

**DIRECTORATE OF FLIGHT SAFETY STANDARDS
TECHNICAL GUIDANCE MATERIALS**

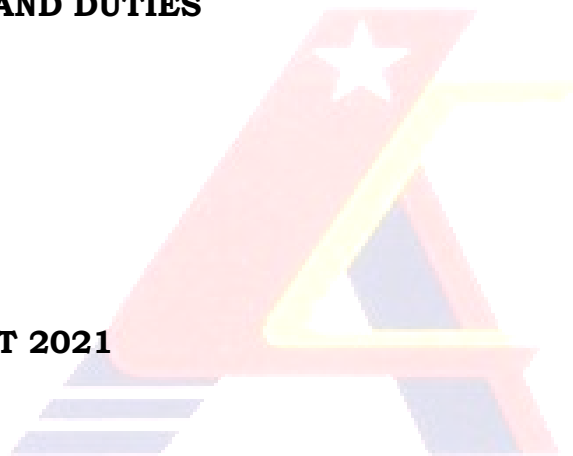


AIRWORTHINESS INSPECTOR HANDBOOK(AIH)

PART 1

**GENERAL ADMINISTRATION, INSPECTOR QUALIFICATIONS
TRAININGS AND DUTIES**

AUGUST 2021





 <p>Liberia Civil Aviation Authority</p>	<p>LIBERIA CIVIL AVIATION AUTHORITY DIRECTORATE OF FLIGHT SAFETY STANDARDS</p> <p>TECHNICAL GUIDANCE MATERIALS</p>		<p>EDITION N°: 1.0</p>
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<p>PREPARED BY</p>	<p>DIRECTOR GENERAL(DG) APPROVAL</p>		
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PREFACE

This Airworthiness Inspector Handbook is one in a set of documents forming the technical guidance materials of the Directorate of Flight Safety Standards provided for the conduct of aviation safety oversight by Airworthiness Inspector (Maintenance) and (Avionics) in the performance of their duties.

It is emphasized that all matters pertaining to an Airworthiness Inspector's duties and responsibilities cannot be covered in this Handbook. They are expected to use good judgment in matters where specific guidance has not been given.

This Handbook will be treated as a dynamic document. Changes in aviation technology, legislation and within the industry will necessitate changes to requirements.

Comments and recommendations for Amendment action to this publication should be forwarded to Airworthiness Inspection Division which will evaluate the comments and recommendations as per "Procedure for Amendment of Airworthiness Inspector Handbook" detailed in this Handbook.

LIST OF EFFECTIVE PAGES

PAGE NO.	REVISION	DATE OF ISSUE	PAGE NO.	REVISION	DATE OF ISSUE
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2	1 (first revision)	July/2/2021	49	1 (first revision)	July/4/2021
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CHAPTER-1: GENERAL HANDBOOK ADMINISTRATION

1.1 TECHNICAL GUIDANCE MATERIALS

- (a) The materials developed include Advisory Circulars, manuals/handbooks, bulletins, directives, instruction and policies, orders, forms and templates, etc. for civil aviation operations, airworthiness and personnel licensing specialties.
- (b) Advisory Circulars (ACs) contain information and guidance material to guide the user in the implementation and continued compliance with the Regulations. (See technical guidance materials development guidelines for further information).
- (c) The manuals/handbooks provide mandatory directions, information and procedures to the inspectors and officers in the certification, surveillance, audit and regulation enforcement duties.

1.1.1 FORMATTING OF TECHNICAL GUIDANCE MATERIALS

- (a) Except for the title, the guidance materials use Bookman old style font type size 10. The titles with heading 1 and heading 2 formats use bolded bookman old style all caps of size 14 and 10 respectively. Titles with heading 3 use bolded bookman old style of size 11.
- (b) Each guidance material is a standalone document.
- (c) Manuals/Handbooks are numbered sequentially by chapters, with each chapter containing subchapters. Page numbers will be located on the bottom right side of each page. The date that the page was published is on the bottom left side of each page.
- (d) See LCAA technical guidance materials development guidelines for further information.

1.1.2 AVAILABILITY OF TECHNICAL GUIDANCE MATERIALS

- (a) The latest version of Manual/Handbook will be available to technical inspectors in hard and soft copies.
- (b) A printed copy will also be maintained in the Technical Library.
- (c) Advisory Circulars, manuals/handbooks, bulletins, directives, instruction and policies, orders, forms and templates will be posted on the LCAA website.

1.1.3 COMPLIANCE WITH TECHNICAL GUIDANCE MATERIALS

- (a) Each assigned user must comply with policies and procedures provided in a given technical guidance material.
- (b) Should the user identify any policy or procedure that might not be consistent with LCAA-DFSS requirements, that information should immediately be communicated to the assigned supervisor.

1.1.4 MAINTENANCE AND OWNERSHIP OF TECHNICAL GUIDANCE MATERIALS

- (a) Inspector Manual/Handbook must be maintained in current status by the assigned user in accordance with the policies and procedures specified in this Part.
- (b) Flight Safety Standards Technical guidance material is considered the property of LCAA-FSSD and must be relinquished to the Manager-FSSD in the event of the user's retirement, termination, transfer or contract termination.
- (c) The content of Flight Safety Standards Technical guidance material is managed and updated by the Director of DFSS and is the express property of the government.

1.1.5 REVISION AND AMENDMENT INSTRUCTIONS

- (a) This handbook will be subject to on-going review and revision. The Legal and Regulation Committee (LRC) is responsible for the publication, amendment and distribution of this handbook.
- (b) Persons identifying errors or omissions, or those wishing to make recommendations for change, are asked to forward their observations to the head of the Legal and Regulation Committee (LRC). Any proposed amendment should be in the form of printed replacement pages which shall be approved by the Director General before insertion.
- (c) Revision pages will be annotated to show the date of issue, amendment list number, and the portion of the text which has been revised, as indicated by vertical marginal lines to the changes. Each amendment will be accompanied by a revised list of effective pages with their dates of issue, page number and revision column.

1.1.6 INSERTION OF LIST OF EFFECTIVE PAGES [LEP]

- (a) The LEP is a listing of all pages in the manual/handbook including those which have been revised since the original manual/handbook was issued.
 - (1) An LEP will be issued for the original and all revisions to this Handbook.
 - (2) The LEP is the controlling reference for the page currency of the Handbook.
 - (3) Use the LEP to verify that all pages of the Handbook are current.
 - (4) Only the most current LEP page(s) should be retained in the Handbook.
 - (5) The replaced LEP page(s) will be discarded before inserting the revised LEP page(s).

1.2 ABBREVIATIONS /ACRONYMS

AD	Airworthiness directive
AID	Airworthiness inspection division
ALI	Airworthiness limitation items
AOC	Air Operator's Certificate
ASI	Aviation Safety Inspector
AWI	Airworthiness Inspector
AMO	Approved maintenance organization
AOC	Air operator certificate
CAA	Civil aviation authority

C of A	Certificate of airworthiness
C of R	Certificate of registration
CDL	Configuration deviation list
CG	Centre of gravity
CMR	Certification maintenance requirements
CVR	Cockpit voice recorder
DG	Director General
DGCA	Director General of Civil Aviation
DFSS	Directorate of Flight Safety Standard
EDTO	Extended diversion time operations
FDR	Flight data recorder
GPWS	Ground proximity warning system
ETOPS	Extended range operations by aeroplanes with two turbine engines
JAR	Joint Aviation Requirements
LCAA	Liberia Civil Aviation Authority
LCARs	Liberia Civil Aviation Regulations
LEP	List of Effective Pages
MCAI	Mandatory continuing airworthiness information
MEL	Minimum equipment list
MMEL	Master minimum equipment list
MRB	Maintenance review board
NDT	Nondestructive testing
RVSM	Reduced vertical separation minima

1.3 DEFINITIONS

(a) When the following terms are used in this Handbook, they have the meanings shown. These definitions are appropriate to the use of the terms in this document only. Additional definitions can be found in Annexes 6 and 8.

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

Note.— The aircraft operating Manual is part of the operations Manual.

- (2) **Aeronautical product.** Any aircraft, aircraft engine, aircraft propeller or a part thereof including any associated computer system and computing software.
- (3) **Aeroplane.** A power-driven heavier-than-air aircraft, deriving its lift in flight chiefly from aerodynamic reactions on surfaces which remain fixed under given conditions of flight.
- (4) **Aeroplane system.** An aeroplane system includes all elements of equipment necessary for the control and performance of a particular major function. It includes both the equipment specifically provided for the function in question and other basic related aeroplane equipment such as that required to supply power for the equipment operation. The engine is not considered to be an aeroplane system.
- (5) **Aircraft.** Any machine that can derive support in the atmosphere from the reactions of the air other than the reactions of the air against the earth's surface.
- (6) **Air operator certificate (AOC).** A certificate authorizing an operator to carry out specified commercial air transport operations.
- (7) **Airworthy.** The status of an aircraft, engine, propeller or part when it conforms to its approved design and is in a condition for safe operation
- (8) **Airworthiness directive (AD).** A regulatory document which identifies aeronautical products in which an unsafe condition exists and where the "unsafe" condition is likely to exist or develop in other products of the same type design. It prescribes corrective actions to be taken or the conditions or limitations under which the products may continue to be operated. The AD is the common form of mandatory continuing airworthiness information mentioned in Annex 8.
- (9) **Airworthiness Standards.** For purposes of type certification, these are the detailed and comprehensive design and safety criteria applicable to the category of the aeronautical product (aircraft, engine, propeller) that satisfies, as a minimum, the applicable Standards of ICAO Annex 8. These design standards are detailed in nature and cover aspects such as, but not limited to: flight performance and characteristics, structural strengths and durability, general design and construction, powerplant and systems, aircraft and systems architecture, equipment specifications, overall function and reliability criteria, tests and inspections methods, and operating limitations and information.

- (10) **Appropriate airworthiness requirements.** The comprehensive and detailed airworthiness codes established, adopted or accepted by a Contracting State for the class of aircraft, engine or propeller under consideration.
- (11) **Certificate holder.** An individual or organization who meets the established requirements and functions at the level of competency and safety required by the State to undertake an aviation-related activity for which they have been licensed, certified, authorized and/or approved to perform.
- (12) **Certification basis.** The applicable airworthiness and environmental standards established by a State as the basis by which the type design of an aeronautical product, or change to that type design was approved or accepted. The certification basis may also include special conditions of airworthiness, findings of equivalent level of safety, and/or exemptions when determined by the State to apply to the type design.
- (13) **Certification maintenance requirement.** Maintenance that is required by design to help show compliance with the appropriate type certification requirements by detecting the presence of, and thereby limiting the exposure time to, a significant latent failure.
- (14) **Comprehensive and detailed airworthiness code.** The collective requirement that consists of, but not limited to, the approval or acceptance of the type design to an airworthiness standard, conformity to production or manufacturing standards, performance of inspection, maintenance, repair and modification in accordance with standards that ensure the continuing airworthiness of the aircraft, and a system of surveillance or monitoring of safety by the Contracting State.
- (15) **Confidence level.** Where the probability of occurrence of an event is inferred from a sample of measurements, the confidence can be determined that the true probability of occurrence of the event is greater than or less than the inferred probability, as appropriate. The confidence level is itself a statistical measure which is also expressed as a probability.
- (16) **Environmental Standards.** The specifications and maximum levels defined in Annex 16 — *Environmental Protection* for the certification of aircraft noise and engine smoke and gaseous emissions, including the Standards for the prevention of intentional fuel venting into the atmosphere.
- (17) **Configuration deviation list (CDL).** A list established by the organization responsible for the type design with the approval of the State of Design which identifies any external parts of an aircraft type which may be missing at the commencement of a flight, and which contains, where necessary, any information on associated operating limitations and performance correction.
- (18) **Continuing airworthiness.** The set of processes by which an aircraft, engine, propeller or part complies with the applicable airworthiness requirements and remains in a condition for safe operation throughout its operating life.
- (19) **Exception/Exemption.** A relief from compliance with the requirement(s) of airworthiness or environmental standards, or operating rules, based on the determination by a civil aviation authority that granting such relief will not adversely affect safety.
- (20) **Extended diversion time operation (EDTO).** Any operation by an aeroplane with two or more turbine engines where the diversion time to an en-route alternate

aerodrome is greater than the threshold time established by the State of the Operator.

- (21) **EDTO – significant system.** An aeroplane system whose failure or degradation could adversely affect the safety particular to an EDTO flight, or whose continued functioning is specifically important to the safe flight and landing of an aeroplane during an EDTO diversion.
- (22) **Extended diversion time operations, configuration, maintenance and procedures (CMP) standard.** The particular aeroplane configuration minimum requirements including any special inspection, hardware life limits, master minimum equipment list (MMEL) constraints and maintenance practices found necessary to establish the suitability of an airframe-engine combination for extended diversion time operation.
- (23) **Equivalent level of safety.** As used in type certification, a finding where literal compliance with a specific airworthiness requirement cannot be demonstrated but compensating factors exist in the type design that can be shown to provide a level of safety equivalent to that intended by the certification basis.
- (24) **Failure condition.** The effect on the aircraft and its occupants, both direct and consequential, caused or contributed to by one or more failures, considering relevant adverse operational or environmental conditions.
- (25) **File.** A file is a collection of related written or printed record items (papers, documents, etc.) arranged in systematic order, and treated as a unit. Record items are grouped into files so as to show the history of each piece of departmental activity, and to form a manageable number of units in the recordkeeping system. A file is the basic unit within a records series/group.
- (26) **Filing.** Is a process in which responsible staff analyses the content of a document, classifies it according to established RCS (Records Classification Scheme), and captures it in designated paper-based recordkeeping system. It may simply mean the process of placing records in the appropriate location and order within a filing system. Effective filing contributes to prompt, accurate and complete retrieval of information.
- (27) **Filing system.** A storage system (e.g. files, boxes, containers or any electronic system) in which records are systematically stored according to an RCS (Records Classification Scheme).
- (28) **Instructions for continued airworthiness.** A set of descriptive data, maintenance planning and accomplishment instructions, developed by a design approval holder in accordance with the certification basis for the product, providing operators with the necessary information for development of their own maintenance program and accomplishment instructions.
- (29) **Latent failure.** A failure that is not detected and/or enunciated when it occurs.
- (30) **Life-limited part.** Any part for which a retirement time, service life limitation, part retirement, retirement life limitation or life limitation exists, and is permanently removed from service when its operating limit (hours, cycles or calendar time) is exceeded.
- (31) **Maintenance.** The performance of tasks required to ensure the continuing airworthiness of an aircraft, including any one or combination of overhaul,

- inspection, replacement, defect rectification, and the embodiment of a modification or a repair.
- (32) **Maintenance organization's procedures Manual.** A document which details the maintenance organization's structure and management responsibilities, scope of work, description of facilities, maintenance procedures, and quality assurance, or inspection systems. This document is normally endorsed by the head of the maintenance organization.
 - (33) **Maintenance program.** A document which describes the specific scheduled maintenance tasks and their frequency of completion and related procedures, such as a reliability program, necessary for the safe operation of those aircraft to which it applies.
 - (34) **Maintenance release.** A document which contains a certification confirming that the maintenance work to which it relates has been completed in a satisfactory manner, either in accordance with the approved data and the procedures described in the maintenance organization's procedures Handbook or under an equivalent system.
 - (35) **Major modification.** In respect of an aeronautical product for which a Type Certificate has been issued, a change in the Type Design that has an appreciable effect, or other than a negligible effect, on the mass and balance limits, structural strength, powerplant operation, flight characteristics, reliability, operational characteristics, or other characteristics or qualities affecting the airworthiness or environmental characteristics of an aeronautical product.
 - (36) **Major repair.** Any repair of an aeronautical product that might appreciably affect the structural strength, performance, engine, operation flight characteristics or other qualities affecting airworthiness or environmental characteristics.
 - (37) **Mandatory Continuing Airworthiness Information(MCAI).** The mandatory requirements for the modification, replacement of parts, or inspection of aircraft and amendment of operating limitations and procedures for the safe operation of the aircraft. Among such information is that issued by Contracting States in the form of airworthiness directives.
 - (38) **Master minimum equipment list (MMEL).** A list established for a particular aircraft type by the organization responsible for the type design with the approval of the State of Design containing items, one or more of which is permitted to be unserviceable at the commencement of a flight. The MMEL may be associated with special operating conditions, limitations or procedures.
 - (39) **Minimum equipment list (MEL).** A list which provides for the operation of aircraft, subject to specified conditions, with particular equipment inoperative, prepared by an operator in conformity with, or more restrictive than, the MMEL established for the aircraft type.
 - (40) **Minor modification.** A modification other than a major modification.
 - (41) **Minor repair.** A repair other than a major repair.
 - (42) **Modification.** A change to the type design of an aeronautical product which is not a repair.

- (43) **Operations Handbook.** A Handbook containing procedures, instructions and guidance for use by operational personnel in the execution of their duties.
- (44) **Operator's maintenance control Handbook.** A document which describes the operator's procedures necessary to ensure that all scheduled and unscheduled maintenance is performed on the operator's aircraft on time and in a controlled and satisfactory manner.
- (45) **Organization responsible for the type design.** The organization which is the holder of the type certificate and has the responsibility of the design of the aeronautical product and the continuous compliance of the aeronautical product type design to the appropriate airworthiness requirements imposed by the type certifying authority. In some cases, (prior to Amendment 98 of Annex 8), it will be the holder of an equivalent document certifying approval of the type design by the certifying authority.
- (46) **Propulsion system.** A system consisting of an engine, all ancillary parts installed on the engine, and all other equipment utilized to provide those functions necessary to sustain, monitor and control the power/thrust output of any one engine following installation on the airframe.
- (47) **Records Classification Scheme (RCS).** A plan or list in which records of an organization are categorized according to its business functions, activities and contents of the records. It includes a coding system expressed in symbols (i.e. alphabetical, numerical and alphanumeric) to show the logical relationship amongst the records. An RCS is also known as file plan.
- (48) **Repair.** The restoration to an aeronautical product to an airworthy condition as defined by the appropriate airworthiness requirements.
- (49) **Safety management system.** A systematic approach to managing safety, including the necessary organizational structures, accountabilities, policies and procedures.
- (50) **Special conditions of airworthiness.** The technical requirements added to the certification basis as a consequence of novel or unusual design feature(s) that exists in a type design and the absence or inadequacy of the applicable airworthiness standards to provide a basis for the certification of such features.
- (51) **State of Design.** The State having jurisdiction over the organization responsible for the type design.
- (52) **State of Manufacture.** The State having jurisdiction over the organization responsible for the final assembly of the aircraft.
- (53) **State of Registry.** The State on whose register the aircraft is entered.
- (54) **State of the Operator.** The State in which the operator's principal place of business is located or, if there is no such place of business, the operator's permanent residence.
- (55) **Structural inspection.** A detailed inspection of the airframe structure that may require special inspection techniques to determine the continuous integrity of the airframe and its related parts.

- (56) **Threshold time.** The range, expressed in time, established by the State of the Operator to an en-route alternate aerodrome, whereby any time beyond requires an EDTO approval from the State of the Operator.
- (57) **Type certificate.** A document issued by a Contracting State to define the design of an aircraft type and to certify that this design meets the appropriate airworthiness requirements of that State.

Note: Some Contracting States also issue Type Certificates for engines and propellers

- (58) **Type design.** The set of data and information necessary to define a product type for the purpose of airworthiness determination to any later product of the same type.

CHAPTER-2: AIRWORTHINESS SECTION, PERSONNEL JOB DESCRIPTION AND DUTIES

2.1 AIRWORTHINESS SECTION

2.1.1 INTRODUCTION

The Airworthiness Section has been formed to perform the LCAA task of maintaining regular safety oversight of all of the airworthiness aspects of aviation in this country, which includes Air Transport Operators, Approved Maintenance Organizations and oversight of any other person or organization involved in the maintenance of aircraft and training aspects of personnel engaged in civil aviation. Effective safety oversight will help to ensure high standards are maintained and will fulfill these states obligations under the Convention on International Civil Aviation. This section will also be responsible to carry out Auditing of the system and the Licensing/approval of maintenance staff as a part of its regular inspection program. The personnel working in Airworthiness Section for carrying out all of the Safety Oversight Responsibilities assigned by the Convention on International Civil Aviation and its Annexes except for those elements that pertain to determining whether or not there is a need for a service and for determining the financial viability of an operator or a potential operator.

2.1.2 ESSENTIAL ELEMENTS OF LCAA AIRWORTHINESS REGULATORY SYSTEM

- (a) The essential elements of LCAA airworthiness regulatory systems include:
- (1) Registration of aircraft;
 - (2) Acceptance of type Certification
 - (3) issue/renewal of Certificates of Airworthiness;
 - (4) Approval of aircraft maintenance organizations;
 - (5) Certification of operators; and
 - (6) Licensing of personnel.
- (b) In order to accomplish these tasks, qualified Airworthiness Inspectors will be appointed to the LCAA Airworthiness division against established posts, and will carry out their duties as per the policies laid down by the Director General/LCAA.

2.1.3 STATUTORY AUTHORITY

- (a) The Airworthiness Section is organized as a component part of the Liberia Civil Aviation Authority. It is authorized by the Government of Liberia and is entrusted by the Director General of the Liberia Civil Aviation Authority to carry out all required functions such as:
- (1) Register aircraft and maintain a national register;
 - (2) acceptance of Type Certificates;
 - (3) Issue, renew or validate Certificates of Airworthiness;

- (4) Issue, amend, cancel and suspend airworthiness approvals, licenses and Certificates;
 - (5) Granting or validation of aircraft noise certificate;
 - (6) Continuing airworthiness of aircraft and parts thereof;
 - (7) Issuance of approvals based on the successful assessment of maintenance organizations, air operators, aircraft maintenance training organizations, and aircraft maintenance technician/engineer/mechanic;
 - (8) Acceptance of modifications and repairs;
 - (9) Continuing airworthiness oversight,
- (b)** The airworthiness section performs the following General Technical and Administrative functions:
- (1) Develop, issue and amend national Airworthiness Regulations, Standards, policy and guidance, Advisory Circulars, Orders, and other documents consistent with the Airworthiness regulations; and
 - (2) Examine changes in ICAO requirements for incorporation into national requirements, or the filing of appropriate differences;
 - (3) Examine current and, as necessary, new foreign regulations and determine the need for adoption of critical features of foreign regulations in the national requirements;
 - (4) Establish working relationships with other CAAs and industry that facilitate the certification of foreign aeronautical products to enable their import and export;
 - (5) Conduct research and development, as necessary, to support issuance of directives, standards, policy and guidance; and
 - (6) Identify and resolve regulatory problems associated with continuing airworthiness and establish appropriate general and technical directives, policies and procedures.
 - (7) Distribution of airworthiness information to the public.
- (c)** The airworthiness section performs the following Surveillance, Investigation and Resolution of Safety Issues functions.
- (1) Develop and implement periodic surveillance programmes based on the airworthiness complexity of the aviation industry. These programmes should include, but not be limited to, air operators, maintenance organizations, maintenance training organizations and delegated tasks;
 - (2) Establish a programme for the surveillance of operations by foreign air operators;
 - (3) Perform periodic and unannounced surveillance of industry activities to ensure compliance with national requirements and ICAO standards. This includes:

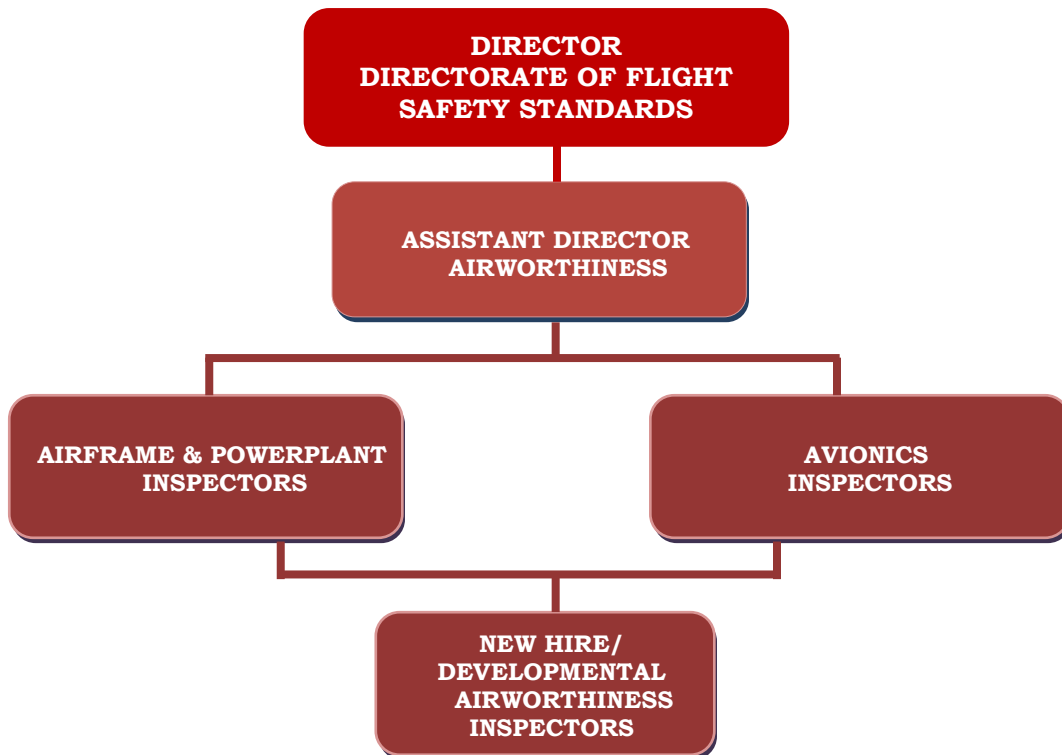
- (i) Ensuring the proper functioning of any designees or designation systems;
 - (ii) Evaluating changes to a certificate or approval or acceptance to ensure continued compliance with the applicable airworthiness requirements;
 - (iii) Coordinating requests for deviations from requirements and specifications, and ensuring adequate treatment for those deviations;
 - (iv) Discovering and assessing industry problems which threaten timely and satisfactory achievement of safety objectives related to national requirements, including issuing recommendations for corrective action; and
 - (v) Witnessing critical tests performed and approving or accepting testing methods and test reports.
- (4) Investigate major problems or defects discovered in aeronautical products or parts in service, and determine appropriate corrective action to be taken, when the airworthiness objectives of national requirements are not being met;
 - (5) Monitor manufacturer's incidents and service difficulties to determine possible unsatisfactory designs or processes; and
 - (6) Evaluate accident reports, incidents and service difficulties to determine possible unsatisfactory designs or processes; and
 - (7) Take enforcement action, when necessary, to ensure compliance with airworthiness requirements.
- (d)** The activities of the Airworthiness Inspectors will be governed by the following:
- (1) Liberia Civil Aviation Act of 2019
 - (2) Liberia Civil Aviation Regulations
 - (3) Airworthiness Inspector Handbook (AIH)
 - (4) Airworthiness Inspector Circulars/ Instructions/Flight Standard Notices (if applicable and being issued).
 - (5) Other relevant directives and instructions that may be issued from time to time by the Director General Liberia Civil Aviation Authority

2.2 ORGANOGRAMS OF THE DIRECTORATE OF FLIGHT SAFETY STANDARDS AND AIRWORTHINESS SECTION

DIRECTORATE OF FLIGHT SAFETY STANDARDS



AIRWORTHINESS SECTION



2.3 PERSONNEL JOB DESCRIPTION AND DUTIES

2.3.1 ASSISTANT DIRECTOR, AIRWORTHINESS SECTION

2.3.1.1 JOB DESCRIPTION

Under the supervision of the Director of Flight Safety Standards, he/she shall oversee all matters/activities relating to the Airworthiness Section and serves as the first level of appeal for airworthiness-related technical issues with industry persons and organizations.

2.3.1.2 MINIMUM QUALIFICATIONS

- (a) This person shall meet the minimum qualifications as an Airworthiness Inspector.
- (b) Must be Computer Literate

2.3.1.3 TECHNICAL QUALIFICATION

- (a) Aircraft Maintenance Engineer's License with Airframe and Powerplant or Avionics specialty.
- (b) Knowledge in ICAO Conventions and Annexes.
- (c) Good working knowledge of the Liberia Civil Aviation Regulations (LCARs).
- (d) At least a Certificate in a CAA approved Airworthiness Inspectors' Course.
- (e) Type Rating in at least one commercial transport aircraft.
- (f) ICAO endorsed AMO/AOC certification course.
- (g) Engineering modification/repair approval procedures.
- (h) Maintenance record keeping system.

2.3.1.4 EXPERIENCE

- (a) At least ten (10) years' experience in safety related duties in a Civil Aviation Organization.
OR
- (b) At least a combination of thirteen (13) years relevant experience of which eight (8) years should be with the LCAA.
OR
- (c) Direct entry to an Inspector with previous experience from another CAA shall serve at least two years with LCAA.

2.3.1.5 TECHNICAL COMPETENCIES

- (a) This person must:
 - (1) Have the ability to independently carry out inspections on aircraft and its documentation in order to determine its airworthiness or otherwise.
 - (2) Have the ability to prepare detailed reports on inspections and surveillance/auditing activities.

- (3) Demonstrate extensive knowledge in standard aircraft maintenance practices.
- (4) Be conversant with relevant ICAO documents and annexes, interpret, explain and apply same.
- (5) Be conversant with the relevant sections of the LCARs, interpret, explain and apply same.
- (6) Demonstrate complete knowledge in the processes and procedures involved in the certification of Air Operators and Aircraft Maintenance Organizations.
- (7) Be proficient with figures and quantitative analysis.
- (8) Have the ability to impart knowledge to others through formal and informal teaching.

2.3.1.6 PERSONALITY COMPETENCIES

(a) This person must:

- (1) Have good communication and interpersonal skills.
- (2) Have good report-writing skill.
- (3) Have good analytical skills
- (4) Possess good judgment, thoroughness and initiative.
- (5) Be innovative.
- (6) Have active listening skill.
- (7) Have the ability to work with others in a team.
- (8) Be time conscious.
- (9) Demonstrate the willingness to learn from peers, superiors and for personal learning and self-development in the aviation field.
- (10) Have self-confidence and assertiveness.
- (11) Be customer focus.

2.3.1.7 MANAGERIAL COMPETENCES

(a) This person must:

- (1) Have the ability to organize, plan and coordinate the activities of the section, exhibit initiative, exercise tact and sound judgment, and good inter-personal and leadership skills.
- (2) Demonstrate skills in administering staff and programs through subordinate supervision.
- (3) Have the ability to network effectively between different organizations.
- (4) Have the ability to work with a team and people at all levels of the

organization.

- (5) Exhibit excellent communication skills.
- (6) Possess excellent research and report writing skills.
- (7) Exhibit leadership qualities.
- (8) Have business awareness.
- (9) Have the ability to manage human and material resources and activities effectively and efficiently.
- (10) Show good leadership skills.
- (11) Have the skill to chair department meetings.

2.3.1.8 DUTIES AND RESPONSIBILITIES

- (a)** In addition to the primary duties specified for the supervisory technical inspector job descriptions, this person is expected to ensure that the following tasks receive special attention throughout the calendar year—
- (1) Propose for adoption, ICAO Standards and Recommended Practices and other relevant provisions contained in ICAO documents relating to Airworthiness as National Rules and Regulations
 - (2) Ensure the development of policies, procedures and processes for continuous review thereof, to meet the requirements of relevant Annexes in accordance with the Liberia Civil Aviation Act and Regulations.
 - (3) Evaluate National Rules and Regulations to determine any differences with ICAO SARPs/Procedures and ensure filing of differences with ICAO.
 - (4) Review proposed amendments to ICAO SARPs / Procedures and make necessary recommendations.
 - (5) Ensures that the competency of the personnel assigned to the Airworthiness Section meet the minimum standards of performance.
 - (6) Ensures that the conduct of the personnel assigned to the Airworthiness Section meet the minimum standards.
 - (7) To record and monitor on continuous basis all inspector activities, evaluations and investigations, and any identified safety issues to enable management to ascertain the status of all safety oversight functions.
 - (8) To coordinate the tasks of the Airworthiness Section of the Directorate of Flight Safety Standards and other government organizations as necessary to ensure proper accomplishment of certification, surveillance, personnel licensing, investigations and any special projects.
 - (9) Ensures that the Inspectors of the units carry out their supervisory roles over inspectors on continuous basis to meet timelines.
 - (10) Resolution of safety issues are conducted in accordance with appropriate

- technical guidance in a timely manner
- (11) Safety issues with the higher levels of risk are addressed on a priority basis.
 - (12) Airworthiness MRAs are planned and assigned to specific inspectors.
 - (13) The MRAs are accomplished as planned.
 - (14) Spot Checks/ad hoc inspections/ snap checks and special surveillance activities are conducted
 - (15) Airworthiness participation in the certification of organizations and the applicable minimum certification plans are accomplished as assigned by the Certification Project Coordinator.
 - (16) Ensures Investigations, development and issuance of appropriate reports assigned to, or supported by the Airworthiness Section are accomplished in a timely and professional manner.
 - (17) Personnel licensing tasks, Routine and any special projects assigned to the Section are accomplished in a prompt and acceptable manner.
 - (18) Develops annual training program for implementation to ensure that the Airworthiness Inspectors remain current and qualified.
 - (19) Maintains and updates training and qualification records of the Inspectors in the Section.
 - (20) Shall evaluate and appraise staff performance, and recommend a formal performance improvement plan for staff who do not meet required performance standards
 - (21) May be assigned other duties and responsibilities as required.

2.3.2 AIRWORTHINESS (AVIONICS/AIRFRAME AND POWERPLANT) INSPECTOR

2.3.2.1 JOB DESCRIPTION

Under the supervision of the Assistant Director of Airworthiness, he/she shall function as the primary avionics/Airframes and Powerplants interface between assigned air operators, other aviation entities, and the Liberia Civil Aviation Authority (LCAA).

2.3.2.2 MINIMUM QUALIFICATIONS

- (a)** Any one of the following Aircraft Maintenance Engineer's License with Airframe and Power-plant or Avionics specialty:
 - (1) European Aviation Safety Agency (EASA) License category B1 or B2
 - (2) British Civil Aviation License (BCAR, Section L), A & C or Avionics.
 - (3) United States of America/Canada A & P License
- OR
- (b)** A qualified licensed Engineer with extensive industry experience.
- (c)** Computer Literate:

2.3.2.3 EXPERIENCE

- (a) The Airworthiness Inspector (ASI) should have attained three (3) years' experience as a Developmental ASI.

2.3.2.4 TECHNICAL QUALIFICATION

- (a) Completion of at least the minimum five core training courses as specified in the ITS.
- (b) Aircraft Maintenance Engineer's License with Airframe and Power-plant or Avionics specialty.
- (c) At least a Certificate in a CAA approved Airworthiness Inspector Course.
- (d) Certificate or Type Rating course in at least one commercial transport aircraft (with jet engine).
- (e) Certificate course from vendors of aircraft component.
- (f) ICAO endorsed AMO/AOC certification course.
- (g) Introduction to continuous surveillance.
- (h) Engineering modification/repair approval procedures.
- (i) Maintenance record keeping system.
- (j) ICAO Conventions and Annexes.
- (k) Good working knowledge in the Liberia Civil Aviation Regulations.

2.3.2.5 ADDITIONAL QUALIFICATION (CONTINUATION TRAINING)

- (a) Aircraft Accident Investigation
- (b) Aviation Safety Management
- (c) NDT Methods
- (d) RVSM
- (e) TCAS
- (f) ETOPS
- (g) Welding
- (h) Reliability Programme
- (i) General Auditing Procedures parts 1,2,3
- (j) MMEL/MEL
- (k) Structural Inspection Programme
- (l) Aviation Safety Promotion Courses
- (m) Dangerous Goods
- (n) Personnel Licensing

- (o) A certificate course or higher in Public Administration

2.3.2.6 TECHNICAL COMPETENCY

- (a) The inspector must:

- (1) have the ability to independently carry out inspections on aircraft and its documentation in order to determine its airworthiness or otherwise.
- (2) have the ability to prepare detailed reports on inspections and surveillance/auditing activities.
- (3) demonstrate extensive knowledge in standard aircraft maintenance practices.
- (4) be conversant with the relevant ICAO documents and annexes, interpret, explain and apply same.
- (5) be conversant with the relevant sections of the LCAR, interpret, explain and apply same.
- (6) demonstrate complete knowledge in the processes and procedures involved in the certification of Air Operators and Aircraft Maintenance Organization.
- (7) possess the technical competence and academic knowledge and ability to assess the competence of Aircraft Maintenance Engineers and technicians.
- (8) possess the ability to independently carry out diagnosis and rectification of aircraft systems faults in the ASI's license category.
- (9) Should have a full knowledge of the workings and operating requirements of a bonded store, material/parts acquisition and handling and the associated documentation.
- (10) be familiar with the use of aircraft and aircraft systems test sets/equipment and the interpretation of readings.
- (11) possess the ability to carry out aircraft functional and system checks using BITE as well as external test equipment.
- (12) be familiar with the procedure for deferring faults and the rectification of deferred faults.
- (13) be familiar with aircraft tooling and calibration requirements.
- (14) demonstrate a high level of proficiency in English language.
- (15) demonstrate thorough knowledge in hangar and workshop safety system requirements.
- (16) understand the requirements and procedures for aircraft weighing, jacking and towing.
- (17) be familiar with the requirements for aircraft refueling/defueling.

- (18) possess the skill of debriefing pilots, engineers and technicians.
- (19) be proficient with figures and quantitative analysis.
- (20) have the ability to impart knowledge to others through formal and informal teaching.

2.3.2.7 PERSONALITY COMPETENCIES

(a) The inspector must:

- (1) Be able to withstand mental and physical stress
- (2) Have good communication and interpersonal skills.
- (3) Have good report writing skills.
- (4) Have good analytical skills.
- (5) Possess good judgment, thoroughness and initiative.
- (6) Be innovative.
- (7) Have active listening skill.
- (8) Have the ability to work with others in a team.
- (9) Be time conscious.
- (10) Demonstrate the willingness to learn from peers, superiors and for personal learning and self-development in the aviation field.
- (11) Have self-confidence and assertiveness.

2.3.2.8 DUTIES AND RESPONSIBILITIES

(a) TECHNICAL ADMINISTRATION

- (1) Ensures on a continuing basis that assigned organizations are properly and adequately organized, staffed, and equipped; have and conduct an adequate training program, including an acceptable record keeping system; and have facilities and procedures that meet all regulatory requirements.
- (2) Chairs joint CAA-industry meetings; maintains regular contact with organizations assigned; and coordinates with top management officials.
- (3) Requires or directs correction of any deficiencies/discrepancies and refuses or withdraws approval if they cannot be resolved.
- (4) Develops maintenance program requirements through participation on Maintenance Review Boards.
- (5) Coordinates Minimum Equipment List (MEL) approvals with the Operations Inspector.
- (6) Takes enforcement action in instances of non-compliance with the MEL.
- (7) AWIs are required to investigate, analyze, and report enforcement findings. In situations that involve alleged noncompliance with the

LCARs, AWIs are required to make recommendations concerning enforcement action.

- (8) Performs or supervises the emergency suspension of certificates or cancellation of Operations Specifications.
- (9) Conducts or directs the re-examination of certificated airmen or re-certification of an operator or agency.
- (10) AWIs by approval of the Director General, may be required to assist in the conduct of on-site accident investigations when serious injuries or fatalities have occurred. The inspector may work closely with Liberia Accident Investigation Board (AIB) when called upon.
- (11) AWIs by the approval of the Director General may be required to investigate incidents, as appropriate. Some of the incidents that require investigation are as follows:
 - (i) Foreign air carrier incidents
 - (ii) Reports of emergency evacuation
 - (iii) Incidents involving hazardous materials
 - (iv) Noise complaints
 - (v) Damage caused by a civil aircraft
- (12) Provides verbal and/or written technical assistance to legal counsel, testifies at court trials and formal hearings, and gives depositions.
- (13) Coordinates with other inspectors as required to accomplish additional air carrier surveillance.

(b) CERTIFICATION

- (1) Has responsibility for initial and ongoing certification of air carriers, aircraft, airmen and air agencies.
- (2) Evaluates requests for an air carrier to operate under conditions not previously specified in the maintenance portion of the Operations Specifications.
- (3) Approves or disapproves requests and provides additional conditions and limitations as needed.
- (4) Provides guidance to assigned air carriers in the development of required maintenance manuals and record keeping systems.
- (5) Reviews and determines adequacy of manuals associated with the air carrier's maintenance programs and revisions.
- (6) Ensures that manuals and revisions comply with regulatory requirements, prescribes safe practices, and furnishes clear and specific instructions governing maintenance programs.

- (7) Approves Operations Specifications and amendments.
- (8) Determines if air carrier maintenance/avionics facilities and contract arrangements for the purpose of overhaul work, major repairs, alterations, and other maintenance are satisfactory.
- (9) Reviews any changes and negotiates with air carrier management to resolve problems.
- (10) Determines if overhaul and inspection time limitations warrant revision.
- (11) Evaluates an operator's proposed reliability programs for compliance with national policies.
- (12) Advises operator of deficiencies and required changes.
- (13) Approves/disapproves reliability programs.
- (14) Determines if the air carrier's training program;
 - (i) meets the requirements of the Civil Aviation Regulations.
 - (ii) is compatible with the maintenance program,
 - (iii) is properly organized and effectively conducted, and results in trained and competent personnel.
- (15) Directs or participates in proving flight evaluations to determine compliance with the Civil Aviation Regulations.
- (16) Recommends changes that will be required prior to approval.

(c) SURVEILLANCE

- (1) Directs the inspection and surveillance of the air carrier's continuous airworthiness maintenance program.
- (2) Monitors all phases of the air carrier's maintenance operation, including the following: maintenance, engineering, quality control, production control, training, and reliability programs.
- (3) Analyzes trends to detect deterioration in the maintenance program.
- (4) Analyzes reports submitted by the air carrier to ensure compliance with the maintenance program and ensures the air carrier has an effective continuing analysis and surveillance program to meet the requirements of the Civil Aviation Regulations.
- (5) Shall be responsible for monitoring the activities of air operators and other industry personnel.

(d) OTHER

- (1) AWIs also perform many other duties, including the ones that follow:
 - (i) Make a deposition or court appearance;

- (ii) Process a voluntary surrender of an operator's certificate;
- (iii) Provide technical assistance;
- (iv) speak to student groups about career opportunities in the field of aviation;
- (v) may conduct seminars and briefings on pertinent aviation topics for aircraft maintenance licensed technician, pilots, and airline officials.

(2) May be assigned other duties and responsibilities as required.

2.3.3 NEW HIRE/DEVELOPMENTAL INSPECTOR-AIR

2.3.3.1 JOB DESCRIPTION

The New Hire/Developmental Airworthiness Inspector, performs a variety of tasks associated with technical administration, certification, and surveillance. Serves as a trainee performing duties as assigned without specific authority for actions or decisions. A significant part of the position involves training in more complex functions of the journeyman level.

2.3.3.2 MINIMUM QUALIFICATIONS

- (a) Possess aeronautical licenses, certificates or academic degrees commensurate with their job responsibilities (e.g flight engineer certificate, technical/engineer/mechanic certificate/licensed with airframe and power plant ratings, electronics technician, etc
- (b) Must be computer Literate

2.3.3.3 EXPERIENCE

At least five years of technical employment is normally required to obtain the minimum qualifications and experience needed to perform the duties of a basic starting position as an Airworthiness Inspector in the maintenance or avionics field.

2.3.3.4 TECHNICAL COMPETENCY

- (a) The New Hire/Developmental Airworthiness Inspector must:
 - (1) Demonstrate extensive knowledge in standard engineering practices.
 - (2) Have an enquiring mind.
 - (3) Demonstrate excellent knowledge in his/her field of expertise (basic qualification).

2.3.3.5 PERSONALITY COMPETENCIES

- (a) The New Hire/Developmental airworthiness inspector must:
 - (1) Be able to withstand mental and physical stress

- (2) Have good communication and interpersonal skills.
- (3) Have good report writing skills.
- (4) Have good analytical skills.
- (5) Possess good judgment, thoroughness and initiative.
- (6) Be innovative.
- (7) Have active listening skill.
- (8) Have the ability to work with others in a team.
- (9) Be time conscious.
- (10) Demonstrate the willingness to learn from peers, superiors and for personal learning and self-development in the aviation field.
- (11) Have self-confidence and assertiveness.

2.3.3.6 DUTIES AND RESPONSIBILITIES

(a) TECHNICAL ADMINISTRATION

- (1) Ensures that aviation organizations and airman comply with regulatory requirements, and reports deficiencies to the principal inspector or supervisor.
- (2) Assists in enforcement, investigations, preparation of final reports and recommendations on disposition.
- (3) Participates in accident/incident and complaint investigations.
- (4) Assists in emergency suspension of certificates and conducts re-examination of certificated airmen.
- (5) Assists in recertification of and operator or agency.
- (6) Provides verbal and/or written technical assistance to legal counsel, testifies at court trials and formal hearings, and gives depositions.

(b) CERTIFICATION

- (1) Reviews manuals and other documents associated with certification requirements of air agencies, and air operators for accuracy and compliance with Civil Aviation Regulations. Makes recommendations to the principal inspector or supervisor.
- (2) Provides assistance in the evaluation of air carriers, air agencies, and air operators and makes recommendations to the principal inspector or supervisor.
- (3) Performs as directed, airmen and aircraft certification functions.

(c) SURVEILLANCE

- (1) Performs, as directed, all surveillance activities associated with air

carriers, air agencies, air operators, airmen, and designees.

- (2) Takes appropriate corrective action for deficiencies noted or makes recommendations to the principal inspector or supervisor.

(d) OTHER

May be assigned other duties and responsibilities as required.

(e) SUPERVISION RECEIVED

The inspector will accomplish duties independently or as part of a team. An assigned supervisor provides general technical and administrative supervision, as well as work assignments. Actions taken are guided by adherence to Civil Aviation Regulations, national and regional directives and sound management practices.

2.3.4 DEVELOPMENTAL AIRWORTHINESS INSPECTOR (AVIONICS/A & P)

2.3.4.1 JOB DESCRIPTION

Under the supervision of the Airworthiness Inspector, he/she shall serve as a trainee performing duties as assigned without specific authority for actions or decisions. A significant part of the position involves training in more complex functions.

2.3.4.2 MINIMUM QUALIFICATIONS

- (a)** At least a University degree in Electrical, Mechanical or Applied Physical Sciences or an equivalent qualification
- (b)** Must be computer Literate

2.3.4.3 EXPERIENCE

None required. A fresh graduate.

2.3.4.4 TECHNICAL COMPETENCY

- (a)** The Developmental Airworthiness Inspector must:
 - (1) Demonstrate extensive knowledge in standard engineering practices.
 - (2) Have an enquiring mind.
 - (3) Demonstrate excellent knowledge in his/her field of expertise (basic qualification).

2.3.4.5 PERSONALITY COMPETENCIES

- (a)** The Developmental airworthiness inspector must:
 - (1) Be able to withstand mental and physical stress
 - (2) Have good communication and interpersonal skills.
 - (3) Have good report writing skills.
 - (4) Have good analytical skills.

- (5) Possess good judgment, thoroughness and initiative.
- (6) Be innovative.
- (7) Have active listening skill.
- (8) Have the ability to work with others in a team.
- (9) Be time conscious.
- (10) Demonstrate the willingness to learn from peers, superiors and for personal learning and self-development in the aviation field.
- (11) Have self-confidence and assertiveness.

2.3.4.6 DUTIES AND RESPONSIBILITIES

(a) TECHNICAL ADMINISTRATION

- (7) Ensures that aviation organizations and airman comply with regulatory requirements, and reports deficiencies to the supervisor.
- (8) Assists in enforcement, investigations, preparation of final reports and recommendations on disposition.
- (9) Participates in accident/incident and complaint investigations.
- (10) Assists in emergency suspension of certificates or cancellation of Operations Specifications.
- (11) Provides verbal and/or written technical assistance to legal counsel, testifies at court trials and formal hearings, and gives depositions.

(b) CERTIFICATION

- (4) Reviews manuals and other documents associated with certification requirements of air agencies, and air operators for accuracy and compliance with Civil Aviation Regulations. Makes recommendations to the Airworthiness or supervisor.
- (5) Provides assistance in the evaluation of air carriers, air agencies, and air operators and makes recommendations to the Airworthiness inspector or supervisor.
- (6) Performs as directed, airmen and aircraft certification functions.

(c) SURVEILLANCE

- (3) Performs, as directed, all surveillance activities associated with air agencies, air operators, airmen, and designees.
- (4) Takes appropriate corrective action for deficiencies noted or makes recommendations to the supervisor.

(d) OTHER

May be assigned other duties and responsibilities as required.

CHAPTER-3: GENERAL INSPECTOR GUIDANCE

3.1 PURPOSE

- (a) This chapter provides foundation information about the Airworthiness Inspection Section (AID) with details on the role and expectations of an aviation safety inspector.

3.2 THE INSPECTOR ROLE

- (a) All inspectors should be qualified to provide “auditor” and “administration” services on behalf of the Liberia Civil Aviation Authority regarding the certification and continued validation processes. These roles are critical to the safety oversight system.
- (b) It is a common mistaken perception that an inspector is personally responsible for the safety of the aviation community.
- (c) It is true that inspectors can have significant influence on aviation safety in the areas where they are assigned if they stay within certain key parameters in their inspector’s role.
- (d) But the responsibility for aviation safety rests with the operators of the aircraft.
- (e) It’s the “AOC holder” (Air Operator, Pilot, Engineer, Mechanic, Dispatcher, and Cabin Crew) who must ensure that they are always in compliance with the applicable regulations and relevant safety practices.
- (f) The Liberia Civil Aviation Authority does have a responsibility to ensure that the air operator and other AOC holders meet the minimum safety directives before issuing the certificate authorizing operation and the continuing validation of that certification.

3.3 THE INSPECTOR'S PRIMARY FUNCTIONS

- (a) The primary function of an inspector is to:
 - (1) Audit the aviation community (individuals, organizations and aircraft) for conformance with the laws and directives applicable to aviation; and
 - (2) While doing that task, also audit for conformance to aviation industry relevant safety practices;
 - (3) Make a technical decision; and
 - (4) Make a record of that audit and that decision.

3.4 STANDARD TERMS FOR ACTION INSPECTOR ENTRY

- (a) The purpose of this section is to discuss the general policies that determine the types of Action database entries that will be made by technical inspectors.
- (b) The guidance in this Help Section applies to all selections of Action numbers.

3.4.1 STANDARDIZED USE OF TERMS

- (a) The following terms and their application are defined in this section and should be applied to all inspector activities—
- (1) Conformance
 - (2) Evaluation
 - (3) Inspection
 - (4) Investigation
 - (5) Certification
 - (6) Safety Issue

3.4.2 AUDIT FOR CONFORMANCE

- (a) Conformance is defined as “an action taken by an inspector that compares the manual, procedures, program, system, aircraft or an individual’s performance to the established standard.”
- (1) Conformance Example 1: Comparing a pilot’s performance for conformance to the minimum established standards for the issuance of the license.
 - (2) Conformance Example 2: Comparing the contents of the aircraft technical log for conformance with the LCAA mandated minimum contents for such a log.
 - (3) Conformance Example 3: Comparing the contents of an aircraft Minimum Equipment List for conformance with the minimum required contents of the Minimum Equipment List.
 - (4) Conformance Example 4: Comparing the contents of the aircraft maintenance program (schedule) for conformance with the manufacturer’s MRB document.
 - (5) Conformance Example 5: Walking across the ramp where servicing, fueling and loading activities are occurring and mentally comparing for conformance with the published standards.
 - (6) Conformance Example 6: Seeing maintenance being performed on the ramp and stopping to compare the work methodology for conformance with then published standards.
 - (7) Conformance Example 7: Listening to conversations at a party about someone’s flying exploits and mentally comparing them for conformance to the published Regulations.

3.4.3 PRIMARY INSPECTOR AUDITING CATEGORIES

- (a) There are 3 primary categories that can be used to describe the auditing functions performed by an inspector--
- (1) Evaluations;
 - (2) Inspections; and

- (3) Investigations.
- (b) The Action database has been set up to record the results and technical decision of the inspector depending on the audit category. (Subsequent examples will illustrate this function.)

3.4.3.1 **Evaluations**

- (a) An “evaluation” is an act of auditing for conformance with a published standard.
- (b) The term, evaluation, is used to describe an inspector action taken before the document, procedure, system, aircraft or airmen is approved for use in aviation operations.
- (c) Examples of Evaluation activities:
 - (1) Evaluation Example 1: Auditing a proposed aircraft operating checklist before approving it for use by an airline for the conduct of flight operations.
 - (2) Evaluation Example 2: Auditing a proposed maintenance program (schedule) before approving it as the airline timetable for completing maintenance checks.
 - (3) Evaluation Example 3: Auditing a proposed aircraft operations manual before authorizing it for use by the airline’s flight crewmembers.
 - (4) Evaluation Example 4: Auditing the performance of a pilot during a flight check before issuance of the license or rating.
 - (5) Evaluation Example 5: Auditing the aircraft to determine that it meets the minimum requirements for light operations in the category of the airworthiness certificate to be issued.

3.4.3.2 **Inspections**

- (a) An “inspection” is an act of auditing for conformance with a published standard.
- (b) The term, *inspection*, is used to describe a specific inspector action when evaluating a document, record, procedure, individual or system that is *currently approved for* use in aviation.
- (c) Inspections are primarily accomplished on an on- going basis after the certification process has been completed.
- (d) Inspections are, however, a key part of the latter stages of a certification process to confirm that the individual or organization is ready for issuance of an authorization.
- (e) Examples of inspection activities:
 - (1) Inspection Example 1: Auditing an aircraft operating checklist currently being used by an airline for the conduct of flight operations.
 - (2) Inspection Example 2: Auditing a maintenance program(schedule)currently being used by an airline for maintaining an aircraft.

- (3) Inspection Example 3: Auditing an aircraft operations manual currently being used by the airline's flight crew members.
- (4) Inspection Example 4: Auditing the performance of a licensed pilot during a re-examination flight check after an accident.
- (5) Inspection Example 5: Auditing the aircraft after a flight operation to determine if it met the minimum requirements for that flight operation.
- (6) Inspection Example 6: Auditing the crew's performance on a revenue flight to determine that they are conforming to the airline's procedures.

3.4.3.3 **Investigations**

- (a) An "investigation" usually involves an individual or organization that is currently operating in aviation.
- (b) The term, investigation, is used to describe the overall process of inspector actions when following up on a reported complaint, incident, accident or enforcement case.
- (c) Depending on its complexity, an investigation may include both evaluations and inspections.
- (d) An investigation usually involves a series of activities conducted over a period of time.

3.4.3.4 **Certification**

- (a) The term, certification, is used to describe the overall process of inspector actions to approve, license, or certificate an individual, document, procedure, record or organization.
- (b) Depending on its complexity, a certification may include both evaluations and inspections.
 - (1) For example, a certification for an original air operator will include a complex series of evaluations to approve the documentation and other arrangements, followed by a battery of inspections before the AOC holder is approved for operations in aviation.
 - (2) But the "certification" actions associated with a single revision of a Minimum Equipment List will probably consist only of evaluations conducted by each of the inspector technical specialties prior to approval for use in aviation.
- (c) A certification usually involves a series of activities conducted over a period of time.

3.4.4 **SAFETY ISSUE**

- (a) Safety issues can result from inspections, investigations, and other contact with the aviation public.
- (b) The term, safety issue, is used to describe a finding or observation made by an inspector as a result of almost any activity (except "evaluation").
- (c) Safety issues are not generally associated with evaluations or certifications accomplished by the technical inspector.

- (d) Examples of safety issues primarily focus on the technical inspector's assessment that an individual or organization has failed, either inadvertently or by decision, to—
- (1) Conform to aviation law, regulations and directives issued by LCAA;
 - (2) Conform to relevant industry safety practices; or
 - (3) Maintain the required fitness to hold a certificate or license.
- (e) LCAA will then pursue resolution of those identified safety issues. The priority of that resolution process will be directly associated with the assessed impact to public safety.

Note: *By definition, there is NO safety issue if the document, record, procedure, individual or system being evaluated is not CURRENTLY BEING USED in aviation.*

3.5 AUDITING STANDARDS

- (a) The concept of auditing is based on the establishment of specific standards as the basis for making an objective evaluation.
- (1) The primary standards that will be applied are the current aviation directives, mandatory technical guidance and other relevant industry-wide and regional safety standards.
 - (2) These directives and other relevant standards are derived from the ICAO Convention, ICAO Annexes and regional agreements.
 - (3) As a signatory State, Liberia has agreed by treaty that those minimum safety standards will be required.
- (b) To implement this, Liberia has published regulations and guidance that is applicable to the aviation community.
- (1) The manufacturers of aircraft and other aeronautical products also publish relevant technical standards and practices in the development of the type certification and maintenance documents during the original certification of the aircraft.
 - (2) In addition, there are regional documents published by organizations outlining the safety standards to be applied during flight in those regions.
 - (3) These constitute the standards that will be audited by the inspectors on behalf of the LCAA.

3.5.1 APPLICABLE AUDITING STANDARDS

- (a) The credibility of a safety inspector's audit findings is directly related to the basis for making such a finding.
- (1) Inspectors should avoid expressing personal opinions to members of the aviation community. This is especially true when the inspector is not sure of the proper answer.
Note: *It is critical that inspectors understand that their personal opinions are not usually an acceptable basis for making an audit finding.*

- (b) The basis for making a decision, which will require resolution action by a member of the aviation community, should be, limited to law, directives, mandatory technical guidance, and relevant safety practices.
- (c) This is applicable to all certification evaluations and later inspections and surveillance. The following sources may be used as a basis for evaluation decisions and discussions—

3.5.1.1 Law

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

3.5.1.2 Safety Regulations

For inspector auditing purposes, applicable Liberia Civil Aviation Regulations may be used. The specific Regulation and applicable section/subsection should be cited when issuing a written evaluation decision.

3.5.1.3 Mandatory Technical Information

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

3.5.1.4 Relevant Safety Practices

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

3.5.2 INFORMAL DISCUSSIONS

- (a) The previous guidance is also applicable to informal discussions from the standpoint that inspectors should confine their evaluation discussions and decisions to known actual requirements.
- (b) Inspectors are NOT expected to memorize the exact source locations of regulatory requirements.
- (c) It is possible that an inspector may make a mistake as to a specific requirement or source document in an informal discussion. If this does happen, the inspector now has an obligation to provide the person with the correct information.

3.5.3 INSPECTOR RECOMMENDATIONS

- (a) It is true that an inspector that has credibility with the aviation community can make recommendations that are readily accepted.
 - (1) But the acceptability of an individual inspector's recommendations should not be the basis for any evaluation decision.

- (2) If the inspector believes that a specific safety requirement should be published by the LCAA that individual should submit his or her recommendation, including the proposed terminology, to the Director for consideration.
- (b)** Inspector recommendations should be based on the applicable published auditing standards.
- (1) The inspector is cautioned to refrain from making recommendations based solely on personal opinion or past experience.
 - (2) The members of the aviation community will not be expected to make changes to their practices based on inspector personal opinions.

3.6 INSPECTOR TOOLKIT

- (a)** This section provides inspectors with an overview of the use of the shared folder named “inspector Toolkit.”
- (b)** The Inspector Toolkit is the location of the “official” references for use by the inspector.
- (1) This folder provides the inspector with the most current version of the documents to be used by the inspectorate.
 - (2) Inspectors are encouraged to print out and maintain a hard-copy of the documents that they consult frequently.
 - (3) But inspectors are required to take their references for development of official correspondence from the inspector toolkit.
- (c)** The arrangement of the folders and files within the Inspector Toolkit were deliberately designed for PDF Acrobat Reader search. The results of such searches are displayed in a descending order of the priority of “official use.”
- (1) For example, Aviation Law is the highest level hierarchy in the LCAA documentation, followed by Aviation Regulations, followed by Technical Guidance, then Advisory Circulars when determining requirements for compliance.
 - (2) This descending order of search allows the inspector to quickly determine the basis for requirements and their proper implementation in the order of their legislative priority.
 - (3) The inspector toolkit allows the inspector to word search for key words or phrases and possible synonyms when researching the requirements.
- (d)** The contents of the Inspector Toolkit are:
- (1) Aviation law
 - (i) This folder contains PDF copies of current aviation law.
 - (2) Aviation regulations

- (i) This folder contains PDF copies of the current aviation regulations, arranged in ascending numerical order.
 - (3) Technical guidance
 - (i) This folder contains PDF copies of the current technical guidance for inspectors, arranged in a numerical order.
 - (4) Advisory circulars
 - (i) This folder contains PDF copies of the current advisory circulars issued by the LCAA, arranged and grouped by LCAR Part number.
 - (5) Forms-Applications
 - (i) This folder contains copies of current LCAA forms and applications, some in PDF and some in WORD (2003-compatibility mode), arranged by form number.
 - (6) Checklists
 - (i) This folder contains PDF copies of current checklists or job aids suitable for print-out, arranged by technical specialty and job aid number.
 - (7) Standard letters
 - (i) This folder contains WORD (2003-compatibility mode) in read-out only format, arranged by file number and title.
 - (8) ICAO Documents
 - (i) This folder contains current ICAO Annexes, Technical Documents, Circulars and Audit Protocols.
 - (9) Other CAA Documents
 - (i) This folder contains the documents of other CAAs that have been cited in LCAA documentation or are considered relevant practices for use by LCAA inspector personnel.
- (e)** See content of inspector toolkits below:

LCAA INSPECTOR TOOLKIT**A-LCAA Aviation Law****B-LCAA Aviation Regulation****C-LCAA Technical Guidance****D-LCAA Advisory Circular****E-LCAA Forms****F-LCAA Checklists****G-LCAA Standard Letters****H-ICAO Documents****I-Other CAA Documents**

CHAPTER-4: DOCUMENT CONTROL SYSTEM PROCEDURE

4.1 INTRODUCTION

- (a) This chapter describes the procedure to be used for the overall control of document received, processed and dispatched from the Directorate of Flight Safety Standards. Each individual responsible for execution of any official documents in DFSS are required to adhere to the procedures laid down in this inspector handbook.
- (b) This chapter describes the detail procedure for tracing the documents, received or dispatched and their current status.

4.2 DOCUMENTS CONTROL PROCEDURE

- (a) Assistant in-charge for each Flight Operation Section, Airworthiness Section, Personnel Licensing Section and Aero Medical Section under Director of DFSS, will be responsible to receive and dispatch official correspondence as letter, memo etc from or to Director DFSS.

4.3 INCOMING DOCUMENT CONTROL PROCEDURE

- (a) Whenever any document is received either addressed to the Director General or Director of Flight Safety Standards, it must get registered by the assistant in-charge of documentation of the respective section of the Directorate of Flight Safety Standards. A register file is maintained (either soft or hard) for recording and registering of such documents.
- (b) When any documents for the DFSS is received and registered, each is given individual tracking number. The said number is usually identifiable as per section as: AWS (Airworthiness Section), FOS (Flight Operation Section), PELS (Personnel Licensing Section), AMS (Aeromedical Section) and generally FSS (Flight Safety Standard Directorate) followed by /first letter representing a particular month followed by number assigned to month/ followed by hyphen and a three-digit number code. (for e.g, AWS/J1/21-001). The same no. is registered in as per appendix-1.
- (c) After having registered, the document will move to individual to whom it is addressed and if required to the Director of the Directorate of Flight Safety Standard or Chief of section, for processing. The application of the document will be allocated to the individual officer/ inspector for processing through again the assistant in-charge of documentation of the required section.

4.3.1 INTERNAL MEMO FILE CREATING AND RECORDING

- (a) Whenever any application is received, it is processed through internal memo by individual officer. An Internal memo file is raised, with required comments from individual officer and necessary documents inside file. File is forwarded to respective assistant in-charge of documentation of section for registration and allocation of unique reference no. and then only it is forwarded to whom it is addressed again. Recording of internal memo is register either in hard or soft copy and shall be in accordance with format as in appendix - 2.

- (b) Whenever memo is dispatched it is again dispatched in two copy, one to addressee and one shall be kept on file.
- (c) Reference number is allocated and is usually identifiable as: CAA followed by two digit number indicating year/ section as AWS (Airworthiness Section), FOS (Flight Operation Section), PELS (Personnel Licensing Section), AMS (Aeromedical Section) and generally DFSS (Directorate of Flight Safety Standard)/abbreviation of month followed by number assigned to month, followed by hyphen and a three digit number code and a letter M.(e.g. memo reference number from airworthiness section for the year 2020 and first month in that year will be given as CAA20/AWS/J1-001M).

4.3.2 OUTGOING DOCUMENTS CONTROL PROCEDURE

- (a) Whenever any official letter is to be dispatched by individual officer, it must be dispatched through assistant in-charge of documentation. Once letter is signed it is handed over to assistant in-charge of documentation where it is registered and each letter shall be given unique dispatch no. termed as Reference Number.
- (b) Reference number is allocated and is usually identifiable as: CAA followed by two-digit number indicating year/ section as AWS (Airworthiness Section), FOS (Flight Operation Section), PELS (Personnel Licensing Section), AMS (Aeromedical Section) and generally FSS (Flight Safety Standard Directorate)/first letter representing a particular month followed by number assigned to month, followed by hyphen and a three digit number code.
(e.g. Letter reference number from airworthiness section for the year 2020 and first month in that year will be given as CAA20/AWS/J1-001).
- (c) The recording of dispatch letter shall either be done in hard or soft copy but shall be recorded in format as shown in Appendix-3. Whenever letter is dispatched it is again dispatched in two copy, one to addressee and one shall be kept as officer copy.

4.4 FILING SYSTEMS

Any changes to a filing system must begin with an inventory. An inventory is a detailed listing of all existing files in an office. Without information gained through an inventory, it would be impossible to develop or make changes to a filing system. The inventory is the foundation of a filing system.

4.4.1 NAMING AND LABELING FILES

- (a) For paper files, identification and labeling allows an office to maintain physical control over current files as well as manage growth of new files. Labeling serves as a *visual aid* by identifying individual record series and by identifying folders within each series.
- (b) For electronic files, identification and labeling allows an office to maintain intellectual control over current files as well as to manage growth of new files. Labeling serves as an *access tool* which allows individual documents to be retrieved in an efficient manner.
- (c) When working with paper files two levels of file identification and labeling help simplify and facilitate filing and retrieval in each section of the Flight Safety Standards Directorate:
 - (1) drawer or shelf labels
 - (2) file folder labels

4.4.1.1 **Drawer or shelf labels**

- (a) Labels should be typed in uppercase and include:
 - (1) primary classification
 - (2) dates

4.4.1.2 **File folder labels**

- (a) The airworthiness section uses a non-coded file folder arrangement in which file folders are arranged in a straight alphabetical sequence by words or subject titles. For example:
 - (1) Ramp and Surveillance Inspection Reports
 - (2) Internal memos
 - (3) Foreign Audit Reports
 - (4) Training Reports
 - (5) Aircraft accident/incident Reports

4.4.1.3 **Electronic files**

- (a) Electronic files follow many of the same file identification and labeling guidelines as paper files. Records are organized by directories which act as the primary classification. Each directory contains folders which act as record series. Finally, each folder contains individual documents whose names should represent their subject matter. For example, every computer used by inspectors of the Flight Safety Directorate should have on its Desktop a directory named Inspectors' Toolkits. Within that directory are nine folders labeled A-I respectively and within each folders are individual documents whose names should represent their subject matter.

4.5 **TRACKING AND LOCATION OF FILES**

- (a) Airworthiness Files Catalogue (AFC) and Record Book have been provided for this purpose.

4.5.1 **OPENING A HARDCOPY FILE**

- (a) In the cabinet/drawer labeled Administrative Files you will be able to find the Records File.
- (b) Depending upon the kind of file you want to open, you will find the next available reference number under the appropriate subject heading.
- (c) Write the name of the file against the next available reference number.
- (d) Write the name and reference number of the file in the AFC (Section 1) under the appropriate subject heading.
- (e) The Airworthiness Assistant should update the records weekly.

4.5.2 FILE TRACKING AND LOCATION

- (a) When a file is required:
 - (1) Content the Airworthiness assistant in-charge of the files to access the Files Catalogue and Record Book.
 - (2) Refer to the Catalogue to determine the title of the file and its reference number.
 - (3) The file will then be removed from the appropriate cabinet by the assistant in charge.
 - (4) The assistant in charge will then enter in the Record Book the following:
 - (i) The name of the inspector or borrower,
 - (ii) His or her ASI number.
 - (iii) The title of the file and its reference number.
 - (iv) The borrowed data.
 - (v) The name of the staff in charge.
 - (5) When the file is returned after use the assistant receiving the file will enter in the Record Book the date the file is returned and his name.
 - (6) He will then return the file into the appropriate cabinet.

4.6 FILING OF DOCUMENTS

4.6.1 INSPECTION FILES AND REPORTS

- (a) All Liberia AOC holders have inspection files in the cabinet/drawer labeled Inspection Files. Completed checklists and Evaluation or Inspection Summary Job Aid AW-OP-001 should be put in their respective Operator Inspection file, except inspections relating to specific aircraft and Approved Maintenance Organizations (AMO)/ Continuing Airworthiness Management Organizations (CAMO).
- (b) All inspection reports relating to aircraft should be placed in the specific aircraft inspection file.
- (c) All inspection reports relating to AMO/ CAMO should be placed in their respective AMO/ CAMO files.
- (d) FASAP Inspections are entered into the FASAP database and the report is filed.
- (e) Designated Foreign Operator Inspections have files for each Operators. As such all inspection reports relating to that Designated Foreign Operators should be placed in their appropriate file, in the cabinet.
- (f) Inspection reports and related letters of correction (LOC) should be held by the inspector responsible for the inspection in a suspense file till close up action is taken.
- (g) The Airworthiness Assistant should be informed of all LOCs raised, and these should be logged in the LOC Tracking File.

- (h) The closed inspection report should then be placed in the appropriate file.

4.7 FILING OF CERTIFICATE OF AIRWORTHINESS (C OF A)

- (a) After a C of A is issued, a photo copy is made and retained by the Airworthiness section in the appropriate aircraft file and the original copy goes to the Operator.
- (b) The copy retained by the Airworthiness section should be filed in the appropriate aircraft file.
- (c) The latest issue of C of A should be the first document from the bottom in the aircraft file.
- (d) All previous Certificates of Airworthiness issued should remain in the file.

4.8 AIRCRAFT FILES

- (a) When an aircraft is being considered for registration, a file is opened for it. This will be the Aircraft Major file.
- (b) All correspondence before and after registration is put on this file.
- (c) After registration, the inspection report and all inspection related documentation should be placed in a separate file labeled Aircraft Registration file for that particular aircraft.
- (d) The Aircraft Registration file is kept solely for reference purposes and no other correspondence is to be placed on it further.
- (e) Subsequently, all inspection reports for C of A renewals, Spot Checks, etc. relating to the aircraft will be placed on the major file for that particular aircraft.

4.9 FILING OF INCIDENTS INVESTIGATION REPORTS

- (a) Each incident investigation report will have a file with reference same as the aircraft file reference with the suffix INCID; (eg. SRD/336/INCID/.....).

4.10 FILING OF OCCURRENCE REPORTS

- (a) Each occurrence report whether mandatory or voluntary shall be placed on this file. Each operator will have its own file with reference same as the operator file reference with the suffix ORs. (eg. AIR/4089/ORs.....)
- (b) Investigations arising out of occurrence reports shall also be placed on this file.

NOTE:

- Each aircraft will therefore have two files; namely: Aircraft Major and Aircraft Registration. All two will have the same reference number with the suffix MAJ and REG respectively, (eg. AIR 336/MAJ/; AIR 336/REG/).
- The Head of Airworthiness will open a new file with the same title and next volume number when the file is full.

- Older files are to be removed from the cabinet and archived when the file cabinet is full.
- Files should not be overflowed to render their contents being tattered prematurely.
- The Record Book should be carefully handled to avoid soiled pages and torn sheets.

4.11 PERSONAL/TRAINING FILES FOR AIRWORTHINESS INSPECTORS

- (a) To ensure systematic and comprehensive training of Airworthiness Inspectors it is necessary to maintain a personal/Training File for each Inspector. The Training File records must be reviewed and updated at regular intervals.
- (b) Record of all 'On Job Training' imparted to an Inspector must be maintained in the Training File.
- (c) An AWI on Job Training Guide has been developed to assist Supervisors with the training of Airworthiness Inspectors. The Guide is placed at Appendix 6.
- (d) The personal / training files should include following details:
 - (1) Copy of Job Description
 - (2) Copy of Credentials
 - (3) Copy of Latest CV
 - (4) Copy of AMT License if held,
 - (5) Copy of Training Certificates
 - (6) Copy of Academic Certificates
 - (7) Copy of Airport Pass
- (e) It is the responsibility of the Individual Airworthiness Inspector to provide their personal details and training certificates to the personnel keeping records of all the inspectors after changes in personal details or after completion of any training.
- (f) The record keeping personnel will verify the records of individual inspector files every year for its completeness.

CHAPTER-5: PERSONNEL MANAGEMENT

5.1 STAFFING REQUIREMENTS POLICY

- (a) Staffing of the DFSS with a sufficient number of suitable ASIs, experienced, qualified and capable of accomplishing the wide range of activities covered is paramount to the success of the safety oversight programme of LCAA.
- (b) ASIs must not only have the knowledge, experience and qualifications to carry out their duties in a professionally sound manner, but also possess the personality to win the respect and confidence of the operators. This would require a reasonable level of tact, understanding, firmness, impartiality, integrity and an exemplary personal conduct both in the office and at the operator's premises.
 - (1) Preferably, ASIs will possess aeronautical licenses, certificates and/or aeronautical degrees commensurate with their job responsibilities (e.g. engineering degrees, aircraft maintenance license) to compare with the personnel to be inspected or supervised.
 - (2) Although the Authority strives at fully qualifying all ASIs it is not expected that in all cases any one inspector within the organization will possess the same level of experience as all the personnel being audited. However, the DFSS will be so organized that more knowledgeable, qualified and experienced staff will assist other inspectors in the performance of assigned certification and surveillance duties.
- (c) The number of ASIs (Airworthiness, Operation and Personnel licensing) required will be determined by the level and of growth of aviation activity in Liberia
- (d) A specific methodology for an accurate calculation of staffing needs is included in the Technical Directorates Organization Manual.
- (e) A periodic review will take place from time to time, as required, to determine whether or not there needs to be a change in the number of Inspectors authorized.

5.2 TECHNICAL TRAINING OF AIRWORTHINESS INSPECTORS

- (a) Technical Training of Airworthiness Inspectors may be accomplished from several sources. These can be contracted to an operator who offers a course that is approved for use in that country for use by their citizens, or from aircraft manufacturers or from operators of Liberia. An Inspector is required to undergo a type-rating course before approving maintenance schedules and related activities. Routine surveillance activities can be accomplished on any aircraft in airline service whether or not the Inspector is type rated on that particular type. In cases where the inspector is conducting a surveillance function on an aircraft in which he is not type rated, he must limit his observations and remarks to those elements that are not specific to that type of aircraft unless the occurrence is self-evident and would not take a type rated person to make an observation of that nature. An example of that would be obvious structural damage and or corrosion etc.
- (b) Inspector refresher training; Airworthiness Inspectors should be scheduled for a minimum of one refresher training course every year. This training can be

accomplished at a local airline or maintenance organization. [A proposed Civil Aviation Directive refresher training of Civil Aviation Airworthiness Inspectors is placed at Appendix '5' for guidance.]

- (c) When an Inspector holds licenses on a number of aircraft, he should be scheduled for refresher/recurrent training on different types each year wherever possible.
- (d) Although Airworthiness Inspectors are not exercising the privilege of their engineer license, when they are performing certification or surveillance activities as required by LCAA, they are required to maintain the same level of knowledge as is required of engineers that are exercising the privilege of their license.
- (e) There may be an occasion where there is no inspector qualified on a particular type of aircraft and there is a need for one to accomplish a task that normally required a type rating. In such a case, an inspector with a type rating on a similar aircraft could accomplish the required task after being directed by his head.

5.3 QUALIFICATIONS OF AIRWORTHINESS INSPECTORS (MAINTENANCE & AVIONIC)

- (a) Individuals seeking positions as Airworthiness Inspectors (Maintenance & Avionic) should have extensive academic and technical education and have progressed through positions of increased technical and supervisory responsibility in the aviation industry or the military services. At least five years of employment as a fully qualified aircraft maintenance engineer is normally required to obtain minimum qualifications and experience for an individual to adequately accomplish the duties and responsibilities of a basic starting position in the maintenance or avionics field as an Airworthiness Inspector. Moreover, they should possess aeronautical licenses, commensurate with their job responsibilities, i.e., Mechanic Certificate with airframe and power plant ratings, electronics technician, etc.
- (b) The satisfactory or unsatisfactory execution of the various Airworthiness functions depends to a large extent on the qualifications, experience, competence and dedication of individual Inspectors. In addition to the vital importance of technical competency in performing airworthiness inspections and the surveillance of certificated operators and approved maintenance Organizations, it is likewise critical that Inspectors possess a high degree of integrity, be impartial in carrying out their tasks, be tactful, have a good understanding of human nature and possess the ability to get along well with people. Considering the specialized and sensitive nature of the Inspector's mission the qualifications, experience and personal characteristics of each person employed to perform inspector's duties will be verified and carefully evaluated before selections are made.
- (c) The Airworthiness Inspectors should also have the following qualifications.
 - (1) In all cases, they must have successfully completed a LCAA approved Basic Course for Airworthiness Inspectors and must have satisfactorily completed OJT as specified in Appendix A (OJT Training Guide). (Note: LCAA should arrange for the recently inducted AWIs to successfully complete a Basic AWI Course before utilizing the AWI on Inspection Job Functions).
 - (2) The qualifications listed in the ITTPM.

- (d) In cases where suitable engineers / inspectors fulfilling the above criteria are not available, the Director General may, at his discretion, relax the requirements, and nominate personnel working in the Liberian aviation industry taking into consideration the engineer's seniority, past performance, employment record, experience, progression towards a higher rating and utility of the Airworthiness Inspectors. These personnel are to be named as Designated Airworthiness Inspector.

5.3.1 PARA-TECHNICAL AND TECHNICAL QUALIFICATIONS

5.3.1.1 Auditor Functions Requiring Para-Technical Qualifications

- (a) To perform the auditor functions, the LCAA employs ground operations inspectors, cabin safety inspectors, flight operations, airworthiness (maintenance) and airworthiness (avionics) inspectors.
- (b) Each of these persons will be used as auditors in those certification and surveillance functions that they are qualified and trained to perform.
- (c) All inspectors must be qualified to perform the para-technical auditing functions in their specialties that relate to aviation law, Regulations and LCAA guidance.
 - (1) Para-technical examples include the auditing required during the formal application phase where the documents are reviewed for conformance with the general standards applicable to document acceptance.
 - (2) Another para-technical example would be the auditing of a conformance Checklist by comparison to the referenced documents.

5.3.1.2 Auditor Functions Requiring Technical Qualifications

- (a) Those inspectors that have technical experience and qualifications in specific aviation certificate areas, such as the systems and maintenance on a specific aircraft type in the certification process, will be used to conduct auditing functions on behalf of the LCAA where it is necessary to audit technical safety procedures and relevant safety practices.
- (b) Those job tasks that require the evaluation of a technically qualified auditor are identified in this manual in the technical references section.
 - (1) Examples include: the primary auditor of aircraft (pilot) checklists will be a qualified pilot, preferably qualified on that type of aircraft; the primary auditor of a maintenance practice on a specific aircraft will be experienced and/or trained on maintaining that type of aircraft.
 - (2) The primary auditor of a dispatcher training curricula will be qualified in the technical procedures and relevant safety practices associated with the job function

5.3.1.3 Technical Qualifications Add Other Roles

- (a) Inspectors who have the technical qualifications may perform other significant roles in the administration of a flight standards safety oversight program.
 - (1) They should be used as "technical advisors" to the Liberia Civil Aviation Authority on the technical safety practices in use.

- (2) They should also be used as technical investigators to provide a technical perspective to occurrence and accident investigations.
- (3) They should be used as “technical evaluators” on behalf of the Liberia Civil Aviation Authority to evaluate the conduct of technical processes, such as proficiency checks or maintenance practices.

5.4 INSPECTOR’S QUALIFICATIONS FOR AOC CERTIFICATION

- (a) Each airworthiness member of a certification team should normally have at least twelve months’ relevant experience in his or her area of responsibility within the team, in the appropriate discipline.
 - (1) Inspectors who do not meet this requirement may be attached to the team but may not be primary members (unless the Director issues a waiver).
 - (2) An inspector who does not have this experience in the requisite technical discipline, but who has completed a full certification as an attached inspector, may be appointed to a subsequent certification team.
- (b) At least one airworthiness inspector should normally be qualified or trained on the aircraft type(s) proposed for operation by the applicant.
- (c) Except in unforeseen circumstances, this team should be allowed to complete the certification project without a change in the team membership.
- (d) At least one airworthiness inspector must be qualified on the aircraft type prior to conducting:
 - (1) Approval of aircraft conformity
 - (2) Approval of maintenance time limits
 - (3) Approval of training programs
 - (4) Approval of the MEL
 - (5) Approval of all-weather operations
 - (6) Approval of EDTO operations
 - (7) Surveillance of demonstration flights.
- (e) Other assigned airworthiness inspectors should have an understanding of the type of aircraft equipment, navigational systems and/or proposed techniques.

5.5 TWO GROUPINGS OF AIRWORTHINESS SPECIALTIES

- (a) The airworthiness responsibility is broken down into two areas of expertise. The areas are:
 - (1) Maintenance
 - (2) Avionics

- (b) The ATA Chapter, coding system, breaks down the responsibility for each area of expertise. Maintenance Inspectors have the primary responsibility for airworthiness program functions not assigned to the Avionics Inspector. Avionics inspectors have the primary responsibility for airworthiness program functions that involve avionics equipment and systems. The duties listed below are functions that require the specific expertise and experience related to each specialty.

5.5.1 PRIMARY AIRWORTHINESS RESPONSIBILITIES

- (a) The primary duties, responsibilities, and functions, based on the applicable Air Transport Association (ATA) chapter coding system, include the evaluation/monitoring/inspection of the equipment and systems as outlined below.

Maintenance	Avionics
<ul style="list-style-type: none"> ● ATA 21 Air-conditioning ● ATA 25 Equipment/Furnishings ● ATA 26 Fire Protection ● ATA 32 Landing Gear ● ATA 35 Oxygen ● ATA 36 Pneumatics ● ATA 37 Vacuum ● ATA 38 Water/Waste ● ATA 49 Airborne Auxiliary Power ● ATA 51 Structures ● ATA 52 Doors ● ATA 53 Fuselage ● ATA 54 Nacelles/Pylons ● ATA 55 Stabilizers ● ATA 56 Windows ● ATA 57 Wings ● ATA 61 Propellers ● ATA 65 Rotors ● ATA 71 Power Plant ● ATA 72 (T) Engine Turbine/Turboprop ● ATA 72 (R) Engine Reciprocating ● ATA 73 Engine Fuel and Control ● ATA 74 Ignition ● ATA 75 Air ● ATA 76 Engine Controls ● ATA 78 Engine Exhaust ● ATA 79 Engine Oil ● ATA 80 Starting ● ATA 81 Turbines ● ATA 82 Water Injection ● ATA 83 Accessory Gearbox 	<ul style="list-style-type: none"> ● ATA 22 Autopilots ● ATA 23 Communications ● ATA 24 Electrical power ● ATA 27 Flight Controls ● ATA 31 Instruments ● ATA 28 Fuel ● ATA 33 Lights ● ATA 29 Hydraulics ● ATA 34 Navigation ● ATA 30 Ice & Rain Protection ● ATA 77 Engine indicating

5.5.2 SECONDARY AVIONICS RESPONSIBILITIES

- (a) Both specialties must coordinate their activities. Each has a specific ATA Chapter of responsibility but several ATA Chapters have dual specialty requirements. The list of secondary responsibility is those areas where shared responsibility exists.
- (b) The secondary avionics duties, responsibilities, and functions, based on the applicable ATA chapter coding system, include the evaluation/monitoring/inspection of the equipment and systems in following list:
- (1) ATA 26 Fire protection/detection
 - (2) ATA 27 Flight control logic system—indicating
 - (3) ATA 28 Fuel/Fuel system—indicating
 - (4) ATA30 Ice and rain protection: Pilot--static, Antennas--radome, Detection
 - (5) ATA 32 Landing gear: Position and warning, Antiskid—electronics,
 - (6) ATA 49 Airborne aux power indicating
 - (7) ATA 52 Door warnings
 - (8) ATA 65 Rotors indicating
 - (9) ATA 72 Power plant electrical harness
 - (10) ATA 73 Engine fuel and control indicating
 - (11) ATA 74 Ignition electrical power supply
 - (12) ATA 21 Air indicating
 - (13) ATA 79 Oil indicating
- (c) Decisions concerning Primary ATA Chapters are the responsibility of the assigned specialty. Decisions concerning the ATA Chapters with Avionics secondary responsibility lie with the assigned Maintenance inspector. He/she should consult with the assigned avionics inspector before making a final decision. All coordination should be in writing.
- (d) It is especially important Avionics be involved in the following approvals—
- (1) Maintenance Programs.
 - (2) Maintenance Manuals.
 - (3) Maintenance Training Program.
 - (4) MELs.
 - (5) EDTO.
 - (6) All Weather operations.
 - (7) Cabin configuration changes.
 - (8) Airworthiness certification original and/or renewals concerning FDR, CVR and transponder requirements.

- (9) Cargo compartment fire detection and suppression requirements.
- (10) Changes to AOC management, aircraft or maintenance procedures.
- (11) Changes to the AOC's MME and or MOE.
- (12) Changes to the Training program.

5.6 AUTHORIZED STRENGTH OF AIRWORTHINESS INSPECTORS

- (a) The number of Airworthiness Inspectors required will be determined by the level of and the growth of aviation in the country. A periodic review will take place from time to time as required to determine whether or not there needs to be a change in the number of Inspectors authorized.
- (b) The following guidelines are considered to be the minimum number that is reasonable for Airworthiness Inspectors to carry out their tasks.
 - (1) One Airworthiness Inspector per approximately *five aircraft* of a particular type. This is only a rough rule of thumb. States will, however, need to take into consideration the number of operators that are operating and the complexity of the air operations as these would affect the workload.
 - (2) Because of the diversity of aircraft operating in General Aviation, the ratio mentioned in (1) above may not be applicable for General Aviation. In such cases, a ratio of one Airworthiness Inspector for ten aircraft (by judiciously combining two or more types) is considered a suitable option.

5.7 ADMISSION TO THE FLIGHT DECK

- (a) Airworthiness Inspectors in their normal course of duty have no right of access to the flight deck during a flight and therefore an AWI shall only enter the flight deck after obtaining the express approval of the PIC. The flight deck of an aircraft is a close society in which each member is proficient in his/her duties and aware of his/her responsibilities, position and rank. The introduction of an inspector into this type of environment may create a distraction and possibly add tension. The AWI's authority can be seen as a threat to the individual flight crew member. While maintaining the status of his/her own position, the AWI must recognize and support the Pilot-in-Command's authority unless he/she is obviously about to violate a regulation. Even in these conditions, the AWI should at first appear to be acting in an advisory capacity and only resort to the powers vested in him/her by the aeronautical legislation as a last resort.
- (b) If permitted under company rules a AWI on duty may travel on the flight deck for familiarization purposes. Under normal circumstances he shall make every effort to reserve the use of any observer seat through the operator's flight dispatch or other designated office at least 24 hours prior to scheduled departure time.
- (c) While on the flight deck, the AWI must avoid distracting the crew. The AWI is a new person to talk to, and a new source of information. A flight deck conversation can be valuable to the AWI as a source of information and to establish a good relationship with the flight crew but it must be carefully controlled so as to avoid distractions at critical times.

- (d) If an AWI has reason to believe that an aircraft is in an unsafe condition, he/she may detain the aircraft pursuant Civil Aviation Act of 2019 subsection 414 by directing Air Traffic Services (ATS), where available, to deny take-off clearance. This would give the AWI more time to co-ordinate other recourses

CHAPTER-6: PERSONAL ETHICS AND CONDUCT

6.1 PURPOSE

- (a) This chapter contains direction and guidance for Airworthiness Inspectors (AWI) pertaining to principles of ethics and conduct as they affect the performance of duties.
- (b) Although some AWIs scenarios are listed in this chapter, all circumstances that an Inspector may encounter cannot possibly be covered. As Inspectors are always in the public eye, they are expected to exercise good judgment and professional behavior at all times while on and off duty.

(1) Unique Responsibilities of Airworthiness Inspectors

AWIs are exposed to a number of circumstances that are critical to their positions and which are not pertinent to other Civil Aviation Authority (CAA) job functions. The Inspector has the critical position of frequently interpreting and evaluating the quality of training programs, operations and maintenance Handbooks, pilot and mechanic performance, and overall safety activities. It is imperative that all Inspectors be sensitive to the responsibilities and demands of their positions and be objective and impartial while performing their duties. Inspectors must also be sensitive to actual as well as perceived appearances of any conflict that could disrupt the effectiveness or credibility of the Directorate of Airworthiness mission.

(2) Civil Aviation Authority Requirements;

Inspectors are required to comply fully with the letter and spirit of the standards of conduct as set forth by this chapter; and with those set forth in Liberia, "CAA Service Rules"; The Authority's policy on employee conduct is designed to encourage employees to maintain a level of professionalism that will promote the efficiency of the LCAA and conform to accepted principles of conduct.

6.2 ON-THE-JOB ETHICS AND CONDUCT

- (a) The conduct of an AWI has a direct bearing on the proper and effective accomplishment of official job functions and responsibilities. Inspectors are required to approach their duties in a professional manner and to maintain that attitude throughout their activities. Through their conduct, Inspectors working in direct contact with operators, and with the public, bear great responsibility in the determination of public perception of the LCAA.

(1) Rules of Conduct

All Inspectors must observe the following rules of conduct:

- (i) Report for work on time and in a condition that will permit performance of assigned duties
- (ii) Render full and industrious service in the performance of their duties
- (iii) Maintain a professional appearance, as appropriate, during duty hours
- (iv) Respond promptly to directions and instructions received from their supervisor

- (v) Exercise courtesy and tact in dealing with co-workers, supervisors, and members of the public.
 - (vi) Obtain approval of all absences from duty
 - (vii) Conserve and protect LCAA property, equipment, and materials (Inspectors may not use or permit others to use LCAA equipment, property, or personnel for other than official business.)
 - (viii) When duties concern the expenditure of public funds, have knowledge of and observe all applicable legal requirements and restrictions.
 - (ix) Safeguard classified information and unclassified information that should not be given general circulation as provided by LCAA. (Inspectors shall not disclose or discuss any classified information or "official use only" information unless specifically authorized to do so)
 - (x) Observe the various laws, rules, regulations, and other authoritative instructions, including all rules, signs, and instructions relating to personal safety.
 - (xi) Uphold with integrity the public trust involved in the position to which assigned.
 - (xii) Report known or suspected violations of law, regulations, or policy through appropriate channels.
 - (xiii) Not engage in private activities for personal gain or any other unauthorized purpose while on government property.
 - (xiv) Give any supervisor or official conducting an official investigation or inquiry all information and testimony about all matters inquired of, arising under the law, rules and regulations administered by the LCAA.
 - (xv) Not use illicit drugs or abuse alcohol or other substances
 - (xvi) Not participate in telephone eavesdropping (Advance notice must be given whenever any other person is placed on the line for any purpose whatsoever). An advance verbal warning must be given when an automatic recording device or a speaker telephone is used.
 - (xvii) The use of recording devices, portable or otherwise, on telephones shall be limited to areas involving air safety.
 - (xviii) Not make irresponsible, false, or defamatory statements that attack, without foundation, the integrity of other individuals or organizations. (Inspectors are accountable for the statements they make and the views they express.)
- (b)** Inspectors must always keep in mind, no matter how trying the circumstances, that they are visible representative of the regulatory agency. In their direct contact with a dynamic highly organized and high profile industry it is crucial that the inspector project a strong professional image.

6.3 OUTSIDE EMPLOYMENT, FINANCIAL INTERESTS, AND GIFTS

6.3.1 Business Interests

AWIs and their immediate families should seek clarification and guidance before engaging in any airline or other business activity for which the LCAA has oversight responsibility. If an Inspector holds any interest that may give the appearance of impropriety, the inspector should immediately consult his superior and the legal department for a determination.

6.3.2 Conflict of Interest

Inspectors may hold employment or own businesses that do not present a conflict of interest with their official job functions. Inspectors who wish to participate in outside aviation activities (such as flight instruction, commercial flying, or any other aviation-related activity) should seek clarification and approval from the Director General.

6.3.3 Public Speaking

Inspectors may not receive payment for speaking on issues that deal with their official job functions. Teaching or instructing at colleges, universities, or vocational schools may be acceptable, but should be coordinated and approved by the Director General.

6.3.4 Fund Raising

AWIs may not participate in fund raising or soliciting donations from any business or activity for which their office is assigned oversight responsibility. Exceptions to this requirement may exist for donation of prizes/gifts for speakers in aviation safety seminars arranged under the aviation safety program. They should, however, seek official approval.

6.3.5 Gifts

Avoiding Conflict of Interest: Gifts should be accepted only when the Inspector knows that the gift will not give the appearance of a conflict of interest.

NOTE: Inspectors shall exercise the utmost discretion when giving or receiving gifts.

6.3.6 Dress

- (a) AWIs should be aware that their personal appearance affects their professional image; therefore, they should adhere to the guidelines below:
- (1) On visits to air operator facilities, AWI should dress semi-formally (tie for men, Dress or slacks for women or any other national dress as per convention).
 - (2) During training AWIs dress should be compatible with the air operator's practice but should lean towards formality.
 - (3) During in-flight inspection, the sight of a non-uniformed person moving in and out of the flight deck can be disturbing to hijack - conscious passengers. For this reason, AWIs should maintain a low profile, dress conservatively, restrict movements between cabin and flight decks and wear the Airport Security Pass.
 - (4) When conducting AWI duties at an airport, the Airport Security Pass must be worn at all times on the ramp and air-side of the terminal.

CHAPTER-7: AIRWORTHINESS INSPECTOR (AWI) CREDENTIALS

7.1 GENERAL

- (a) This chapter contains information for Inspectors concerning the types of Aviation Safety Inspectors (ASIs) credentials and the Inspector eligibility requirements and application procedures for those credentials. This chapter also contains direction and guidance to be used by Inspectors when employing ASI credentials during the performance of inspector tasks.
- (b) The inspectors' credential issued by the Director-General is the recognized method for identifying yourself as a LCAA inspector for any situation where you are involved in the inspection of Liberia or foreign air operators at any location in Liberia.
- (c) This credential grants the inspector right of access to any facilities, personnel, records and aircraft (regardless of registration) engaged in operations in Liberia.
- (d) It also grants the inspector right of access anywhere in the world to the maintenance and operational facilities, personnel, records and aircraft used in operations by a Liberia pilot or Liberia AOC holder.
- (e) All LCAA technical personnel authorized to ensure the maintenance of competency and to conduct surveillance must possess appropriate credentials identifying them as technical experts employed by the LCAA having the right to unhindered access to inspect aircraft and facilities.
- (f) The LCAA Inspector Credential authorizes the persons employed in an Inspector's position, to exercise the powers, duties or functions, conferred on the inspector by the Civil Aviation Act 2019.
- (g) The Inspector Credential are complemented by the document 'Letter of Authorization' and 'Inspector's Scope of Authorization', which establishes and limits the scope of delegated powers to the holder, according to the level of qualification under the Inspectors Training System (ITS).

7.2 SCOPE OF AUTHORIZATION

The Technical Directorates Organization Manual provides guidance and procedures for the issuance and awarding of CAA Letter of Authorization/Scope of authorization.

7.3 FSS COMPETENCE FRAMEWORK

The Technical Directorates Organization Manual provides guidance and orientation on the competencies for ASIs associated with meeting the challenges of conducting oversight duties and tasks in increasingly complex and dynamic environments.

7.4 TYPES OF CREDENTIALS

- (a) AWIs are issued two types of credentials:

- (1) LCAA Inspector Identification that identifies the Inspector as an “Authorized Person” and authorized that person to perform the duties and exercise the powers under said rule; and
- (2) Functionary Identification from Airports Security which provides for access to different areas of any Liberia airport and aircraft, as indicated on the credential.

7.5 ELIGIBILITY REQUIREMENTS

AWIs assigned to positions involving air transportation inspections and audits are eligible to receive the LCAA credential; however, the inspector must have also completed a "Basic Airworthiness Inspector" course. To be eligible for the Airport credential, the AWI must possess (or be concurrently issued) the LCAA credential; have fulfilled the requirements set forth in this Handbook authorizing the conduct of ramp inspections; and have a job function that requires the conduct of inspections.

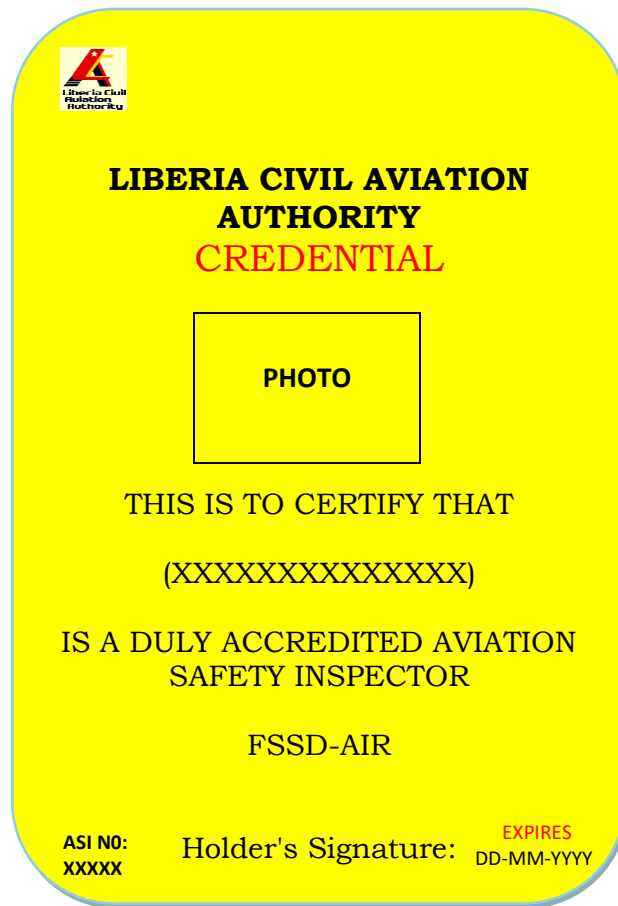
7.6 APPLICATION PROCEDURES

Inspectors shall apply for the two credentials by completing an application for a LCAA Inspector Credential and an Airport Security Credential in accordance with the procedures of those entities to expedite the issuance of the credentials, the application may be initiated before the inspector meets the training and qualification requirements outlined in this Handbook.

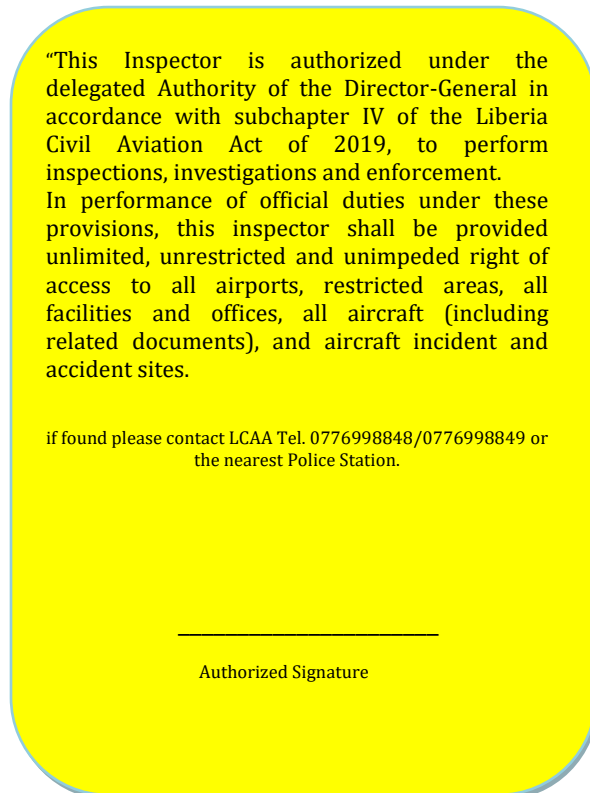
7.7 USE OF CREDENTIALS

- (a) Although the credentials contain the general authorization for the inspector to conduct LCAA work functions, specified work functions may only be performed after the inspector has been authorized by an appropriate supervisor and has satisfied the training and qualification requirements specified in this Handbook. The work functions for the two credentials are as follows:
 - (1) **LCAA Inspector Credential:** The LCAA Inspector credential identifies an individual as an “authorized Person” and authorizes that individual to perform the duties and exercise the powers vested in the Director General through the LCAA ACT of 2019. These official duties include the conduct of ramp inspections.

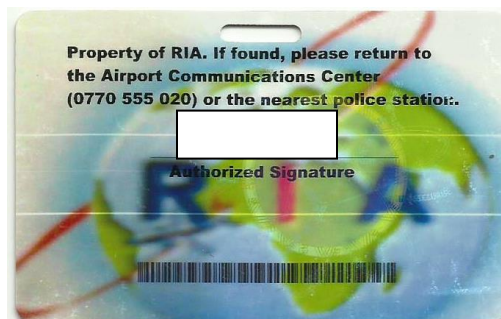
- (i) **The Following Details Shall Appear on the Face Side of the Credential:**



(ii) The Following Details Shall Appear on the Back Side of the Credential:



- (2) **Airport Security pass Credential:** The Airport Functionary credential contains authorization for an inspector to be given free and uninterrupted access to restricted areas at airports governed by the LCARs while the inspector is performing official duties to the extent stated on the credential. These officials' duties include those types of inspections such as ramp inspections etc. An inspector must display this credential on an outer garment to be permitted entry into airport secured areas, and while working in these areas. While employing the Airport Functionary credential, inspectors should consider the following procedures:
- (i) **Physical Barriers:** Although this credential is an authorization for inspectors to be in secured areas, for physical barriers such as locked doors and gates, an inspector may need to seek local assistance to gain access. Inspectors should ask at the time of entry if the operator has any specific security program practices and procedures that need to be followed.
 - (ii) **Passenger Screening Points:** Inspectors approaching passenger screening points may not bypass that screening; however, if the inspector is unable to afford the delay that may be involved in passenger screening, then arrangements should be made with the airport or operator personnel to enter the secured areas at other entry points.



7.8 LOST OR STOLEN CREDENTIALS

If either one or both of these credentials are lost, Stolen, or damaged, the inspector should report the occurrence immediately to the Inspector's supervisor Flight safety standard department.

7.9 PROCEDURE FOR ISSUANCE OF AW INSPECTORS CREDENTIALS

This section contains information for issuance of AW Inspector Credential.

- (a) Individual inspector will raise an internal office memo with all the supporting documents addressing the Chief of Airworthiness after fulfilling all the qualifications and training requirements laid down in chapter 5 Section 5.3, and requirements laid down in Appendix-5 and Appendix-6 Airworthiness Inspectors Training Guide to Chief of Airworthiness.
- (b) The Chief of Airworthiness verifies the supporting document forwarded by Airworthiness Inspector and if found satisfactory forwards it to Director of FSSD with his recommendation. If not, he forwards a file to Concerned Airworthiness Inspector with his comments.
- (c) The Director of DFSS verifies the supporting document forwarded by chief of Airworthiness and if found satisfactory forwards it to the Director General (DG) with his recommendation. If not he forwards the file to Chief of Airworthiness and concerned Airworthiness Inspector with his comments.
- (d) If the DG is satisfied with the file and supporting document forwarded by Chief of FSSD, he approves the file and sends the file to Administration for preparation of Credential Card.
- (e) After the credential card is prepared and signed by DG the Internal office memo along with Credential card is sent to FSSD for distribution of Credentials and recordkeeping of the Internal Office Memo.
- (f) A copy of Credentials of each inspector will be kept in personal files of individual inspectors.

7.10 PROCEDURE FOR CURRENCY OF AW INSPECTORS CREDENTIALS

The AW Inspector Credentials is issued with the validity of 2 Years. It is the responsibility of the inspectors to keep their credentials current while carrying out their inspectorial function. The inspector should initiate an office memo 1 month before the expiry of their credentials. The procedure for renewal of credential will be similar to the procedure laid down in Para 6.7 of this Handbook.

CHAPTER-8: AIRWORTHINESS COORDINATION WITH OTHER OFFICES

8.1 OBJECTIVE

The objective of this chapter is to summarize the area where the airworthiness office needs to coordinate with other areas.

8.2 GENERAL

- (a)** There is need for coordination between airworthiness office and other offices to work together to process certification, approve documents and conduct surveillance activities.
- (b)** The major objective of the Inspectors handbooks is to define and to standardize the functions and responsibilities of ASI position at CAA. In addition, it is to provide direction and guidance for all the performance of technical administrative, certification and surveillance tasks in a standardized, effective and coordinated manner. In addition, it can be used as a reference by prospective and current certificate holders, owners and aircraft operators in general, licensed and other interested aviation personnel. Through the use of inspector's manual, safety personnel are encouraged to make suggestions for revisions. Proposed changes should be coordinated throughout the Office Managers and presented to the RRC for a recommendation of approval to the DG CAA.
 - (a)** Airworthiness inspector handbook is organized in two parts; Part 1 (General Administration, Inspector Qualifications, Trainings and duties), Paragraph 8.2 (Prerequisites and Coordination Requirements), Subparagraph 8.2.2 (Coordination Requirements) gives a list of the people, organizations, specialties, agencies, etc., that might require coordination with the ASI performing the task.

8.3 AIRWORTHINESS COORDINATION WITH FLIGHT OPERATIONS OFFICE

8.3.1 AIR OPERATOR CERTIFICATION

- (a)** The purpose of an AOC is to certify that specified commercial air transport operations are authorized by the CAA and are in conformance with the applicable regulations. The procedures contained in this Inspector Handbook will be utilized by LCAA inspectors for the issuance of an AOC and for the continuing safety oversight and inspection by LCAA of the operations conducted in accordance with the AOC and the related operations specifications.
- (b)** Once a completed POPS is received, at the commencement of the certification process, an LCAA inspector will be appointed as the Certification project Manager (CPM) and a certification team (CPT) will be established consisting of qualified and experienced inspectors of the necessary specializations, such as operations, airworthiness, cabin safety, and dangerous goods.
- (c)** The applicant will be informed that the CPM will be responsible for coordinating all aspects of the certification process and will be the focal point for dealing with all matters between the applicant and the CAA. The safety oversight workload of the CPM and team members may need to be adjusted in order that enough time is provided for the certification of a new air operator.

- (d) The certification process shall be documented with all documents and checklists used to be completed, signed and dated and appropriately filed. All findings or discrepancies noted during the inspections and evaluations must be notified to the applicant in writing. The applicant should address all findings and discrepancies to the satisfaction of the CAA before the issue of the AOC.
- (e) Since each operation may differ significantly in complexity and scope, the CPM and the certification team have considerable latitude in taking decisions and making recommendations during the certification process. The ultimate recommendation by the CPM and decision by the CAA regarding certification and awarding of an AOC are to be based on the determination of whether or not the applicant meets CAA's requirements and is adequately equipped and capable of conducting the proposed operation in a safe and efficient manner.
- (f) The CPT and CPM will be assigned by the Deputy Director General-Technical.

(g) CPM:

- (1) The CPM shall have completed an appropriate training course on air operator certification and surveillance, including on-the-job training, and should have previous experience in the certification of an air operator. It is desirable that a person with extensive inspector experience be designated as the CPM.
- (2) The CPM will have the following duties and responsibilities:
- (3) Serve as the primary spokesperson for the CAA throughout the certification process.
- (4) Act in a professional and responsive manner.
- (5) Co-ordinate all certification matters with all other specialists assigned to the certification project.
- (6) Ensure that all certification job functions are completed.
- (7) Ensure that all correspondence to and from the applicant is co-ordinated through the CPM.
- (8) Ensure that all pertinent CAA officials and the AMO staff involved with the certification project are kept fully informed of the status of the certification
- (9) Notify CAA management of any information that may significantly affect or delay the certification project.

(h) CTM. The CTM will have the following duties and responsibilities:

- (1) Responding to the requests for assistance made by the CPM, i.e. The CPM may ask certification team members to review maintenance manuals, conduct inspections, prepare written reports and provide recommendations.
- (2) Keeping the CPM informed of the status of the certification
- (3) Brought immediately to the attention of the CPM any discrepancy that may delay the certification .

8.3.2 APPROVAL OF DOCUMENTS

- (a) There is need for coordination between operations and airworthiness to work together to approve the following documents:
- (1) Minimum equipment list (MEL)
 - (2) Configuration Deviation List (CDL)

8.3.2.1 MINIMUM EQUIPMENT LIST (MEL)

(a) General

- (1) LCAA Regulations requires that a Master Minimum Equipment List (MMEL) issued by the organization responsible for the type design of an aircraft and approved by the State of Design shall be accepted as the basis for the development of a minimum equipment list (MEL). LCARs part 8 requires the MEL to be approved for each aircraft type operated by the operator.
- (2) An MEL is developed with procedures to allow the continued operation of an aircraft with specific items of equipment inoperative under certain circumstances. It is based mainly on the MMEL established for the aircraft type. Equipment allowed to be inoperative for flight in the MEL cannot be less restrictive than those established in the MMEL for the aircraft type.
- (3) The MEL needs to be available to flight crew, maintenance personnel and personnel responsible for operational control. The MEL also needs to include instructions for its use, including defects entry, categories, and actions to be taken (maintenance or operation) and placarding.

8.3.2.2 APPROVAL OF MEL (AIRWORTHINESS ASPECTS)

- (a) The flight operations inspector (FOI) is the primary LCAA official responsible for the overall process of administering, evaluating, and approving the MEL. It is essential that the FOI work coordinates closely with the airworthiness inspector (AWI), on airworthiness matters, and other individuals or groups involved in the MEL approval/review process prior to the approval of the document.
- (b) In the application for the approval of a MEL, the operator's MEL should:
- (1) identify the minimum equipment and conditions for an aircraft to maintain conformity with the standards of airworthiness and to meet the operating rules for the type of operation;
 - (2) define operational procedures necessary to maintain the required level of safety and to deal with inoperative equipment; and
 - (3) define maintenance procedures necessary to maintain the required level of safety and procedures necessary to secure any inoperative equipment.
 - (4) The MEL should also contain a description of how and when the MEL is to be used including procedures for:

- (i) Repair interval categories application
 - (ii) Repair interval extensions
 - (iii) Deferral of items
 - (iv) Placarding of unserviceable items
 - (v) Dispatch of aircraft
- (c) The MEL is customized from the MMEL to the operator's specific aircraft, aircraft equipment, modifications and operating environment and may be dependent upon the route structure, geographic location, and number of airports where spares and maintenance capability are available.
- (d) Where the MMEL cannot address some of the variables, it uses a standard term such as "As required by Regulations". The operator is required the applicable [State CAA] regulations to develop operations and/or maintenance procedures to be meet the requirements.
- (e) The operator shall submit a training programme for maintenance personnel on the appropriate policies and procedures in using a MEL.

Note: The job aid to evaluate the airworthiness aspects of MEL is at the CL: O-FSS225A.

- (f) The AWI will inform the designated FOI when the airworthiness evaluation of the MEL is satisfactory.
- (g) The AWI, FOI and the FSD must sign the LCAA MEL Coordination and Approval Form;

8.3.3 SPECIFIC APPROVAL

- (a) There is need for coordination between operations and airworthiness to work together to approve the following specific approvals:
- (1) Reduced vertical separation minima (RVSM);
 - (2) Performance based navigation (PBN);
 - (3) Low visibility, Category II and Category III approach;
 - (4) Extended diversion time operation (EDTO);
 - (5) North Atlantic (NAT) Minimum Navigation Performance Specifications (MNPS);
 - (6) Electronic Flight Bag (EFB)
- (b) The flight operations inspector (FOI) is the primary LCAA official responsible for the overall process of administering, evaluating, and approving these specific approvals. It is essential that the FOI work coordinates closely with the airworthiness inspector (AWI), on airworthiness matters, and other individuals or groups involved in this process prior to the approval of the documents and special operations.
- (c) The AWI will inform the designated FOI when the airworthiness evaluation for the respective specific approvals is satisfactory.

8.3.3.1 REDUCED VERTICAL SEPARATION MINIMA (RVSM)

Note: The complete RVSM approval procedure is described in AIH Part 2, Section 30.2.

(a) General

- (1) LCAR requires that operators obtain authorization prior to conducting flights operation of an aircraft within RVSM airspace. Airworthiness inspectors shall ensure the aircraft is approved as meeting the requirements for operation in RVSM airspace and that the aircraft altimetry and heightkeeping equipment is maintained in accordance with approved procedures and servicing schedules.

(b) Approval of RVSM operations (airworthiness aspects)

- (1) The applicant shall provide documentation to confirm that each aircraft is certificated for RVSM operations.
- (2) The operator shall submit a configuration list detailing the equipment used for the RVSM operation.
- (3) All equipment required for RVSM operations shall be identified in the maintenance programme. Similarly, these equipment shall also be identified in the MEL.
- (4) A list of inspections and functional checks, together with their intervals, required for the continued altitude monitoring of the RVSM approved aircraft to be included into the maintenance programme. These RVSM maintenance requirements can usually found in the maintenance manual of aircraft type.
- (5) The operator should provide procedures for configuration control to ensure that the aircraft is appropriately equipped for RVSM operations.
- (6) The operator shall submit a training programme for maintenance personnel on the appropriate policies and procedures for RVSM operations.

Note: The job aid to evaluate the airworthiness aspects of RVSM is the checklist Job Aid: AW-035.

8.3.3.2 PERFORMANCE BASED NAVIGATION (PBN)**(a) General**

- (1) Liberia CAA regulations require an operator to obtain authorization for the conduct of PBN operations. The airworthiness inspector should ensure that each item of the radio-navigation equipment installed is of a type and design appropriate to its intended function and that the installation functions properly.

(b) Approval of PBN operations (airworthiness aspects)

- (1) An aircraft is eligible for a particular PBN application provided there is clear statement in:

- (i) the TC; or
 - (ii) the STC; or
 - (iii) the associated documentation — Aircraft flight manual or equivalent document; or
 - (iv) a compliance statement from the manufacturer, which has been approved by the State of Design.
- (2) The operator shall submit a configuration list detailing the pertinent hardware and software components and equipment used for the PBN operation.
 - (3) All equipment required for PBN operations shall be identified in the maintenance programme. Similarly, these equipment shall also be identified in the MEL.
 - (4) The operator should provide maintenance procedures for configuration control to ensure that the aircraft is appropriately equipped for PBN operations.
 - (5) The operator shall provide a training programme for maintenance personnel on the appropriate policies and procedures for the respective type of PBN operations.

8.3.3.3 LOW VISIBILITY OPERATIONS AND CATEGORY II AND III APPROACH

Note: The complete low visibility operations, Category II and III approach approval procedure is described in AIH Part 2, Chapter 39.

(a) General

LCARs require an operator to obtain authorization for the conduct of low-visibility operations.

(b) Approval of low visibility operations and Category II and III approach (airworthiness aspects)

- (1) The operator shall include in the application to the LCAA relevant pages of the aircraft flight manual, type certificate (TC), supplemental TC, TC data sheet and/or the aeroplane operations manual attesting that the aeroplane meets the relevant airworthiness requirements and performance criteria for, as applicable, low visibility operations and Category II and/or Category III operations.
- (2) The operator shall submit a configuration list detailing the pertinent hardware and software components and equipment used for the operation applied for.
- (3) The operator shall submit a list of equipment/systems that must be installed and serviceable at the commencement of a low visibility operations or a Category II or III approach.
- (4) All equipment required for low visibility operations, Category II and III approach operations shall be identified in the maintenance programme and MEL.
- (5) The operator should provide maintenance procedures for configuration control to ensure that the aircraft is appropriately equipped for low visibility operations, Category II and III approach operations.

- (6) The operator shall provide a training programme for maintenance personnel on the appropriate policies and procedures for the respective type of low visibility operations, Category II and III approach operations.

Note: The job aid to evaluate the airworthiness aspects of low visibility operations, Category II and III approach is at CAA Form: AC-FSS16A

8.3.3.4 EXTENDED DIVERSION TIME OPERATIONS (EDTO)

Note: The complete EDTO approval procedure is described in AIH Part 2, Section 30.7.

(a) General

LCAR Part 8 requires an operator to obtain EDTO approval for any operation by an aeroplane with two or more turbine engines where the diversion time to an en-route alternate aerodrome is greater than the threshold time established by [State CAA]. The operator should ensure the required level of safety is maintained under conditions of flight for extended periods following failure of an engine and/or essential systems.

(b) Approval of EDTO (airworthiness aspects)

- (1) The applicant should submit a safety risk assessment which demonstrates how an equivalent level of safety will be maintained, taking into account the following:
- (i) capabilities of the operator;
 - (ii) overall reliability of the aeroplane;
 - (iii) reliability of each time limited system;
 - (iv) relevant information from the aeroplane manufacturer; and
 - (v) specific mitigation measures.
- (2) For operations beyond the threshold distance, the air operator shall meet the following requirements:
- (i) For all aeroplanes:
 - (A) the most limiting EDTO significant system time limitation, if any indicated in the aeroplane flight manual (directly or by reference) and relevant to that particular operation is not exceeded; and
 - (B) the additional fuel required by LCAR shall include the fuel necessary to comply with the EDTO critical fuel scenario as established by LCAA.
 - (ii) For aeroplanes with two turbine engines, the aeroplane is EDTO certified and following has been verified:
 - (A) reliability of the propulsion system;
 - (B) airworthiness certification for EDTO of the aeroplane type; and

(C) EDTO maintenance programme.

- (3) The operator shall submit a list of EDTO significant components and systems that must be installed and serviceable for an EDTO flight.
- (4) All equipment required for EDTO shall be identified in the maintenance programme and MEL.
- (5) The operator shall provide a training programme for maintenance personnel on the appropriate policies and procedures on EDTO. The operator shall also ensure that only EDTO trained maintenance personnel are authorized to perform EDTO maintenance tasks.

Note: The job aid to evaluate the airworthiness aspects of EDTO is the checklist Job Aid:AW-037.

8.3.3.5 NORTH ATLANTIC (NAT) MINIMUM NAVIGATION PERFORMANCE SPECIFICATIONS (MNPS) (RESERVED);

8.3.3.6 ELECTRONIC FLIGHT BAG (EFB) (RESERVED);

8.4 AIRWORTHINESS COORDINATION WITH PERSONNEL LICENSING OFFICE

8.3.4 GENERAL

- (a) There is need for coordination between personnel licensing and airworthiness to work together to approve the following documents and specific approval operations:
 - (1) Issuance of a maintenance license;
 - (2) INSERT ALL DOCUMENTS THAT REQUIRE COORDINATION FOR YOUR CAA.
- (b) The Personnel Licensing Inspector (PELI) is the primary [State CAA] official responsible for the overall process of administering, evaluating, and approving Aircraft Maintenance Licenses. However, a qualified airworthiness inspector is necessary to conduct some tasks. It is essential that the PEL work coordinates closely with the airworthiness inspector (AWI), on.
- (c) The AWI will inform the PELI when the exams or evaluation are is satisfactory.

8.3.5 ISSUANCE OF AN AIRCRAFT MAINTENANCE LICENSE (RESERVED)

8.5 AIRWORTHINESS COORDINATION WITH LEGAL OFFICE

8.5.1 GENERAL

- (a) There is need for coordination between legal office and airworthiness to work together to approve the following documents and specific approval operations:
- (1) Registration of an aircraft;
 - (2) Resolution of safety concerns.

8.5.1.1 REGISTRATION OF AN AIRCRAFT

- (b) The AWI is the primary LCAA official responsible for the overall process of administering, evaluating, and registering an aircraft. It is essential that the AWI work coordinates closely with the airworthiness inspector (AWI), on airworthiness matters, and other individuals or groups involved in this process prior to the approval of the documents and special operations.
- (c) The AWI will inform the designated FOI when the airworthiness evaluation for the respective special operations is satisfactory.

8.5.1.2 RESOLUTION OF SAFETY CONCERN (RESERVED)

APPENDIXES

APPENDIX-5: AWI ON-JOB-TRAINING GUIDE

The following guide has been developed to assist Supervisors with the training of Airworthiness Inspectors. It is only a guide and should not be considered limiting. Some of the subject areas are dealt with into in greater detail in other manuals and these manuals should be used to assist with training.

Airworthiness Inspector (AWI) activities often interact with Operations, Cabin Safety (CS), Dangerous Goods (DGs). These specialty activities are briefly mentioned within this checklist.

The following Branches will normally deal with issues listed:

Operations:

- Ramp inspections *
- Cabin en route inspections *
- Cockpit en route inspections
- Pilot proficiency and competency checks for operators
- FE proficiency checks for operators

Cabin Safety:*

- Safety Features Cards
- Cabin Attendant Manuals
- Cabin Attendant Training Programs

Dangerous Goods:

- Company Operations Handbook DGs Chapter Review
- Company DGs Permit(s) for Equivalent Level of Safety
- DGs Specialty Audits and Inspections
- DGs Cargo Facility Inspections
- DGs Random Ramp Inspections
- DGs Passenger Terminal Inspections
- DGs Surveillance Operations
- DGs Packaging Inspections
- DGs Investigations and Compliance Actions
- Company DGs Records and Document Retention programs
- ICAO Doc 9284 Technical Instructions for Safe Transport of DG, by Air

This checklist has been written with the intent of capturing most activities encountered by Air Carrier Airworthiness Inspectors. It is not meant to reflect specific tasks, such as certain office routines or methods on how particular situations are dealt with.

Note: * If these Airworthiness Inspector are not available/catered for in the organization the qualified AWI shall be entrusted with these activities as deemed appropriate by the head of Airworthiness.

It is therefore essential that Airworthiness Inspectors (Maintenance) who are assigned to Transport Airlines / Air carrier oversight responsibilities are also trained on such issues as Cabin Safety, Carriage of Dangerous goods, en route inspection e.t.c.

Since the responsibility of Inspectors is mainly implementing the civil aviation requirement and various rules and orders, their knowledge on the subject must be current, as such a periodic refresher of the same is considered imperative. Such refresher courses should be program at least once in two years.

In addition to this the various Airworthiness courses discussed earlier e.g. Basic I, Basic II and Advanced Course be imparted to the inspectors at an interval of three to five years. The time gap of repetition for such course will depend on the place of positioning of the inspector and the responsibility he is endowed with.

The inspectors who hold Aeronautical Licenses as qualification must undergo refresher courses on the type at an interval of every two years (or specify period agreed for the engineers in the Industry). Persons having licenses on more than one type of aircraft should attend refresher courses, on at least one type every two years or agreed period. It is advisable that the inspector attends the refresher course on aircraft which is more complicated in technology among the types of aircraft he is qualified.

APPENDIX-6: AWI ON - JOB - TRAINING ACTIVITY CHECKLIST**Table of Contents**

CHAPTER 1 - Office Administration Activities.....
CHAPTER 2 - Airworthiness Activities (Admin).....
CHAPTER 3 - Field Activities.....

CHAPTER 1 - OFFICE ADMINISTRATION ACTIVITIES**1. Meet the staff and discuss a brief outline of their responsibilities.****2. Review the following documents.**

- 2.1 Job Description
- 2.2 Delegation of Authority
- 2.3 Access to Information

3. Explain Office Procedures and Policy.

- 1.1 Approval of Leave
- 1.2 Working Hours
- 1.3 Employee In/Out Board
- 1.4 Vehicle Sign Out
 - 1.4.1 Procedures for accident reporting
- 1.5 Personal vehicle use
- 1.6 Inspector Scheduling System
 - 1.6.1 Booking of rides
 - 1.6.2 Use of receipt book

4. Explain Administrative Procedures

- 4.1 Forms, training.
- 4.2 Travel Claims and Advances
- 4.3 Cheque Pick-up
- 4.4 File Register – Correspondence
- 4.5 Work at home

5. Review Documents:

- 5.1 Civil Aviation Rules/Regulations
- 5.2 Airworthiness Inspector Handbook
- 5.3 Handbook of Regulatory Audits (If available)
- 5.4 MMEL /MEL Policy and Procedures Manual
- 5.5 Policy Letters
- 5.6 Air Safety Circulars
- 5.7 Air Navigation Orders
- 5.8 Enforcement/Compliance Manual
- 5.9 ICAO Annexes 1 to 19
- 5.10 ICAO Docs
 - ❖ 9051- AN/896 Airworthiness Technical Manual
 - ❖ 9365-AN/910 Manual of All Weather operation
 - ❖ 9379-AN / 916 Manual for procedures for establishment and management of a state's Personnel Licensing System,
 - ❖ 9389- AN/919 Manual for procedures for an Airworthiness Organization.
 - ❖ 9401- AN/921 Manual on establishment and operation of Aviation Training Centres.
 - ❖ 9501- AN/ 929 Environmental Technical Manual on the use of Procedures in the Noise Certification of Aircraft
 - ❖ 9574- AN / 934 Handbook on implementation of R.V.S.M

- ❖ 9642-AN/ 941 Continuing Airworthiness Manual
- ❖ 9654-AN/ 945 Handbook on prevention of problematic use of substances in the aviation work place.
- ❖ Circular 253-AN/151 Human Factor Digest No 12 (Human Factor in Aircraft Maintenance and Inspection)
- ❖ 7300 Convention on International Civil Aviation

6. TRAINING

Review Training Policy Letters.

6.1 Training Calendar of Courses

- 6.1.1 Basic Airworthiness Inspector Course
- 6.1.2 Advance Airworthiness Inspector Course (To include - ETOPS, CAT II & III, RVSM/MNPS,MMEL)
- 6.1.3 Audit Policy and Procedures Course
- 6.1.4 Aircraft Performance Course (Depending on Assigned Duties)
- 6.1.5 Aircraft Type Training (as required)
- 6.1.6 Aviation Safety Promotion Course (Depending on Assigned Duties)
- 6.1.7 Accident Investigation Course (Depending on Assigned Duties)
- 6.1.8 Personnel Licensing Course (Depending on Assigned Duties)

6.2 Personal Development

- 6.2.1 Development Course
- 6.2.2 Computer and Work Processing Courses 9379-AN

Section 2 - AIRWORTHINESS ACTIVITIES (ADMIN.)

1. Process Applications for Operating Certificates

- 1.1 Check and confirm application is complete

Inspector must know:

- a. What comprises a complete application package
- b. Refer to Certification Handbook and Airworthiness Inspector Handbook and ICAO Doc 8335
- c. Details required completing application
- d. What form application should be taken

- 1.2 Circulate forms to appropriate branches

Inspector must know:

- a. Which Sections share certification responsibilities
- b. What forms to circulate

- 1.3 Verify management personnel qualifications

Inspector must know:

- a. What qualifications are required from CARs
- b. Whether the qualifications submitted are consistent with company operations

- 1.4 Review manuals and ensure they are compatible with requirements Inspector must understand:

- a. The requirements of the CARs
- b. That Inspection/Engineering Manual must accurately reflect carriers operation
- c. Training Manual
- d. Complete check list in respect of this in respect of this functional area.

1.5 Recommend required approvals

Inspector must know:

- a. How to make an overall assessment of company submission to ensure Compliance with terms of license and applicable CARs
- b. How to complete all relevant forms
- c. The Certification Manual
- d. What approvals are required for each aircraft's Maintenance Program
- e. Approve training program

Program should include:

- ❖ A/C Type (To include type course, and simulator / C.P.T experience including ground running of engines.)
- ❖ MEL
- ❖ Company Procedures.

1.6 Arrange for Base Inspection

Inspector must know:

- a. How to plan and conduct an initial inspection as per Manual of Regulatory Audits / Airworthiness Inspector's Handbook;
- b. Who to contact to make arrangements
- c. Complete check list of relevant functional area.

1.7 Ensure file is complete.

The inspector must know

- a. How to make annotations on a file
- b. How to record reference for findings
- c. Follow up action if any.

2. Process amendments to Engineering Handbook and Operations specifications (or equivalent doc.)

2.1 Confirm change is consistent with regulations, operation and scope of approval

Inspector must know the:

- a. Scope of the approval
- b. Operator's authority

2.2 Advise operator of necessary changes (if required)

Inspector must know:

- a. The standards relative to change requested
- b. Effective writing techniques

2.3 Verify accuracy of final draft

2.4 Recommend acceptance/approval

- a. Differentiate between approvals and acceptances
- b. Recommendation procedure

3. Minimum Equipment List Approvals

3.1 Compare proposed MEL to MMEL

- a. Research standards, legislation, requirements and procedures
- b. Study aircraft systems
- c. Discuss with appropriate counterpart in Directorate of Operations
- d. Purpose of proposed MEL
- e. Reference of Master MEL

3.2 Ensure proposed MEL does not conflict with any legislation or design standard

- a. Review pertinent legislation
- b. Obtain concurrence from Operations Directorate

3.3 Ensure proposed MEL is appropriate to operation

- a. Review particular type of operation

3.4 Recommend changes to MEL/MMEL

Inspector must be familiar with:

- a. Minimum equipment required for proposed type of operation
- b. The approving authority for MEL'

3.5 Issue approval

- a. Follow the normal approval procedure.

4. Special approval if requested.

- a. Operation in R.V.S.M area
- b. Category II and III operation

4.1 The inspector must be aware of the technical requirement

4.2 Organization must prepare and submit specific maintenance program for approval.

4.3 Inspector must ensure program meets the component and Aircraft manufacturer's recommendations and country's C.A.Rs.

4.4 Ensure that the operator is equipped to carry out all the inspection items.

4.5 Ensure specific training is given specially designated personnel for authorizing such flights.

5. Regulatory Compliance Investigations

5.1 Conduct preliminary investigation

- a. How to collect information
- b. How to complete Preliminary Investigation Report

Section 3 - Field Activities

1. Aircraft Inspections

1.1 Inspect aircraft documents

- a. Documents that are required
- b. C of A requirements
- c. Registration and leasing requirements
- d. Radio License
- e. Weight and balance report, amendments and validity
- f. Aircraft flight Handbook, supplements and amendments
- g. Journey log, hold items, MEL
- h. Release for flight

- 1.2 Inspect instrumentation and associated communication and navigation equipment.
 - a. Instruments and communication/navigation equipment required for the particular type of operation
 - b. Instrument markings
 - c. Compass card validity
 - d. auto-pilot/Stabilization Augmentation Systems
- 1.3 Inspect emergency equipment and emergency exits
 - a. Safety equipment
 - b. Proper exit marking and lighting
 - c. Exit accessibility
 - d. ELT requirements
 - e. Fire extinguishers
- 1.4 Check safety information is available and adequate
 - a. Requirements
 - b. Acceptable format
 - c. Where located
 - d. Passenger, Safety Information Card
- 1.5 Inspect cargo restraint system and other auxiliary equipment
 - a. Operate load release systems
 - b. Restraining loads
 - c. *Various methods of restraint*
 - d. *External load release*
 - e. External load methods
 - f. Segregation (DGs)

2. Ramp Checks

- 2.1 Documents on board
- 2.2 Emergency equipment on board.
- 2.3 Compliment of cabin crew
- 2.4 External check by crew member
- 2.5 Release to service by appropriate person
- 2.6 Use of MEL/ Deferred defect
- 2.7 Release for special operation like ETOPS, RVSM, Cat II or III etc