LAMPIRAN PERATURAN DIREKTUR JENDERAL PERHUBUNGAN UDARA
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Staff Instruction

SI 8900-6.9
Auditing and Surveillance Procedure for Approved Maintenance Organization (AMO) Holders

Amendment : 0
Date : 7 March 2018

REPUBLIC OF INDONESIA – MINISTRY OF TRANSPORTATION
DIRECTORATE GENERAL OF CIVIL AVIATION
JAKARTA – INDONESIA

AMENDMENT RECORD LIST

Amendment No.	Issue Date	Reference
0	7 March 2018	KP 064 Year 2018, Date 7 March 2018

FOREWORD

1. PURPOSE : This Staff Instruction has been prepared to guide and assist all Directorate of Airworthiness and Aircraft Operation personnel, Directorate General of Civil Aviation, AMOs (AMO) or applicants dealing with DGCA, in properly discharging their responsibilities and efficiently accomplishing audit and surveillance task

2. REFERENCES : This Staff Instruction should be used in accordance with the applicable regulations.

3. CANCELLATION : The SI 8900-6.9 Revision 0 dated October 2013, SI 8900-6.11 revision 0 dated October 2013, SI 8300 Volume 3 Chapters 97 and 98, Revision 4, dated 25 March 2010, have been cancelled.

4. AMENDMENT : The amendment of this Staff Instruction shall be approved by the Director General of Civil Aviation.

DIRECTOR GENERAL OF CIVIL AVIATION

Ttd.

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CHAPTER I. DEFINITIONS

The following terminology is specific to the audit and surveillance procedure for AMO:

- **Accountable Manager** means the certificated AMO designates the accountable manager as responsible for, and having authority over all AMO operations conducted under CASR part 145. This person's duties include ensuring that AMO personnel follow the regulations and serving as the primary contact with the DAAO.

1) The organization shall appoint an accountable manager who has corporate authority for ensuring that all maintenance required by the customer can be financed and carried out to the standard required by CASR Part145. The accountable manager shall:
   - ensure that all necessary resources are available to accomplish maintenance in accordance with CASR Part 145 to support the organization approval.
   - Establish and promote the safety and quality policy specified in CASR Part 145.
   - Demonstrate a basic understanding of CASR Part 145.
2) The accountable manager, whose responsibilities include ensuring that the organization complies with Aviation Act. Number 1 years 2019 and CASR's.
3) Such person(s) shall ultimately be responsible to the accountable manager.
   - The person or persons nominated shall represent the maintenance management structure of the organization and be responsible for all functions specified in CASR Part 145.
   - The person or persons nominated shall be identified and their credentials submitted in a form and manner established by the DGCA.
   - The person or persons nominated shall be able to demonstrate relevant knowledge, background and satisfactory experience related to aircraft or component maintenance and demonstrate a working knowledge of CASR Part 145.
   - Procedures shall make clear who deputizes for any particular person in the case of lengthy absence of the said person
4) The accountable manager shall appoint a person with responsibility for monitoring the quality system, including the associated feedback system as required by CASR Part 145. The appointed person shall have direct

access to the accountable manager to ensure that the accountable manager is kept properly informed on quality and compliance matters.

5) The accountable manager shall make sure that organization have a maintenance man-hour plan showing that the organization has sufficient staff to plan, perform, supervise, inspect and quality monitor the organization in accordance with the approval. In addition the organization shall have a procedure to reassess work intended to be carried out when actual staff availability is less than the planned staffing level for any particular work shift or period.

- **Additional/Amendment approval** means extension to the existing scope of approval.
- **AMO** means Approved Maintenance Organization
- **AMO Certificate of Approval** means the authority granted by DGCA for an AMO to conduct business
- **AMO Manual** means the manual describes the procedures and policies of an AMO's operations
- **AMOC** means Alternative Method of Compliance
- **Article** means an article is an aircraft, airframe, aircraft engine, propeller, appliance, or component part
- **Audit** means an in-depth review and evaluation of the activities of an organization to verify conformance to DGCA regulations and standards.
- **Audit activities** mean those activities and procedures through which information is obtained to verify the auditee's conformance to applicable regulations and standards. Such activities may include, but are not limited to: interviews, observations, inspections and the review of files and documents.
- **Auditee** means the organization to be audited. This term may be interchanged with "organization", "company", "AMO", "air AMO", "private AMO", "Approve Maintenance Organization" or "flight training unit AMO".
- **Audit Finding** means the determination of non-conformance of a product, process, practice, or procedure or a characteristic thereof to a specified regulation or standard. This will be documented on the Audit Finding Form.
- **Audit Manager** means the individual, designated by the DGCA, responsible for the planning and conduct of an audit, including the production of the audit report.
- **Audit Member** means the individual appointed by the respective directorate to participate in either the Airworthiness or the safety portion of the audit.

- **Audit Report** means a report that outlines the audit process and provides a summary of the audit findings.
- **Audit Program (AP)** means the Annual program that promotes conformance with the aviation regulations and standards that collectively prescribe an acceptable level of aviation safety. The AP ensures that DGCA audit policies and procedures are applied uniformly
- **Audit Plan** means the annual plan of scheduled audits intended to measure the level of an organization's conformance. These organizations include designated airworthiness organizations and air AMO.
- **Capability List** means a capability list (CL) is a list of articles on which the AMO is rated to perform maintenance, preventative maintenance, or alterations
- **Certificated AMO** means a certificated AMO is an AMO that has a fixed main base location, has met the certification requirements of CASR Part 145, and is engaged in the maintenance, preventive maintenance, inspection, and alteration of aircraft and aircraft products as defined in CASR Part 43
- **Certification** means the process of determining competence, qualification, or quality on which the issuance of an AMO and/or Operation Specifications is based. This includes the original issuance, denial, renewal or Amendments/revision of that document.
- **Class Ratings** means class ratings are issued if the AMO can prove its capability to maintain a representative number of products under this rating. After issuance of a class rating, it should not have restrictions to a specific product added. For such a case, issue a limited rating
- **Contracting** means entering into an agreement between two or more persons for the performance of maintenance functions on an article.
- **Characteristic** means any distinct property or attribute of a product, process, service or practice of which the conformance to a regulation or standard can be measured.
- **Combined Audit** means an audit that targets both Airworthiness functional areas.
- **Compliance** means the state of meeting regulatory requirements.
- **Confirmation** means the assurance that audit findings are in accordance with data obtained from different sources.
- **Confirmation Request Form (CRF)** means a form issued during the inspection portion of an audit to the auditee by DGCA inspector requesting

information that is not readily available. The auditee will be requested to respond within a specified time period.

- **Conformance** means the state of meeting the requirements of a regulation or standard.
- **Convening Authority (CA)** means the individual responsible for authorizing and overseeing the regulatory audit. The CA is also responsible for ensuring that the follow-up is completed.
- **Corrective Action Plan (CAP)** means a plan submitted to the CA or to his or her delegate byte auditee, following receipt of the audit report. This plan outlines the manner in which the company proposes to correct the cause(s) of deficiencies identified by the audit findings based on the root cause analysis. Carrying out the plan should bring the auditee into full conformance with regulatory requirements.
- **Depth** means the period of time over which a company will be audited, normally from the last audit up to the present day.
- **Directly in Charge** means the person directly in charge is responsible for the work of a certificated AMO that performs maintenance, preventive maintenance, alterations, or other functions affecting aircraft airworthiness.
- **Domestic AMO** means A domestic AMO is an automated operation specification term used to describe a DGCA certificated facility within the Republic of Indonesia that performs maintenance, preventive maintenance, or alterations on article
- **Documented** means that which has been recorded in writing, photocopied or photographed and then signed, dated and retained so as to ensure the continuity of the evidence secured. Documented (evidence) recorded in writing, by photocopy or by photography and signed, dated and retained in a manner to ensure continuity of the evidence secured.
- **Follow-Up** means the activity following an audit that is dedicated to program modification based on an approved Corrective Action Plan. Follow-up ensures that the document holder meets regulatory requirements.
- **Foreign AMO** means A foreign AMO is an automated operation specification term that describes a DGCA certificated facility located outside of the Republic of Indonesia that performs maintenance, preventive maintenance, or alterations on articles.
- **Human Factors** means Human Factors is the discipline of optimizing human performance in the workplace by combining a wealth of knowledge, primarily from the disciplines of psychology and ergonomics

- **Immediate Action** means any necessary action taken by DGCA upon finding of non-compliance against Civil Aviation Safety Regulations or Aviation Act by air AMO resulting from an audit
- **Inspection** means the basic activity of an audit, involving examination of a specific characteristic of a company.
- **In-Depth** means extensively, completeness or thoroughly.
- **KAN** means Komite Akreditasi Nasional or National Accreditation Committee (NAC). KAN/NAC is the only institution authorized to provide accreditation services conformity assessment bodies (laboratories, inspection bodies, certification bodies) in Indonesia
- **LLP** means Life-limited part means any part for which a mandatory replacement limit is specified in the type design, the Instructions for Continued Airworthiness, or the maintenance manual.
- **Life status** means Life status means the accumulated cycles, hours, or any other mandatory replacement limit of a life-limited part
- **Limited Specialized Service Ratings** means Limited specialized service ratings are issued for a special maintenance function when the function is performed in accordance with a specification or data acceptable to the DGCA. The operation specification must include the specifications or data used by the AMO to perform that service in accordance with CASR Part 145.
- **Line Maintenance**. Line Maintenance should be understood as any maintenance that is carried out before flight to ensure that the aircraft is fit for the intended flight.

  1) Line Maintenance may include:
     - Trouble shooting.
     - Defect rectification.
     - Component replacement with use of external test equipment if required. Component replacement may include components such as engines and propellers.
     - Scheduled maintenance and/or checks including visual inspections that will detect obvious unsatisfactory conditions/discrepancies but do not require extensive in depth inspection. It may also include internal structure, systems and powerplant items which are visible through quick opening access panels/doors.
     - Minor repairs and modifications which do not require extensive disassembly and can be accomplished by simple means.

2) For temporary or occasional cases (ADs, SBs) the Quality Manager may accept base maintenance tasks to be performed by a line maintenance organization provided all requirements are fulfilled as defined by the DGCA.
3) Maintenance tasks falling outside these criteria are considered to be Base Maintenance.
4) Aircraft maintained in accordance with 'progressive' type programs should be individually assessed in relation to this paragraph. In principle, the decision to allow some 'progressive' checks to be carried out should be determined by the assessment that all tasks within the particular check can be carried out safely to the required standards at the designated line maintenance station.

- **Maintenance Function** means a maintenance function is a step or series of steps in the process of performing maintenance, preventive maintenance, or alterations, which may result in approving an article for return to service.
- **Major Repair** means Major Repair means a repair: (1) That, if improperly done, might appreciably affect weight, balance, structural strength, performance, powerplant operation, flight characteristics, or other qualities affecting airworthiness; or (2) That is not done according to accepted practices or cannot be done by elementary operations
- **MTE** means Measuring Test Equipment means precision tools and test equipment used to make airworthiness determinations
- **NDI** means Non-Destructive Inspection
- **Non-Compliance** (immediate corrective action/Level 1) means a deficiency in characteristic, documentation, or procedure with respect to provisions of the Aviation Act No. 01 of 2009 or a CASR. This is action must be taken immediately but not exceed than 15 days upon identification of the audit and surveillance finding. Audit findings that have direct impact on aviation safety may be taken to stop the operation of aircraft, maintenance, suspend of personnel licensing or termination of AMO activities.
- **Non-Conformance** (Short-Term Corrective Action/Level 2) means a deficiency in a characteristics, documentation, or procedures. which renders the quality of a product or service unacceptable or indeterminate, or not according to specified requirements, e.g. physical defects, test failures. Inadequate documentation. This is short-term action to correct a non-conformance that does not pose an immediate threat to aviation safety, which ensures that conformance is established quickly until long-term action is completed to

prevent recurrence of the problem. Short-term corrective action will maximum take place within 30 days.

- **Non-Adherence** (Long-Term Corrective Action/Level 3) means a deficiency in characteristic, documentation, or procedure with respect to a recommended practice, procedure, guideline or good aviation safety. This is longer-term action and has two components. The first will involve identifying the cause of the problem and indicating the measures the company will take to prevent a recurrence. These measures should focus on a system change. The second component will include a timetable for company implementation of the long-term corrective action. Long-term corrective action will maximum take place within 60 days. Non adherence finding including safety observation is linked to safety and evaluation of the risks linked to operational hazards and raised when the risk pertaining to a specific hazard is evaluated by DGCA as non acceptable for safety.
- **Observers** means a person(s) other than certified and approved auditors, assigned to participate in the audit for training purposes in an audit program. Observer is not an audit team member.
- **OEM** means Original Equipment Manufacturer
- **OpSpecs**: Operations Specifications. The DAAO issues operation specification to indicate the authorizations and limitations to ratings as specified on the Air Agency Certificate
- **PAH** means Production Approval Holder
- **PMA** means Parts Manufacturer Approval
- **Principle Airworthiness Inspector (PAI)** means The individual Airworthiness Inspector the DGCA has assigned certificate management and surveillance responsibility of a particular company or Approve Maintenance Organization (AMO) holder.
- **Practice** means the method by which a procedure is carried out.
- **Product** means the end result of a procedure or process.
- **Procedure or Process** means a series of steps followed methodically to complete an activity. This includes: the activity to be done and individual(s) involved; the time, place and manner of completion; the materials, equipment, and documentation to be used; and the manner in which the activity is to be controlled.
- **QCM** means Quality Control Manual. The QCM describes the inspection and quality control system and procedures used by the AMO

- **Root Cause** means the initiating cause in a causal chain that leads to an undesirable situation or condition; the point in the causal chain where corrective action could reasonably be implemented and expected to correct and prevent recurrence of the undesirable situation or condition
- **RTS** means Return to Service
- **Sampling** means the inspection of a representative portion of a particular characteristic to produce a statistically meaningful assessment of the whole.
- **Satellite AMO** means a satellite AMO is an additional certificated facility or location under the managerial control of another certificated AMO
- **Scope** means the number of functional areas within a company that will be audited.
- **Specialist Audit** means an audit that targets either Airworthiness, Safety or Quality functional areas.
- **Special-Purpose Audit** means an audit intended to respond to special circumstances beyond initial certification, requests for additional authority or routine conformance monitoring.
- **Standard** means an established criterion used as a basis for measuring an auditor's level of conformance.
- **SUP** means Suspected Unapproved Parts
- **Surveillance** means routine continuing audit to ensure compliance with the CASR's, standards and approved manuals. The surveillance area is the same as the audit area. Surveillance carry out as a routine continuing inspection to ensure compliance with the CASR's, standards and approved manuals.
- **Surveillance Program (SP)** means the annual program for routine continuing inspections that promotes conformance with the aviation regulations and standards that collectively prescribe an acceptable level of aviation safety. The AP ensures that DGCA audit policies and procedures are applied uniformly
- **Surveillance Plan** means the annual plan of scheduled surveillance intended by routine basis to measure the level of an organization's conformance. These organizations include designated Approve Maintenance Organizations. Surveillance performed by Principle Airworthiness Inspector (PAI).
- **TC** means Type Certificate
- **TCH** means Type Certificate Holder's
- **Top Management** means AMO's chief executive officer (CEO), chief operating officer (COO), president, accountable manager or a person in an equivalent

position who has the authority to resolve issues and take action and can be held accountable for quality issues. The DGCA believes that top management should be well aware of the plans, results (findings, concerns, and observations), and follow-up actions undertaken in an Internal audit Program.

- **TSO** means Technical Standard Order
- **Verification** means an independent review, inspection, examination, measurement, testing, checking, observation and monitoring to establish and document that products, processes, practices, services and documents conform to regulatory requirements. This includes confirmation that an activity, condition or control conforms to the requirements specified in contracts, codes, regulations, standards, drawings, specifications, program element descriptions, and technical procedures.
- **Working Papers** means all documents required by the auditor or audit team to plan and implement the audit. These may include audit schedules, auditor assignments, checklists and various report forms

CHAPTER II. AUDIT AND SURVEILLANCE POLICY

1. Purpose

The audit program (AP) and surveillance program (SP) have been developed to promote conformance with the aviation regulations and standards that collectively prescribe an acceptable level of aviation safety. It also ensures that DGCA audit/ surveillance policies and procedures are applied uniformly.

2. Approval

AMO Certification

DGCA audits are conducted for the grant of approvals for initial certification, renewal, amendment/additional approval, routine conformance and special purpose audit pursuant to the Indonesia Aviation Act no. 1 year 2009. The Director General of Civil Aviation shall perform the safety oversight functions in respect of matters specified in this Act or the Rules made there under.

Surveillance

DGCA surveillance is conducting routine continuing inspections and audit to:

- Ensure compliance with the CASR's, standards and approved manual.
- Detect any significant safety issue within an air carrier, and ensure that the issue is effectively rectified in a timely manner.

The Director General, Civil Aviation (DGCA) is responsible for all regulatory audits and surveillance.

3. Audit Types

The type of audit is determined by the circumstances under which the audit is convened.

a. Initial Certification

Prior to the issuance of Approved Maintenance Organization (AMO), all the areas of a company shall be audited by the DGCA to ensure that its conformity to the required regulations and standards results to an approved quality system. Once the company has been issued with an Approved Maintenance Organization (AMO), detail procedure regarding initial certification for AMO refers to Staff Instruction (SI) 8900-2.11.

b. Amendment/ Additional Approval Audit

An amendment/ additional approval audit may be conducted prior to the granting of amendment/ additional approval. Detail procedure regarding amendment/ additional certification for AMO refers to Staff Instruction (SI) 8900-2.11.

c. Routine Conformance and Routine Surveillance Audit

Companies are audited on a regular basis for the AMO renewal purposes and to determining conformance of aviation regulations and standards. This routine conformance audit will be performed every two years before the AMO certificate will be expired.

A company must submit a formal application letter to DGCA for request renewal AMO certificate at least 90 days prior to the expired date of AMO certificate.

Surveillance includes a routine continuing audit program performed by PAI

d. Special-Purpose Audit

A special-purpose audit is one conducted to respond to special circumstances other than those requiring an initial certification audit, an amendment/ additional approval audit or a routine conformance audit. For example, a special-purpose audit may be convened with little or no notice and focus on specific areas of concern arising from safety issues.

A “no-notice” audit may preclude certain team-member activities and responsibilities that would be normally associated with other types of audits.

4. Surveillance

Surveillance is routine continuing audit performed by PAI. All organizations will be subject to continuing surveillance in between duration of AMO certificate (in between Routine Conformance Audit). The purpose of surveillance is to conduct audit to ensure continuing compliance with the CASR’s, standards, approve manual, appropriate technical and operational approved documents. Surveillance results may indicate the need for a special-purpose Audit of all or part of an organization.

5. Audit Activities

The audit process consists of the following four distinct phases of activities:

a. The pre-audit (desk audit);
b. The physical audit;
c. Post-audit; and
d. The audit follow-up.

a. Pre-Audit

Planning and preparation during the pre-audit phase will ensure that the objectives of the audit are achieved effectively, efficiently and economically. The scope and depth of the proposed audit, to be addressed and justified within the audit plan, will determine the time schedule, personnel and financial resources required.

b. Physical Audit

The physical audit phase will be implemented in accordance with the audit plan. It includes the entry meeting with the auditee, the determination of audit findings through interviews, inspections and the evaluation and verification of files and records, functional area debriefings and the exit meeting.

c. Post-Audit

Post-audit activities include completion of the audit report and parallel report.

d. Audit Follow-up

Audit follow-up includes the development and approval of the auditee's Root cause analysis and Corrective Action Plan (CAP) and ensures full implementation of the corrective action plan (CAP).

6. Co-ordination

Audits will be co-ordinated through Sub Directorate Standardization of DAAO – DGCA. The audit manager will ensure that the Sub Directorate Standardization of DAAO – DGCA is informed of all relevant audit matters, and will be accountable for the management of audit resources and the integrity of the audit process.

7. Scope and Depth

The scope and depth of the audit is determined by the following:

a. The size and complexity of the company;
b. The time since the last audit;
c. The enforcement record of the company; and
d. Audit resources available.

8. Surveillance Activities

The surveillance process consists of the following four distinct phases of activities:

a. Developing surveillance plan;
b. Accomplishing the surveillance plan;
c. Analyzing surveillance; and
d. Determining appropriate course of action.

a. Developing surveillance plan

The development of a surveillance plan requires planning at the DAAO-DGCA office and individual PAI levels. Each PAI should make an annual surveillance program specific to AMO holder in which the PAI was assigned. The program must be approved by Director of DAAO for annual surveillance program for AMO, before to be implemented. When developing a surveillance program, a PAI should consider to the following:

1) DAAO-DGCA Annual Surveillance Program (DGCA Form No.120-88 “Annual Surveillance Program”) ,provides a guidance and policy on activities and other resources;
2) The data such as previous reports of surveillance and audit, accident/incident information, compliance and enforcement information (DGCA Form No. 120-89 “Risk Analysis Surveillance Form”); and
3) Other data such as ongoing certification work activities, the geographic areas where the various types of inspections should be conducted.
4) AMO Complexity Rating.

The complexity rating of an AMO holder is determined by the addition of the point rated criteria provided below, which is divided into types of AMO holder.

Criteria	Point Rating
Number of employees	1-10 = **1 point** 11-100 = **2 points** More than 100 **= 3 points**
Number of location maintenance facilities	2 or less = **1 point** 3-5 = **2 points** More than 5 = **3 points**
Number of ratings	3 or less = **1 point** 4-6 = **2 points** More than 6 = **3 points**
Number of aircraft type/ engine type/ propellers type.	1 = **1 point** 2-5 = **2 points** More than 5 = **3 points**
Type of maintenance capabilities	Line maintenance = **2 points** Workshop = **2 points** Aircraft heavy maintenance = **3 points** Engine shop and Test Cell **= 3 Points**
Number of location line maintenance station	5 or less = **1 point** 6-15 = **2 points** More than 15 = **3 points**

For each AMO certificate holder, add the number of points and use the total to determine the related complexity rating using the following table.

Complexity Rating	Point Total	Minimum Level for Leader of Inspector
Low Complexity	**5 -9**	**4**
Medium Complexity	**10- 17**	**5**
High Complexity	**18 - 25**	**6**

A surveillance program may be based on the need to conduct routine and ongoing surveillance or the need to conduct special emphasis surveillance as a result of certain events such as accidents, related incidents, related violations, and strikes.

Numbers of inspections should be established taking into consideration the current operating environment which the DGCA oversees (such as AMO Complexity rating and the scope of maintenance).

Previous inspection reports, accident/incident information, compliance and enforcement information, and public complaints should also be used to determine both the types and frequency of inspections to be accomplished during a given time frame.

History of compliance with regulations and cooperation within the DGCA may also be considered when developing a surveillance program for a specific AMO.

b. Accomplishing the surveillance plan

During the conduct of the surveillance plan inspections, accurate and qualitative inspection reporting is essential. High quality inspection reporting is necessary for the effective accomplishment of the third and fourth phases of a surveillance program. The quality and standardization of inspection reporting will be enhanced through the use of the inspection checklists and report forms.

c. Analyzing surveillance

After the inspection data has been reported, an evaluation of the information obtained from inspection reports and related sources must be conducted. The purpose of this evaluation is to identify the areas of concern and note areas such as the following:

- Non-compliance with regulations or safe operating practices
- Both positive and negative trends
- Isolated deficiencies or incidents
- Causes of noncompliance, trends, or isolated deficiencies

Evaluation of inspection results is a key phase of any surveillance program. The primary purpose of evaluating surveillance data is to identify both negative and positive trends as well as deficiencies which are not associated with an apparent trend.

This evaluation of inspection results is also important in terms of redefining and implementing subsequent surveillance objectives and inspection activity.

The PAI must adopt systematic methods that permit accurate and effective evaluation of inspection results. Additionally, other related

information from incidents, accidents, enforcement actions and other sources may provide valuable trend information which may relate to the AMO's safety and compliance status. For example in the AMO with capability line maintenance, if in a series of ramp inspection reports a trend of deficiencies in the use of the MEL is identified, but the cause of these deficiencies cannot be identified, the PAI may need to adjust the emphasis on the types of inspections conducted. In this case, additional training program inspections, manual inspections, maintenance program, or flight control inspections (flight release procedures) may be more effective in determining the cause of these deficiencies.

d. Determining appropriate course of action

PAI must use good judgment when determining the most effective course of action to be taken as a result of unsatisfactory inspection/audit findings. The appropriate course of action often depends on many factors, many of which may be quite subjective.

PAI should evaluate preventive action developed by AMO (root cause analysis refer to Chapter 4 of this Staff Instruction) of the finding to prevent recurrence of the undesirable situation or condition.

Various options which may be considered are: informal discussion with the AMO; formal written request for corrective action; withdrawal of DGCA approval for a program, manual, or document; and initiation of an investigation leading to formal enforcement/disciplinary action.

Corrective action which an AMO takes independently of the DGCA should be taken into account.

The DGCA must also decide whether or not the results of a specific inspection should result in a modification of their current surveillance program. As previously mentioned, the DGCA may elect to conduct further inspections to determine if the unsatisfactory finding was an isolated incident or part of a trend

9. Frequency Audit and Surveillance

a. Resource Allocation

One objective of the audit and surveillance program is to target companies with poor conformance or safety records for more frequent inspection/audits. Accordingly, maximum resources will be directed at

those companies where the risk of compromising aviation safety is the greatest.

b. Criteria

Targeting and frequency will consider the following factors:

1) Risk indicators;
2) Scope;
3) Depth;
4) Personnel resources available;
5) Flexibility;
6) Time;
7) Financing or budgets;
8) Accountability; and
9) A poor conformance record.

c. Risk Indicators

Risk indicators are very important when determining whether a company should be subject to additional special-purpose or more frequent inspections.

A list of these indicators, with an explanation of each, follows. The ranking of each indicator may vary according to circumstances within the company when it is evaluated.

1) Financial Change

   The effects of financial difficulties and the subsequent impact on maintenance actions are potential indicators of safety. Examples could be “cash on delivery” demands made by suppliers; delays by the company in meeting financial obligations such as rent, payroll; spare-part shortages; and repossession of aircraft or other equipment.

2) Labour Difficulties

   Labour unrest may occur during periods of seniority-list mergers, union contract negotiations, strikes, or employer lockouts, and may warrant increased regulatory monitoring.

3) Management Practices

   Management controls employment, salaries, equipment, training and operational/ maintenance processes. It can ensure that maintenance functions are performed in a controlled and disciplined manner, or it can

adopt a less active approach. Management can also determine how quickly problems are solved and weak processes rectified. These factors all determine the extent of regulatory monitoring required.

4) Poor Internal Audit or Quality Assurance Program

   The absence of internal audit or quality assurance program may influence the frequency of surveillance, inspections or audits.

5) Change in Operational Scope or Additional Authorities

   Changes such as a new level of aircraft operations and associated service will require increased regulatory monitoring.

6) Changes in Contracting for Services

   Any changes to aircraft handling or maintenance contracts may require increased monitoring to ensure that the company has conformed to regulatory requirements.

7) High Turnover in Personnel

   A loss of experienced personnel or lack of employee stability may be the result of poor working conditions or management attitudes that result in operational inconsistencies or the inability to meet or maintain regulatory requirements. This situation will require increased surveillance, inspections or audits.

8) Loss of Key Personnel

   The replacement of accountable manager, maintenance/ workshop managers, quality manager, safety manager, chief inspector or other key personnel within a company will require increased regulatory monitoring to ensure a smooth transition.

9) Additions or Changes to Product Line

   Any changes to a product line (e.g. the addition of ratings, the addition of location of facilities) may require increased monitoring to ensure that appropriate regulatory requirements have been met.

10) Poor Accident or Safety Record

    Incidents or accidents that occur during aircraft operations that impact from the improper maintenance action by AMO may be an indicator of the company's level of conformance and require additional surveillance, inspection or audits.

11) Merger or Takeover

Any merger or change in controlling management may require additional regulatory surveillance or inspection after initial recertification.

12) Regulatory Record

A company's record of previous surveillance, inspections and audits, the promptness with which the company has completed its CAP, and its overall conformance history are indicators that will influence the frequency of surveillance, inspections and audits.

d. Periodic Cycle

Every company holding an AMO certificate will be audited on a periodic cycle every two years. The promptness with which previous non-conformances were corrected and risk indicator should also be a factor in the timing of the next audit.

The scope of audit and surveillance areas refer to this Staff Instruction Chapter 5.

The frequency of surveillance refer to this Staff Instruction Chapter 6.

10. Unity of Control

DGCA inspectors assigned to an audit shall report to the designated audit manager for the duration of the audit. To ensure continuity DGCA inspectors assigned to an audit shall not be released from their audit duties prior to the completion of the audit unless written authorization has been received by the audit manager.

11. Qualifications

The audit team member's and inspector conducted surveillance qualifications will vary according to their respective duties and responsibilities. However, each member of the team and inspector conducted surveillance (except those in training or serving as observers) should undergo the audit procedures Course refers to SI 8900-1.3 (audit process for airworthiness FCN 61701).

12. Principal Inspector Restrictions

To remain impartial throughout the audit process, Principal Airworthiness Inspectors (PAI's) should not participate in audits of their assigned companies except in an advisory capacity to assist the appropriate audit manager. The DGCA, however, may approve the restrictions for Inspector in-charge participation of the PAI as an active member of the audit team should circumstances and resources dictate.

13. Inconsistencies - DGCA Approvals

During an audit and surveillance, the auditee may produce letters or approval documents which appear inconsistent with current legislation or policy. The audit manager/ PAI shall report such documentation to the DGCA immediately and include these inconsistencies in the parallel report. Unless safety is compromised, the auditee will not be required to make immediate program changes. The DGCA is responsible for resolving these inconsistencies and advising the auditee of any required action.

14. Confidentiality

Discussion of Audit and Surveillance Content

Owing to the sensitive nature of audits and surveillance, confidentiality is of the utmost importance. Team audit members/ PAI shall exercise discretion when discussing audit and surveillance matters during an audit or surveillance (whether on or off the site). Discussion of audit or surveillance content shall be limited to the audit team/ PAI and appropriate DGCA management.

15. Parallel Report

When audit or surveillance findings are identified against CASR and/ or Aviation Act no. 1 year 2009, the audit manager or PAI will prepare a parallel report for the DGCA management.

CHAPTER III. GENERAL AUDIT, SURVEILLANCE AND INSPECTION PROCEDURES

1. Areas of Audits, Surveillance or Inspection

a. General

An audit to be a complete and effective review of a AMO's operation, it should normally be conducted by airworthiness inspector for the area airworthiness, safety (SMS) and Quality (QAP). The audit should be the norm for AMO's of any complexity in the AMO operations.

b. Areas of Audit, Surveillance or Inspection

This audit or inspection focuses on specific functional areas within a company.

1) Airworthiness

An airworthiness audit or surveillance will review the activities of the following areas:

a) Management and Administration
b) Approval and Manuals Inspection
- Operation Specification and Capability list
- AMO's Manual (AMO Manual, Quality Control manual, Training program manual, and other related manual);
- Publication/Library;

c) Training Program and Training Record
d) Maintenance Record System and Reporting Procedures
e) Maintenance facilities, tools, equipment, part and materials.
f) Maintenance Contract Arrangement
g) Maintenance Production Planning
h) Maintenance Process Inspection
i) Work Other than Fixed Locations

2) Safety (SMS)

A Safety (SMS) audit or surveillance will review the activities of the following areas:

a) Safety management system (SMS) manual;
b) SMS Implementation (hazard identification and risk management);
c) SMS Reporting System;

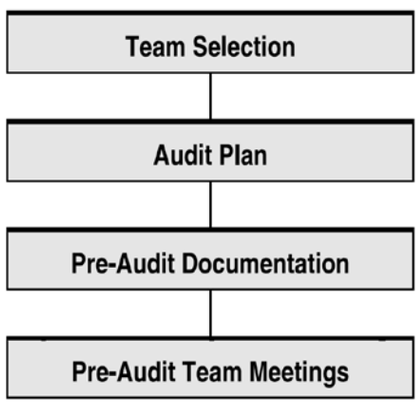
3) Quality Assurance Program (QAP)

Quality (QAP) audit or surveillance will review the activities of the following areas:

a) Quality assurance organization and management
b) Audit Program (Internal audit process including the contractors)
c) Auditors training and qualification program
d) Process for addressing Findings
e) Quality and audit record

2. Pre-Audit

The pre-audit process for audits begins with the selection of a team, followed by the preparation of an audit plan, the gathering of pre-audit documentation and the holding of a pre-audit team meeting. This process is illustrated as follows:



a. Team Selection

The audit team, approved by the DGCA management, will normally consist of the audit manager and team member and observers as appropriate. For audits of smaller air AMOs the team may be reduced in size.

b. Convening Authority (CA)

Convening authority for AMO holder audit is Deputy Director for Standardization of DAAO – DGCA

1) Responsibilities

The convening authority shall:

a) Appoint the audit manager at least one to two months prior to the audit;

b) Oversee the selection of the audit team;
c) Approve the covering letter for audit report and ensure that the auditee receives the report within ten working days;
d) Ensure that action is taken in an appropriate, timely manner for critical safety issues identified by the audit manager during the physical audit;
e) Ensure that appropriate follow-up action is completed after the physical; and
f) Send a letter to the auditee confirming that all audit findings and corrective actions are complete and that the audit has been closed.

c. Audit Manager

The CA will appoint an audit manager for each audit. This individual will be an airworthiness inspector. For a large air AMO, the audit manager should be appointed at least two months prior to the planned audit. This will allow sufficient time for research, familiarization with the terms of reference, the selection of the audit team and the development of an audit plan.

The audit manager:

- Will report directly to the CA for all audit matters. Team members will report to the Audit Manager until released from their audit duties; and
- Will immediately contact the CA with a recommendation for action in the event of an imminent threat to aviation safety.

1) Qualifications

The audit manager shall:

a) Have completed the audit procedures course;
b) Have experience related to the type of organization to be audited;
c) Possess a sound knowledge of aeronautical legislation and regulations;
d) Have demonstrated communication and management skills; and
e) Have acted as team member for at least three audits.

2) Responsibilities

The audit manager shall:

a) Plan, organize, direct and control the audit process;
b) Negotiate dates sufficiently in advance to allow adequate planning prior to the audit;
c) Select team member in consultation with the CA;

d) Maintain an audit file, which will include all working notes, copies of audit-related documents and a copy of the audit report;
e) Develop an audit plan. The plan shall include the audit schedule and an indication of sampling sizes for audit files or records to be used to obtain information during the audit;
f) Notify the auditee by letter of the planned audit at least one month prior to the audit dates.
g) Ensure that the pre-audit documentation review is complete;
h) Ensure that team members are knowledgeable in their assigned functional areas;
i) Convene a pre-audit team meeting;
j) Establish contact with the CA to relay fieldwork progress, potential problems, changes in the objectives, scope or depth of the audit, and other significant matters arising during the pre-audit phase;
k) Co-ordinate and chair the entry meeting with the auditee and maintain a liaison with the auditee's senior management;
l) Advise the CA immediately of any critical safety issues identified during the physical audit;
m) Ensure that any decisions to be made by, or approvals required from, the CA during the physical audit are received in a timely manner;
n) Exercise line authority over audit team members and observers ensure that all audit findings are tied to applicable regulations or standards and supported by specific examples;
o) Co-ordinate and chair the exit meeting with the auditee's senior management;
p) Prepare the covering letter and audit report for approval by the CA;
q) Provide the CA with recommendations for possible enforcement action arising from the audit; and
r) Ensure that a parallel report, if required, has been completed

d. Team Member

1) Terms of Reference

Audit Manager will appoint team members in consultation with the CA.

2) Qualifications

A team member shall:

a) Have completed the audit procedures course;

b) Have experience related to the type of organization to be audited; and
c) Possess a sound knowledge of aeronautical legislation and regulations.

3) Responsibilities

A team member shall:

a) Become familiar with auditing procedures and associated company documentation;
b) Become familiar with the auditee's policies and procedures;
c) Revise the audit checklists applicable to the assigned audit functions;
d) Conduct audit fieldwork and document audit findings
e) Liaise with the Audit Manager to ensure that audit progress is reported and potential problems are addressed; and
f) Review the validity and applicability of audit findings by ensuring that all are tied to applicable regulations or standards and supported by specific examples

e. Observer

An observer may join the audit team with the approval of the CA.

3. Audit Plan

The Audit Manager will develop an audit plan. This plan ensures that the audit will be conducted in an organized manner and in accordance with predetermined criteria. Appropriate sections of the plan will be distributed to each member of the audit team to provide guidance and direction throughout the audit. The audit plan should address the following items:

a. Objective

The audit plan should state the type of audit (i.e., initial certification, routine conformance audit, special-purpose audit, amendment/ additional approval audit, etc.).

b. Scope and Depth

The following factors should be considered when determining the scope and depth of an audit:

1) The areas of the company to be audited (the entire operation or a specific area);
2) The depth (i.e. how far back in time) to which the audit will reach;

3) The geographical dispersion; and
4) The sample sizes to be used versus the population being sampled.

c. Company Data

The audit plan should provide specific information on the company's

1) Ratings and limitation of approval (Airframe, powerplants, propellers, instrument, radio equipment, accessories, landing gear, NDI, emergency equipment, rotor blade, etc.)
2) Approved points of maintenance facilities location;
3) Training facilities used;
4) Maintenance bases, main bases, sub-bases and contract bases;
5) Employees and their location;
6) Company's manual and procedure; and
7) Previous audit result.

d. Approach

The audit plan should describe the Audit Program (AP) approach to auditing by describing:

1) The manner in which the audit is to be conducted;
2) The specific procedures to be followed (checklists and forms used); and
3) The checklist shall be updated and adapted to the audit and previous audit outputs.

e. Specialist Assistance

The audit plan should address the issue of specialist assistance by determining whether:

1) there are team members who understand these systems; and
2) Specialists will be required (those with aircraft-type, non-destructive testing, engineering, etc.).

f. Scheduling

The following points should be considered when scheduling an audit:

1) The feasibility of the audit dates and timeframes;
2) The sufficiency of time allotted for the completion of the audit;
3) The time allotted for the physical audit, with a daily schedule of inspection for each specialist functional area (airworthiness, quality and safety)

4) Travel time; and
5) The preparation of the audit findings and distribution of the audit report.

4. Pre-Audit Documentation

This includes a thorough review of all company files and documentation and the opening of a company audit file. Information gathered during the pre-audit phase will assist the audit team in determining the specific areas, systems and activities that warrant examination; supplementing audit checklists; or amending the scope of the audit. This audit phase should:

a. Ensure that all reference manuals and documents to be used during the audit in accordance with the Reference Material Matrix are readily available and include the latest approved amendments;
b. Review the auditee's approved manuals for conformance to the appropriate Civil Aviation Safety Regulation (CASR's);
c. Review the auditee's files and records;
d. Itemize areas which require further review auditee;
e. Select the appropriate checklist items as applicable, in accordance with the scope he procedural manual of the respective directorates.
f. Complete all pre-audit sections of the checklists;
g. Ensure that all audit documentation is chronologically recorded on the company audit sub-file; and
h. Ensure that each team member has received appropriate portions of the
i. Audit plan.
j. Previous inspection or Audit Reports;
k. Accident or incident data;
l. Any enforcement action;
m. Appropriate extracts from regulations, standards and policies; and
n. Exemption, approvals, aircraft type approvals, manufacturing limitations and operations specifications authorizations

5. Pre-Audit Team Meeting

This meeting should:

a. Confirm individual team members' duties and responsibilities;
b. Ensure that all team members have received appropriate portions of the audit plan;
c. Ensure the correct checklist appropriation by the team members;

d. Ensure that all team members are aware of restrictions regarding audit report distribution;
e. Outline the overall audit plan;
f. Clarify any outstanding issues or problems;
g. Include a briefing by the PAI on current company activities, trends, performance or other information related to previous audits; and
h. Address the issues of conflict of interest, confidentiality and access to information.

6. Physical Audit

a. General

The physical audit consists of the entry meeting, evaluation and verification, daily briefings and the exit meeting

b. Entry Meeting

The entry meeting should discuss the plan of the physical audit. It should be attended by the auditee's senior management and identified members of the audit team. It will outline the audit process to the company and confirm any administrative requirements so that the physical audit may be conducted both effectively and efficiently, while minimizing disruptions to the company's operation. One of the objective of the entry meeting is to obtain the positive participation of the auditee's to the audit activities.

1) The entry meeting should:
   a) Take place on the auditee's premises;
   b) Be attended by the auditee's senior management;
   c) Specify audit details and procedures; and
   d) Be brief, specific and courteous.

2) The Audit Manager shall:
   a) Explain the purpose of the entry meeting;
   b) Introduce audit team members, including specialists and observers;
   c) State the objective, scope and depth of the audit;
   d) Address the means of communication between the audit team and the auditee;
   e) Explain that company officials will be briefed daily on progress of the audit;

f) Describe the manner in which any audit finding detected will be handled;
g) Establish a location and time for the exit meeting;
h) Emphasis that the purpose of an audit is to identify non-conformances and that enforcement action may result from any of these findings; and
i) Respond to all questions from the auditee's.

3) The auditee may agree to provide:
a) Adequate, preferably private, working space;
b) Access to a photocopier and internet line;
c) Measuring or test equipment;
d) Access and admission to all facilities;
e) Access to company files and records,;
f) Credentials and facility passes;
g) Selected personnel for interviews; and
h) Knowledge able company advisors or liaison officers.

c. Evaluation

In the evaluation phase, the company's level of conformance with regulations and standards contained in existing legislation and company control manuals will be assessed. The following are possible means of evaluation:

1) Pre-Audit Checklists

Pre-audit checklists will determine whether all essential controls appear to be in place and are properly designed. Based on the results of the checklist, a summary of the strengths and weaknesses of the auditee's control system will be developed. This system will be most effective if all questions are answered.

2) Interviews

Interviews with company personnel are important during the evaluation phase to determine whether the control system documented in company manuals is that in use, and to assess the knowledge of supervisory personnel of their duties and responsibilities. Interviews may also confirm the validity of audit findings reached through observation or

sampling. The following guidelines will be useful when preparing for an interview:

a) Prepare carefully prior to the interview by defining the areas to be explored and setting specific objectives;
b) Explain why the interview is taking place;
c) Use open questions and avoid complex questions or phrases;
d) Listen carefully to answers and allow interviewee to do most of the talking;
e) Avoid being side-tracked from your original objectives;
f) Ensure that questions are understood;
g) Terminate the interview if the atmosphere becomes highly negative;
h) Document all responses; and
i) Thank the interviewee at the conclusion of the interview.

3) Sampling

The sample size of a population and selection criteria have a direct impact on the validity and confidence level of the results. The following guidelines should be used:

a) Each sample group must stand alone. If there are 1400 engineers, 200 quality inspectors, 50 certifying personnel, and 10 key management personnel, each of the four groups must be considered separately;
b) The AP goal is to achieve a 95 per cent confidence level with the results of the sample tested. Often, this goal may not be appropriate; therefore, the audit team must carefully consider both the sample size and the time devoted to the task. Random sampling may be considered an acceptable alternative;
c) The table below will help determine the sample size needed to achieve a 95% confident level for populations of 400 or more. For smaller populations, a larger sample must be examined and the following guide should be used:

Populations	Sample
100:	50 per cent
199:	40 per cent
399:	35 per cent

d. Verification

1) During this phase, the audit team will gather information to determine the company's level of conformance. Specifically, verification will:
   a) Determine whether company controls are operating effectively and as intended;
   b) Determine whether the auditee's operation conforms to the Civil Aviation Safety Regulation (CASR) and standards contained in the audit checklists; and
   c) Analyze particular deficiencies to assess their effects and identify the causes.
2) Company files or records should not be accessed without appropriate company authorization and, when possible, company representatives should be present during the review of these files and records.
3) If the review and verification phases do not provide sufficient confirmation of the company's level of conformance, further substantiation will be required to ensure that any evidence obtained up to that point supports the audit findings and conclusions. In short, other supporting documentation must be acquired and secured.
4) Verification includes various types of inspections. These may be Aircraft Inspections, facility Inspections, tools and equipment inspection, maintenance process inspection, and maintenance base inspections.

e. Confirmation Request Form (CRF)

1) The CRF is an effective audit tool in the following cases:
   a) Where evidence indicates an audit finding, the company will be given the opportunity to show otherwise;
   b) The auditor will determine the course of action to be adopted based on the auditee's response;
   c) The auditor will observe the state of the company records management system from the auditee's perspective;
   d) Arbitrary audit findings based on subjective examples will be eliminated;
   e) The auditee will not be surprised at the end of the audit, as all contentious issues will have been discussed openly during the physical audit;
   f) The auditor can concentrate on auditing rather than on researching company files and records, and

g) The auditor will receive a signed document from the auditee for inclusion in the supporting documentation package.

2) The CRF form (DGCA Form 120-09) will be sent to the Audit Manager at the outset to avoid untimely surprises. All CRFs form will be issued sequentially to ensure that, upon completion of the physical audit, the CRFs have responses and appropriate action has been taken.

3) At the end of each day, the CRF form should be compared with the returned CRF to ensure that it is current. For a large audit, this can be done at the daily briefing with the company. In this manner, both the company and the audit team will be updated as to the status of these documents. Regardless of the way in which the CRF form is maintained, all CRFs should be cleared prior to the completion of the physical audit at that site or base.

4) When the CRF has been returned and appropriate action taken, this material should be filed according to the appropriate audit area, allowing documentation relating to high-profile items to be maintained for later reference. This file will also provide background and evidence for any enforcement action to be taken at a later date.

f. Type of Finding

A finding is generated as the result of a non-conformity to a standard: CASR, internal rules or procedure. A finding can be of 3 different types:

1) Non-Compliance (NCP) (immediate corrective action/Level 1) means a deficiency in characteristic, documentation, or procedure with respect to provisions of the Aviation Act No. 01 of 2009 or a CASR.

2) Non-Conformance (NCF) (Short-Term Corrective Action/Level 2) means a deficiency in a characteristics, documentation, or procedures. which renders the quality of a product or service unacceptable or indeterminate, or not according to specified requirements, e.g. Physical defects, test failures inadequate documentation.

3) Non-adherence (NAD) (Long-Term Corrective Action/Level 3) means a deficiency in characteristic, documentation, or procedure with respect to a recommended practice, procedure, guideline or good aviation safety. Non adherence finding including safety observation is linked to safety and evaluation of the risks linked to operational hazards and raised when the risk pertaining to a specific hazard is evaluated by DGCA as non-acceptable for safety

g. Audit/Surveillance/Inspection Finding Form

1. Audit/ Surveillance/Inspection finding forms must be completed accurately as they form the basis of the audit report and a successful audit. Audit/ Surveillance finding form use DGCA Form 120-07.
2. Since a number of team members will be completing audit/ surveillance / Inspection finding forms, it is important that a standardized approach to inputting data on the form be taken to reduce the number of data entry errors.
3. All supporting documentation will be included with the completed audit/ surveillance/ Inspection finding form for review by the Audit Manager/ PAI. Although supporting documentation will not be included in the audit/ surveillance report, it will be retained in the audit file.

h. Daily Briefings

1) Team briefings will normally be held at the end of each day during the audit to:
   a) Ensure adherence to the audit plan;
   b) Validate confirmation requests and audit findings;
   c) Resolve issues or problems arising from the day's activities; and
   d) Update the CA if necessary.
2) Company briefings should be held at the end of each day, following team briefings, to update the auditee's management on audit progress.

i. Exit Meeting

The exit meeting with the AMO's senior management should provide an overview of the audit. The meeting should summaries the audit findings, stating areas of strength and weakness. A controversial discussion with company representatives regarding audit report content must be avoided. The process for the exit meeting is as follows:

1) Normally, Audit manager and team members will attend the exit briefing, however, other members may be required for specific briefings.
2) If team members other than the Audit Manager and team members are required to speak at the exit meeting, the Audit Manager will advise them in advance.
3) All audit findings should have been discussed with company officials as each functional area was completed. New audit findings should not normally be identified at the exit meeting. The meeting should provide an

overview of the audit and not become a debate between the team and the organization. The auditee should be advised that the company will have an opportunity to respond formally to the audit report.

4) The auditee will be advised of those audit findings that may be subject to enforcement action. The auditee will also be advised of the company's responsibility to take appropriate action to correct all non-conformances and prevent their recurrence.

5) The audit manager shall advise the auditee that the audit report will be forwarded to the company within ten working days and that a CAP must be submitted to DGCA within 15 working days after the company has received the report.

7. Post-Audit

a. General

This phase includes preparation of the audit report and the parallel report.

b. Audit Report

1) The audit report should normally be presented to the company within ten working days. Any delay must be documented since the validity of the audit will be compromised if the report is not presented in a timely manner. Although draft audit finding forms may be left with the company as a courtesy, this is not mandatory.

2) The Audit manager is responsible for the preparation of the audit report.

3) A sample covering letter and audit report will include:

   a) Part I - Introduction, which summarizes the audit process and the content of the audit report;

   b) Part II - Executive Summary of Findings, which summarizes the most significant findings for the information of the senior management of the audit and DGCA;

   c) Part III - Airworthiness, which contains the functional summaries for airworthiness;

   d) Part V - Safety, which contains the functional summaries for safety; and

   e) Part IV – Quality (QAP), which contains the functional summaries for quality;

   f) An Appendix, which contains the audit findings summary for all.

4) The audit report will be a factual account of the audit and will not include subjective statements, suggestions or recommendations.
5) The CA will sign the covering letter and forward it, with a copy of the audit report, to the AMO. The letter will outline the procedure for responding to audit findings and specify the required response time of 15 working days from the time the AMO receives the report

c. Parallel Report

1) An audit may identify observations and/ or deficiencies in, or the misapplication of Civil Aviation Safety Regulation and Aviation Act no. 1 year 2009. Where a non-conformance to a regulatory requirement is found, and that requirement requires approval (i.e., document or manual approval), a finding shall be made against the auditee (so that the non-conformance is resolved through the CAP).
2) Findings against Civil Aviation Safety Regulation and Aviation Act no. 1 year 2009 will be described in a document called the parallel report. The audit manager will forward the parallel report to the CA within 15 days of the completion of the audit and shall identify the problem, cause, responsibility and recommended solution for each finding. All supporting documentation shall be included in the parallel report.

d. Parallel Report Follow-Up

Parallel report items shall be forwarded to CA who will co-ordinate and follow-up of those deficiencies.

8. Audit/ Surveillance/ Inspection Follow-Up

a. General

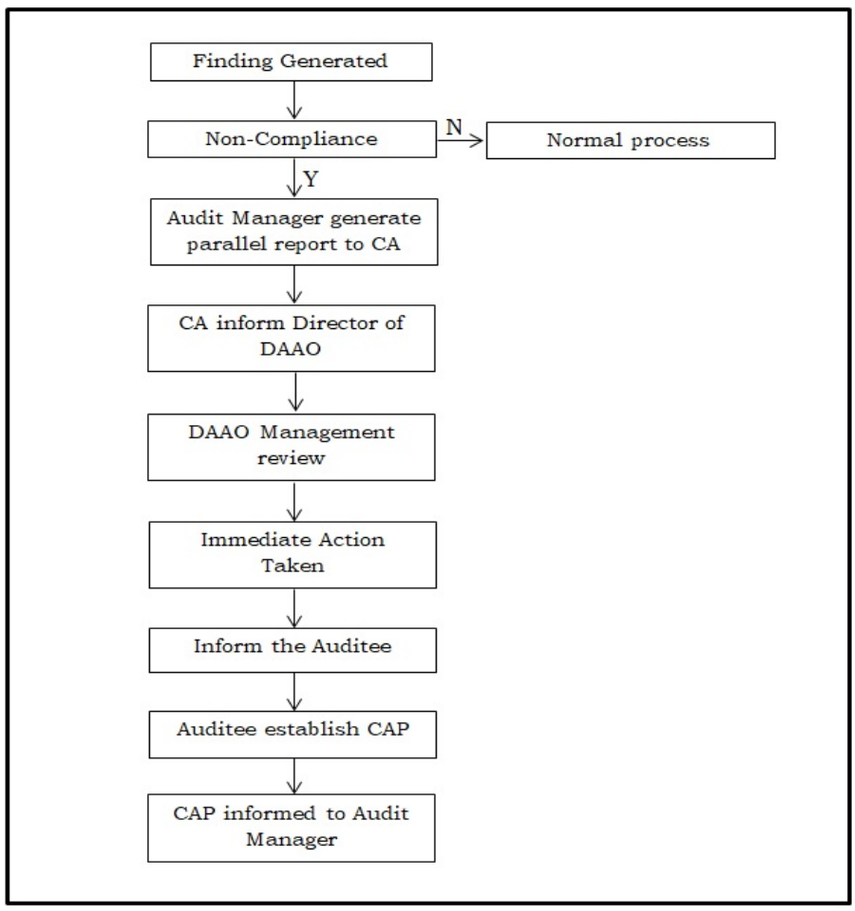
Upon completion of the audit, the CA will delegate follow-up responsibilities to the Audit Manager who will then ensure that all audit findings have been resolved in accordance with an approved CAP.

b. Immediate Action

Immediate action will be taken by DGCA upon finding of non-compliance against Civil Aviation Safety Regulations or Aviation Act.

After generate the finding, the Audit Manager shall immediately informed the CA using the parallel report mechanism. Based on that report, CA will inform Director of DAAO to determine the type of immediate actions taken.

Determination of the type of immediate action is based on management review of DAAO, which will be convened by the Director. The type could vary, from issuing warning letter, restriction or limitation of operation, suspension, recommendation of revocation, or proceeding to enforcement actions. The decision will then be informed to the auditee, which in turn will need to establish corrective action plan and informed DGCA / DAAO within the time frame established in accordance with the type of associated finding. The schematic process is as follow:



c. Corrective Action Plan

1) The covering letter of the audit report will advise the auditee that it must submit a CAP addressing the audit findings within 15 working days. Normally, this deadline will not be extended without the CA's approval.
2) It is important to review the company's CAP to determine whether the company has developed a reasonable timetable for corrective action. It is also essential to ensure that the timetable has prioritized the corrective actions to address the most critical findings first.

3) Depending on the nature of the audit findings, the company's CAP should involve:
   a) Non-Compliance (immediate corrective action/Level 1) means a deficiency in characteristic, documentation, or procedure with respect to provisions of the Aviation Act No. 01 of 2009 or a CASR or a major safety risk. This is action must be taken immediately but not exceed than 15 days upon identification of the audit finding. Audit findings that have direct impact on aviation safety may be taken to stop the operation of aircraft, maintenance, suspend of personnel licensing or termination of AMO activities.
   b) Non-Conformance (Short-Term Corrective Action/Level 2) means a deficiency in a characteristics, documentation, or procedures. which renders the quality or the safety of a product or service unacceptable or indeterminate, or not according to specified requirements, e.g. Physical defects, test failures. Inadequate documentation. This is short-term action to correct a non-conformance that does not pose an immediate threat to aviation safety, which ensures that conformance is established quickly until long-term action is completed to prevent recurrence of the problem. Short-term corrective action will maximum take place within 30 days.
   c) Non-adherence (Long-Term Corrective Action/Level 3) means a deficiency in characteristic, documentation, or procedure with respect to a recommended practice, procedure, guideline or good aviation safety. This is longer-term action and has two components. The first will involve identifying the cause of the problem and indicating the measures the company will take to prevent a recurrence. These measures should focus on a system change. The second component will include a timetable for company implementation of the long-term corrective action. Long-term corrective action will maximum take place within 60 days. Non adherence finding including safety observation is linked to safety and evaluation of the risks linked to operational hazards and raised when the risk pertaining to a specific hazard is evaluated by DGCA as non-acceptable for safety.
4) Long-term corrective action should be accompanied by the forwarding of supporting documents for review. Short-term corrective action should also be accompanied by the forwarding of supporting documents, which

may take the form of logbook entries, purchase orders, memoranda, revised inspection procedure cards, or photograph evident. It is important to verify as much supporting documentation as possible during subsequent surveillance.

5) If the company's CAP is not acceptable, the Audit Manager will indicate the reasons, propose changes and negotiate a new target date. Otherwise, an alternative course of action may be pursued.
6) Where the audit findings are of a minor nature, no threat to aviation safety exists and the company has a reputable quality assurance or internal audit program, a "paper follow-up" may be acceptable. In this case, the documents are submitted with the CAP and no interim surveillance is required. As the company completes its audit responses as Part of the CAP, its progress will be monitored.
7) An audit will be formally closed when every audit finding has been corrected through the CAP, the corrections have been found to be acceptable by the follow-up office and post-audit surveillance has been completed.
8) Normally, the Audit Manager will ensure that a letter has been sent to the auditee, confirming that all audit findings have been completed and that the audit has been closed.

CHAPTER IV. ROOT CAUSE ANALYSIS AND CORRECTIVE ACTION

1. Root Cause

The initiating cause in a causal chain that leads to an undesirable situation or condition; the point in the causal chain where corrective action could reasonably be implemented and expected to correct and prevent recurrence of the undesirable situation or condition.

a. Root cause analysis

A method of analysis that focuses on identifying the root cause(s) of an undesirable situation or condition of finding (non-conformities).

It is the responsibility of the auditee (AMO holder) to determine the cause(s) of any finding (non-conformities) and to implement corrective actions after findings have been raised. Clearly, the organisation being audited is best placed to develop a causal analysis as it better understands the environment it operates in, its own operations, methods and personnel, and the events that may have led to the problem.

In some cases, in particular where risks to safety are highest and causes and actions require complex analysis and lengthy implementation, a joint DGCA-AMO holder approach may be required.

The DGCA is responsible for ensuring that the causal factors as determined by the AMO holder are accurate and that the associated actions implemented by the AMO are effective.

The root cause analysis is the tool or method designed to help auditee and auditors describe what happened during a particular finding (non-conformities), then determine how it happened and understand why it happened.

A full root cause analysis as used in the more complex situations contains three key components that need to be applied to ensure an effective analysis, namely:

1) A method of describing and schematically representing finding (non-conformities) sequence and its contributing conditions.
2) A method of identifying the critical events, conditions, and unsafe acts in the sequence. This is where different root cause analysis techniques come into play (Ishikawa, 5-whys, etc.) with varying degrees of complexity.
3) Based on the identification of the critical events, conditions, and unsafe acts, a method for systematically investigating the management and

organisational factors that allowed the unsafe acts to occur i.e. a method to uncover the root cause.

In many cases, the issue that has resulted in the finding may be a 'one-off' event with a low consequence or impact and therefore a detailed root cause analysis may not have a significant safety benefit.

The extent to which root cause analysis methods are used and the level of analytical effort spent should be commensurate with the significance of the issue or non-compliance. When determining what tool or methodology is appropriate and whether the auditee (AMO holder) has been thorough in its analysis, the DGCA will rely on the knowledge, experience, and judgement of the auditor.

Risk management methodology should be used to focus on areas known to have a greater effect on aviation safety. This should additionally be weighed against the ability of the AMO to carry out an effective analysis in the more serious and complex situations.

It is likely that the majority of findings (minor) will require minimal root cause analysis with increasing depth of analysis and increased involvement of the DGCA as the severity and/or number of findings and the complexity of the causal factors increases.

Ultimately, the auditee (AMO holder) will need to satisfy the DGCA that the root cause has been correctly identified and, in the more complex situations, that the root cause analysis has been appropriately and thoroughly conducted.

b. Identification of the Root Cause

1) To ensure that finding (non-conformities) are permanently corrected. it is important to carefully assess the reason(s) for:
   a) A lack of existence, or only a partial introduction of the Standard, policy, procedures or Recommended Practice;
   b) Failure to conform with the Standard, policy, procedures or Recommended Practice.
   c) Failure to provide the necessary level of risk management
2) This will assist in identifying appropriate and effective corrective actions.
3) The identification of root causes is also an essential input to an effective SMS.

c. Root cause analysis on DGCA Form No. 120-07

Auditee must correctly identify and thoroughly conduct root cause analysis of any finding (non-conformities) and written in DGCA Form No. 120-07. Root cause analysis will be evaluated by the Audit Manager and Audit member, as a mandatory requirement for closing finding.

2. Corrective actions

Additionally, after findings have been raised and root causes determined the DGCA will agree with the auditee (AMO holder) on corrective actions and/or a corrective action plan. It is the auditee (AMO holder) who has the resources and authority to implement corrective actions.

The fundamental goal of the findings-causes-actions process is to shift from fixing the effects of non-compliances to eliminating, changing, or controlling the causes of problems, hence implementing corrective action and in the context of safety risk management, preventive action.

a. Types of Corrective Action

1) Immediate corrective action/Level 1 for non-compliance finding.
This is action must be taken immediately but not exceed than 15 days upon identification of the audit finding. Audit findings that have direct impact on aviation safety may be taken to stop the operation of aircraft, maintenance, suspend of personnel licensing or termination of AMO activities.

2) Short-Term Corrective Action/Level 2 for Non-Conformance finding.
This is short-term action to correct a non-conformance that does not pose an immediate threat to aviation safety, which ensures that conformance is established quickly until long-term action is completed to prevent recurrence of the problem. Short-term corrective action will maximum take place within 30 days.

3) Long-Term Corrective Action/Level 3 for Non-adherence finding
This is longer-term action and has two components. The first will involve identifying the cause of the problem and indicating the measures the company will take to prevent a recurrence. These measures should focus on a system change. The second component will include a timetable for company implementation of the long-term corrective action. Long-term corrective action will maximum

take place within 60 days. Non adherence finding including safety observation is linked to safety and evaluation of the risks linked to operational hazards and raised when the risk pertaining to a specific hazard is evaluated by DGCA as non acceptable for safety

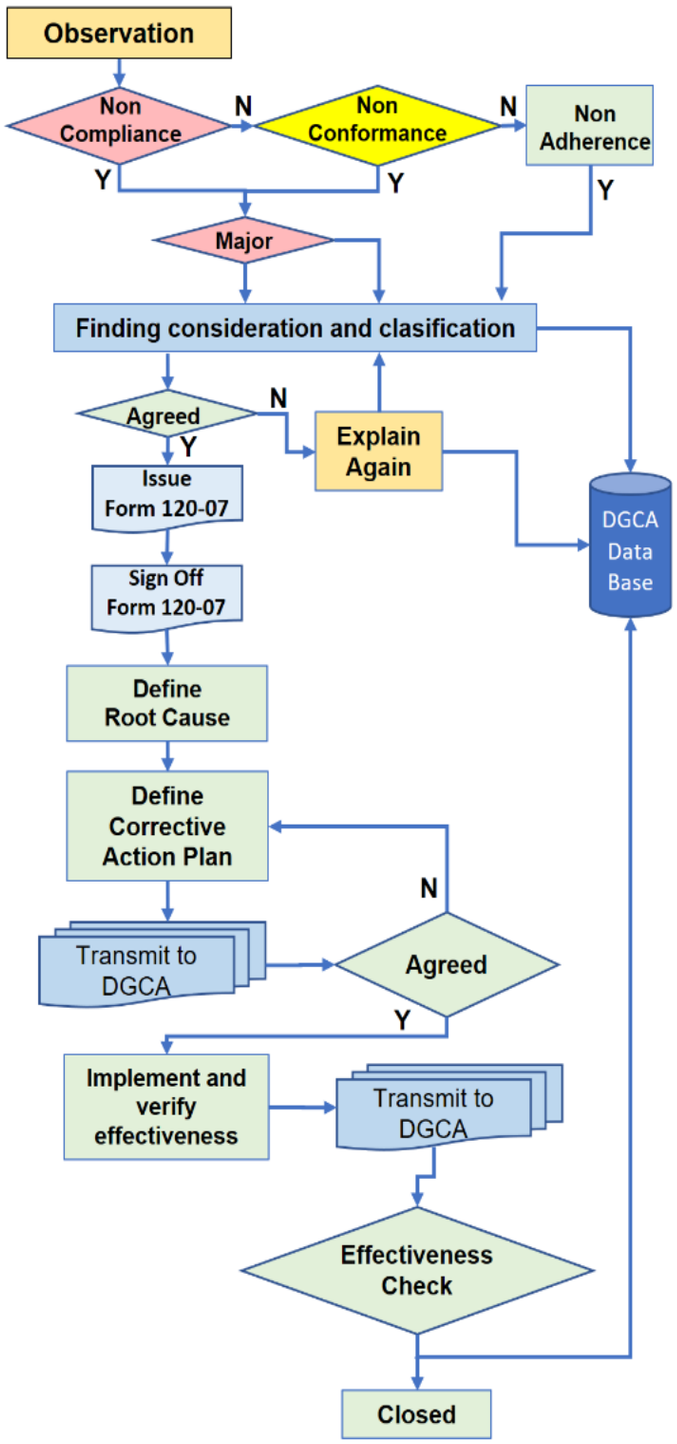
b. Corrective Action Plan Submission

1) The covering letter of the audit report will advise the auditee that it must:
   a) Where applicable, submit root cause analysis and corrective action in Audit Finding forms (DGCA Form no, 120-07) for each audit finding requiring corrective actions by the date specified in the corrective action section of the finding form; and
   b) Submit a corrective action plan addressing all other audit findings within 15 working days from the date of receipt of the audit report. Normally, this deadline will not be extended without the approval of the DGCA.
2) Corrective action plans received from the auditee should include completed corrective action in DGCA form 120-07 and where applicable, supporting documentation that may take the form of memoranda, manual amendments, etc.

c. Corrective Action Plan Approval

1) Where the corrective action plan is acceptable, the auditee will be so advised and the appropriate information (administrative/on-site follow-up, proposed completion date) will be entered on the corrective action in DGCA form 120-07, for the purpose of follow-up.
2) Before approving plans for findings that include long-term corrective actions, the audit manager must be satisfied that the proposed corrective action is reasonable and that safety will not be jeopardised.
3) If the auditee's corrective action plan is not acceptable, the DGCA will indicate the reasons, propose changes and negotiate a revised corrective action plan. Where the auditee is unresponsive to this action, an alternative course of action may be pursued; where applicable, such action could include the sending of a Notice of Suspension to the AMO Certificate by the DGCA.

Audit/ Surveillance/Inspection Follow-Up Process Flow Diagram



	Who	How
	Auditor	
	Auditor	SI 8900-6.9
	Auditor	SI 8900-6.9
	Auditee	
	Auditor	
	Auditor & Auditee	5 Why Process
	Auditee	Define an action per cause
	Auditee	SI 8900-6.9
	Auditor	
	Auditee	
	Auditor	
	Auditor	

CHAPTER V. AUDIT, SURVEILLANCE AND INSPECTION AREA

The DGCA Audit or Surveillance focus on 3 functional as follows:

1. Airworthiness.
2. Safety (SMS).
3. Quality Assurance Program (QAP).

1. Airworthiness

An airworthiness specialist audit, surveillance or inspection will review the activities of the following areas:

a. Management and Administration

The AMO's staffing must be investigated to determine whether an adequate number and qualification of personnel, are employed at the executive and other levels to perform necessary functions. Through a sampling questioning process, the DGCA inspector must make a finding that management personnel are qualified, experienced and competent to perform their assigned duties in accordance with CASR and AMO’s manual.

The DGCA inspector shall evaluate the effectiveness of the feedback system and its results to manage the company compliance level measured through the monitoring of the activities and their analysis

Each AMO must have the management personnel necessary for the scope and complexity of its organization. The regulation requires an accountable manager, supervisory personnel, inspection personnel, auditor and certificated personnel to approve the articles it maintains/alters for return to service.

It may be necessary for the AMO management structure to warrant additional supervisory personnel that are not required by regulation. In addition, an AMO is required to maintain a roster of managerial, supervisory, and inspection personnel. This list must include their qualifications and authority in the AMO.

This roster may be maintained in paper or electronic format, and must be accessible for review and inspection by the DAAO.

Review management & administration requirements, check the following:

1) Review AMO Certificate of Approval, Review the AMO's certificate of approval and OpSpecs to verify that they are:
   a) Available for inspection.
   b) Identical to those on file in the DAAO and properly signed.
   c) Appropriate for the maintenance and alterations that personnel at the facility perform.
   d) If the AMO uses a capability list, verify that it is at the same revision level as the one on file at the DAAO.
   e) Certificates for AMOs have a limited duration not exceeding two (2) year from the date the certificate is issued.
2) Review the Organizational Chart. Verify that the AMO's organizational chart is current and is the same as the DAAO copy. Verify whether the chart matches the duties listed in the AMO manual.
3) Certification. Verify whether each person authorized to approve an article for return to service under the AMO certificate and OpSpecs is certificated under part 65 and understands, reads, and writes English
   NOTE: All managers, inspectors, and supervisors must be authorized, qualified, and listed on the AMO's required roster(s).
4) Qualifications. Verify that the AMO personnel performing functions governed by existing industry standards are trained and qualified to that standard (for welding, non-destructive testing, heat treatment, etc.). In some cases these industry standards may be identified on the AMOs' OpSpecs
   a) Verify that inspectors identified on the AMO's roster:
      - Maintain proficiency in using the various types of inspection equipment and visual inspection aids appropriate for the article being inspected.
      - Are thoroughly familiar with the regulations and with the inspection methods, techniques, practices, aids, equipment, and tools used to determine the airworthiness of the article on which maintenance, preventive maintenance, or alterations is being performed.
      - Understand, read, and write English.
   b) Verify that all supervisors
      - Are on the roster.
      - Are properly certificated for the supervisor position held.

- Understand, read, and write English.

5) Staffing. Considering the size and scope of the AMO, verify that it has a sufficient number of employees with the training or knowledge and experience in the performance of maintenance, preventive maintenance, or alterations authorized by the AMO's ratings.
   a) Verify if the certificated AMO has a sufficient number of supervisors, who are certificated under part 65 and are able to understand, read, and write English, to direct the work performed. The supervisors must also provide oversight to those individuals who are unfamiliar with the methods, techniques, practices, aids, equipment, and tools employed.
   b) Verify whether the AMO determines the abilities of its non-certificated employees who perform maintenance functions based on training, knowledge, experience, or practical tests
6) Roster/Summary. Confirm that the AMO has the following
   a) A current roster of management and supervisory personnel.
   b) A current roster of all inspection personnel.
   c) A current roster of personnel authorized to sign a maintenance release for approving a maintained or altered article for return to service.
   d) A current summary of the employment of each individual whose name is on the personnel rosters required by CASR Part 145.161. The summary must include:
      i. Present title.
      ii. Total years of experience and the type of maintenance work performed.
      iii. Past relevant employment with names of employers and periods of employment.
      iv. Scope of present employment.
      v. The type of license held and ratings on that license, if applicable.

      NOTE: Within 5 business days of a change, the rosters required by CASR Part 145.161 must reflect changes caused by termination, reassignment, change in duties or scope of assignment, or addition of personnel.

      NOTE: It is appropriate for a AMO to develop a combination roster. The roster could include initials, signatures, stamp

numbers, certificate numbers, or any other information used to designate the authority of inspection or supervisory personnel. It could also list persons who can sign/stamp off work documents or approve articles for return to service.

7) Training. Review the training records of inspectors and supervisors to verify they have the required training for their job function. The records should also show how the AMO qualified these individuals.

Applicable form:

- DGCA Form No.145-51 “Management and Administration evaluation”
- DGCA Form No.145-59 “Personnel”

b. Approval and Manuals Inspection

Civil Aviation Safety Regulation requires AMO holders to prepare and keep current various manuals and checklists for the direction and guidance of personnel to perform maintenance. Each AMO is required to maintain a complete manual (or set of manuals) at its principal base of maintenance and to furnish a complete manual (or set of manuals) to DGCA.

An AMO holder’s manual must be reviewed by inspectors to ensure adequate content and compliance with applicable regulations and the AMO’s operations specifications (OpSpecs) and Capability list. While inspectors are encouraged to provide guidance and advice to certificate holders in the preparation of their manuals, the development and production of an acceptable manual is solely the responsibility of the AMO.

Inspect AMO Manual. Verify if:

1) Revisions to the AMO Manual are being made in accordance with the AMO’s revision system.
2) The AMO Manual identifies who is authorized to make and approve changes to the AMO Manual.
3) Revisions are properly distributed and incorporated by sampling AMO Manuals throughout the facility.
4) All copies of the AMO Manual are at the same revision level as the DAAO copy.

5) The AMO Manual is accessible for use by all AMO personnel, on all work shifts. If the manual system is maintained electronically, sufficient viewing terminals must be available and each copy on individual computers must be current.

Review the Quality Control System. Verify if:

1) The QCM is available to all AMO personnel.
2) All technical data referenced in the manual is current.
3) All maintenance and inspection forms listed in the manual are still current and the AMO is not using any forms in the quality system not listed in the manual.
4) All copies of the QCM are at the same revision level as the DAAO copy

Review the Training Manual.

AMOs vary drastically in size and capabilities; therefore an inspector can expect differences in AMO training programs. The training program must be appropriate to its organization and the work it performs. The training program itself may be documented in the AMO Manual or it may be a separate document.

1) If the training program is a separate document, verify it is approved and current.
2) If the training program is incorporated in the AMO Manual, verify that the section of the manual is an approved document and that it is current

Check the Air Carrier Manuals.

Some AMO's performs maintenance, preventive maintenance, or alterations for air operators conducting operations under CASR parts 121, 129, and 135. When this is the case, maintenance must be performed in accordance with the air operator Maintenance Program and/or the maintenance manual.

Verify that the AMO has been provided with the information necessary to ensure compliance with this requirement. This information must be defined on contractual documents from the air carrier by clearly stating the source of the data (manufacturer's or air carrier's) used to perform the requested maintenance along with any other requirements of its program or maintenance manual. If the AMO has applicable sections of air carriers' maintenance program(s) or manual(s), verify that they are controlled and current copies

Technical Publication (Library); Civil Aviation Safety Regulation requires AMO to have current technical publication and regulatory manuals in accordance with the capabilities.

Review Technical Publication. The by PAI should review a representative sample of maintenance records or work orders by the AMO in order to verify the following items:

1) The technical data used by AMOs could include any of the following:
   a) Program Deviation. When the AMO is performing maintenance under the provisions of CASR Part 145.205, the AMO must follow the air carrier's or commercial operator's program and applicable sections of its maintenance manual. Any deviation from that program must be authorized by the air carrier. This includes technical data used for repairs or alterations. The AMO should have documentation of how and when the AMO will notify the air carrier or commercial operator if it needs to deviate from the air carrier's or commercial operator's program.
   b) Manufacturer's Manuals/Data. Manufacturer's manuals/data may be approved or acceptable data. If the manufacturer's manuals do not cover the repair or alteration, then the AMO must make a determination if the repair or alteration is major. If the AMO is performing maintenance for an air carrier, then the air carrier must make that determination. The AMO may have access to other approved data applicable to the repair or alteration, but the air carrier must authorize the AMO to use that data if the AMO is performing maintenance for the air carrier. If the air carrier is providing the technical data to the AMO for a major repair or alteration, the air carrier should provide documentation that the technical data was DAAO approved.
   c) Inspection Programs. CASR Part 91.409(e) requires owners/operators of certain large aircraft to select an inspection program under CASR Part 91.409(f). In turn, CASR Part 91.409(f) requires the owner/operator to use the program, which it selected and identified in the maintenance records of the aircraft. Therefore, the maintenance provider should use either the inspection program that the owner/operator has selected and identified in the aircraft maintenance records, or the most recent manufacturer's inspection program.

d) Program Availability. Note that CASR Part 91.409(f) also requires each operator to include in its identification of the selected program the name and address of the person responsible for scheduling the inspections required by the program. The operator should make a copy of that program available to the person performing inspections on the aircraft and, upon request, to the DAAO.

e) Airworthiness Directive (AD). When the AMO is performing maintenance based on an AD, the AD is approved data. However, if the AMO is performing maintenance using an alternative method of compliance (AMOC), the AMO should ensure there is documentation verifying that the DAAO has approved the AMOC

f) Air Carrier's Approved/Acceptable Data. Each air carrier will have a process to approve data for major repairs or alterations. The air carrier has the responsibility to determine if the repair or alteration is major. Once the air carrier determines the maintenance to be major, the air carrier should provide the AMO with documentation that the repair or alteration has approved data. The AMO may have access to other approved data applicable to the repair or alteration, but the air carrier must authorize the AMO to use that data if the AMO is performing maintenance for the air carrier.

g) Process Specifications. The AMO may have a rating for specialized service. The air carrier should provide documentation authorizing the AMO to use its approved process specification on the air carrier product.

h) Repair Specifications. A repair specification provides an alternative to the methods, techniques, and practices contained in the current manufacturer's manuals, Service Bulletins (SB), or instructions for continued airworthiness (ICA). A repair specification is necessary when instructions for major repairs are required for multiple-use, non-serial number specific, and non-design approval holder (DAH) repairs.

2) Verify that the technical data is appropriate for the maintenance or alterations that the AMO will perform.

3) Verify that the data is current, accurate, and complete.

a) The AMO Manual procedure should describe how the revised technical data will be inserted into existing documents and how the appropriate individuals in the AMO will be notified about revisions.

b) If the AMOs use computer software for component testing, verify whether the revisions/updates are made and the current software is distributed.

4) Verify that the data is in the certificate holder's possession and easily accessible to all personnel. Ensure that the technical data is accessible to employees of the AMO when they are performing maintenance and that the data is processed in accordance with the certificate holder's AMO Manual.

5) For electronic technical Publication/library(s), review the following concerns during the inspection.

a) Security and Access. Determine whether:

- Only authorized personnel are making changes to the manual
- Unauthorized personnel are capable of making changes to the manual,
- The employees have been trained to access the manual on the network, and
- All of the supervisors and inspectors have access to the manual

b) Revisions. Determine the following:

- How the manuals are revised within their system (CD-ROM or Internet),
- How the AMO distributes the revisions, If the user knows that the manual has been revised and what content was changed, and
- If personnel verify the currency of individual disks before use.

c) Additional Guidance See Chapter III (Record System).

6) Verify that the AMO distributed the controlled documents in accordance with the AMO Manual/QCM to include distribution, accountability, and availability.

7) Verify that all technical data (e.g., operator's ICA, manufacturer's maintenance manuals, or type-certificate holder's (TCH) continuous airworthiness data) that the AMO uses and retains is in English. This includes all alteration records, logbook entries, return to service (RTS) records, or any other maintenance or inspection record entries that

demonstrate compliance with the requirements of CASR Part 43.9 or CASR Part 43.11.

a) The AMO may convert technical data (e.g., the operator's ICA, manufacturer's maintenance manuals, or TCH's continuous airworthiness data) into the national language. Internal documents (e.g., work cards, worksheets, and shop travelers) may be produced and maintained in the national language. Dual language (English/national language) internal documents are acceptable.

b) All technical data translated into the national language and used to meet the requirements of part 43 should be current and accurate in translation.

NOTE: Customers who wish to receive English-language copies of any internal documents, such as those listed above, should address that requirement in their contractual agreement.

NOTE: The AMO must establish procedures in its AMO Manual/QCM that ensure that its English-language copy of technical data and any internal documents developed from this technical data are current and complete. The main base of the AMO should retain the English-language copy of the technical publication/library and must make it available to the DAAO upon request.

c) AMOs that are associated with or with part of a Production Approval Holder (PAH) facility often use the manufacturer's drawings and data to perform maintenance. This data may not meet the requirements of CASR Part 43.13(a). Caution these AMOs that parts manufactured by the production side of the facility must be DAAO-approved through a Parts Manufacturer Approval (PMA), Technical Standard Order (TSO), type certificate (TC), or other means.

Applicable form:

- DGCA Form 145-41 "Evaluation & Approval of AMO QC Manual"
- DGCA Form 145-53 "Approval and Manuals Inspection"
- DGCA Form 145-43 "Evaluation And Approval of Training Program Manual"
- DGCA Form No.145-56 "Technical Publication"

c. Training Program and Training Record

Training program that is approved by the Directorate General of Civil Aviation (DAAO). Each AMO's training program will be based on its individual operation and needs, considering its size, location, ratings, employee experience, and skill levels.

The AMO holder's training program should include company indoctrination and technical training (formal and on the job training). The program should contain a list of tasks to be taught and a method for recording the training. Completion of the training must be entered in the individual's training record that includes:

1) Company indoctrination;
2) Maintenance Personnel Training;
3) Recurrent Training;
4) Special Emphasis Training;
5) Etc.

Applicable form:

- DGCA Form No.145-60 "Training Program and Training Record"

d. Maintenance Record System and Reporting Procedures

This inspection provides information necessary for evaluating AMO maintenance records systems and other required records/reports on an initial and continuing compliance basis. Pertinent sections of CASR outline the requirement of an AMO system for the preparation, storage, and retention of certain required records and reports. The primary objective of these systems is the generation, storage, retention, and retrieval of accurate and complete AMO maintenance records.

Requirement record keeping for AMO as follow:

1) An AMO must retain records in English that demonstrate compliance with the requirements of CASR Part 43. The records must be retained in a format acceptable to the DGCA.
2) An AMO must provide a copy of the maintenance release to the owner or operator of the article on which the maintenance, preventive maintenance, or alteration was performed.
3) An AMO must retain the records required by this section for at least 2 years from the date the article was approved for return to service.

4) The records specified in this section shall be retained for a minimum period of 90 days after the unit to which they refer has been permanently withdrawn from service.
5) An AMO must make all required records available for inspection by the DGCA and the National Transportation Safety Committee (NTSC)

A certificated AMO must report to the DGCA within 96 hours after it discovers any failure, malfunction, or defect of an article. The report must be in a format acceptable to the DGCA

Review Required Maintenance Records System and reporting procedure:
The records must be in English and retained for no less than 2 years. The AMO must provide a copy of the return to service to the owner/operator. If the AMO chooses to use DAAO Form 21-18 as a return to service, the records must include a copy of the completed form.
The AMO Manual procedures should describe who would review the records for accuracy and completeness before approval for return to service. The records retained by the AMO, required by CASR Part 145.219, need only to demonstrate compliance with the requirements of CASR part 43.
Whatever record system is used by the AMO it must clearly state on both the record given to the owner/operator and the record retained by the AMO that the aircraft, engine, propeller, or article is approved for return to service

Verify the records comply with CASR part 43 as follows:

1) CASR Part 43.9 describes the content, form, and disposition of maintenance, preventive maintenance, and alteration records. The content must include a description of the maintenance performed, the date the AMO completes the maintenance, and the name of the person performing the maintenance. It also must include the signature or stamp, (if a stamp system is used by a AMO), certificate number, and type of certificate of the person approving the maintenance for return to service.
2) CASR Part 43.11 describes the content, form, and disposition of maintenance records for inspections performed under CASR 91, and 135, CASR Part 135.380(a) and 135.380a. Verify the entry of record entries in the appropriate aircraft maintenance record reflecting the

type inspection performed and the similarly worded approval for return to service statement.

3) The AMO should retain a record of all major repairs and alterations completed as part of any maintenance record retention system as required by the regulation.
   a) The AMO may use the customer's work order, or DAAO 43-337, Major Repair and Alteration (Airframe, Powerplant, Propeller, or Appliance), to record a major repair made in accordance with a DAAO-approved manual or other approved data.
   b) The AMO must use DAAO 43-337 to record major alterations. Verify the completion and routing of DAAO 43-337 in accordance with the requirements in part 43, appendix B.

Applicable form:

- DGCA Form No.145-52 "Evaluation of Maintenance Record System and Reporting Procedures"

e. Maintenance facilities, tools, equipment, part and materials

An AMO must have the maintenance facilities, tools, equipment, part and materials necessary to perform the maintenance, preventive maintenance, or alterations under its AMO certificate and operations specifications in accordance with CASR Part 43. The maintenance facilities, tools, equipment, part and materials must be located on the premises and under the AMO's control when the work is being done
A certificated AMO may not change the location of its housing without written approval from the DGCA

Verify Segregation and Protection of Parts. Verify that each workspace has areas for the proper segregation and protection of parts and subassemblies during all phases of maintenance, preventive maintenance, or alterations. Inspect for the following:

1) The differences between serviceable and unserviceable components, parts, and materials must be clearly distinguishable throughout each process. AMOs may accomplish this with suitable racks, hoists, trays, stands, and/or other means of segregation for the storage and protection of all articles.
2) AMOs should situate environmentally hazardous or sensitive operations, such as avionics work, battery maintenance, painting,

cleaning, welding, and machining in such a manner that they do not adversely affect other maintenance or alteration of articles or activities.

3) If the facility deals in non-aircraft parts, materials, or maintenance activities outside the realm of the AMO, it should segregate the aircraft function from other functions to preclude a AMO using unapproved parts or materials on an aircraft.
4) AMOs must segregate articles and materials stocked for installation from those undergoing maintenance, preventive maintenance, or alteration.

Review Calibration/Record. Review the part of the AMO Manual/QCM describing the system and the procedures used for calibrating MTE

1) The PAI will verify:
   a) The AMO is calibrating MTE, in accordance with the intervals, the system, and procedures described in the AMO Manual/QCM.
   b) All MTE are calibrated and traceable to a standard acceptable to the Directorate General of Civil Aviation (DAAO), to include those recommended by the manufacturer and the Komite Akreditasi Nasional or National Accreditation Committee (KAN/NAC) or a standard provided by the manufacturer other national authority.
2) The PAI should consider the following:
   a) Whether the AMO determines calibration status of new MTE before they are put into service;
   b) How and when MTE are recalled for calibration;
   c) Does the calibration and tracking system include employee-owned MTE;
   d) How the AMO establishes calibration intervals;
   e) Whether the AMO maintains a list of all calibrated equipment by name, model or part number, serial number, date of calibration, and next calibration due date;
   f) If calibration records are maintained for at least 2 years;
   If MTE are identified to prevent the inadvertent use of non-calibrated equipment in the maintenance process. The identification usually includes the serial number or other identification, date of last calibration, date calibration is due, and the name or initials of the person who performed the calibration;

g) Whether MTE that are not used to make airworthiness determinations are identified; and

Review Information on Parts and Materials. Verify that all parts and materials meet the following requirements:

1) Storage and Protection.
   a) Verify if environmental requirements established by the Original Equipment Manufacturer (OEM) for the storage of parts and materials are being complied with (temperature, humidity, static, ultraviolet light exposure, etc.). Receiving/incoming inspection personnel must be familiar with these requirements.
   b) Confirm whether parts room articles and those items in process are identified to show:
      - Basic part information (name, make/model/serial number, batch or lot, etc.).
      - Serviceability status of parts and materials in a manner that readily
      - identifies serviceable parts and materials from unserviceable parts and materials.
      - Rejected parts, including questionable parts, awaiting disposition
   c) Verify the protection of parts and materials in storage and during transit in a manner that prevents damage, contamination, loss, or substitution until installation. Sensitive parts and equipment (e.g., oxygen parts, O-rings, or electrostatic sensitive devices) must be properly stored, packaged, identified, and protected from contamination and damage. Hazardous, flammable, or volatile materials and aircraft parts (e.g., fire extinguisher squibs) must be stored in flameproof cabinets or facilities.
   d) Verify that all parts are appropriately identified and segregated.

2) Life-Limited Parts.
   a) All life-limited parts must have up-to-date component times listed on the historical records or appropriate tags, as required. In addition, AMOs must clearly mark, monitor, and dispose of all items received with shelf-life limits and/or specific storage requirements in accordance with AMO Manual/QCM procedures.
   b) Disposition of life-limited parts.

3) Documentation/ Traceability.
   a) Parts/materials receiving procedures provide for traceability to an approved source. The AMO should retain traceability records for all incoming articles.

      NOTE: It is common to receive certain raw materials/standard parts in lots, which the AMO must break down into smaller quantities (hardware, sheet stock, welding rod, coating powders, etc.). In these cases, the AMO must be able to trace them back to the original lots. The AMO must have systems in place to ensure that only approved and traceable parts and materials are issued for maintenance performed.
   b) The AMO maintains a record of inspections and tests used to verify the airworthiness of received components.

4) Personnel Training. Receiving personnel comply with AMO Manual/QCM procedures to determine that incoming raw materials are of an acceptable quality. The AMO should conduct and document the training of receiving personnel in parts receiving/shipping, parts control, and detecting and reporting suspected unapproved parts (SUP).

Applicable form:
- DGCA Form No.145-54 “Housing and Facilities”
- DGCA Form No.145-55 “Tools and Equipments”
- DGCA Form No.145-58 “Parts and Materials”

f. Maintenance Contract Arrangement

1) An AMO may contract a maintenance function pertaining to an article to an outside source provided:
   - The DGCA approves the maintenance function to be contracted to the outside source; and
   - The AMO maintains and makes available to the DGCA, in a format acceptable to the DGCA, the following information:
     - The maintenance functions contracted to each outside facility; and
     - The name of each outside facility to whom the AMO contracts
     - Maintenance functions and the type of certificate and ratings, if any, held by each facility.

2) An AMO may contract a maintenance function pertaining to an article to a non-certificated person provided:
   - The non-certificated person follows a quality control system equivalent to the system followed by the AMO;
   - The AMO remains directly in charge of the work performed by the non-certificated person; and
   - The AMO verifies, by test and/or inspection, that the work has been performed satisfactorily by the non-certificated person and that the article is airworthy before approving it for return to service.
3) An AMO may not provide only approval for return to service of a complete type-certificated product following contract maintenance, preventive maintenance, or alterations**.**

Applicable form:

- DGCA Form No.145-63 "Contracted Maintenance"

g. Maintenance Production Planning

The AMO shall have a system appropriate to the amount and complexity of work to plan the availability of all necessary personnel, tools, equipment, material, maintenance data and facilities in order to ensure the safe completion of the maintenance work.

The planning of maintenance tasks, and the organizing of shifts, shall take into account human performance limitations.

When it is required to hand over the continuation or completion of maintenance tasks for reasons of a shift or personnel changeover, relevant information shall be adequately communicated between outgoing and incoming personnel.

1) Depending on the amount and complexity of work generally performed by the maintenance organization, the planning system may range from a very simple procedure to a complex organizational set-up including a dedicated planning function in support of the production function.
2) For the purpose of CASR Part 145, the production planning function includes two complementary elements:
   - Scheduling the maintenance work ahead, to ensure that it will not adversely interfere with other work as regards the availability of all

necessary personnel, tools, equipment, material, maintenance data and facilities.

- During maintenance work, organizing maintenance teams and shifts and provide all necessary support to ensure the completion of maintenance without undue time pressure.

3) When establishing the production planning procedure, consideration should be given to the following:
   - logistics,
   - inventory control,
   - Square meters of accommodation,
   - Man-hours estimation,
   - Man-hours availability,
   - Preparation of work,
   - Hangar availability,
   - Environmental conditions (access, lighting standards and cleanliness),
   - Co-ordination with internal and external suppliers, etc.
   - Scheduling critical maintenance tasks during periods when staff are likely to be most alert.

Limitations of human performance, in the context of planning safety related tasks, refers to the upper and lower limits, and variations, of certain aspects of human performance (Circadian rhythm / 24 hours body cycle) which personnel should be aware of when planning work and shifts.

The primary objective of the changeover / handover information is to ensure effective communication at the point of handing over the continuation or completion of maintenance actions. Effective task and shift handover depends on three basic elements:

- The outgoing person's ability to understand and communicate the important elements of the job or task being passed over to the incoming person.
- The incoming person's ability to understand and assimilate the information being provided by the outgoing person.
- A formalized process for exchanging information between outgoing and incoming persons and a planned shift overlap and a place for such exchanges to take place.

Applicable form:

- DGCA Form No.145-65 “Maintenance Production Planning”

h. Maintenance Process Inspection

Objective of this inspection provides guidance for conducting a detailed Process/task inspection by analyzing the data, materials, and parts used in the aircraft maintenance and alterations process.

A detailed process/task inspection is an inspection activity that will examine one or more specific tasks that are associated with the maintenance and alteration of an airframe, aircraft engine, propeller, appliances, and/or component parts.

Procedures to inspection of maintenance process inspection:

1) Identify the process/ task to be inspected
   a) The PAI/ DGCA Inspector should identify the process/task to be inspected, and identify those documents (travelers, task cards, work orders, maintenance/component maintenance manuals, etc.) that will verify the use of approved or accepted data, materials, tools, etc.
   b) Inform the appropriate management personnel as to what particular process/task will be observed during the inspection. Inform the person in authority of the inspection criteria and the areas that will be verified.

2) Conduct the Process Review.

   The following steps serve as a guide to the PAI/DGCA Inspector in performing a process/task inspection. Certain steps may not be appropriate, depending on the complexity of the AMO. Inspect/review the following, as applicable:

   a) Procedures/Methods/Systems. Determine whether these:
      - Have been prepared for all processes.
      - Reflect the technical data contained in appropriate maintenance manuals or other approved documents.
      - Define and accept/reject criteria, required tools, test equipment, inspection equipment, details of method of inspection to be performed, and tolerance limits, as applicable.

- Denote and detail the function to be performed, sequence of operations, and inspection points to ensure proper handling of products from one station to another through all phases.
- Have been approved, controlled, and documented after revisions are made.
- Maintain traceability after completion of all operations.

b) Inspection Systems. Determine that:

- Inspection records (indicating the number of inspections made, conformance or nonconformance, and the action when the product is nonconforming) are maintained.
- When required, re-inspection/retests are performed following rework.
- Assemblies are inspected for conformity before closure.
- All required inspections and tests have been satisfactorily accomplished before final acceptance of the completed products/parts.
- Personnel performing required inspection items inspections for an air carrier are identified and authorized by the carrier.
- Inspection personnel are not exceeding their area of authority.
- Internal audits are conducted to verify compliance with Directorate General of Civil Aviation (DAAO)-approved or acceptable data, and appropriate procedures.

c) Technical Data. Confirm that:

- Personnel are provided with current technical data and changes. Inapplicable.
- Inappropriate, illegible, or obsolete data is removed from areas of potential use.
- Nondestructive inspection (NDI) processes are reviewed for conformance with DAAO-approved data.
- Process specification changes are submitted to the DAAO for evaluation and approval.
- Tags, forms, and other documents used are controlled

d) Major Repairs and Alterations. Verify that:

- If the task involved is a major repair or major alteration, that DAAO approved data was used to accomplish the task.

- The DAAO-approved data has been documented on DAAO Form 43-337 as appropriate,

  NOTE: Any DAAO-approved data procured by the AMO for use on CASR Parts 121, 129, and 135 aircraft must be in accordance with the air carrier's manual.

e) Materials/Parts. Determine whether:

- The materials, test records, and standards used in NDI are identified and controlled.
- When required, special identification and controls for materials or parts are identified and are in place before the materials/parts are used.
- When required, special handling and storage requirements for materials and parts are identified and used.
- There is traceability of material or parts received from distributors and that the records of receiving inspection data are retained and list the name, part number, quantity, and inspection results.

f) Tools and Test Equipment. Confirm that:

- When required, special tools and test equipment are identified and used for an operation or process.
- Calibration records are maintained for all tools and test equipment requiring calibration.
- The facility's personnel are trained appropriately for their assignments.

g) Additional Considerations. Verify that:

- Shift turnover procedures are in place and are being complied with.
- Adequate numbers of personnel trained, qualified, and authorized to perform the specific task are available throughout the maintenance process.
- As work is routed through the facility, it flows through the process with no interruptions due to personnel, facilities, or parts/materials availability that might affect airworthiness

Applicable form:

- DGCA Form No.145-61 "Maintenance Process Inspection "

i. Work Other than Fixed Locations

This inspection provides guidance for authorization and surveillance of a CASR part 145 AMO that performs aircraft maintenance away from its fixed location.

The following are the circumstances that allow a part 145 AMO to do work away from the station:

1) Special Circumstances. When a special circumstance arises that allows work to be done away from the AMO on a temporary basis.
   a) Temporary Basis—Short Term. When a special circumstance arises such as a blown tire, radio, or navigation equipment changes, etc.
   b) Temporary Basis—Extended. When the repair or alteration requires the AMO to make repairs or alterations over an extended period, e.g., the aircraft is in for extended maintenance and an interior shop is requested to install a new interior at that location.
2) Recurring Basis. When it is necessary to perform such work on a recurring basis with operations specification (OpSpec) authority.

   NOTE: Working away from the AMO is not equivalent to line maintenance or a geographic authorization.

   NOTE: The circumstances above require the AMO to submit a request to the Principal Airworthiness Inspector (Principal Airworthiness Inspector) / DAAO Inspector for evaluation on a case by case basis, except for emergency short term work when the AMO has a procedure in its manual. In this case, the AMO only needs to notify the Principal Airworthiness Inspector in accordance with the procedure.

Procedures to inspection of Work Other than Fixed Locations:

1) Review Applicable Information. Before the inspection, the Principal Airworthiness Inspector (Principal Airworthiness Inspector) or DAAO Inspector should carefully review:
   a) CASR Part 145.
   b) The AMO Manual / Quality Control Manual (QCM) procedures on work away from the station.
   c) OpSpec, if authorized.

      NOTE: OpSpec will only be issued for those AMOs that perform repairs or alterations on a recurring basis. For example, engine on wing repair, nondestructive testing, tank, and fuel cell repair.
   d) Directorate Airworthiness and Aircraft Operation (DAAO) office file

2) Inspect a AMO Performing Work Away From the Fixed Location Under Special Circumstances.

a) Temporary Basis—Short Term.

- Review the AMO procedures to verify that procedures are in place to:
  - Control equipment, tools, required forms, etc.
  - Ensure qualified personnel for the required work.
  - Conduct emergency work away from the station. The procedure should contain an explanation of emergency work away from station as it relates to the AMO ratings. The procedures should detail how the DAAO is notified; if approval is required, they must be notified before dispatching the work crew.
- The AMO must be able to provide written documentation that reflects the air operator method for the acceptance of all AMO programs, and the AMO's standard operating procedures (SOP) to ensure all maintenance is performed in accordance with the air operator's Maintenance Program. The air operator must be informed of all contracted out work and if the maintenance provider must be inspected by the air carrier's Continuing Analysis and Surveillance System (CASS) auditors and all findings corrected before work is performed.

  NOTE: It may not be necessary for the Principal Airworthiness Inspector / DAAO Inspector to approve each short term temporary situation; however, all situations will require the PAI/ DGCA Inspector to be notified.

b) Temporary Basis—Extended.

- Contracted maintenance that is authorized by the DAAO may require several months to complete; this type of operation does not constitute the establishment of another AMO or a satellite AMO because it is temporary in nature.
- The AMO requesting to perform maintenance away from its fixed location for extended periods of time must evaluate the housing and facilities where the maintenance is to be performed to ensure the location meets the intent of CASR part 145.

- If additional time is needed, the AMO must submit another request updating the original information and providing any new details on the contracted maintenance.
- Review the AMO procedures to verify that the procedures will:
  - Control equipment, tools, required forms, etc.
  - Ensure qualified personnel for the required project.
  - Provide the DGCA with a plan on how and where the project will be performed, to include: Controlling of parts; Tools; Personnel; Required inspectors; Length of time the project will take; and Title of the person in charge of the project.

    NOTE: The PAI / DGCA Inspector must approve extended temporary projects before the crews are sent and must have a start date and an estimated completion date. The PAI/ DGCA Inspector should only approve this request after ensuring the AMO will be able to control the project as if it were being completed at the home station.

3) Inspect an AMO Doing Work Away From the Fixed Location on a Recurring Basis.
   a) Verify that the procedure for performing work away from the station on a recurring basis is clearly defined in the AMO Manual/QCM. OpSpec must reference the section and chapter where these procedures are located in the AMO Manual/QCM.
   b) Review all work packages completed away from station to confirm the work was completed per the procedures in the AMO Manual /QCM. CASR Part 145 does not allow continuous, uninterrupted maintenance or alteration operations to be performed at another location.
      - Verify that the AMO furnished its own tools and equipment. The AMO can have a lease agreement for tools and equipment if the procedures are contained in the AMO Manual.
      - Verify that after the contracted maintenance is completed, the AMO transported its tools, equipment, and personnel back to its fixed location.
      - Verify that the AMO maintained a permanent fixed location even if the majority of its work is done at another facility.

c) Verify the AMO Manual contains procedures for the following:
   - Transporting tools and equipment to and from the work site without damage
   - Ensuring that only qualified personnel are assigned to perform, supervise, and inspect the work completed; and
   - Ensuring that all air carrier maintenance programs are followed.

d) Verify the AMO is following its quality control system, and confirm that:
   - All forms are properly completed per the quality control system;
   - The AMO follows their calibration system for calibrated tools; and
   - All parts are stored and protected as required in the quality control system.

e) Verify that the AMO only uses approved data.

Applicable form:

- DGCA Form No.145-62 “Work Other Than Fixed Locations”

2. Safety (SMS)

An safety audit or surveillance will review one or more of the following areas:

a. Safety management system (SMS) manual;

AMO holders shall develop and maintain SMS Manual, the SMSM shall document all aspects of the SMS, and its contents shall include the following:

1) Safety policy and objective
   - Management commitment and responsibility
   - Safety accountabilities
   - Appointment of key safety personnel
   - Coordination of emergency response planning
   - SMS documentation

2) Safety risk management
   - Hazard identification

- Safety risk assessment and mitigation

3) Safety assurance
   - Safety performance monitoring and measurement
   - Management of change
   - Continuous improvement of the SMS

4) Safety promotion
   - Training and education
   - Safety communication

Applicable form:

– DGCA Form No. 120-92 ”Evaluation Manual and Implementation of Safety Management System” Part I

b. SMS implementation (hazard identification and risk management);

Certificate holders ensure implementation of SMS comply with SMS Manual

- Gap analysis
- SMS implementation plan
- Safety performance indicator

Applicable form:

– DGCA Form No. 120-92 ”Evaluation Manual and Implementation of Safety Management System” Part II

c. SMS Reporting System;

1) The reporting of occurrences which endangered or which, if not corrected or addressed, would endanger an aircraft, its occupants, any other person, equipment or installation affecting aircraft operations; and there porting of other relevant safety related information in that context.
2) Analysis and follow-up action in respect of reported occurrences and other safety-related information;
3) The protection of aviation professionals;
4) Appropriate use collected safety information; and
5) The dissemination of anonymous information to interested parties for the purpose of providing such parties with the information they need in order to improve aviation safety.

Applicable form:

– DGCA Form No. 120-98 ”Evaluation of SMS reporting system”

3. Quality Assurance Program (QAP)

a. Quality assurance organization and management

The quality assurance program that provides for the auditing of the management system, and maintenance functions, to ensure the organization is:

1) Complying with applicable regulations and standards;
2) Satisfying stated operational needs;
3) Identifying areas requiring improvement;
4) Identifying hazards to operations;
5) Assessing the effectiveness of safety risk controls.
6) Appointment of a manager with appropriate qualifications, authority and independence that is responsible for:
7) Ensuring communication and coordination with operational managers in the management of operational risk
8) Process for management review of significant issues
9) Evaluations of quality assurance program

Applicable form:

- DGCA Form No. 120-83 ” Evaluation of Quality assurance organization and management”

b. Audit program (Internal Audit Process Including the contractors)

The audit program that provides for the auditing to ensure:

1) Audit planning process and resources
2) The process to ensure significant issues arising from the quality assurance program are subject to management review.
3) The means for disseminating information from the quality assurance program to management and non-management operational personnel as appropriate to ensure an organizational awareness of compliance with applicable regulatory and other requirements.
4) The audit planning process and sufficient resources, including auditors, to ensure audits are:
   - Scheduled at intervals to meet regulatory and management system requirements;
   - Completed within a specified time period.

Applicable form:

- DGCA Form No. 120-84 ” Evaluation of Audit Program”

c. **Auditors training and qualification program**

The training and qualification program that ensures auditors that conduct auditing under the quality assurance program:

1) Have the knowledge, skills and work experience needed to effectively assess areas of the management system and operations that will be audited;
2) Maintain an appropriate level of current audit experience;
3) Complete initial and continuing auditor training that provides the knowledge and understanding necessary to effectively conduct audits

Applicable form:

- DGCA Form No. 120-85 ” Evaluation of Auditors training and qualification program”

d. Process for addressing Findings

The process for addressing findings that result from audits conducted under the quality assurance program, which ensures:

1) Identification of root cause(s);
2) Development of corrective action as appropriate to address findings;
3) Implementation of corrective action in appropriate operational area(s)
4) Evaluation of corrective action to determine effectiveness.

Applicable form:

DGCA Form No. 120-86 ” Evaluation of Process for Addressing Findings”

e. Quality and audit record

Ensuring quality and audit record are maintained and recommendations effective implementation

Applicable form:

- DGCA Form No. 120-87 ” Evaluation of Quality and Audit Record”

CHAPTER VI. SURVEILLANCE PROGRAM

1. Introduction

A surveillance program may be based on the need to conduct routine and ongoing surveillance or the need to conduct special emphasis surveillance as a result of certain events such as accidents, related incidents, related violations, and strikes.

PAI should responsible with surveillance program, surveillance program should determine objectives, evaluate the resources available, and determine the specific types and numbers of inspections to be conducted in support of that program.

DGCA surveillance area are similar with the audit area, frequency surveillance area will developed base on risk base analysis, characteristic AMOs and previous audit report and surveillance report.

After the inspection data has been reported, an evaluation of the information obtained from inspection reports and related sources must be conducted. The purpose of this evaluation is to identify the areas of concern and note areas such as the following: Noncompliance with regulations or unsafe operating practices

- Both positive and negative trends
- Isolated deficiencies or incidents
- Causes of noncompliance, trends, or isolated deficiencies

2. Objective of Surveillance Programs

The primary objective of surveillance is to provide the DGCA, with an accurate, real time, and comprehensive evaluation of the safety status of the air transportation system. This surveillance program objective is accomplished by inspectors performing the following:

- Determining each AMO's compliance with regulatory requirements and safe operating practices;
- Detecting changes as they occur in the operational environment;
- Detecting the need for regulatory, managerial, and operational changes;
- Measuring the effectiveness of previous corrective actions.

3. Frequency of Surveillance

When planning a surveillance program, a PAI should determine the program objectives, evaluate the resources available, and determine the specific types and numbers of inspections to be conducted in support of that program.
As minimum, table 6-1, 6-2 and 6-3 illustrates typical inspections and its frequency per year.

For the implementation of risk base analysis, the type of inspections may be varied for each AMO, depend to the complexity and size of the AMO. Some of the inspections may be combined into one activity. The frequency of inspection per year may be different than these numbers depending on the previous report and confident level of DGCA.

Table 6-1 Typical Surveillance of Airworthiness

No.	Type of Inspections	Frequency per year	DGCA Form Number
1	Management and Administration • Management and Administration • Personnel	1	 145-51 145-59
2	Approval and Manuals Inspection • Evaluation & Approval of AMO QC Manual • Approval and Manuals Inspection • Evaluation And Approval Of Training Program Manual • Technical Publication	1	 145-41 145-53 145-43 145-56
3	Training Program and Training Record	1	145-60
4	Maintenance Record System and Reporting Procedures	1	145-52
5	Maintenance facilities, tools, equipment, part and materials • Housing and Facilities • Tools and Equipments • Parts and Materials	1	 145-54 145-55 145-58
6	Maintenance Contract Arrangement	1	145-63
7	Maintenance Production Planning	1	145-65

8	Maintenance Process Inspection	1	145-61
9	Work Other than Fixed Locations	1	145-62

Table 6-2 Typical Surveillance of Safety (SMS)

No.	Type of Inspections	Frequency per year	DGCA Form Number
1	Safety management system (SMS) manual;	1	120-92 Part I
2	SMS implementation	1	120-92 Part II
3	SMS Reporting System;	1	120-98

Table 6-3 Typical Surveillance of Quality Assurance Program

No.	Type of Inspections	Frequency per year	DGCA Form Number
1	Quality assurance organization and management	1	120-83
2	Audit Program (Internal audit process including the contractors)	1	120-84
3	Auditors training and qualification program	1	120-85
4	Process for addressing Findings	1	120-86
5	Quality and audit record	1	120-87

4. SURVEILLANCE PLANNING AND EVALUATION RESPONSIBILITIES

The organizational elements within the DGCA which are responsible for ensuring that comprehensive surveillance programs for AMO are to be developed and maintained are as follows:

a. Directorate of Airworthiness and Aircraft Operations (DAAO)
   Sub Directorate Maintenance for airworthiness, safety (SMS) and Quality (QAP) areas.

b. Principal Airworthiness Inspectors, PAIs

a. Directorate of Airworthiness and Aircraft Operations (DAAO)

The Directorate of Airworthiness and Aircraft Operations has the primary responsibility for establishing programs approve by DG and for developing the direction and guidance for inspectors to use when conducting surveillance.

b. Sub Directorate Maintenance

The roles and responsibilities of each Deputy Director regarding Surveillance Program are described as follows:

1) Developed surveillance plan which are :
   Approve any deviations from the approved annual surveillance plan, as recommended by PAI.
2) Primary responsibility for the implementation of surveillance programs for airworthiness and safety (SMS) areas.
3) Plays a key role in developing effective surveillance programs and is responsible for ensuring that Principle Airworthiness Inspector conducting effective surveillance.
4) Ensuring that these programs provide high quality surveillance data.
5) Assigning available inspectors to conduct the necessary inspections; providing on the job training for assigned inspectors; and for supervising assigned inspectors for efficiency and effectiveness.

c. Principle Airworthiness Inspectors (PAI)

PAI's are the primary surveillance program planners in the DGCA since they are the focal point for all technical matters between the DGCA and the AMO holder.

PAI's must ensure that there are periodic reviews of all aspects of the AMO holder's operations. They must specifically determine the AMO's compliance status by establishing effective surveillance programs, and evaluating previous surveillance data and other related information.

PAI's must establish a continuing program for evaluating surveillance data to identify trends and deficiencies and to decide upon and take appropriate courses of action.

Individual PAI's are responsible for conducting inspections in accordance with the direction, guidance, and procedures. A primary responsibility of each inspector is to report inspection results in a clear, concise, and factual manner.

5. SURVEILLANCE PLANNING RESOURCES

The availability of a DGCA surveillance resource (i.e. inspector) is determined using:

a. Total annual number of inspector Full Time Equivalent (FTE) available days;
b. Average annual number of training days taken by the inspector;
c. Average annual number of travel days taken by the inspector;
d. A deduction for the amount of time used by inspectors for non-oversight activities, this includes tasks such as:
    1) Investigation, enforcement and compliance;
    2) Promotion, education and interpretation;
    3) Policy development;
    4) Functional direction;
    5) Internal priority; and
    6) Workshops and meetings.
e. A deduction of 5% for unplanned surveillance activities.
f. Total frequency inspection for each AMO Holder