP 1.7.1, 3.1.1
(iv)	Airc	raft specific weight and balance instructions/data;	DSP 1.7.1, 3.3.3
(v)	Inst	ructions for the conduct and control of ground de/anti-icing operations.	FLT 3.9.6, 3.4.1, 3.4.3
Area	as, R	outes and Airport Information	
(vi)		ite and airport instructions and information (departure, destination, en route a rnates, to include:	and destination
	(a)	Airway manuals and charts, including information regarding communication navigation aids;	facilities and
	(b)	Airport charts, including the method for determining airport operating minim- values for destination and alternate airports and the increase of airport oper degradation of approach or airport facilities;	a, operating minima ating minima in case of
	(C)	Airport and runway analysis manual or documents:	
	(d)	If applicable, flight following requirements and instructions to ensure the PIC of en route flight movement or deviations from the OFP including procedure communication between the aircraft and the FOO;	
	(e)	Instructions for the conduct of precision and non-precision approaches, incl minima;	uding approach
	(f)	If applicable, procedures for the conduct of long-range navigation;	
	(g)	Supplemental oxygen requirements and escape routes in case of decompre- high terrain, if applicable;	ession in an area of
	(h)	Regional guidance necessary to comply with local regulations.	
Trai	ning	Information	
(vii)	Tra	ining Manual, to include:	



	Table 3.2–Operations Manual (OM) Content Specifications		
	 (a) Details of all relevant training programs, policies, directives and requirements, including curricula and syllabi, as applicable, for initial qualification, continuing qualification and other specialized training; 		
	(b) Curricula for ground training, evaluation and certification;		
	(c) Comprehensive syllabi to include lesson plans, procedures for training and conduct of evaluations;		
	(d) The training program for the development of knowledge and skills related to human performance (Crew Resource Management/Dispatch Resource Management, CRM/DRM).		
Othe	er Information		
(viii)	Cabin safety and emergency procedures relevant to operational control personnel.		
(ix)	Dangerous Goods manual or parts relevant to operational control personnel, to include information and instructions on the carriage of dangerous goods and action to be taken in the event of an emergency.		
(X)	Security Manual or parts relevant to operational control personnel, including bomb search procedures.		



Table 3.3–(Intentionally Open)



Table 3.4–(Intentionally Open)



Table 3.5–Competencies of Operational Control

The Operator shall ensure FOO or FOA personnel demonstrate knowledge and/or proficiency in the competencies of operational control appropriate to the assignment of responsibility to carry out operational control functions, duties, or tasks, to include, as applicable:

	Competency	FOO	FOA
(i)	Contents of the Operations Manual relevant to the operational control of flights;	X ³	X ^{3B}
(ii)	Radio equipment in the aircraft used;	X ³	X ^{3B}
(iii)	Aviation indoctrination;	X ³	X ^{3B}
(iv)	Navigation equipment in the aircraft used, including peculiarities and limitations of that equipment;	X ³	X ^{3B}
(v)	Seasonal meteorological conditions and hazards;	X ³	X ^{3B}
(vi)	Source of meteorological information;	X ³	X ^{3B}
(vii)	Effects of meteorological conditions on radio reception on the aircraft used;	X ³	X ^{3B}
(viii)	Aircraft mass (weight) balance and control;	X ³	X ^{3B}
(ix)	Human performance relevant to operations or dispatch duties (CRM/DRM);	X ³	
(x)	Operational procedures for the carriage dangerous goods;	X ²	X ^{2B}
(xi)	Operational procedures for the carriage of cargo;	X ^{3B}	X ^{3B}
(xii)	Operational emergency and abnormal procedures;	X ^{2B}	X ^{2B}
(xiii)	Security procedures (emergency and abnormal situations);	X ³	X ^{3B}
(xiv)	Civil Air Law and regulations;	X ³	X ^{3B}
(xv)	Aircraft mass (weight) and performance;	X ³	X ^{3B}
(xvi)	Navigation, special navigation;	X ³	X ^{3B}
(xvii)	Special airports;	Х 3А	X ^{3AB}
(xviii)	Air traffic management;	X ³	X ^{3B}
(xix)	Aircraft systems and MEL/CDL;	X ³	X ^{3B}
(xx)	Flight planning;	X ³	X ^{3B}
(xxi)	Flight monitoring;	X ³	X ^{3B}
(xxii)	Communication;	X ³	X ^{3B}
(xxiii)	Fuel supply (aircraft and fuel type requirements);	X ³	X ^{3B}
(xxiv)	De-icing/anti-icing procedures;	X ^{3A}	X ^{3AB}
(xxv)	Procedures for operations beyond 60 minutes including, if applicable, EDTO.	X ^{3A}	X ^{3AB}



Table 3.5–Competencies of Operational Control

Legend

- X: Shall be completed during training and evaluation.
- 1: Shall be satisfactorily completed during initial training and once every calendar year plus or minus one calendar month from the original qualification anniversary date or base month.
- 2: Shall be satisfactorily completed during initial training and once every 24 months.
- 3: Shall be satisfactorily completed during initial training and once every three calendar years plus or minus one calendar month from the original qualification tri-annual anniversary date or base month.
- A: If relevant to the operations of the Operator.
- B: If relevant to area of expertise or job function (e.g. Flight Planning, Maintenance Control, Load Planning, etc.).

Notes

FOO personnel that are assigned overall operational control responsibility for specific flights, assigned responsibilities in all competencies of operational control or utilized in shared systems of operational control demonstrate knowledge and/or proficiency in all applicable competencies in this table. FOO or FOA personnel assigned the individual responsibility to carry out specific operational control functions, duties or tasks demonstrate knowledge and/or proficiency in competencies relevant to area of expertise or function as determined by the operator or State.

It is important to note that some operators might choose to assign the responsibility for specific operational control functions to fully qualified FOO personnel. In such cases an FOO is acting in a limited capacity and although qualified in all competencies of operational control, would be functionally acting as an FOA.



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Section 4 — Aircraft Engineering and Maintenance (MNT)

Applicability

Section 4 is applicable to all operators, and addresses aircraft engineering and maintenance functions relevant to the airworthiness of the aircraft, engines and components.

Individual provisions or sub-specifications within a provision that:

- Begin with a conditional ("If the Operator...") are applicable if the operator meets the condition(s) stated in the phrase.
- Do not begin with a conditional phrase are applicable unless determined otherwise by the Auditor.

Where an operator outsources the performance of aircraft engineering and maintenance functions to external organizations, the operator retains overall responsibility for such functions, and must demonstrate processes for monitoring the applicable external organization(s) in accordance with ORG 3.5.2 located in Section 1 of this manual.

General Guidance

Definitions of technical terms used in this manual, as well as the meaning of abbreviations and acronyms, are found in the IATA Reference Manual for Audit Programs (IRM).

1 Management and Control

1.1–1.2 (Intentionally Open)

1.3 Maintenance Program

MNT 1.3.1 The Operator shall provide, for the use and guidance of relevant maintenance and operational personnel, a Maintenance Program and maintenance data, approved by the Authority that contains information for each aircraft type, in accordance with specifications in Table 4.1. The Maintenance Program shall satisfy:

- (i) Requirements of the State of Registry;
- (ii) Requirements of the State of Design;
- (iii) Requirements of the Operator;
- (iv) Maintenance specifications provided by the aircraft, engine and component OEMs. (GM)

Guidance

Refer to the IRM for the definitions of Approved Maintenance Organization (AMO), State of Design and State of Registry.

An operator's authority holds the operator responsible for the definition of Approved Data and an Approved Maintenance Program for use by the operator and its maintenance organization.

In this context, it is necessary to check what vehicle is being used by the operator to ensure that both the Approved Data and Maintenance Program are known to the approved maintenance organization (AMO) and are approved according to the requirements of the Authority. Additionally, it is necessary to check which vehicle the operator uses to introduce changes to Approved Data and to the Approved Maintenance Program. Does the operator have a Design Organization to perform these activities?

Here it is also proper to ask the question: what subscriptions the operator has in order to be able to define its Approved Data and Approved Maintenance Program? e.g., bi-weekly, TC Holder Data, shared reliability data and others.

The aircraft is maintained to one approved operator's aircraft maintenance program. When an operator wishes to change from one approved operator's aircraft maintenance program to another approved program, a transfer check/Inspection may need to be performed, as agreed with the Authority, in order to implement the change.

ISSA Standards Manual

The operator's aircraft maintenance program contains a preface that defines the maintenance program contents, the inspection standards to be applied, permitted variations to task frequencies and, where applicable, any procedure to escalate established check/inspection intervals.

Some approved operators' aircraft maintenance programs, not developed from the MRB Process, use reliability programs. The purpose of a reliability program is to ensure that the aircraft maintenance program tasks are effective and carried out at appropriate time intervals. Actions resulting from the reliability program may result in the escalation, addition or deletion of maintenance tasks, as deemed necessary. A reliability program provides an appropriate means of monitoring the effectiveness of the maintenance program.

The maintenance program typically contains the following information:

- The type/model and registration number of the aircraft, engines and, where applicable, auxiliary power units (APUs) and propellers;
- The name and address of the operator;
- The operator's reference identification of the program document, the date of issue and issue number;
- A statement signed by the operator to the effect the specified aircraft is maintained in accordance with the program and that the program is reviewed and updated as required;
- Contents/list of effective pages of the document;
- Check periods that reflect the anticipated utilization of the aircraft and where utilization cannot be anticipated, calendar time limits are included;
- Procedures for the escalation of established check periods, where applicable, and acceptable to the Authority;
- Provision to record date and reference to approved amendments incorporated in the program;
- Details of preflight maintenance tasks accomplished by maintenance personnel and not included in the Operations Manual for action by flight crew;
- The tasks and the periods (intervals/frequencies) at which each part of the aircraft, engines, APUs, propellers, components, accessories, equipment, instruments, electrical and radio apparatus and associated systems and installations are to be inspected, together with the type and degree of inspection;
- The periods when items are checked, cleaned, lubricated, replenished, adjusted and tested;
- Details of specific structural inspections or sampling programs;
- Details of the corrosion control program, when applicable;
- The periods and procedures for the collection of engine health monitoring data;
- The periods when overhauls and/or replacements by new or overhauled parts are to be made;
- A cross-reference to other documents approved by the Authority that contain the details of maintenance tasks related to mandatory life-limitations, Certification Maintenance Requirements (CMRs) and Airworthiness Directives (ADs);

Note: To prevent inadvertent variations to such tasks or intervals, these items would not be included in the main portion of the maintenance program document, or any planning control system, without specific identification of their mandatory status.

- Details of, or cross-reference to, any required Reliability Program or statistical methods of continuous surveillance;
- A statement that practices and procedures to satisfy the program are to the standards specified in the Type Certificate Holder's Maintenance Instructions. When practices and procedures are included in a customized operator's maintenance manual approved by the Authority, the statement refers to this manual;
- Each maintenance task quoted is defined in the definitions section of the program.

An operator's approved aircraft maintenance programs are subject to periodic review to ensure they reflect current Type Certificate Holder's recommendations, revisions to the Maintenance Review



Board Report and the mandatory requirements and maintenance needs of the aircraft. The operator reviews the detailed requirements at least annually for continued validity in light of the operating experience.

A system is in place to analyze the effectiveness of the maintenance program with regard to spares, known defects, malfunctions and damage and to amend the maintenance program, as necessary. The amendment to the maintenance program requires the approval of the Authority unless the operator has been approved to amend the maintenance program without requiring approval of the Authority.

MNT 1.3.2 (Intentionally open)

MNT 1.3.3 The Operator shall ensure amendments to the Maintenance Program are furnished to all organizations and/or persons to whom the Maintenance Program has been issued.

1.4–1.6 (Intentionally Open)

1.7 Maintenance Management Manual

MNT 1.7.1 The Operator shall have, for the use and guidance of relevant maintenance and operational personnel, a Maintenance Management Manual that is accepted or approved by the Authority. The MMM may be issued in separate parts and shall contain maintenance policies, procedures and information as specified in Table 4.3. The design of the manual shall observe Human Factors principles. **(GM)**

Guidance

An MMM is a document that defines how an operator, through its AMO and all contracted AMOs, accomplishes and controls its aircraft maintenance activities. This document sets out:

- The description of the maintenance management system and its senior personnel;
- Each location where maintenance is carried out;
- The Approved Data for accomplishing aircraft maintenance;
- The procedures by which Engineering and Maintenance is managed.

The MMM provides all Engineering and Maintenance personnel with the necessary information to enable them to accomplish their duties and allow the Authority to understand and approve how the operator and its AMO comply with the applicable Airworthiness Requirements.

The MMM can comprise one manual or a suite of manuals. The MMM may have specific sections extracted to form a customized manual for distribution to maintenance contractors, line stations and others, as applicable.

The MMM can be a generic term for the MCM, QPM, MOM, QM, IPM, MME and others. The purpose of the MMM is to set forth the procedures, means and methods of the operator in fulfilling its maintenance responsibilities. Compliance with its contents assures fulfillment of the operator's maintenance responsibilities.

The management section in the MMM may be produced as a stand-alone document and made available to the key personnel required to be familiar with its contents.

Working procedures between the operator and AMO are established and may be produced as any number of separate procedures manuals and cross-referenced from the management part of the MMM. The list of AMO Certifying Personnel may be produced as a separate document.

Personnel from both the operator and the AMO are expected to be familiar with sections of the manuals that are relevant to the work they carry out.

Responsibilities and procedures for revisions to the management part of the MMM and any associated manuals are to be specified.

The Quality Manager of the operator is responsible for monitoring revisions to the MMM unless otherwise agreed by the Authority.

Unless the Authority has agreed via a procedure stated in the amendment section of the MMM that certain defined classes of amendments may be incorporated without prior Authority approval, this process includes monitoring revisions to the associated procedures manuals.

The MMM normally has at least the following four main parts to cover the items in Table 4.3:

- Organization and management;
- Maintenance procedures;
- Quality system procedures;
- Contracted maintenance procedures and paperwork.

And also contains:

- An organization chart;
- Procedures to ensure:
 - Each aircraft operated is maintained in an airworthy condition;
 - The operational and emergency equipment necessary for an intended flight is serviceable;
 - The Certificate of Airworthiness of each aircraft operated remains valid.
- A description of the quality system;
- A description of the procedure for receiving, amending and distributing all necessary airworthiness data from the type certificate holder or type design organization;
- A statement signed by the operator confirming the MMM and any incorporated documents identified therein reflect the operator's means of compliance with the Authority requirements;
- A description of the MMM amendment control procedure;
- A means of identifying each page of the MMM. This can be in the form of a list of effective pages with each page numbered and either dated or marked with a revision number;
- A description of the system used to distribute the MMM, including a distribution list; for nonscheduled work, temporary copies of the relevant portions of the MMM, or any incorporated reference, may be sent via facsimile transmission;
- A detailed description of the procedures used to ensure that any maintenance tasks required by the maintenance schedule, airworthiness directives or any task required for the rectification of a defect are completed within the required time constraints;
- A description of the evaluation program required by these standards;
- A description of the defect rectification and control procedures, including details of:
 - The methods used to detect and report recurring defects;
 - The procedures for scheduling the rectification of defects whose repair has been deferred, if these procedures have not been incorporated into the MEL preamble.
- The procedures used to report service difficulties in accordance with these standards;
- A description of the technical dispatch procedures, including procedures for ferry-flight authorizations, extended range operations (ETOPS, EROPS, LROPS), all weather operation or any other special operation;
- A description of personnel records to be retained;
- A description of the procedure used to ensure the empty weight and balance of each aircraft is recorded in accordance with the applicable State of Registry/Authority requirements;
- Maintenance arrangements and a list of all such arrangements, including the procedure used to communicate to an approved maintenance organization the maintenance requirements for planned and unforeseen maintenance activities, as well as those mandated by airworthiness directives;
- Procedure for revising and maintaining the MMM up to date and current;
- Approval of the Authority through approval of the list of effective pages or, in the case of manuals containing a small number of pages, approval can be identified on each page.



MNT 1.7.2–1.7.5 (Intentionally open)

MNT 1.7.6 The Operator shall ensure a copy of the current version of the MMM, or relevant portions thereof, is promptly made available to:

- (i) Applicable authorities;
- (ii) Each organization or person that performs or certifies maintenance for the Operator;
- (iii) All other organizations or persons to whom the MMM has been issued.

2 Maintenance Control

2.1 Control System

MNT 2.1.1 The Operator shall have a maintenance control system that is in accordance with procedures acceptable to the Authority and ensures:

- (i) Each aircraft is maintained in an airworthy condition;
- (ii) Operational and emergency equipment necessary for flight is serviceable;
- (iii) The Certificate of Airworthiness of each aircraft remains valid.

2.2 Maintenance Planning

MNT 2.2.1 The Operator shall have a system for forecasting and tracking required maintenance activities.

2.3 Parts Installation

MNT 2.3.1 The Operator shall have a process to ensure that no new part is installed on an aeronautical product unless the part meets the standards of airworthiness applicable to the installation of new parts and any of the following:

- (i) The new part has marking identifying it as a part specified in the type design conforming to a recognized national or international standard, or
- (ii) The part has been approved for use on an aeronautical product, in accordance with the type certificate/STC, if the part was originally designed and manufactured for non-aeronautical use, or
- (iii) The new part was manufactured under a Parts Manufacturer Approval (PMA).

MNT 2.3.2 The Operator shall have a process to ensure that no used part is installed on an aeronautical product unless the part meets the standards of airworthiness applicable to the installation of used parts and is **either**:

- (i) An airworthy part that has been removed from an aircraft for immediate installation on another aircraft, **or**
- (ii) An airworthy part that has undergone maintenance for which a maintenance release has been signed by an appropriately rated Approved Maintenance Organization (AMO).

MNT 2.3.3 The Operator shall have a process to ensure that no used life-limited part is installed on an aeronautical product unless the part meets the standards of airworthiness applicable to the installation of life-limited parts and:

- The technical history of the part is available to demonstrate the time in service, as authorized for that part in the type certificate governing the installation, has not been exceeded;
- (ii) The technical history referred to in sub-paragraph i) is incorporated into the technical record for the aeronautical product on which the part is installed.



2.4 Deferred Maintenance

MNT 2.4.1 The Operator shall have a maintenance control function that is responsible for approving, controlling, monitoring and scheduling non-routine and deferred maintenance activities, including MEL/CDL requirements.

MNT 2.4.2 The Operator shall have a process to ensure MEL/CDL restricted items are tracked and corrected within the required time intervals. **(GM)**

Guidance

The process ensures all defects affecting the safe operation of the aircraft are rectified within the limits prescribed by the approved MEL or CDL. No postponement of any defect rectification can be permitted without the operator's agreement and in accordance with a procedure approved by the State of Registry/Authority.

2.5 Continuing Airworthiness

MNT 2.5.1 The Operator shall have a process to obtain and assess continuing airworthiness information, such as Airworthiness Directives (ADs), Alert Service Bulletins and recommendations from the organizations responsible for the type design, and shall implement the resulting actions considered necessary, in accordance with a procedure acceptable to the Authority.

MNT 2.5.2 The Operator shall have a process to monitor and assess maintenance and operational experience with respect to continuing airworthiness of aircraft of over 5,700 kg (12,566 lb) maximum certificated takeoff mass, as prescribed by the Authority.

2.6 Repairs and Modifications

MNT 2.6.1 The Operator shall have a process to ensure all modifications and repairs:

- (i) Are carried out using approved data;
- (ii) Comply with airworthiness requirements of the Authority and State of Registry.

2.7 Defect Recording and Control

MNT 2.7.1 The Operator shall have processes for the management of recurring defects, to include:

- (i) tracking chronic or repetitive unserviceable items;
- (ii) documenting troubleshooting history;
- (iii) implementing instructions for corrective action;
- (iv) ensuring rectification takes into account the methodology used in previous repair attempts.

3 Technical Records

3.1 Aircraft Maintenance Records

MNT 3.1.1 The Operator shall have a program to ensure the following maintenance records are maintained:

- (i) Total time in service (hours, calendar time and cycles, as appropriate,) of the aircraft, engines and all life-limited components;
- (ii) Current status of compliance with all mandatory continuing airworthiness information;
- (iii) Appropriate details of modifications and repairs;
- (iv) Time in service (hours, calendar time and cycles, as appropriate,) since last overhaul of the aircraft, engines or its components subject to a mandatory overhaul life;



- (v) Current aircraft status of compliance with the Maintenance Program;
- (vi) Detailed maintenance records to show that all requirements for signing of a maintenance release have been met. **(GM)**

Guidance

Contracted maintenance organizations are required to maintain detailed records, to include certification documents that support the issuance of a maintenance release. Such requirement is typically specified in contractual arrangements, and implementation verified through oversight by the operator.

3.2 Aircraft Technical Log (ATL)

MNT 3.2.1 The Operator shall have a process to ensure all aircraft have an aircraft technical log (ATL) or approved equivalent that comprises elements specified in Table 4.6.

MNT 3.2.2 The Operator shall have processes for the management of the ATL or approved equivalent as specified in MNT 3.2.1 to ensure, with respect to the ATL or approved equivalent:

- (i) Entries are current and cannot be erased or deleted;
- (ii) Descriptions of errors or discrepancies that have been corrected remain readable and identifiable;
- (iii) Completed pages are retained to provide a continuous record of the last six months of operations.

3.3 (Intentionally Open)

3.4 Airworthiness Directives

MNT 3.4.1 The Operator shall maintain records of Airworthiness Directives (ADs) and Service Bulletins (SBs) or equivalents accomplished in accordance with the MMM.

4 Maintenance Organizations

General Guidance

Refer also to Guidance associated with ORG 3.5.2 located in ISSM Section 1.

Operators may or may not be approved as maintenance organizations. The following three options are possible:

- An operator is an Approved Maintenance Organization with the scope to carry out all maintenance of the aircraft and components;
- An operator is an Approved Maintenance Organization with the scope to carry out some of the maintenance of the aircraft and components. This, at minimum, could be limited to line maintenance but may be considerably more, but still short, of the first option above;
- An operator is not a Maintenance Organization;

However, irrespective of which option, most operators will always have part of their maintenance performed by external organizations.

The purpose of the ISSA process, with regard to this sub-section four, is to ensure the operator has the required monitoring and control processes, documented and implemented, to ensure its operational requirements are being satisfied by all organizations that perform maintenance on the operator's aircraft.



4.1 Approval

MNT 4.1.1 The Operator shall ensure an aircraft is not operated unless it is maintained and released to service by an Approved Maintenance Organization (AMO) that:

- (i) Is acceptable to the Authority:
- (ii) Has established procedures acceptable to the Authority to ensure maintenance practices are in compliance with all relevant requirements;
- (iii) Maintains the validity of its approval through compliance with the requirements for an approved maintenance organization acceptable to the Authority.

MNT 4.1.2 (Intentionally open)

MNT 4.1.3 The Operator shall ensure each maintenance organization that performs maintenance for the Operator has an approval document that contains, as a minimum:

- (i) The name and location of the AMO;
- (ii) The date of issue and period of validity of the approval;
- (iii) The scope of the approval. (GM)

Guidance

The specification in item iii) of this provision is satisfied by the operator ensuring that the AMO approval document contains the type and level of work required by the operator.

A repair station or Approved Maintenance Organization certificate is usually delivered with ratings in one or more of the following categories or their equivalents:

- Aircraft;
- Avionics;
- Engine;
- Propeller;
- Structure and Corrosion Protection Control Program;
- Component;
- Welding;
- NDT.

4.2 (Intentionally Open)

4.3 Quality Assurance

MNT 4.3.1 The Operator shall ensure each maintenance organization that performs maintenance for the Operator has an independent quality assurance program that:

- (i) Meets the specifications and control processes contained in Table 4.7;
- (ii) Monitors compliance with applicable regulations, requirements and the Maintenance Procedures Manual (MPM) of the AMO;
- (iii) Addresses the specific requirements of the Operator as specified in the maintenance agreement;
- (iv) Is under the sole control of the Quality Manager or the person assigned managerial responsibility for the program. **(GM)**

Guidance

The primary objectives of the quality system are to enable the AMO to ensure it can deliver a safe product and remain in compliance with all requirements.



An essential element of the quality system is the independent audit. The independent audit is an objective process of routine sample checks of *all* aspects of the approved maintenance organization's ability to carry out all maintenance to the required standards. This process includes:

- Product sampling, as this is the end result of the maintenance process, which represents an objective overview of the complete maintenance-related activities; product sampling is intended to complement the requirement for certifying personnel to be satisfied that all required maintenance has been properly carried out before the issue of the certificate of release to service;
- A percentage of random audits carried out on a sample basis when maintenance is being carried out; random audits include audits done during the night for those organizations that work at night.

Another essential element of the quality system is the quality feedback system. The principal function of the quality feedback system is to ensure all findings resulting from the independent quality audits of the organization are properly investigated and corrected in a timely manner:

- Independent quality audit reports are sent to the relevant department(s) for rectification action proposing target rectification dates;
- Rectification dates are discussed with such department(s) before the quality department or nominated quality auditor confirms dates in the report;
- The relevant department(s) rectifies findings within agreed rectification dates and informs the quality department or nominated quality auditor of the completion of such rectifications.

The accountable executive is kept informed of any safety issues and the extent of compliance with authority requirements. The accountable executive also holds regular meetings with personnel to check progress on rectification. In large organizations such meetings may be delegated on a day-to-day basis to the quality manager, subject to the accountable executive meeting at least twice per year with the senior personnel involved to review the overall performance and receiving at least a half yearly summary report on findings of non-compliance.

All records pertaining to the independent quality audit and the quality feedback system are retained for at least two evaluation cycles after the date of closure of the finding to which they refer, or for such period as to support changes to the audit time periods, whichever is the longer.

Note: The quality feedback system may not be contracted to outside persons.

It is not intended that this QA Program be based on a system of end product inspection, but rather upon periodic verifications of all aspects of the systems and practices used for the control of maintenance to ensure compliance with regulations and with the operator's approved procedures.

The aim of the program is to provide an unbiased picture of the AMO's performance to verify that activities comply with the MPM and confirm that the systems and procedures described in the MPM remain effective and are achieving the AMO's requirements.

4.4 (Intentionally Open)

4.5 Training Program

MNT 4.5.1 The Operator shall ensure each maintenance organization that performs maintenance for the Operator has a training program that assures all maintenance personnel receive initial and recurrent training that is appropriate to individually assigned tasks and responsibilities, and provides maintenance personnel with:

- (i) The knowledge of regulations, standards and procedures in accordance with requirements in the MMM.
- (ii) The knowledge and skills related to human performance, including coordination with other maintenance personnel and flight crew.

Guidance

Refer to the IRM for the definition of Human Performance.

Item ii) refers to the knowledge and skills related to human performance in all maintenance activities covered under an operator's maintenance program, including those activities performed by an external AMO.

4.6–4.8 (Intentionally Open)

4.9 Procedures Manual

MNT 4.9.1 The Operator shall ensure each maintenance organization that performs maintenance for the Operator provides for the use and guidance of relevant maintenance personnel a Maintenance Procedures Manual (MPM), which may be issued in separate parts, that contains information, as specified in Table 4.9. **(GM)**

Guidance

The MPM is a document that defines how an Approved Maintenance Organization accomplishes and controls its aircraft maintenance activities.

The MPM provides all personnel of the AMO with the necessary information to enable them to accomplish their duties and allows the Authority to understand and approve how the AMO complies with the applicable Airworthiness Requirements.

The MPM can comprise one manual or a suite of manuals. The MPM may have specific sections extracted to form a customized manual for distribution to maintenance contractors, line stations and others as applicable.

The purpose of the MPM is to set forth the procedures, means and methods for the AMO to accomplish maintenance. Compliance with its contents assures fulfillment of the AMO's responsibilities.

The management section in the MPM may be produced as a stand-alone document and made available to the key personnel who need to be familiar with its contents. The list of AMO Certifying Personnel may be produced as a separate document.

Responsibilities and procedures for revisions to the management part of the MPM and any associated manuals are to be specified.

The Quality Manager of the AMO is responsible for monitoring revisions of the MPM, unless otherwise agreed by the Authority.

Unless the Authority has agreed via a procedure stated in the amendment section of the MPM that certain defined classes of amendments may be incorporated without prior Authority approval, this process includes monitoring revisions to the associated procedures manuals.

The MPM also normally contains the following information:

- A brief description of the organization that includes:
 - The approximate size of the organization;
 - The geographic location of the office facilities and/or the base of operations, when not co-located;
 - Where necessary to ensure comprehension, a chart depicting the distribution of the functions.
- A statement signed by the maintenance organization confirming the MPM and any incorporated documents identified therein reflect the Organization's means of compliance with the Authority requirements;
- A description of the maintenance procedures and the procedures for completing and signing a maintenance release when maintenance is based on a system other than that of an approved maintenance organization;
- A description of the procedures for monitoring, assessing and reporting maintenance and operational experience;
- A description of procedures for assessing continuing airworthiness information and implementing any resulting actions;



- A description of the procedures for implementing action resulting from mandatory continuing airworthiness information;
- A description of procedures for ensuring that unserviceable items affecting airworthiness are recorded and rectified;
- A description of the procedures for advising the State of Registry/Authority/operator of significant in-service occurrences;
- A table of contents;
- A description of the MPM amendment control procedure;
- A means of identifying each page of the MPM. This can be in the form of a list of effective pages, with each page numbered and either dated or marked with a revision number;
- A description of the system used to distribute the MPM, including a distribution list; for nonscheduled work, temporary copies of the relevant portions of the MPM or any incorporated reference;
- Where the organization uses standards for the performance of elementary work or servicing different from those recommended by the manufacturer, the identification of those standards;
- Procedures to ensure regulatory information and technical data appropriate to the work performed are used in respect of elementary work and servicing;
- Details of the methods used to record the maintenance, elementary work or servicing performed, including the method of recording of defects in the technical record required by these standards;
- A detailed description of the procedures used to ensure that any maintenance tasks required by the maintenance schedule, airworthiness directives or any task required for the rectification of a defect are completed within the required time constraints;
- A description of the evaluation program required by these standards;
- A description of the defect rectification and control procedures, including details of:
 - The methods used to detect and report recurring defects;
 - The procedures for scheduling the rectification of defects whose repair has been deferred.
- The procedures used to report service difficulties in accordance with these standards;
- A description of the technical dispatch procedures, including procedures for ferry-flight authorizations, extended range operations (EDTO, ETOPS, EROPS, LROPS), all weather operation or any other special operation;
- Procedures to ensure that only parts and materials that meet the requirements of the State of Registry/Authority/operator are used in the performance of elementary work or servicing, including details of any spare part pool arrangements that have been entered into;
- A description of the methods used to ensure that the personnel authorized to perform elementary work or servicing are trained as required by the Authority and qualified in accordance with these requirements, as applicable;
- A description of personnel records to be retained;
- Details of the procedures applicable to maintenance arrangements and a list of all such arrangements, including the procedure used to communicate to an approved maintenance organization the maintenance requirements for planned and unforeseen maintenance activities, as well as those mandated by airworthiness directives;
- · Procedure for revising and maintaining the MPM up to date and current;
- Approval of the Authority through approval of the list of effective pages or, in the case of manuals containing a small number of pages, approval can be identified on each page;
- Procedures used for the storage and control of petroleum, oil and other lubricants, as required by national regulations.



4.10 Maintenance Release

MNT 4.10.1 The Operator shall ensure each maintenance organization that performs maintenance for the Operator produces a completed and signed maintenance release that certifies all maintenance work performed has been completed satisfactorily and in accordance with the approved data and procedures described in the MPM of the maintenance organization. Such maintenance release shall include:

- (i) Basic details of the maintenance performed;
- (ii) A reference of the approved data used;
- (iii) Maintenance tasks that were not accomplished;
- (iv) The date maintenance was completed;
- (v) When applicable, identity of the approved maintenance organization;
- (vi) Identity of the person(s) that sign the release. (GM)

Guidance

Aircraft CRS

A Certificate of Release to Service (CRS) is required before flight:

- At the completion of any maintenance package specified by the aircraft operator;
- At the completion of any defect rectification, while the aircraft operates flight services between scheduled maintenance.

The maintenance package may include any one or a combination of the following elements: a check or inspection from the operator's aircraft maintenance program, Airworthiness Directives, overhauls, repairs, modifications, aircraft component replacements and defect rectification.

New defects or incomplete maintenance work orders identified during maintenance are brought to the attention of the operator for the specific purpose of obtaining agreement to rectify such defects or complete the missing elements of the maintenance work order. In the case where the aircraft operator declines to have such maintenance carried out and provided this missing element/defect does not affect the airworthiness of the aircraft, this fact is entered in the aircraft CRS before issue of such certificate.

Component CRS

A CRS is necessary at the completion of any maintenance on an aircraft component while off the aircraft.

The authorized release certificate/airworthiness approval tag constitutes the aircraft component certificate of release to service when one AMO maintains an aircraft component for another AMO.

When an AMO maintains an aircraft component for use by the organization, an authorized release certificate/airworthiness approval tag may or may not be necessary, depending upon the organization's internal release procedures defined in the maintenance organization exposition and approved by the Authority.



Table 4.1–Maintenance Program Specifications

The Operator's Maintenance Program shall contain the following information for each aircraft:

- (i) Maintenance tasks and the intervals at which these tasks are to be performed, taking into account the anticipated utilization of the aircraft;
- (ii) A system that identifies mandatory maintenance tasks, and their corresponding intervals, for tasks that have been specified as mandatory in the approval of the type design, (i.e., Certification Maintenance Requirements (CMRs));
- (iii) When applicable, a continuing structural integrity program;
- (iv) Procedures for changing or deviating from (i), (ii) and (iii) above;
- (v) When applicable, condition monitoring and reliability program descriptions for aircraft systems, components and powerplants.



Table 4.2–(Intentionally Open)



	Table 4.3–Maintenance Management Manual Content Specifications		
The MM	ne MMM shall contain the following maintenance policies, procedures and information:		
(i)	A description of the administrative arrangements between the operator and the approved maintenance organization;		
(ii)	Names and duties of the person or persons whose responsibilities are to ensure that maintenance is carried out in accordance with the MMM;		
(iii)	A description of aircraft types and models to which the manual applies;		
(iv)	A description of the maintenance procedures and the procedures for completing and signing a maintenance release when maintenance is based on a system other than that of an approved maintenance organization;		
(V)	A reference to the approved maintenance program;		
(vi)	A description of the methods used for the completion and retention of maintenance records, and including procedures for retaining back-up records;		
(vii)	A description of the procedures for monitoring, assessing and reporting maintenance and operational experience;		
(viii)	A description of the procedures for complying with the service information reporting requirements;		
(ix)	A description of procedures for assessing continuing airworthiness information and implementing any resulting actions;		
(x)	A description of the procedures for implementing action resulting from mandatory continuing airworthiness information;		
(xi)	A description of establishing and maintaining a system of analysis and continued monitoring of the performance and efficiency of the maintenance program, in order to improve and correct any deficiency in that program;		
(xii)	A description of procedures for ensuring that unserviceable items affecting airworthiness are recorded and rectified;		
(xiii)	A description of the procedures for advising the Authority of significant in-service occurrences;		
(xiv)	The scope, structure and functionality of the management system for maintenance operations, to include a description of departments, positions, authorities, duties, responsibilities and the interrelation of functions and activities within the system;		
(xv)	A process to ensure all amendments to the MMM are approved by the Authority and/or Operator, as applicable;		
(xvi)	A description of the duties, responsibilities and reporting relationships within the Quality Assurance Program, or a reference to a separate quality assurance manual, if such description is found in that manual.		



Table 4.4–(Intentionally Open)



Table 4.5–ETOPS Maintenance Program Specifications

The Operator's process shall ensure the ETOPS maintenance program complies with all requirements of the Authority and the maintenance specifications provided by aircraft, engine and component OEM's. Such maintenance program shall include:

- (i) The titles and numbers of all airworthiness modifications, additions and changes that were made to qualify aircraft systems for ETOPS are provided to the Authority;
- (ii) Any changes to maintenance and training procedures, practices or limitations established in the qualification for ETOPS are approved by the Authority before being adopted;
- (iii) A reliability reporting program that is functional prior to approval and continued after approval (i.e., new aircraft type);
- (iv) Prompt implementation of required modifications and inspections that could affect propulsion system reliability;
- (v) Procedures to prevent an aircraft from being dispatched for extended range operation after powerunit shutdown or primary system failure on a previous flight until the cause of such failure has been positively identified and the necessary corrective action completed. Confirmation that such corrective action has been effective may, in some cases, require the successful completion of a subsequent flight prior to dispatch on an extended range operation;
- (vi) A procedure to ensure the airborne equipment will continue to be maintained at the level of performance and reliability required for extended range operations.
- (vii) A process for monitoring in-flight shutdowns.



Table 4.6–Aircraft Technical Log (ATL) Specifications

The Operator shall have a process to ensure all aircraft have an aircraft technical log (ATL) or approved equivalent that comprises the following elements:

- (i) Aircraft nationality and registration;
- (ii) Date;
- (iii) Place of departure;
- (iv) Place of arrival;
- (v) Time of departure;
- (vi) Time of arrival;
- (vii) Hours of flight;
- (viii) Incidents, observations, as applicable;
- (ix) Details of defects and rectifications/actions taken;
- (x) Signature and identity of the person recording the defect;
- (xi) Signature and identity of the person signing the release following maintenance.



	Table 4.7–Quality Assurance Program Specifications and Control Processes			
	The Operator shall ensure each maintenance organization that performs maintenance for the Operator has an independent Quality Assurance Program that meets the specifications and has control processes as follows:			
	Specifications			
(i)	An internal audit/evaluation and surveillance program;			
(ii)	An established audit schedule;			
(iii)	A record of audit findings and corrective and/or preventive actions;			
(iv)	Assurance of appropriate corrective and/or preventive action;			
(v)	All elements necessary to confirm the maintenance organization is in compliance with the applicable regulations and the MPM;			
(vi)	The QA program confirms all referenced procedures remain applicable and effective.			
	Control Processes			
(i)	An initial evaluation, using the published checklists that cover all aspects of the maintenance organization technical activities, conducted within 12 months (or 24 months with appropriate management approval) following the date that the operating certificate is issued;			
(ii)	Recurring evaluations conducted at intervals established in the approved MPM;			
(iii)	Records of findings of compliance and non-compliance resulting from the evaluations required by i) and ii);			
(iv)	Procedures to ensure the findings of the evaluations are communicated to the person appointed and made available to the Operator;			
(v)	Where appropriate, immediate and long-term actions to correct the root cause of each non- compliance noted;			
(vi)	Follow-up procedures to ensure necessary corrective/preventive actions (both immediate and long-term) implemented by the Maintenance Organization are effective;			
(vii)	A record-keeping system to ensure details of evaluation findings, corrective actions, preventive actions and follow-up are recorded and that the records are retained for two complete evaluation cycles.			



Table 4.8–(Intentionally Open)



	Table 4.9–Maintenance Procedures Manual Content Specifications			
provides	erator shall ensure each maintenance organization that performs maintenance for the Operator for the use and guidance of relevant maintenance personnel a Maintenance Procedures Manual which may be issued in separate parts, that contains the following information:			
(i)	A brief description of the organization that includes:			
	 (a) A general description of the scope of work authorized under the organization's terms of approval; 			
	(b) A general description of the organization's facilities.			
(ii)	A description of the organization procedures and quality or inspection system;			
(iii)	Names and duties of the responsible personnel;			
(iv)	Names and duties of the person or persons whose responsibilities are to ensure that maintenance is carried out in accordance with the MPM;			
(v)	A description of the procedures used to establish the competence of maintenance personnel;			
(vi)	A description of the methods used for the completion and retention of the Operator's maintenance records, including procedures for retaining back-up records;			
(vii)	A description of the procedure for preparing the maintenance release and the circumstances under which the release is to be signed;			
(viii)	The process for authorizing personnel to sign the maintenance release and the scope of their authorization;			
(ix)	A description of any additional procedures for complying with the Operator's maintenance procedures and requirements;			
(x)	A description of the procedures for complying with the service information reporting requirements;			
(xi)	A description of the procedure for receiving, amending and distributing within the maintenance organization, all necessary airworthiness data from the type certificate holder or type design organization.			



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Section 5 — Cabin Operations (CAB)

Applicability

Section 5 addresses the safety and security requirements associated with the passenger cabin. This section is only applicable to an operator that conducts passenger flights with or without cabin crew.

Individual provisions in this section all begin with a conditional phrase ("If the Operator"...) and are applicable to an operator that meets the condition(s) stated in the phrase.

Where an operator outsources the performance of cabin operations functions to external service providers, the operator retains overall responsibility for such functions, and must demonstrate processes for monitoring applicable external service providers in accordance with ORG 3.5.2 located in Section 1 of this manual.

General Guidance

Definitions of technical terms used in this manual, as well as the meaning of abbreviations and acronyms, are found in the IATA Reference Manual for Audit Programs (IRM).

1 Management and Control

1.1–1.5 (Intentionally Open)

1.6 **Operations Manual**

CAB 1.6.1 If the Operator conducts passenger flights with cabin crew, the Operator shall have an Operations Manual (OM), which may be issued in separate parts, that contains the policies, procedures and other guidance or information necessary for cabin crew members to perform their duties and be in compliance with applicable regulations, laws, rules and Operator standards. The content of the OM shall be in accordance with specifications in Table 5.1. (GM)

Guidance

Refer to the IRM for the definition of Practical Manual.

The complete content of the OM for cabin operations may be issued in more than one document or manual. For example, an operator might choose to issue a practical manual, which would be a controlled document and considered part of the OM. A practical manual, which might be referred to as a quick reference handbook (QRH), typically comprises checklists and other selected information and material taken directly from the OM, and is utilized by cabin crew members in performing onboard duties and procedures during normal, abnormal and/or emergency operations.

Likewise, whereas the operational and training areas of cabin operations specified in Table 5.1 are all included in the OM, they are typically issued in separate documents. For example, the cabin crew training program (item viii) might be outlined in a training document, while policies, procedures, checklists are specified in operational documents.

2 Training and Qualification

2.1 Training Program

CAB 2.1.1 If the Operator conducts passenger flights with cabin crew, the Operator shall have a cabin crew training program, approved or accepted by the Authority that ensures cabin crew members understand their responsibilities and are competent to perform the duties and functions associated with cabin operations. The cabin crew training program shall include initial, recurrent, requalification and aircraft type training courses.



CAB 2.1.2 If the Operator conducts passenger flights with cabin crew, the Operator shall ensure all cabin crew members complete an initial training course:

- (i) As part of the cabin crew qualification process for individuals who have not previously been qualified as a cabin crew member for the Operator;
- (ii) Prior to being assigned duties as a cabin crew member.

CAB 2.1.3 If the Operator conducts passenger flights with cabin crew, the Operator shall ensure all cabin crew members complete a recurrent training course once every 12 months in order to remain qualified to perform duties as a cabin crew member. **(GM)**

Guidance

An operator typically has a process that tracks qualification requirements to ensure cabin crew members complete recurrent training in a timely manner to remain qualified.

The nominal cycle for the completion of the recurrent training course by each cabin crew member is 12 months and, during that period, each cabin crew member receives training in the subject areas applicable to the course for that 12-month period.

As a means of ensuring flexibility in the scheduling process, in some regulatory jurisdictions an operator may be permitted to increase the maximum cycle for the completion of recurrent training by cabin crew members up to 15 months with no change to the original training anniversary date of each cabin crew member. Such flexibility, however, would not alter the requirement for a basic 12-month recurrent training cycle for cabin crew members.

In the event a cabin crew member becomes unqualified for any reason (e.g., extended leave of absence), completion of re-qualification training would establish a new anniversary date (superseding the original anniversary date) upon which recurrent training would be based.

CAB 2.1.4 (Intentionally open)

CAB 2.1.5 If the Operator conducts passenger flights with cabin crew, the Operator shall have aircraft type training, which shall be completed by cabin crew members as part of the process to qualify and remain qualified to perform cabin crew duties on each type of aircraft to which they may be assigned. As a minimum, subjects covered under aircraft type training shall include:

- (i) Aircraft systems;
- (ii) Exit locations and operation;
- (iii) Emergency equipment locations and operation;
- (iv) Emergency assignments;
- (v) Unique features of the aircraft cabin (as applicable for variants of a common aircraft type). (GM)

Guidance

An aircraft type training course for cabin crew members would include the description, locations and operation of an aircraft and its equipment.

Instruction in aircraft systems typically includes:

- Aircraft interior, passenger seats and restraints;
- Crew member seats and restraints;
- Aircraft-specific duties and responsibilities;
- Galley systems;
- Communication systems;
- Lighting systems;
- Oxygen systems.

Instruction on exit locations and operation addresses the types of exits on an aircraft.

Instruction on emergency equipment locations and operation addresses slides, rafts, slide/rafts, ramp slide/rafts, life jackets and other flotation devices.



Sub-specification iv): The term "emergency assignments" refers to specific duties assigned to cabin crew members during emergency situations.

A process, in accordance with requirements of the Authority, would be utilized to qualify cabin crew members that concurrently operate aircraft of different types or operate variants within one aircraft type. The qualification process would typically address the differences between variants or types.

CAB 2.1.6 (Intentionally open)

CAB 2.1.7 If the Operator conducts passenger flights with cabin crew, the Operator shall ensure cabin crew training courses include testing or evaluation by written, oral or practical means to satisfy requirements for cabin crew members to demonstrate adequate knowledge, competency and proficiency to perform duties, execute procedures and operate emergency and lifesaving equipment. **(GM)**

Guidance

Testing or evaluation, which may be accomplished using oral, written or practical means, ensures a thorough knowledge of and the ability to perform duty assignments and execute functions in the cabin.

Written tests and practical drills would be sufficiently thorough to ensure adequate coverage of all safety duties and functions to be performed in an emergency.

Written tests need not be lengthy (e.g., 10 multiple choice questions) provided they are randomly drawn from a large pool of questions that address a broad range of subjects. If tests include commercial questions (e.g., procedures associated with food and beverage services), then testing methods would ensure a sufficient number of test questions to adequately evaluate knowledge of safety aspects.

Grading as part of evaluation would be calibrated such that high scores on non-safety issues do not override or mask low scores on important safety-related material.

Typically the process includes grading standards that define the minimum passing score for all testing to measure and indicate the level of safety competency. Similarly, grading standards are needed when evaluating the performance of cabin crew members during practical training exercises.

3 Line Operations

3.1 (Intentionally Open)

3.2 Cabin Crew Policies and Procedures

CAB 3.2.1 (Intentionally open)

CAB 3.2.2 If the Operator conducts passenger flights with cabin crew, the Operator shall have procedures to ensure a coordinated and expeditious cabin evacuation during aircraft fueling operations with passengers embarking, on board or disembarking. As a minimum, procedures shall require:

- (i) Cabin exits are designated for rapid deplaning or emergency evacuation, and routes to such exits are unobstructed;
- (ii) The area outside designated emergency evacuation exits is unobstructed;
- (iii) One cabin crew member or other qualified person is positioned by the boarding door(s);
- (iv) Means of communication are established among cabin crew members and with passengers;
- (v) A suitable method of communication is established between qualified persons in a position to monitor passenger safety and personnel that have responsibility for fueling operations. (GM)



Guidance

During fueling operations with passengers on board the aircraft, the designation of exits for rapid deplaning or evacuation takes into account various factors, which would typically include:

- Aircraft type (e.g. some aircraft types might require the designation of over-wing exits for evacuation);
- Number of cabin crew members on board;
- The method being utilized for passenger boarding and/or deplaning (e.g. boarding bridge, air stairs);
- Exterior obstructions (e.g. catering vehicle) that might render an exit unusable for an emergency evacuation;
- Interior obstructions (e.g. catering trolley) that might block the route to one or more emergency evacuation exits.

Cabin crew procedures ensure a method of communication is established.

- Among cabin crew members positioned throughout the cabin for the purpose of coordination should a passenger evacuation be required (when more than one cabin crew member is required to be onboard);
- Between the cabin crew and passengers (one way) for the purpose of providing instructions should a passenger evacuation be required;
- Between the cabin crew and the flight crew (when the flight crew is onboard) for the purpose of ensuring notification when fueling operations are in progress and when a passenger evacuation is required;
- Between the cabin crew and the flight crew and/or ground handling personnel for the purpose of ensuring notification when fueling operations must be discontinued for any reason.



	Table 5.1. Operations Manual Contant Specifications
Table 5.1–Operations Manual Content Specifications The content of the Operations Manual shall address the following areas of cabin operations:	
	Compliance or conformity with:
(i)	
	(a) Applicable laws, regulations and rules;(b) Standard operating procedures for each phase of flight.
(ii)	Administration of first aid, to include guidelines for:
(ii)	(a) Life threatening medical emergencies;
	(b) Cardiopulmonary resuscitation (CPR);
	(c) Injuries and illnesses;
	(d) Use of Automatic External Defibrillator (AED), if applicable.
(iii)	Response to abnormal and emergency situations:
(111)	(a) Aircraft emergency evacuation;
	(b) Cabin decompression, if applicable;
	(c) Onboard smoke and fire;
	(d) Emergency landing;
	(e) Leakage or spillage of suspected dangerous goods;
	(f) Suspected bomb or explosives;
	(g) Hijacking or unlawful intervention.
(iv)	Use of cabin systems and equipment, to include malfunctions:
()	(a) Oxygen systems, if applicable;
	(b) Communication systems;
	(c) Entry and exit doors;
	(d) Lifesaving equipment;
(v)	Dangerous goods manual or parts relevant to the cabin crew, to include:
	(a) Dangerous goods prohibited in passenger and crew baggage;
	(b) Information/instructions for dangerous goods permitted in passenger and crew baggage;
	(c) Action to be taken in the event of an emergency.
(vi)	Response to suspected cabin security situations:
	(a) Least risk bomb locations specific to aircraft type;
	(b) Cabin search.
(vii)	Use of survival equipment
(viii) Cabin crew training program
	(a) Abnormal and emergency situations, emergency evacuation;
	(b) Use of emergency and lifesaving equipment;
	(c) Lack of oxygen, loss of pressurization (as applicable);
	(d) Other cabin crew member assignments and functions;
	(e) Dangerous goods;

- (f) Human performance.
- (ix) Limitations pertaining to flight time, flight duty periods and rest periods.





Section 6 — Ground Handling Operations (GRH)

Applicability

Section 6 addresses functions within the scope of ground handling operations and is applicable to an operator that conducts passenger, cargo and/or combi (combined cargo and passenger) aircraft operations.

Individual provisions or sub-specifications within a provision that:

- Begin with a conditional phrase ("If the Operator...") are applicable if the operator meets the condition(s) stated in the phrase.
- Do not begin with a conditional phrase are applicable unless determined otherwise by the Auditor.

Functions within the scope of ground handling operations include:

- Passenger handling
- Baggage handling
- Aircraft handling and loading
- Load control
- Aircraft fueling
- Aircraft de-/anti-icing

In this section, non-revenue cargo and mail are addressed in the same way as revenue cargo for the purposes of handling, loading, securing and transporting. COMAT is non-revenue cargo.

Where an operator outsources the performance of functions within the scope of ground handling operations to external service providers, the operator retains overall responsibility for such functions, and must demonstrate processes for monitoring the applicable external service providers in accordance with ORG 3.5.2 located in Section 1 of this manual.

Security specifications applicable to functions within the scope of ground handling operations are located in Section 8 of this manual.

General Guidance

Definitions of technical terms used in this manual, as well as the meaning of abbreviations and acronyms, are found in the IATA Reference Manual for Audit Programs (IRM).

Procedures used in ground operations are defined in the IATA Ground Operations Manual (IGOM), which is a supplement to the IATA Airport Handling Manual (AHM).

1 Management and Control

1.1–1.5 (Intentionally Open)

1.6 Operational Manuals

GRH 1.6.1 The Operator shall have an Operations Manual, which may be issued in separate parts, that contains the operational policies, processes, procedures and other information necessary for ground handling personnel to perform their duties and be in compliance with applicable regulations, laws, rules and standards of the Operator. **(GM)**

Guidance

Refer to the IRM for the definition of Operations Manual (OM).

An operations manual typically includes guidance that addresses areas generic to all functions within the scope of ground handling operations, as well as parts of the manual that are specific to individual operational functions.

Because the scope of ground handling operations is broad and varies by operator, rather than publishing one OM just for ground handling, a smaller operator might choose to incorporate the relevant information into a larger, comprehensive OM.

An operator could also choose to issue the information in separate documents that are each specific to the various ground handling operational functions (e.g. passenger handling, baggage handling, aircraft handling). Each individual document would typically contain generic guidance that is applicable to all ground handling operational functions (e.g., organizational policies, general definitions), as well as guidance that is specific to the particular ground handling function or office location (e.g., process descriptions, standard operating procedures, references to the appropriate regulations and IATA manuals).

The IGOM contains a core set of operations procedures that may be used by operators in the conduct of ground handling operations.

If an operator has external organizations conduct ground handling operations functions, such operator would then be expected to have a monitoring and control process to ensure each external organization either uses the OM of the operator or has its own published OM that fulfills operational safety, security and quality requirements of the operator.

2 Training and Qualification

2.1 Training Program

GRH 2.1.1 The Operator shall have a process to ensure personnel who perform operational duties in functions within the scope of ground handling operations for the Operator, to include personnel of external service providers, complete:

- (i) Initial training prior to being assigned to perform such operational duties;
- (ii) Recurrent training, except recurrent training in dangerous goods as specified in GRH 2.2.1 or GRH 2.2.2, on a frequency in accordance with requirements of the regulatory authority, but not less than once during every 36-month period. (GM)

Guidance

Requirements for initial and recurrent training apply to all operational ground handling personnel who perform duties within the scope of ground handling operations.

2.2 **Program Elements**

GRH 2.2.1 If the Operator transports dangerous goods, the Operator shall have a process to ensure ground handling personnel receive dangerous goods training, to include *initial training* and *recurrent training*, on a frequency in accordance with requirements of the regulatory authority, but *not less than once within 24 months of previous training in dangerous goods*. Such training shall be completed by personnel that perform operational duties in the following functions within the scope of ground handling operations:

- (i) Passenger handling;
- (ii) Baggage handling;
- (iii) Aircraft loading;
- (iv) Load control. (GM)

Guidance

Recurrent training in dangerous goods is completed within a validity period that expires 24 months from the previous training to ensure knowledge is current, unless a shorter period is defined by a competent authority. However, when such recurrent training is completed within the final 3 months of the 24-month validity period, the new validity period may extend from the month on which the recurrent training was completed until 24 months from the expiry month of the current validity period. If such recurrent training is completed *prior* to the final three months of the validity period, the new validity period to the recurrent training was completed.



The curriculum for dangerous goods training for ground handling personnel will vary depending on specific responsibilities and duty function(s), but will typically address:

- General philosophy;
- Limitations;
- List of dangerous goods;
- Labeling and marking;
- Recognition of undeclared dangerous goods;
- Storage and loading procedures;
- Flight crew notification;
- Provisions for passengers and crew;
- Emergency procedures.

Refer to DGR 1.5 (Table 1.5.A, Minimum Requirements for Training Curricula) for detailed guidance that addresses dangerous goods training and subjects applicable to specific ground handling functions.

GRH 2.2.2 If the Operator does *not* transport dangerous goods, the Operator shall have a process to ensure ground handling personnel receive dangerous goods training, to include *initial training* and *recurrent training* on a frequency as specified in GRH 2.2.1. Such training shall be completed by personnel that perform operational duties in the following functions within the scope of ground handling operations:

- (i) Passenger handling;
- (ii) Baggage handling;
- (iii) Aircraft loading;
- (iv) Load control. (GM)

Guidance

When an operator does not transport dangerous goods (i.e. a "no-carry" operator), dangerous goods training is still required for ground handling personnel to ensure prohibited dangerous goods are recognized and are not loaded onto an aircraft.

Dangerous goods training would be structured to provide the requisite knowledge to permit ground handling personnel to recognize prohibited dangerous goods (whether labeled or not labeled), ensure such dangerous goods are not inadvertently loaded on an aircraft and apply emergency action in the event of contamination or a spill. The curriculum for dangerous goods training for ground handling personnel will typically address:

- General philosophy;
- Limitations;
- Labeling and marking;
- Recognition of undeclared dangerous goods;
- Provisions for passengers and crew;
- Emergency procedures.

Refer to DGR 1.5 (Table 1.5.B, Minimum Requirements for Training Curricula for "No-carry" Operators), for detailed guidance that addresses dangerous goods training and subjects applicable to specific ground handling functions.

3 Ground Handling Operations

3.1-3.2 (Intentionally Open)

3.3 Load Control

GRH 3.3.1 The Operator shall ensure a Load Control system is in place that provides for:

- (i) Aircraft weight and balance conditions that are correct and within limits;
- (ii) Aircraft loaded in accordance with applicable regulations and specific loading instructions for the flight;
- (iii) Dissemination of dangerous goods and other special load information applicable to each flight;
- (iv) Information, to include last minute changes, that is in agreement with the actual load on the aircraft and presented on a final load sheet. **(GM)**

Guidance

Refer to the IRM for the definitions of Load, Load Control, Special Load and Weight and Balance Manual (W&BM).

Load planning is important for ensuring accurate aircraft weight and balance. Such process entails, as a minimum:

- Assemblage of all data relating to the aircraft load (originating and en route stations);
- Planning of the load for ready accessibility;
- Planning of special loads according to restrictions, maximum quantities, separation and segregation requirements
- Consideration of center of gravity parameters affecting aircraft fuel consumption.

Guidance may be found in AHM 590.

3.4 Aircraft Loading

GRH 3.4.1 The Operator shall ensure procedures are in place that provide for aircraft to be loaded:

- (i) In accordance with written loading instructions;
- (ii) In a manner that satisfies weight and balance requirements. (GM)

Guidance

Refer to IGOM Chapter 5 for guidance that addresses the notification to the PIC of on-board dangerous goods. Additional guidance may be found in AHM 514, 519, 590 and 630.

4 Special Aircraft Ground Handling Operations

4.1 Aircraft Fueling

GRH 4.1.1 The Operator shall have a process to ensure fuel suppliers are maintaining standards of fuel safety and quality acceptable to the Operator and fuel delivered and loaded onto aircraft is:

- (i) Free from contamination;
- (ii) Of the correct grade and specification for each aircraft type. (GM)

Guidance

The process ensures fuel is stored, handled and serviced in accordance with accepted standards. Approved fuel specifications are contained in each aircraft manual.



To ensure fuel corresponds to the specifications and grade of product necessary for the applicable aircraft type(s), a control process at each location where the operator has aircraft fueling operations is necessary. Such process ensures the existence of periodic inspections of critical aspects of the fuel supply system at each applicable location, to include, as a minimum:

- Fuel facilities;
- Safety and quality procedures;
- Performance levels of personnel.

Additional guidance may be found in the IFQP (IATA Fuel Quality Pool) Quality and Safety Procedures, and in the AEA Recommendations for De-icing/Anti-icing of Aircraft on the Ground.

4.2 Aircraft De-/Anti-icing

GRH 4.2.1 If the Operator has the potential to conduct commercial and/or non-commercial flights from any airport when conditions are conducive to ground aircraft icing, the Operator shall have a De-/Anti-icing Program, which, if applicable, is approved by the Authority and, as a minimum:

- (i) Ensures adherence to the Clean Aircraft Concept;
- (ii) Defines responsibilities within the Program;
- (iii) Addresses applicable locations within the route network;
- (iv) Defines areas of responsibility;
- (v) Specifies technical and operational requirements;
- (vi) Specifies training and qualification requirements;
- (vii) Is applicable to external service providers that perform de-/anti-icing functions for the Operator. (GM)

Guidance

Refer to the IRM for the definitions of De-/Anti-icing Program and Clean Aircraft Concept.

A de-/anti-icing program covers all locations where flights might be conducted and that have the potential for ground icing conditions, and defines all areas of responsibility pertaining to aircraft de-icing and anti-icing, including functions conducted by external ground handling service providers.

If the operator has a regional route network that does not include any airports that have the potential for ground icing conditions, the Operations Manual would have a statement that specifically prohibit flights to any airports where there is a possibility of ground icing conditions.

The program requires all persons involved in ground de-icing and anti-icing activities to be trained and qualified in the procedures, communications and limitations of each area of responsibility.

If any de-/anti-icing functions will be conducted by external ground handling agents or service providers, the program describes and defines specific control processes that ensure all de-icing and anti-icing requirements of the operator are fulfilled by external service providers.

Additional guidance may be found in ICAO Doc 9640-AN/940, Manual of Aircraft Ground De-icing/Anti-icing Operations, Chapter 7, and in the AEA Recommendations for De-icing/Anti-icing of Aircraft on the Ground.





Section 7 — Cargo Operations (CGO)

Applicability

Section 7 addresses functions within the scope of cargo handling operations, and is applicable to an operator that transports revenue or non-revenue cargo and/or mail. COMAT (Company Material) is non-revenue cargo.

In this section, non-revenue cargo and mail are addressed in the same way as revenue cargo for the purposes of handling, loading, securing and transporting.

Individual provisions in this section begin with a conditional phrase ("If the Operator...") and are applicable to an operator that meets the condition(s) stated in the phrase.

Functions within the scope of cargo handling operations include:

- Cargo and mail acceptance;
- Cargo and mail handling;
- ULD loading/build-up;
- Application of required security measures.

The loading of cargo into the aircraft is addressed in Section 6, Ground Handling Operations (GRH).

Where an operator outsources the performance of functions within the scope of cargo operations to external service providers, the operator retains overall responsibility for such functions, and must demonstrate processes for monitoring applicable external service providers in accordance with ORG 3.5.2 located in Section 1 of this manual.

General Guidance

Definitions of technical terms used in this manual, as well as the meaning of abbreviations and acronyms, are found in the IATA Reference Manual for Audit Programs (IRM).

1 Management and Control

1.1–1.5 (Intentionally Open)

1.6 **Operational Manuals**

CGO 1.6.1 If the Operator transports revenue or non-revenue cargo, the Operator shall have an Operations Manual (OM), which may be issued in separate parts, that contains the operational policies, processes, procedures and other information necessary to ensure compliance with applicable regulations, laws, rules and standards of the Operator. The content of the OM shall contain standards and guidance that addresses the acceptance, handling, loading, securing and transporting of cargo as specified in Table 7.1. (GM)

Guidance

This provision is applicable to an operator that transports non-revenue cargo. COMAT is non-revenue cargo.

An OM may include guidance that addresses areas generic to all functions within the scope of cargo operations; other parts of the manual may be specific to individual operational functions.

Because the scope of cargo operations is broad and varies by operator, rather than publishing a separate OM dedicated to cargo operations (e.g. a Cargo Operations Manual), an operator might choose to publish all guidance for cargo operations in a section of an OM that addresses other types of operations (e.g. maintenance management manual for an operator that transports only COMAT).

An operator could also choose to issue the information in separate documents that are each specific to the various cargo operations functions (e.g., safety and security, acceptance, physical handling, documentation, identification, storage and stowage, preparation for flight). Each individual document would typically contain generic guidance that is applicable to all cargo operations functions

(e.g., organizational policies, general definitions), as well as guidance that is specific to the particular function or office location (e.g., process descriptions, standard operating procedures, references to the appropriate regulations and IATA manuals).

If an operator has external organizations conduct cargo operations functions, such an operator would then be expected to have a monitoring and control process to ensure each external organization either uses the OM of the operator or has its own published operations manual that fulfills operational safety, security and quality requirements of the operator.

2 Training and Qualification

2.1 Training Program

CGO 2.1.1 If the Operator transports revenue or non-revenue cargo and/or mail, the Operator shall have a process to ensure personnel that perform operational duties in functions within the scope of cargo (revenue or non-revenue) handling operations for the Operator, to include personnel of external service providers, complete initial and recurrent training. Such training shall provide the knowledge necessary to perform duties, execute procedures and operate equipment associated with specific cargo handling functions and responsibilities, and include:

- (i) Familiarization training on applicable regulations;
- (ii) In-depth training on requirements, including policies, procedures and operating practices;
- (iii) Safety training on associated operational hazards;
- (iv) Training in human factors principles. (GM)

Guidance

COMAT is non-revenue cargo.

Refer to the Applicability box at the beginning of this section for the functions within the scope of cargo handling operations.

Requirements for initial and recurrent training apply to all personnel that perform duties within the scope of cargo handling operations for an operator, both at the main base and external office locations where such operations are conducted. Training for security requirements includes access control at both landside and airside facilities and cargo security procedures in accordance with requirements of the State of Flight Departure and/or the State of Flight Arrival, as applicable.

2.2 **Program Elements**

CGO 2.2.1 If the Operator transports revenue or non-revenue cargo, and also transports dangerous goods, the Operator shall have a process to ensure personnel assigned the responsibility for accepting dangerous goods complete dangerous goods training, to include *initial training* and *recurrent training*, on a frequency in accordance with requirements of the regulatory authority, but *not less than once within 24 months of previous training in dangerous goods*. Such training shall address, as a minimum:

- (i) General philosophy;
- (ii) Limitations;
- (iii) General requirements for shippers;
- (iv) Classification;
- (v) List of dangerous goods;
- (vi) General packing requirements;
- (vii) Packing instructions;
- (viii) Labeling and marking;
- (ix) Shipper's declaration and other relevant documentation;
- (x) Acceptance procedures;
- (xi) Recognition of undeclared dangerous goods;



- (xii) Storage and loading procedures;
- (xiii) Flight crew notification;
- (xiv) Provisions for passengers and/or crew;
- (xv) Emergency procedures. (GM)

Guidance

Recurrent training in dangerous goods is completed within a validity period that expires 24 months from the previous training to ensure knowledge is current, unless a shorter period is defined by a competent authority. However, when such recurrent training is completed within the final 3 months of the 24-month validity period, the new validity period may extend from the month on which the recurrent training was completed until 24 months from the expiry month of the current validity period. If such recurrent training is completed *prior* to the final three months of the validity period, the new validity period to the final three months of the validity period, the new validity period would extend 24 months from the month the recurrent training was completed.

Subjects included in the curriculum for dangerous goods training for cargo handling personnel will vary depending on specific responsibilities and duty function(s). For the purpose of dangerous goods training, cargo handling functions generally break down into three groupings:

- Acceptance of cargo;
- Handling, storage and build-up of cargo;
- Provision of required information to load planning.

Refer to DGR 1.5 (Table 1.5.A, Minimum Requirements for Training Curricula), for detailed guidance that addresses dangerous goods training and subjects applicable to specific cargo handling functions.

CGO 2.2.2 If the Operator transports revenue or non-revenue cargo and/or mail, and does not transport dangerous goods, the Operator shall have a process to ensure personnel assigned the responsibility for accepting or handling any cargo and/or mail complete dangerous goods training, to include *initial training* and *recurrent training*, on a frequency in accordance with CGO 2.2.1. Such training shall address, as a minimum:

- (i) General philosophy;
- (ii) Limitations;
- (iii) Labeling and marking;
- (iv) For personnel that accept cargo, shipper's declarations and other relevant documentation;
- (v) Recognition of undeclared dangerous goods;
- (vi) Provisions for passengers and/or crew;
- (vii) Emergency procedures. (GM)

Guidance

COMAT is non-revenue cargo.

When an operator does not transport dangerous goods (i.e. a "no-carry" operator), dangerous goods training is still required for cargo operations personnel to ensure declared and undeclared dangerous goods are recognized and prohibited from being carried or loaded onto an aircraft.

Dangerous goods training is structured to provide the requisite knowledge to permit cargo operations personnel to recognize dangerous goods, whether labeled or not labeled, and to prevent such dangerous goods from being inadvertently accepted and/or planned for loading into an aircraft.

Refer to DGR 1.5 (Table 1.5.B, Minimum Requirements for Training Curricula for "No-carry" Operators), for detailed guidance that addresses dangerous goods training and subjects applicable to specific cargo handling functions.



3 Acceptance and Handling

3.1 General Cargo

CGO 3.1.1 If the Operator transports revenue or non-revenue cargo and/or mail, the Operator shall have a process to ensure such shipments accepted for transport:

- (i) If revenue cargo and/or mail, are in compliance with standards in the OM as specified in CGO 1.6.1;
- (ii) If interline cargo, are in compliance with IATA interline cargo requirements
- (iii) If non-revenue cargo, are in compliance with the OM or equivalent document as specified in CGO 1.6.1. (GM)

Guidance

COMAT is non-revenue cargo.

Shipments of cargo or mail are accepted under the terms of the OM, which typically specifies procedures to ensure acceptance personnel verify the cargo (revenue or non-revenue) has been packed in a manner:

- For safe transport with ordinary care in handling;
- To preclude injury or damage to any person, cargo or property.

It is expected that interline cargo also complies with the applicable requirements of the receiving operator(s).

Refer to the IATA Cargo Services Conference Resolution 660 for guidance pertaining to interline cargo.

3.2 Dangerous Goods

CGO 3.2.1 If the Operator transports revenue or non-revenue cargo and/or mail, and also transports dangerous goods, the Operator shall have a Dangerous Goods Acceptance Checklist that reflects applicable requirements contained in the current dangerous goods regulations. **(GM)**

Guidance

Sample checklists for non-radioactive shipments, radioactive shipments, lithium batteries and dry ice (carbon dioxide, solid) are found in the back of the DGR.

Refer to DGR 9.1.3 for guidance that addresses the Dangerous Goods Acceptance Checklist.



Table 7.1–Operations Manual Content Specifications

The content of the Operations Manual shall contain standards and guidance that address the acceptance and handling of revenue cargo, to include, as applicable to type(s) of shipments transported by the Operator:

- (i) Compliance or conformity with:
 - (a) Applicable laws, regulations and rules, including civil aviation cargo security programs;
 - (b) Industry standard operating procedures for each aspect of cargo acceptance and handling.
- (ii) Response to abnormal or emergency situations:
 - (a) Leakage or spillage of suspected dangerous goods;
 - (b) Suspected bomb or explosives;
 - (c) Damaged or leaking cargo;
 - (d) Other emergencies.
- (iii) Cargo acceptance and handling, including conditions of carriage:
 - (a) General cargo;
 - (b) Security requirements;
 - (c) Dangerous goods;
 - (d) Live animals;
 - (e) Other special cargo:
 - Perishable cargo;
 - Human remains;
 - Outsized and heavy cargo;
 - Fragile goods.
 - (f) Mail;
 - (g) Valuable cargo;
- (iv) Requirements associated with the transport of ULDs.





Section 8 — Security Management (SEC)

Applicability

Section 8 addresses the management of operational security in accordance with requirements of an airline Security Program. This section is applicable to all operators.

Individual provisions or sub-specifications within a provision that:

- Begin with a conditional phrase ("If the Operator...") are applicable if the operator meets the condition(s) stated in the phrase.
- Do not begin with a conditional phrase are applicable to all operators unless determined otherwise by the Auditor.

Where operational security functions are outsourced to external service providers, an operator retains responsibility for the conduct of such functions and will have processes to monitor applicable external service providers in accordance with ORG 3.5.2 located in Section 1 of this manual to ensure requirements that affect the security of operations are being fulfilled.

General Guidance

Definitions of technical terms used in this manual, as well as the meaning of abbreviations and acronyms, are found in the IATA Reference Manual for Audit Programs (IRM).

1 Management and Control

1.1 Management System

SEC 1.1.1 (Intentionally open)

SEC 1.1.2 The Operator shall have a senior management official designated as the head of security with direct access to the highest level of management within the organization. Such senior management official, regardless of reporting structure, shall have the responsibility, and thus be accountable, for ensuring the implementation and maintenance of the Security Program. **(GM)**

Guidance

Refer to the IRM for the definitions of Accountability and Responsibility.

Based on the size, structure and complexity of an operator's organization, the position of head of security could be filled by a member of senior management that has responsibilities in addition to security. However the organization is structured, it is important that one senior management official is the designated focal point for security management on behalf of the operator.

1.2 Security Program

SEC 1.2.1 The Operator shall have a formal Security Program that includes:

- (i) The requirements of the civil aviation security program of the State of the Operator (hereinafter, the State);
- (ii) Applicable requirements of other states where operations are conducted;
- (iii) The security standards of the Operator. (GM)

Guidance

Refer to the IRM for the definitions of State, State Acceptance and State Approval. An operator is required to have a Security Program in order to:

- Protect customers, personnel and assets from any act of unlawful interference;
- Comply with regulatory requirements.

The Security Program may be structured in accordance with the ICAO or IATA template, or in accordance with the template provided by the State of the Operator or other relevant state (where operations are conducted).

The State may issue a standard security program with which all operators must comply (operators may apply for exemptions or amendments, as applicable). In such cases, the standard security program of the State is typically recognized as the Security Program of the operator.

A standard security program may be acceptable in meeting security requirements of other states, or the operator may be required to submit individual security programs tailored to meet requirements of other states. An operator must satisfy the security requirements of all applicable states for the purpose of meeting the intent of this standard.

The Security Program is normally approved or accepted (i.e. no notice of deficiency or equivalent is issued) by the relevant state.

The Security Program provides a structure for security policy and awareness, which flows from senior management to all levels of operational personnel within the organization. The documented Security Program, as a minimum, specifies or makes reference to other documents that specify:

- Airline security policy and objectives;
- · Means for achieving these objectives including establishing a security department;
- Structure and responsibilities of the security department;
- Security responsibilities of operational personnel, handling agents and other contractors;
- Minimum and contingency protective measures;
- Risk analysis, threat assessment and counter measures.

1.3–1.6 (Intentionally Open)

1.7 Security Manual

SEC 1.7.1 The Operator shall have a Security Manual or equivalent document that provides guidance for the implementation of the Security Program(s) to ensure applicable personnel have the direction necessary to implement security measures. **(GM)**

Guidance

An operator may have more than one security manual (e.g. where security responsibilities are delegated to various departments or by geographic locations, each with distinct security requirements). All documents comprising an operator's security manual (or equivalent document) are considered controlled documents.

The content of the security manual (or equivalent document) typically addresses the following subject areas, as applicable to the operator's type(s) of operations conducted and specific security requirements:

- Definitions of technical terms associated with the Security Program;
- Authority and applicability of the Security Program;
- Recruitment and training of operational security personnel;
- Security threat assessment;
- Movement of aircraft and evacuation of passengers following bomb alerts;
- Security crisis management plans at airports served;
- Scrutiny of electronic items in the aircraft cabin and in checked baggage (based on threat level);
- Segregation of departing passengers in airport facilities;
- Public awareness of security;
- Detection equipment and technology;
- Passenger risk assessment and enhanced screening;
- Security of checked baggage;



- Screening of checked baggage;
- Security of cargo, express parcels and mail;
- One-stop security;
- Measures for addressing unruly passengers.

2 Training and Qualification

2.1 Training Program

SEC 2.1.1 The Operator shall have a security training program that includes initial and recurrent training, and is in accordance with requirements of all applicable state(s). The security training program shall have a balanced curriculum of theoretical and practical training to ensure:

- (i) Personnel, employed by or under the control of the Operator who implement security controls, have the competence to perform their duties;
- (ii) Crew members and frontline ground handling personnel are able to act in the most appropriate manner to minimize the consequences of acts of unlawful interference and/or disruptive passenger behavior. (GM)

Guidance

Training may be sub-divided for line managers/supervisors, aircrew, ramp workers, cargo personnel and other personnel who are directly involved in the implementation of security measures and thereby require an awareness of obligations to the Security Program.

The security training program is typically integrated into the normal training curriculum for operational personnel, and need not be stand-alone training.

The scope of recurrent security training, as well as the specific subject matter included, may vary in accordance with requirements of the applicable authorities and the security policy of the operator.



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