Public Authority for Civil Aviation

AIRWORTHINESS PROCEDURES MANUAL

Manual Number: 1.4.2.1

Issue Date: 01 November 2019

Revision: 02

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PREFACE

The Airworthiness Procedures Manual has been prepared for use and guidance of Airworthiness Inspectors in the performance of their duties.

The present issue is published based on the feedback received from audits carried out by various international bodies in the recent past. Special emphasis has been given in their scope of their activities in the present issue of the manual.

The manual will be updated from time to time based on suggestions received or to incorporate any changes in the procedures that may be carried out.

The manual will be effective on 01 November 2019.

Director General of Civil Aviation Regulation

Public Authority for Civil Aviation

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Corrigendum of Amendments

Issue.	Rev	Description
01	02	This manual has been completely reviewed and reissued

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ABBREVIATIONS

When the following abbreviations and acronyms are used in this manual, they have the meanings shown.

AD	Airworthiness directive
AED	Airworthiness engineering division
AFM	Aircraft flight manual
AID	Airworthiness inspection division
ALI	Airworthiness limitation items
ANS	Air Navigation Service
AME	Aircraft Maintenance Engineer
AMO	Approved maintenance organization
AMS	Aircraft Maintenance Schedule
AOC	Air operator certificate
APU	Auxiliary power unit
CAA	Civil aviation authority
C of A	Certificate of Airworthiness
CAMO	Continuing Airworthiness Management Organisation
CAME	Continuing Airworthiness Management Exposition
C of R	Certificate of Registration
CDL	Configuration deviation list
CG	Centre of gravity
CMR	Certification maintenance requirements
CRS	Certificate of Release to Service
DGCAR	Director General of Civil Aviation and Regulation
EDTO	Extended diversion time operations
ERP	Emergency Response Plan
EO	Engineering Orders
ETOPS	Extended-range Twin-engine Operational Performance Standards
FAA	Federal Aviation Administration
FSD	Flight Safety Department Director
FTO	Flight training Organisation
HIRM	hazard identification and risk mitigation
ICA	Instructions for continued airworthiness
IFSD	in Flight Shut Down
JAA	Joint Aviation Authority
JAR	Joint Aviation Requirements
Kg	Kilogram
LOI	Letter of Investigation
LoV	Limit of validity
LWTR	License Without Type Rating
MCAI	Mandatory continuing airworthiness information
MCM/ CAME	Maintenance control manual/Continuous Airworthiness Management Exposition
MEL	Minimum equipment list
MMEL	Master minimum equipment list
MOPM/MOE	Maintenance organization's procedures manual/Maintenance Organisation Exposition
MPD	Maintenance Planning Data
MRB	Maintenance review board
MSG	Maintenance steering group

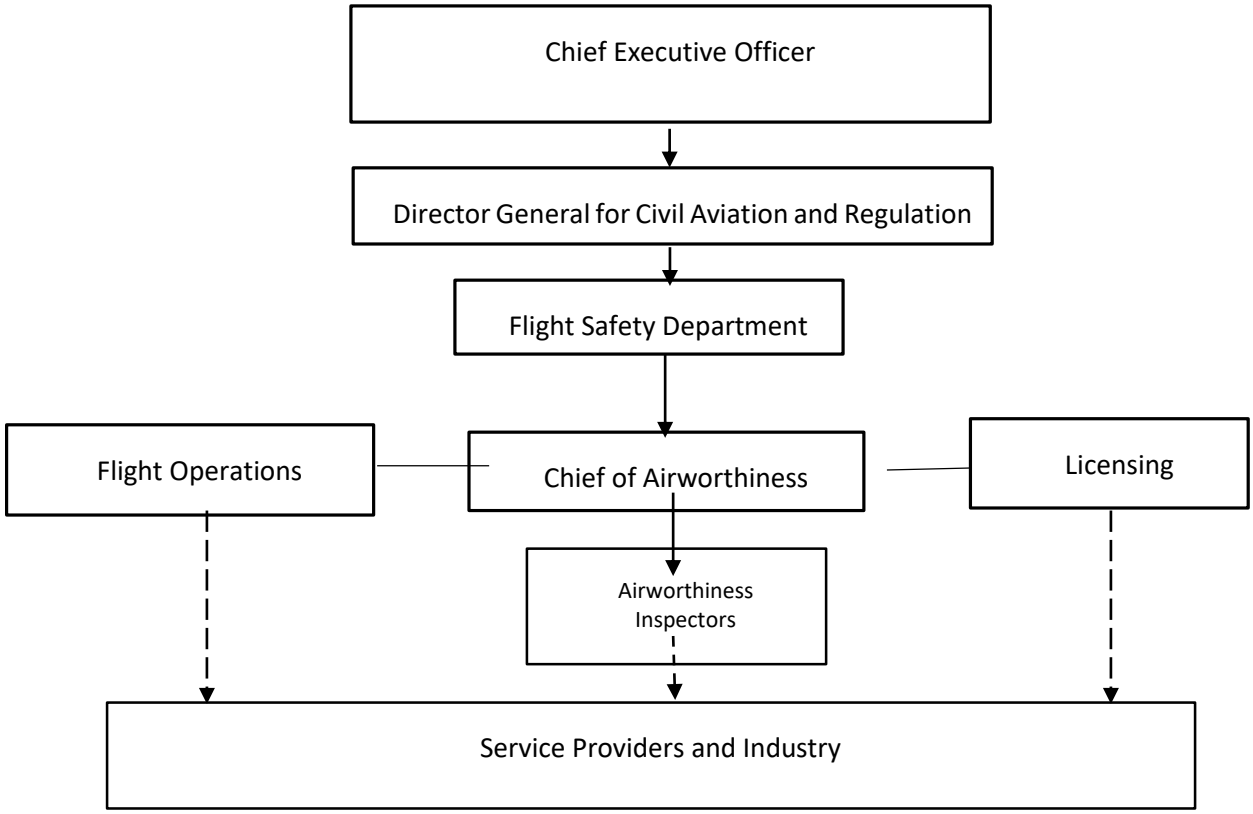
MTOW	Maximum certified take-off weight
OEM	Original equipment manufacturer
PASI	Pre-Application Statement of Intent
RII	Required Inspection Items
RVSM	Reduced vertical separation minima
SAG	Safety Action Group
SB	Service bulletin
SDR	Service difficulty report
SIP	Structural integrity programme
SMS	Safety Management System
SRB	Safety Review Board
STC	Supplemental Type Certificate
TBO	Time Between Overhauls
TC	Type Certificate
TCB	Type certification board
TSN	Time since new
TRTO	Type Rating Training Organisation
TSO	Time since overhaul

1. Description of Flight Safety Department

The Flight Safety Department has [three] main sections:

- The Flight Operations Section
- The Airworthiness Section
- The Personnel Licensing Section

1.1. Flight Safety Department Organisational Chart



Note. — In practice, PACA has no Airworthiness Engineering Section right now.

——— Line of authorities and responsibilities

--------- Line of communication and coordination

1.2. Director of the Flight Safety Department

The Director of Flight Safety Department reports to the Director General of Civil Aviation and Regulation and has the overall responsibility for the functions, staffing, personnel welfare, and facilities of the Flight Safety Department.

The Director of Flight Safety is responsible for:

- Implementing the DGCAR policy for oversight and surveillance.
- Ensure that staffing, facilities and training are adequate and prepare forecasts to facilitate the continued proper functioning of the Personnel Licensing Section.
- Assigning Principle Operations Inspectors and Principle Maintenance Inspectors.
- Directing and supervising the Section Chiefs in relation to the preparation and performance of audits and inspections.
- Directing and supervising the Section Chiefs in relation to the approval and certification process of air operators and maintenance organizations.
- Directing and supervising the Section Chiefs in relation to the registration and certification of aircraft and parts.
- Directing and supervising the Section Chiefs in relation to the approval and certification process of Service Providers (ANS, Aerodromes).
- Directing and supervising the Section Chiefs in relation to personnel licensing procedures.
- Assigning inspector teams for joint Flight Operations / Airworthiness certification and approval, and special projects.
- Directing and supervising the Aeromedical Board.
- Recruitment and Selection of inspectors and other staff.
- Establishing training programs for inspectors and other staff.
- Establishing an administrative system in relation to correspondence, licensing record keeping, certification and approval record keeping, and ensuring data security and protection of personnel data under his control.
- Co-ordination with other DGCAR departments
- Maintaining liaison with other aviation authorities and organizations on matters concerning standards and safety.
- Recommend enforcement actions against air operators, maintenance organizations and service providers in case of alleged violations of the civil aviation law, civil aviation regulations, and directives.
- Take necessary enforcement action against personnel licensing violations.
- The Director of Flight Safety has delegated authority to prepare, issue, approve, permit, authorize, and suspend/cancel I.A.W the schedule below:

Prepare:

- Certificate of Airworthiness (including C of A for Export).
- Certificate of Registration, letter of deregistration.
- Noise Certificates.
- Radio Station License and Certificate of Approval for Aircraft Radio Installation.
- Air Operators Certificates. (AOC)
- Air Operator Permit (AOP)
- Approved Maintenance Organization Certificates.

- Civil Aviation Regulations (CAR).
- Airworthiness Directives
- Operational Directives

Note: The above certificates and documents must be authorized / signed by the Director General of Civil Aviation and Regulation (DGCAR).

Issue:

- Civil Aviation Notices (CAN).
- Annual audit programs.
- Annual training programs
- Operations Specifications
- Validation and conversion of foreign Licenses and Ratings for Flight Crew, Cabin Crew, and Maintenance Engineers
- Command upgrades
- Concessions for air operators and maintenance organizations

Approve:

- Type Certificates and AFM amendments
- Local and foreign maintenance, overhaul and repair organizations.
- Local and foreign flight training organizations (FTO, TRTO)
- Local and foreign technical training organizations
- Air operators operation manuals (OM).
- Air operators Continued Airworthiness Management Exposition (CAME)/(MME).
- Maintenance Organization Exposition (MOE)
- Training programmes for flight crew, cabin crew maintenance engineers and other operational ground staff
- Manufacturers Recommended Maintenance Programs (MMP)/Operators Maintenance Programs
- Aircraft Maintenance Schedule (AMS)
- Minimum Equipment List (MEL, CDL)
- Modifications and major repairs
- Airline security programs and manuals
- Synthetic Training Devices

Permit:

- Ferry/permit to flights

The Flight Safety Director may delegate his authority, but shall remain responsible for all delegated matters.

1.3. Airworthiness Section:

1.3.1. General

1.3.1.1 PACA established an airworthiness organization division to meet the requirements set forth in the Convention and in Annexes 6, 7, 8, 16 and 19. The organizational structure of an inspection organization division within the PACA hereinafter referred to, as the Airworthiness Inspection Section division (AID), will vary depending on the scope of aviation activity within the State Sultanate of Oman.

1.3.1.2 The primary responsibilities of the Airworthiness section covers all matters concerning the continuing airworthiness of aircraft as described below:

a) Continuing airworthiness of aircraft and parts thereof;
b) Approval of maintenance organizations;
c) Maintenance certification of air operators;
d) Approval of maintenance training organizations; and
e) The licensing of aircraft maintenance personnel.

PACA has not established AED, so sometimes the AIS are responsible for those engineering tasks associated with continuing airworthiness. These tasks may include evaluation and approval of repair and modification requests related to the continued operation of aircraft based on the data provided from manufacturer of Design (or TC holder).

Note: *In practice, PACA has no Airworthiness Engineering Section right now. Therefore, the designated Airworthiness inspector upon receiving the application form for modification or repair approval shall verify the completeness and accuracy of the required information provided by the applicant. The Airworthiness Inspector may communicate with the State of Design as part of his assessment for the repair or modification application, as necessary. If the application is found satisfactory, approval may be given by the Airworthiness Inspector based on the submitted repair or modification form and as per approved data of the State responsible for the type design. If the application and assessment of the repair or modification form is found unsatisfactory, approval is rejected.*

1.3.2. Airworthiness Inspection Section Duties and responsibilities

The Airworthiness Inspection Section should:

a) maintain the Oman national civil aircraft register and make the information from the register available, when needed;
b) evaluate and accept air operator's mass and balance programmes;
c) review the airworthiness records of Omani registered aircraft to assess the adequacy of their maintenance and status of aircraft and the competence and diligence of the persons and organizations who perform the maintenance in order to issue, renew the certificate of Airworthiness;

d) establish a service difficulty reporting (SDR) system. Analyse, investigate significant defects discovered in aircraft, and determine corrective action to be taken where airworthiness may be affected and correct any trends, where necessary;

e) review aircraft and component manufacturers' SBs and ADs issued by foreign airworthiness authorities to determine their applicability on the basis of the state of Design approved standards to Omani registered aircraft, and take action where airworthiness may be affected by a continuous monitoring and control. Provide guidance on the implementation of MCAI;

f) monitor the implementation of the ADs and/or related SBs issued by the manufacturer (both foreign and domestic) on the basis of the state of Design approved standards to ensure air operator's compliance to the continuing airworthiness of aeronautical products with an established procedure to avoid or correct service difficulties;

g) review current and new international and foreign airworthiness standards related to continuing airworthiness and determine the need for adoption of critical features of those standards into national requirements;

h) review air operator's airworthiness main base and line stations maintenance provisions including training provisions, organizations and quality assurance procedures of applicants for issuance and renewal of an AOC of Omani Airlines / issuance of an Air Operator Permit (AOP) Approval of Foreign Air Operator operating in Oman in coordination with Flight OPS section of the Flight Safety Department and making recommendations as appropriate with regard to the application;

i) review the facilities and procedures of applicants for issuance and renewal of certificates of approval to conduct maintenance of aircraft, including qualifications of persons issuing a maintenance release;

j) assess qualifications of persons who may be eligible to perform tasks on behalf of the PACA when found qualified and properly authorized (designees);

k) Evaluate for acceptance the design and suitability when qualified, of aircraft components and equipment and their approval for use in aircraft, and assess and approve the installation of aircraft components and equipment;

l) evaluate and approve aircraft maintenance programmes, including condition monitoring programmes, reliability programmes, modifications, repairs and mandatory inspections, structural integrity programmes, as applicable;

m) evaluate and approve or accept MCMs/CAME, maintenance procedures manuals, and where no separate licensing division exists, aircraft maintenance training organizations' curriculums;

n) assist in the airworthiness investigation of aircraft accidents, as necessary;

o) investigate possible violation of the national air law or regulations in regard to airworthiness and take appropriate enforcement action, when necessary;

p) issue directives concerning maintenance, overhaul and repair of aircraft and components thereof, and procedures to be followed by the aviation industry to comply with the national air law and/or regulations related to airworthiness;

q) issue advisory material to the aviation industry concerning airworthiness practices and procedures, where such advice may make a significant contribution to aviation safety;

r) resolve regulatory problems associated with continuing airworthiness, formulating amendments to regulations as necessary, establishing general and technical policies and procedures on which airworthiness requirements can be improved upon and based;

s) take appropriate action on MCAI issued by the State of Design or by the State of Registry; and

t) provide advice and recommendations in other areas of PACA responsibility, such as the identification and handling of dangerous goods, and on other technical matters relating to airworthiness as may be required.

u) Continued inspection and surveillance of certificated air operators (airworthiness aspects).

1.3.3. Approvals and certificates

The AIS should:

a) review, process and record applications for registration of aircraft, registering and de-registering aircraft as appropriate, and issuing certificates of registration;

b) grant or validate aircraft noise certification;

c) survey aircraft for issuance, renewal and validation or acceptance of certificates of airworthiness and processing of documents, as appropriate;

d) issue, renew and continuous oversight (audit/inspection) of maintenance organization approvals, air operators, and, aircraft maintenance training organizations' approvals;

e) record, review and process application forms of aircraft maintenance personnel for issuance, renewal validation and extension of licenses and ratings, when no personnel licensing division is established;

f) evaluate and approve aircraft maintenance programmes, including special maintenance programme requirements for extended diversion time operations (EDTO/ETOPS);

g) evaluate and approve aircraft condition monitoring, aircraft reliability, and aircraft structural integrity programmes, as appropriate;

h) evaluate equipment required for specific operations as appropriate for the intended purpose, e.g. minimum equipment list, reduced vertical separation minima, Category II and III precision approach equipment, EDTO/ETOPS, EFB, etc.;

i) evaluate and issue export certificates of airworthiness for aircraft, engine and/or propellers, as applicable;

j) evaluate and approve or accept air operators' MCMs/CAMEs, MOM, maintenance organization procedures manuals, and where no separate licensing division exist, maintenance training organization curriculums;

k) evaluate and issue approval of modification and repair-designs, when no separate AES exists and those engineering tasks are associated with continuing airworthiness. The evaluation of the proposed modification or repair design should be accomplished by experienced personnel in the areas where design approval is sought; and

l) issue special flight permits with operating limitations for aircraft that do not meet airworthiness requirements but are capable for safe flight. Examples of special flight permits include: flights after a modification or repair or during a process of applying for a supplemental type certificate, delivering or export of aircraft, evacuation of aircraft from impending danger, overweight aircraft carrying extra fuel or navigation equipment, aircraft flying to a location for maintenance.

1.3.4. Surveillance

1.3.4.1 The AIS develop a periodic surveillance (audit and inspection) work programmes based on the complexity of the Omani aviation industry taking into account the quantity of AOCs, types of aircraft

operated, AMOs, and approved aircraft maintenance training organizations (ATO), when applicable. The surveillance programme include periodic and unannounced surveillance visits of the certificate holders. The surveillance cover compliance to approved or accepted procedures to obtain an accurate depiction of the day-to-day operations and also compliance with airworthiness requirements. In addition to periodic surveillance, the AIS should focus follow-up surveillance visits on areas where deficiencies were noted on previous audits. The AIS should ensure all surveillance that is performed is properly documented and referenced and retained for future audits. Analysis of previous audit reports is recommended and may indicate a pattern of weakness the certificate holder may be experiencing. The AIS should take steps to ensure AOCs have an effective system to monitor the performance and efficiency of the maintenance programme. The AIS should ensure an AMO has an independent quality assurance system to monitor compliance with the requirements to make sure all maintenance is properly performed.

1.3.4.2 The AIS should promptly advise the certificate holder in writing should discrepancies exist in regard to compliance with the Omani's national airworthiness requirements. The AIS should include in their written reply a time period for the certificate holder to take corrective action on any discrepancies noted during the surveillance. When the AIS has been notified in writing of corrective action, a follow-up visit should take place to verify correction of the discrepancies and compliance with the airworthiness requirements. Should the certificate holder not address the discrepancies in the time period allotted by the AIS or be unable to correct the discrepancy, enforcement action may be necessary.

1.3.4.3 There may be instances during the performance of surveillance where the AIS may identify a serious safety concern. The AIS should have procedures in place to take prompt action, should conditions warrant, that will ensure that aircraft are operated in an airworthy condition.

1.3.4.4 The specific surveillance functions of AIS inspectors will vary based on the technical specialty, e.g., aircraft, engine, avionics, but in general terms should include at least the following:

- Conduct periodic and unannounced surveillance of maintenance-related facilities including line stations that perform maintenance of its air operators' aircraft, making appropriate directions and recommendations and approving amendments to the air operator's AOC authorizations and to the MCMs/CAMEs, as appropriate;
- Conduct periodic and unannounced surveillance of maintenance-related facilities of AMOs on the ramp and in the hangars, workshops, and repair facilities. This includes contracted work that the AMO may outsource;
- Conduct periodic and unannounced surveillance of its air operators' aircraft undergoing maintenance on the ramp and in the hangar and ensure work is being performed in accordance with the MCM/CAME, aircraft maintenance programme, maintenance organization procedure manual, current technical data, and by authorized maintenance personnel;
- Conduct ongoing surveillance of its air operators' aircraft reliability programmes and take action should results indicate degraded levels of safety;
- Conduct periodic and unannounced surveillance of its air operators' aircraft during operations to ensure aircraft are airworthy;
- Conduct periodic and unannounced surveillance of foreign air operators' aircraft operations with regard to airworthiness matters;
- Conduct periodic and unannounced surveillance on personnel certificated and/or authorized to issue a maintenance release; and

- Investigate possible violations of the national law or regulations in regard to airworthiness and to enforce corrective and legal actions, if required.

1.3.5. Liaison functions

The AIS should:

- Participate in type certification board activities;
- Participate in maintenance review board activities for newly type certificated aircraft;
- Prepare and distribute to the public documents containing all issued MCAI and airworthiness advisory material; and
- Confer at national and international levels on matters relating to the regulations and technical matters concerning airworthiness.
- Participate in aircraft accident investigation when required.
- Review and assessment of aerial work applications by foreign operators.

The Airworthiness Section ensure auditing and inspections for continuous oversight as below:

1- The audit: for initial and renewal in order to check the regulatory compliance.
2- The inspection: for spot-check if any Discrepancies are noticed.

1.4. Chief of the Airworthiness Section

The Chief of Airworthiness Section reports to the Director of Flight Safety.

In addition to his airworthiness inspector duties, the Chief of Airworthiness Section is responsible for:

- Ensure the development and promulgation of regulations and national standards regarding the airworthiness of aircraft, continuing airworthiness of aircraft, registration of aircraft and noise certification of aircraft.
- Ensure the development and promulgation of national regulations regarding import requirements and, if required, export requirements of aeronautical products.
- If applicable, ensure development and promulgation of national regulations for validation of type certificates for which the State of Registry is not the State of Design.
- Approve or accept modifications and repairs relevant to the continuing airworthiness of an aircraft.
- Notify ICAO of differences between ICAO Standards and national regulations and practices via PACA National coordinator.
- Ensure the aircraft register is properly maintained and an aircraft is issued a registration certificate that conforms to the provisions of CAR 47 /Annex 7.
- Ensure that when it first enters on its register an aircraft of a particular type for which it is not the State of Design and issues or validates a Certificate of Airworthiness, it advises the State of Design that it has entered such an aircraft on its register.
- Determine the continuing airworthiness of aircraft in relation to the appropriate airworthiness requirements in force for the aircraft.
- Develop or adopt requirements to ensure continuing airworthiness of an aircraft during its service life.
- Upon receipt of MCAI from the State of Design, adopt the information directly or assess the information and take appropriate action.

- Ensure the State of Design is kept informed of all MCAI it issues, where applicable.
- Ensure a system exists for aeroplanes over 5700 kg and helicopters over 3 175 kg MTOM whereby information on faults, malfunctions, defects and other occurrences that might cause adverse effects on the continuing airworthiness of the aircraft is transmitted to the organization responsible for the aircraft type design.
- Establish in respect of aeroplanes over 5 700 kg and helicopters over 3 175 kg MTOM the type of service information to be reported to its airworthiness authority by air operators, and maintenance organizations.
- Issue C of R, C of A, special flight permits, export C of A and aircraft noise certification.
- Evaluate and approve or accept MCMs, maintenance organization procedures manuals, modifications and repairs, and aircraft maintenance programmes, including, if applicable, maintenance programmes for aircraft operating under EDTO.
- Perform certification inspections of maintenance organizations and air operators with respect to airworthiness requirements.
- Maintain appropriate records for aircraft on its register.
- Develop annual surveillance work plans.
- Establishment and Management of a State's Safety Oversight System during the planning of surveillance work programmes.
- Conduct surveillance of its certified air operators (airworthiness requirements), maintenance and training organizations.
- Ensure timely corrective action on deficiencies noted during oversight of certified air operators, maintenance and training organizations.
- Take appropriate enforcement action of certified air operators, maintenance and training organizations and licensed technical personnel, where necessary.
- The day-to-day management of the Airworthiness Section related to the main functions as described in chapter 1.1.
- The allocation of Inspectors to specific administrative and oversight duties.
- Regularly advise to the Director of Flight Safety of the state of work and significant events and developments within the Airworthiness Section.
- The establishment and maintenance of Inspection and Audit plans.
- Distribution of regulatory publications (Civil Aviation Law, CARs, CANs) and office manuals.
- Evaluation of C of A application for issue and renewal, and preparation of necessary inspections, documentation and certificates for authorization.
- Evaluation of C of R applications, and preparation of necessary documentation and certificates for the national civil aircraft register, including preparing certificates for mortgage and lease.
- Evaluation of applications for Noise Certificates, Radio Station License, and preparation of the necessary documentation and certificates for authorization.
- Participation in aircraft incident and accident investigation.
- Evaluation of C of A application for issue and renewal, and preparation of necessary inspections, documentation and certificates for authorization.
- Allotment of SSR codes.
- Maintaining a register of Noise Certificates, Radio Station Licences, SSR codes and C of A's.
- Maintaining a register of Approved Maintenance Organizations.
- Liaison with the Chief of Flight Operations Section for technical matters in relation to AOC applications.
- issuance of approvals (Certificate of Airworthiness, Certificate of Airworthiness for Export and special flight permits), based on the successful assessment of aircraft, engines, propellers, and

equipment produced in the State or of foreign-manufactured aircraft intended to be placed on the State aircraft register;
- Assist the Director for taking of appropriate action with MCAI:
- Assist FSD for the distribution of airworthiness information to the public;
- Maintain the national civil aircraft register and make the information from the register available, when needed as he is considered as aircraft register staff.

1.4.1. Airworthiness Inspector

The Airworthiness Inspector reports to the Chief of Airworthiness Section.

1.4.1.1. Responsibilities

The Airworthiness Inspectors duties and responsibilities are to carry out aircraft and maintenance organization surveillance, audit function and certification inspections. The airworthiness Section requires a dedicated specialized staff to carry out its function. A specialized training course for Airworthiness inspectors is a prerequisite to enable inspectors to carry out their Safety oversight task(s). In the final analysis, the Airworthiness Inspectors will have to grow to keep pace with the growth of aviation in the country. This will have to be borne in mind whenever the inspection system and its structure are reviewed (an exercise that must be done periodically).

1.4.1.2. Main duties:

The primary responsibilities of the AIS should cover all matters concerning the continuing airworthiness of aircraft and should cover, at a minimum:

- Review maintenance organizations certificate applications for initial issue and renewal and follow-up surveillance.
- Review and approval of maintenance organizations pertinent documentation, including MOE and MCM/CAME for airlines, etc for compliance with applicable regulatory requirements.
- Advise the Director of Flight Safety for approval of maintenance organisations
- Review and advice for implementation of Service Bulletins, Alert Service Bulletins, Airworthiness Directives, Service letters, and other mandatory requirements.
- A continuing airworthiness of aircraft and parts thereof
- Conduct surveillance inspections and audits of approved maintenance organizations and facilities at base stations and line stations to ensure continued conformance with the requirements for an AMO.
- Inspection and advice for approval by the Director of Flight Safety of organizations and persons for specific tasks related to training and licensing.
- Preparation of examination questions as required for Omani Law and Regulations examinations.
- Implement regulations on airworthiness and maintenance licensing.
- Maintenance certification of air operators
- The approval of maintenance training organizations
- The licensing of Aircraft Maintenance Personnel
- Review and advise for approval of applications for issue of a C of A, C of A for Export, C of R and other certificates as required.
- C of A renewal inspections.
- Review MEL and AFM amendment proposals for approval, in conjunction with the Flight Operations Section.
- Review and advise for approval of Aircraft Maintenance Schedules.

- Participation in Service Difficulty Reports (SDR) investigations.
- Review and advise for approval of Air Operator Permit applications.
- Assessment for issue of ferry flight permits in conjunction with the Flight Operations Section
- Participate as required, in aircraft incident/accident investigations and the preparation of reports and follow-up requirements.
- Evaluate and approve aircraft maintenance programmes, including special maintenance programme requirements for extended diversion time operations (EDTO).
- Evaluate and accept air operator's mass and balance programmes.
- Since in PACA does not established an AES, it may be necessary for the AIS to be responsible for those engineering tasks associated with continuing airworthiness. These tasks may include evaluation and approval of repair and modification requests related to the continued operation of aircraft.

1.4.2. Qualification of Inspectors

1.4.2.1. General

To effectively perform its role, the Flight Safety Department must be properly organized and staffed with qualified personnel capable of accomplishing the required wide range of operational and technical inspection activities. In addition, the inspectors of the Department should have educational and technical experience that compare favourably with those operations and maintenance personnel they will inspect or regulate.

All Inspectors must be suitably trained, qualified and experienced for their role, based on Training Needs Analysis and an identified critical learning path as specified below:

- Observation
- Interviews
- Questionnaires
- Job Descriptions
- The Difficulty Analysis
- Problem Solving Conference
- Appraisal Reviews
- Analysis of Organizational Policy
- Drive Pattern Identity

No hard and fast rules on qualification can be made because the particular circumstances of each Authority and each operator will differ.

It is, nevertheless, most important that in every instance, an Inspector should, by background and experience, command the professional respect of the operator's senior personnel.

Senior personnel, in this context, includes those who are responsible for establishing the company's operating procedures and standards including training managers.

1.5. Recruitment of Airworthiness Inspector/Engineer:

1.5.1. Recruitment of new airworthiness inspector:

1-Maintenance: Experienced Licensed maintenance engineers.

- Good knowledge in MS Office.
- Good knowledge in English

OR

2-College graduates who have passed a recognized engineering degree in the aviation field.

- Good knowledge in MS Office.
- Good knowledge in English

1.5.2. Recruitment of experienced airworthiness inspector:

1. 8 years' experience in Civil Aviation Authorities including 5 years' experience related to continuing airworthiness and operational tasks
2. Familiar with CAR-OPS, CAR-147 and CAR-66 or equivalent
3. Have passed PART 21/PART 145/PART M or equivalent

1.5.3. Qualifications and requirements for airworthiness Inspector:

1. a relevant engineering degree or an aircraft maintenance technician qualification with additional education. 'Relevant engineering degree' means an engineering degree from aeronautical, mechanical, electrical, electronic, avionic or other studies relevant to the maintenance and continuing airworthiness of aircraft/aircraft components,
2. 8 years' experience in Civil Aviation Authorities including 5 years' experience related to continuing airworthiness and operational tasks, or
    a) 5 years' experience in the field of aircraft maintenance or
    b) Aircraft maintenance engineer license with type rating with the same technology of Omani registered aircraft, or at least one rating with 5 years of maintenance experience.

- **Note:** *In cases where suitable engineers / inspectors fulfilling the above criteria are not available, the Flight Safety Director may, at his/her discretion, relax the requirements, taking into consideration the engineer's/inspectors seniority, past performance, employment record, experience, inspector ethic progression towards a higher rating and utility of the Airworthiness Inspectors.*

1.6. Accreditation of Inspecting Staff

Upon appointment, an Inspector will be issued with a pass or document which shows the holder's recent photograph and which entitles him to national and international recognition of his powers. His rights of access, both groundside and airside to premises or aircraft which reasonably lie within his assigned responsibility should, subject to essential security scrutiny, be accepted by all authorities and associated aerodrome personnel. The wording of the pass must be in English and, as required, any other language.

This document is the property of the Public Authority for Civil Aviation and must be returned by the inspector when leaving the service.

A PACA database is used to control the currency of the expiration date of airworthiness inspectors card monitored by the chief of Section.

Note: *Improper use of this document can result in withdrawal of the privileges.*

1.7. Airworthiness Inspector workforce evaluation methodology.

The DGCAR conducts a periodic review from time to time as required to determine whether or not there needs to be a change in the number of inspectors authorized. As part of this review and in order to ensure that the DGCAR has a sufficient number of inspectors to carry out its surveillance and certification activities, the DGCAR utilizes its Workforce Evaluation Methodology.

The Workforce Evaluation Methodology allows the DGCAR to determine whether it has an adequate number of inspectors, or needs to hire additional personnel.

2. ICAO Documents and PACA employees' access:

Technical Staff of the airworthiness section inspectors and administrative staff (if need it) have direct access to the PACA web Site Portal in order to have the following:

1- All the ICAO Annexes, documents, Circular, etc.
2- PACA Law, Regulation, Civil Aviation Notices, Checklists, news, Technical Publication, etc.

Besides to the above the airworthiness inspectors has direct access to the ICAO website portal.

3. Design organisation documentation and continuing airworthiness information access:

PACA airworthiness inspectors have direct access to the updated design organisation documents and continuing airworthiness information from their computer via internet and their password given to them to support the certificates /approvals issued for the Omani registered aircraft such us :

1) Aircraft flight manual
2) Maintenance manual
3) Structural repair manual
4) Service bulletins
5) Master minimum equipment list (MMEL)
6) Maintenance review board (MRB) report
7) Illustrated Parts CatLog
8) ADs
9) Etc

4. PACA Technical library

PACA has a technical library available for airworthiness inspectors in order to check the technical data of the different stakeholders.

The responsible of the library ensure the reception, control and distribution of the necessary technical documentation if requested by the airworthiness inspector.

5. Airworthiness Inspector Manual

Airworthiness section has an approved Airworthiness Inspector Manual (updated when need) annexed with checklists to assist the inspectors when they are carrying out their functions in standardized manner.

These documents are prepared by the airworthiness inspector, if any amendments occur or improvements of procedures/checklists, verified by the whole section, checked by the Flight Safety Director and approved by Director General for Civil Aviation.

The updated manual and checklist are delivered into PACA server / website to be available for the inspectors.

5.1. Procedure for amendment/update of Airworthiness Inspector Manual

When Director, manager or inspector find deficiency during airworthiness activities or when received notification for deficiency in airworthiness manual, it will be start to amendment or updated procedure manual. The Flight Safety Director through the chief of airworthiness assigns an inspector for preparing and establishing new amendment.

Assigned inspectors prepares procedure and send by email to chief of airworthiness section and defines date of last revision.

The Chief will submit the latest amendment for approval thru the Flight Safety Department and DGCAR.

If there is any comment from Director or manager, it will investigate by inspector and submit latest changes to relevant manager/Director by email.

The inspector shall define new revision for new amendment or change.

After approve the procedure manual by DGCAR, it will send to responsible person in technical library and internal dedicated network for Airworthiness and he/she uploads latest revision in accordance to section procedure.

5.2. Airworthiness Office Equipment

The airworthiness section has a sufficient office equipment at the disposal of their inspectors such us:

1) Telephones
2) Printers
3) Computers
4) Internet/Intranet
5) Photocopiers
6) Meeting Room well equipped
7) Kitchen
8) Rest Room
9) Etc

6. Procedures for Amendment of the CARs

Refer **to CAR-11** - Civil Aviation Regulatory Change Procedure document provides further details the development and amendment of CARs and may supersede any part of the procedure mentioned above.

6.1. Differences

Where the CARs do not comply with the ICAO standards or are more restrictive, the Director of Flight Safety Department or the designated airworthiness inspector must file the differences with the ICAO by completing the ICAO EFOD (compliance checklist) online.

Any significant differences must be published in the Oman Aeronautical Information publication (AIP)

Note: *An official respond to ICAO must go through the OIC section.*

6.2. Civil Aviation Notices

The Director of Flight Safety is responsible for (and must approve) the proposed contents, amendments and change procedures of the CANs and direct any change required accordingly.

Note: CANs depending the object it can be procedure or PACA requirements based on the subject.

6.3. Safety Alert

The Director of the Flight Safety Department may direct, by means of a Safety Alert Directive, that an operation shall be prohibited, limited or subject to certain conditions in the interest of safety. The Safety Alert may state:

a) The reason for its issue;
b) The applicability and duration; and
c) The action or performance required by the service provider(s).

The Safety Alert Directives/CANs are supplementary to the provisions of the CARs.

7. Procedures for acceptance of type certificates of the applicant

PURPOSE

This chapter is issued to provide guidance and information for recognition of Airworthiness code and acceptance of a Type Certificate or equivalent document issued by a state of design/manufacture in respect of aircraft, engines and propellers.

7.1. Applicability

The DGCAR adopt the type certificates to aircraft, designed/manufactured in another country and type certificated by the regulatory authority of that country. This part of the Civil Airworthiness Requirements lays down the procedure relating to the acceptance of type certificate applicant. It also lays down the rules/requirements to be followed by holders of the acceptance type certificate.

The DGCAR has adopted the following airworthiness codes:

FAA	Joint Airworthiness Requirements	EASA
	JAR–22 – Sailplanes and Powered Sailplanes	CS-22 (Sailplanes and Powered Sailplanes)
Part 23	JAR–23 – Small Aeroplanes	CS-23 (Normal, Utility, Aerobatic and Commuter Aeroplanes)
Part 25	JAR–25 – Large Aeroplanes	CS-25 (Large Aeroplanes)
Part 27		CS-27 (Small Rotorcraft)
Part 29		CS-29 (Large Rotorcraft)
Part 31		CS-31HB and GB (Hot Air Balloons)
Part 33	JAR–E – Engines	CS-E (Engines)
Part 35	JAR–P – Propellers	CS-P (Propellers)
	JAR–VLA Very Light Aeroplanes	CS-VLA (Very Light Aeroplanes)
		CS-VLR (Very Light Rotorcraft)
Part 34		CS-34 (‘Aircraft Engine Emissions and Fuel Venting),
Part 36		CS-36 (Aircraft Noise)
Part 34		CS-CO2 (Aeroplane CO2 Emissions).

Codes of Airworthiness of a State of Design other than the above may be acceptable at the discretion of the DGCAR.

Note: *As Oman is not a State of Design for aircraft, PACA does not issue any type certificates. PACA accepts TCs issued by certain States of Design as per PACA regulatory requirements.*

7.2. Application for Acceptance of Type Certificate

Application for acceptance of type certificate may be submitted to the DGCAR by filling Form AWR 040-01 for Fixed Wings and Form AWR 040-02 for Helicopters along with requisite fees as per CAN 1-06

7.3. Requirement for Acceptance of Type Certificate

DGCAR would accept the type certificate applicant form based on accepts TCs issued by certain States of Design only, in respect of any aircraft that may be imported, provided that:

(a) the airworthiness authority of the country in which it is manufactured has issued the type certificate or similar document, in respect of that aircraft or components;

(b) it meets the airworthiness requirements laid down by the PACA.

7.4. Documents to be Submitted

The applicant shall furnish the following documents attached with the related PACA form:

I. Type certificate (TC),

II. Type Certificate data sheets (TCDS),

III. Supplemental type certificate data sheets (if applicable),

IV. Noise standard to which it has been certified,

V. The basis of ETOPS certification, if applicable,

VI. Copies of aircraft, engine, propellers specifications, special conditions and/or exemption including the certification basis,

VII. Engineering description of the aircraft with required illustrations,

VIII. A statement of compliance with applicable design standards/ certification basis,

IX. Details of non-conformity with design standards,

X. Details of concessions from applicable certification basis sought from the Regulatory Authority for the Type Certification,

XI. Copies of tests reports for flight, ground/water tests, etc.,

XII. A database on various defects noted on the aircraft,

XIII. All applicable Airworthiness Directives,

XIV. Copies of maintenance review board (MRB) report and MMEL for aircraft type certificated in transport category,

XV. Weight and Balance report, Flight Manual, Structural Repair Manual, Illustrated Parts Catalogue,

XVI. A list of accident or major incidents that the aircraft had been involved in.(if applicable),

XVII. Any other documentation required by DGCAR.

7.4.1. Specific Design Approvals

If clarifications are to be sought about the complexities of design or any special design feature, representative of the manufacturer shall familiarize DGCAR with the system and design of the aircraft. Representatives of DGCAR may also visit the manufacturing sites to discuss specific design/manufacturing issues with the representatives of the manufacturers, designer and/or airworthiness authority of the country of manufacture.

7.4.2. Conditions of Approval

Special conditions may be imposed on foreign type certificate and type certificate data sheets by the DGCAR in specific cases for safe operation of the aircraft in Oman. The special conditions so imposed will be communicated to the applicant/manufacturer and Airworthiness Authority of that country by DGCAR.

7.5. Acceptance of Type Certificate of the applicant

The Flight Safety Department once is satisfied that the aircraft conforms to the relevant acceptable standards in respect of design and performance, a letter of acceptance of the Type Certificate will be issued by the PACA based on certification basis of the 'state of design'. The acceptance letter shall refer only to the aircraft conforming, in detail to the documents specified on such approval.

7.6. Service Experience Change

Where the Director General of Civil Aviation finds, as a result of service experience or otherwise that an unsafe condition exists with respect to a design feature or characteristic of the validated aircraft, he may issue a directive specifying conditions and limitations including inspections for continued operation in aircraft or may all together prohibit the use of the same till the unsafe condition has been corrected. When design changes are considered necessary, the holder of the Type Certificate shall submit appropriate design changes for approval of the Director General of Civil Aviation.

7.7. Exceptions

Notwithstanding what has been stated in the preceding paragraphs, the Director General of Civil Aviation may waive/reject any of the requirements relating to design in respect of the aircraft type certificated in a foreign country, but built under license in Sultanate of Oman. For this purpose, the applicant shall submit to the Director General of Civil Aviation Complete Type Record Documents and Manuals specified in para 4.

7.8. Cancellation, Suspension or Endorsement of Accepted Type Certificate

If at any time, the DGCAR is satisfied that there is a reasonable doubt to indicate that the safety of the aircraft is imperilled because of an unsafe condition in the aircraft, he may cancel, suspend or endorse the accepted type certificate or may require the incorporation of any modification as a condition of the accepted type certificate remaining in force.

8. PROCEDURE FOR REGISTRATION OF AIRCRAFT

8.1. Introduction

This Chapter lays down the recommended procedures to be followed by the Airworthiness Inspectors for registration of an aircraft.

8.2. References

The applicable references concerned with issue of C of A is;

Regulation	CAR 47
ICAO	Annex 7
Forms	Application for C of R

8.3. Eligibility

A. The aircraft shall not be currently registered in any State.

B. The aircraft shall have an approved Type Certificate equivalent to EASA/FAR 21 or any other airworthiness standard which is in compliance with the requirement of Annex 8 to the Convention and acceptable to DGCAR. Above type certificates are accepted by the DGCAR as specified in the Type Certificate acceptance procedure.

C. The aircraft confirms to all the requirements published by DGCAR in regard to communications, navigation and surveillance equipment, safety and emergency equipment on board as appropriate and have eligibility in accordance to CAR 47.

8.4. Registration Procedure

A. For registration of an aircraft, an application shall be made to DGCAR on the Application Form (AWR/010) as specified. The Form is available at Flight Safety Department.

B. Along with the duly completed application form, the applicant should submit the following documents to proceed with the application.

- Proof of cancellation of registration certificate (de-registration certificate) if it was registered with any other state.
- Proof in regard to eligibility of the person/firm in whose name the aircraft will be registered.
- Proof of ownership of the aircraft and any other legal interest in the aircraft such as mortgage and security
- Copy of the certificate of insurance
- Copy of the import permit (Bill of sales)
- If the aircraft is leased, an attested copy of the lease agreement
- The appropriate fee as prescribed in the Civil Aviation Notice 1-06.

C. Failure to provide the above documents will invalidate their application.

D. Upon receipt of the application form and the respective documents, the airworthiness section will evaluate the form for completeness; consultation of the legal section will be obtained if needed.

E. The aircraft should not be registered if there is any doubt about the eligibility of registration of the aircraft.

F. Before issuing of certificate of registration and for maintenance of the aircraft register the airworthiness inspector must ensure that have no combination which might be confused with:

- The five-letter combinations used in the International Code of Signals, Part II,
- The three-letter combinations beginning with Q used in the Q Code, and,
- The distress signal SOS, or other similar urgent signals for example XXX, PAN and TTT,

G. If the application form is complete and meets all the requirements laid down in CARs, Flight Safety Department issues a registration number and Certificate of Registration.
H. The nationality and registration mark shall be notified to the International Civil Aviation Organization
I. Particulars in the Certificate of Registration shall be recorded in the Civil Aircraft Register, and Airworthiness Section Database.

8.5. Civil Aircraft Register

The Sultanate of Oman Civil Aircraft Register is maintained by DGCAR. The register is a confidential document kept in a secure cabinet and accessible only to authorized officials. The register comprises the following data.

A. The number of the Certificate of Registration.
B. Date of initial registration.
C. Date of last renewal of Certificate of Registration.
D. Registration marks assigned.
E. Name and address of each registered Owner/Operator.
F. The aircraft Type, Nationality and construction number.
G. The signature of the authorized officer/inspector who issued the Certificate of Registration

8.6. Certificate of Registration

A. The Certificate of Registration shall be issued in the standard format which complies with the content in ICAO Annex 7 and CAR 47.
B. The registration number shall be allocated as per order in the register in the format, A40-XXX, where A40 is the designated Nationality Mark for the Sultanate of Oman and XXX stands for letters of registration mark issued by DGCAR to a particular aircraft with the consultation of the operator. In special cases the three letter registration marks will also be allocated by the DGCAR. It shall be ensured that neither registration mark will be repeated with the existing marks in the register.
C. A copy of the C of R should be filed appropriately in a file relevant to the particular aircraft.

8.7. Validity and Making Changes to the Certificate of Registration

A. Registration of an aircraft is a one-off exercise unless there is a change of ownership.

B. A certificate of registration becomes void when there is a change of ownership of the aircraft. The certificate should be changed accordingly to reflect it.

8.8. Intimation of Registration to Sate of Design

If the type of aircraft registered is first time imported into the country, the DGCAR shall intimate the "State of Design" that it has registered this particular type of aircraft in the Sultanate of Oman.

8.9. De-registration of Aircraft

A. Application for de-registration of an aircraft shall be made by the registered operator of the aircraft on behalf of the owner. Owners consent should also be submitted. If in any case, the owner is applying for de-registration directly, it shall be addressed in the original contract agreement which is in force and submitted to DGCAR at the time of initial registration or at the amendment.
B. A letter of de-registration shall be issued if the aircraft has been permanently withdrawn from service, or when the registered owner wish to cancel the registration for any other reason

C. The Flight Safety Department shall ensure that the registered owner/operator returns the Certificate of registration before de-registration of aircraft.
D. The de-registration of the aircraft shall be informed to the owner via a letter and to the National Aviation Authority where the aircraft is to be re- registered.
E. The aircraft register shall be updated accordingly.

8.10. Carriage of Certificate of Registration

The Certificate of Registration shall be carried on board of every aircraft registered in the Sultanate of Oman when engaged in flight operations.

8.11. Aircraft Register Database

The Airworthiness Section within DGCAR shall maintain the Aircraft Register Database and this database should have listed within, the following information pertaining to those current aircraft registrations:

- Registration Mark within Oman
- Aircraft Type (i.e. Fixed wing [A], Helicopter [H] or Glider [G])
- Aircraft make and model (e.g. B787)
- Aircraft version or type (e.g. 800ER)
- Number of engines
- State of Manufacture
- Registered Owner of the aircraft
- Address of the registered owner
- Operator of the aircraft
- Address of the operator
- Any other information (e.g. Self-Powered Glider).

9. ISSUE AND VALIDATION OF THE AIRCRAFT NOISE CERTIFICATE

9.1. Introduction

The Noise Certification is a part addressed under the Aircraft Type Certification. While the type certification standards are addressed in Annex 8 to the Convention on International Civil Aviation, the Noise Certification requirements are addressed in Annex 16. As noise certification is a part of type certification, all standards pertain to noise certification is in the Aircraft Flight Manual. In case, if the aircraft does not hold an individual noise certificate, the aircraft flight manual provides the compliance standards of noise certification. Therefore, the Noise Certificate could be issued as a fresh certificate on the data given in the Aircraft Flight Manual.

ICAO Annex 16, Volume 1, states that noise certification shall be granted or validated by the State of Registry based on satisfactory evidences that the aircraft complies with the requirements that are at least equal to the applicable standards specifies in Annex. When the State of Registry is satisfied with the evidence provided, a document such as a noise certificate attesting to noise certification shall be approved by the Stare of Registry and shall be carried on board the aircraft. The noise certification standards adopted by the Authority are those in ICAO Annex 16, Volume 1.

The Sultanate of Oman accepts the Noise Certificates issued to the aircraft/engine combination by EASA, FAA or any other certification standards of a contracting state and is in compliance with the standards in Annex 16 to the convention. The noise certification standards meeting the following standards of Annex 16, is accepted by the DGCAR to validate existing noise certificate or issue a new certificate in compliance with the Flight Manual included data on noise certification.

a) The applicable noise requirements for the issue of a type-certificate for an aircraft are prescribed according to the provisions of Chapter 1 of Annex 16, Volume I, Part II to the Chicago Convention and:
    1. For subsonic jet aeroplanes, in Volume I, Part II, Chapters 2, 3, 4 and 14 as applicable;
    2. For propeller-driven aeroplanes, in Volume I, Part II, Chapters 3, 4, 5, 6 ,7,10 and 14, as applicable;
    3. For helicopters, in Volume I, Part II, Chapters 8 and 11, as applicable; and
    4. For supersonic aeroplanes, in Volume I, Part II, Chapter 12, as applicable.
    5. For Tilt Rotor, in volume I, Part II, Chapter 13, as applicable.

b) The applicable emission requirements for the issue of a type-certificate for an aircraft and engine are prescribed in Annex 16 to the Chicago Convention:
    1. For prevention of intentional fuel venting, in Volume II, Part II, Chapter 2;
    2. For emissions of turbo-jet and turbofan engines intended for propulsion only at subsonic speeds, in Volume II, Part III, Chapter 2; and
    3. For emissions of turbo-jet and turbofan engines intended for propulsion only at supersonic speeds, in Volume II, Part III, Chapter 3.

The aircraft importer must submit evidences for the satisfaction of DGCAR that such aircraft are proven to establish a safety level equal or higher than that of the above in advance to issue a Noise Certificate or to Validate.

Requirements contained in this chapter are based on the above (a) and (b) as stipulated in ICAO Annex 16 'Environmental Protection'. Noise certification or validation procedure applies to all such aircraft as are specified in Annex 16 and registered in the Sultanate of Oman Civil Aircraft Register. This procedure is also applicable to foreign registered aircraft operated under AOC issued by the DGCAR. In respect of

foreign aircraft conducting flight operations into and out of the Sultanate of Oman, the requirements for Noise Certification shall be as approved by the State of Operator. Nevertheless, such requirements shall not be less than that are specified in the Annex-16 to the Convention on International Civil Aviation in writing.

Note: *Guidance material on the use of equivalent procedures address in this Chapter is also provided in the Environmental Technical Manual on the use of procedures in the Noise Certification of Aircraft DOC 9501.*

9.2. Issue and Validation of Noise Certificate of the applicant.

PACA Noise certificates are issued on the basis of Certificates issued to the aircraft/engine combination by EASA, FAA or any other certification standards of a contracting state noise certificates issued by the Oman National Aviation Authority of ICAO Contracting States responsible for issue of Type Certificate, in compliance with ICAO Annex 16 Volume 1 noise standards or equivalent noise standards, information/data contained in the National Aviation Authority approved flight manual.

An operator/owner is requested to submit the following documents requiring the issue of Noise Certificate by the DGCAR

a) Original copy of the Noise certificate issued by the NAA responsible for issue of Type Certificate of the aircraft type;
b) Subsequent Noise Certificate(s) issued by the NAA(s) responsible for issue / renewal of Certificate of Airworthiness and Noise Certificate of the aircraft, if applicable;
c) Approved and current Flight Manual or other document / manual confirming that the aircraft complies with the noise standards; and
d) Verification and the statement that there has been no adverse and/or unapproved change in the acoustical design of the aircraft/engine and the current status of the aircraft and engine is in compliance with type design

Application for a noise certificate is a one-time exercise done during the registration of the aircraft. A new application is required when the noise characteristics of the aircraft has changed such that either the noise level or the noise standard of the aircraft has changed.
The Noise Certificate must be in English.

9.3. Suspension / Cancellation of Noise Certificate

Noise certificate of an aircraft may be suspended or revoked if the aircraft ceases to comply with the applicable noise standards. Suspension of Noise Certificate may not be removed or a new certificate may not be granted unless the aircraft is found, on reassessment, to comply with the applicable noise standards.

9.4. Procedure for issue of Noise certificate:

In case of request for new noise certificate or amendment or modification in noise certificate, applicant sends application form AWR 035 and relevant documents in accordance to CAR 21 subpart I to Flight Safety Department, therefore, the relevant inspector assigns by chief of airworthiness section.
Airworthiness Inspector shall comply with CAR 21 and OPM and relevant aircraft documents and if there is any finding(s) in accordance with CAR 21 subpart I, the airworthiness inspector shall communicate with applicant and after rectification of finding(s), airworthiness inspector is responsible for complete Form

AWR 035 and issue noise certificate after satisfactory. Ultimately noise certificate delivers to applicant by DGCAR signature.

Finally, all document related to noise certificate must be record in aircraft folder.

DIRECTORATE GENERAL OF CIVIL AVIATION AND REGULATION OF

SULTANATE OF OMAN

Noise Certificate

Registration No:

NOISE CERTIFICATE

Nationality & Registration Marks	Manufacture and Manufacturer's designation of aircraft -	Aircraft Serial No.
Engine:	Propeller:	
Maximum take-off mass:	Maximum landing mass	Noise certification Standard
Additional modifications incorporated for the purpose of compliance with the applicable noise certification standards:		

Lateral/full power noise level	Approach noise level	Flyover noise level	Overflight noise level	Take-off noise level
Remarks:				

This noise certificate is issued pursuant to Volume I of Annex 16 to the Convention on International Civil Aviation, in respect of the above mentioned aircraft, which is considered to comply with the indicated noise Standard when maintained and operated in accordance with the relevant requirements and operating limitations.

Signature:

Date of issue: **Director General for Civil Aviation Regulation**

Figure 1 – Standard Noise Certificate

10. ISSUE OF CERTIFICATE OF AIRWORTHINESS

This chapter lays down the recommended procedures to be followed by the Flight Safety Department for issuing or renewing the Certificate of Airworthiness in respect of aircraft registered in Sultanate of Oman.

1. The issue of a Certificate of Airworthiness is dependent on the aircraft being registered in the Sultanate of Oman and will be subject to compliance with the procedures outlined in this Chapter.
2. Before the issue of a Certificate of Airworthiness in the Transport, Aerial Work, or Private Category, aircraft above 2730Kg maximum authorized weight, must qualify for a Type acceptance. The procedures for type acceptance are also given in this Airworthiness inspector manual.

Note- *For the purpose of the procedures describe in this section, the term "Aircraft" is intended to include its engines, propellers, and instruments and equipment.*

10.1. Introduction

Issue and renewal of Certificates of Airworthiness (C of A) is one of the main and primary functions of the Flight Safety Department.

Certificate of Airworthiness is issued to a complete aircraft indicating that the particular aircraft meets the requirement of type design acceptable to DGCAR.

CAR requires that all aircrafts engaged in flight operations in the Sultanate of Oman must have a valid Certificate of Airworthiness issued or rendered valid by the State in which the aircraft is registered.

10.2. References

The applicable references concerned with issue and renewal of C of A are:

ICAO Annex 8, Chapter 3, CAR 21, CAR M
Forms PACA AWR 020 Application for C of A (Initial Issue) & (Renewal)
Checklist C of A Issue/ Renewal Check List

There are two situations when dealing with a Certificate of Airworthiness:

a. The issuance of a new Certificate of Airworthiness when an aircraft type is first registered in Sultanate of Oman;
b. The renewal of a Certificate of Airworthiness issued by Sultanate of Oman;

10.3. Issue of Certificate Airworthiness

10.3.1. For New Aircraft

The applicant shall send a letter to the DGCAR and an application form AWR 020 attached with all the requested documents;

a) The application for Certificate of Airworthiness and Radio License together with information requested at least in 30 days before for the DGCAR to review and accept.
b) Type Certificate for review and acceptance.
c) The Certificate of Airworthiness or Export Certificate of Airworthiness issued by the State of Manufacturer.
d) An aircraft Flight Manual conforming to certification requirements in case where a Flight Manual has been issued for acceptance and approval.
e) The Aircraft Noise Certificate issued by the aircraft certifying authority as per the type certification procedure applicable and the data given in the Aircraft Flight Manual as applicable.
f) The National Requirements with which the aircraft complies, giving title, issues number and effective date as required and applicable.
g) Such deviations from the national requirements as may have been authorized in writing by the Authority which issued the Certificate of Airworthiness.

For new aircraft type in territory of Sultanate of Oman, the Airworthiness inspector shall check acceptability of aircraft type certificate in accordance with CAR 21 subpart B.

The airworthiness inspector after scrutinizing the application form AWR 020 and the related document if found satisfactory he will proceed for physical inspection of the aircraft as per Airworthiness checklist / delivery checklist.

After completion of document review and physical survey by inspector for C of A based on DGCAR Delivery checklist and when find satisfactory, the related C of A proceeds to issue by airworthiness section. Inspector shall confirm and ultimately DGCAR issue the certificate and it delivers to applicant.
In fact, one copy of C of A shall keep by airworthiness section and inspector is responsible for record keeping in airworthiness section.
When Airworthiness Inspector find any finding(s) during document review or physical survey, the finding(s) have been submitted to applicant and after rectification of finding(s), the certificate of airworthiness must be issue in accordance to PACA regulation. Record of such finding(s) and rectification of finding(s) shall be kept by airworthiness section in aircraft folder.

Note 1: Airworthiness inspector is responsible to put in folder of aircraft all document for retention.

Note 2: An example of items included into DGCAR Checklists used by Airworthiness inspectors.

Sample of Items must be checked by the airworthiness inspector for the initial issue of the C of A New Aircraft				
Operator/Owner: Aircraft Registration Marks:	N/A	Satisfactory	Unsatisfactory	Observation
1. Review application form: : – an incomplete application form (including supporting documents) should be rejected	☐	☐	☐	
2. Verify aircraft registration: – ensure aircraft is registered locally before C of A can be issued;	☐	☐	☐	
3. If this is a first of type aircraft in the State, ensure the aircraft type certificate (TC) is accepted in accordance with CAR 21 Subpart B.	☐	☐	☐	
4. If this is a first of type aircraft in the State, ensure the State of Design is informed;	☐	☐	☐	
5. If this is a first of type aircraft in the State, ensure the maintenance programme is approved: – ensure the maintenance programme is customized from the maintenance planning document (MPD).	☐	☐	☐	
6. Air operator to submit a compliance checklist: – ensure air operator submits the checklist to show that the aircraft has met the type certification, airworthiness and national requirements;	☐	☐	☐	
7. ensure MEL is customized from the MMEL;	☐	☐	☐	
8. Review airworthiness limitation items (ALI) list: – ensure the list is part of the aircraft records;	☐	☐	☐	
9. Review Export C of A, if applicable;	☐	☐	☐	
10. Conduct aircraft inspection: – sample configuration and work done on the aircraft;	☐	☐	☐	
11. Approve aircraft radio station, if applicable;	☐	☐	☐	
12. Review flight test reports (if applicable), OEM inspection reports and log books: – ensure all deficiencies and deviations are appropriately addressed and corrected;	☐	☐	☐	
13. Issue C of A if all the above is satisfactory ; and	☐	☐	☐	
14. File complete application package and copy of CoA.	☐	☐	☐	

10.3.2. For Used Aircraft

The applicant shall provide to the DGCAR;

a) The applicant shall apply on the form, prescribed for issue of C of A giving, complete details sought in the form. Incomplete applications shall not be entertained and the deficiencies in terms of its completeness and the requisite enclosures shall be immediately conveyed to the applicant.
b) The application shall be submitted along with the applicable, fees as per Fees & Charges schedule in CAN 1-6.

c) The issuance of C of A may be in respect of Aircraft imported;

Note : *An example of items included into DGCAR Checklists used by Airworthiness inspectors .*

The airworthiness inspector after scrutinizing the application form AWR 020 and the related document if found satisfactory he will proceed for physical inspection of the aircraft as per Airworthiness checklist.

After completion of document review and physical survey by inspector for C of A based on CAR 21/CAR M as appropriate, and CMR checklist and when find satisfactory, the related C of A proceeds to issue by airworthiness section. Inspector shall confirm and ultimately DGCAR issue the certificate and it delivers to applicant.

In fact, one copy of C of A shall keep by airworthiness section and inspector is responsible for record keeping in airworthiness section.

When Airworthiness Inspector find any finding(s) during document review or physical survey, the finding(s) have been submitted to applicant and after rectification of finding(s), the certificate of airworthiness must be issue in accordance to PACA regulation. Record of such finding(s) and rectification of finding(s) shall be kept by airworthiness section in aircraft folder.

Note: Airworthiness inspector is responsible to put in folder of aircraft all document for retention.

Sample of Items must be checked by the airworthiness inspector for the renewal /issue of the C of A For used Aircraft				
Operator/Owner: Aircraft Registration Mark:	N/A	Satisfactory	Unsatisfactory	Observation
1. Review application form: : – an incomplete application form (including supporting documents) should be rejected	☐	☐	☐	
2. Verify aircraft registration: – ensure aircraft is registered locally before C of A can be issued;	☐	☐	☐	
3. Verify previous C of R and C of A: – establish that the aircraft had not previously been denied the certificates. If yes, investigate reasons;	☐	☐	☐	
4. If this is a first of type aircraft in the State, ensure aircraft type certificate (TC) is certified/validated/ accepted;	☐	☐	☐	
5. If this is a first of type aircraft in the State, ensure the State of Design is informed;	☐	☐	☐	
6. If this is a first of type aircraft in the State, ensure the maintenance programme is approved: – ensure the maintenance programme is customized from the MPD. Compliance checklist (see 7.):	☐	☐	☐	
7. Air operator to submit a compliance checklist: – ensure air operator submits the checklist to show that the aircraft has met the type certification, airworthiness and national requirements and should also include: a) current aircraft/engines/propellers hours/cycles;	☐	☐	☐	

Sample of Items must be checked by the airworthiness inspector for the renewal /issue of the C of A For used Aircraft				
b) bridging checks, if applicable; c) ageing aircraft programme, if applicable; d) list of all modifications and repairs; e) ALI list; f) AD compliance list; g) maintenance records; and h) aircraft damage chart.				
8. Review Export C of A, if applicable;	☐	☐	☐	
9. Conduct aircraft inspection, if necessary: – sample configuration and work done on the aircraft;	☐	☐	☐	
10. Approve aircraft radio station, if applicable;	☐	☐	☐	
11. Review flight test reports (if applicable), inspection reports and log books: – ensure all deficiencies and deviations are appropriately addressed and corrected;	☐	☐	☐	
12. Issue C of A; and	☐	☐	☐	
13. File complete application package and copy of CoA.	☐	☐	☐	

10.4. Documents for Retention

The applicant shall provide the following documents for examination and retention by the Flight Safety Department in accordance to CAR 21 and CAR M as appropriate;

10.5. Renewal of Certificate of Airworthiness

An application for renewal of a Certificate of Airworthiness should be completed on the Form prescribed and submitted to the Flight Safety Department usually thirty days prior to the expiry of the Certificate.

The applicant shall;

A. make the aircraft available, at a time and place acceptable to the Airworthiness Section for such checks and inspections as required by Airworthiness Section;
B. provide the necessary personnel and equipment so that required checks and inspections may be satisfactorily carried out;
C. make all relevant records of previously completed inspection, maintenance, flight test and calibration available for inspection by the Airworthiness Inspectors;
D. Ensure that performance and handling qualities of the aircraft, where applicable, have been tested in flight to schedules approved by the Flight Safety Department;
E. A copy of an inspection report giving brief details of the work done since the last renewal of the Certificate of Airworthiness;
F. a record of the work accomplished since the last renewal of the certificate;
G. a record showing details of major checks carried out since the last renewal of the certificate;

H. a record of airframe, engine and propeller flying hours as follows:

1. the total flying hours for the airframe since new and the flying hours since the last renewal;
2. the total flying hours for the engine(s) since new and the flying hours since the last overhaul;
3. the total flying hours for the propellers since new and the flying hours since the last overhaul;

I. a record showing compliance with service bulletins, modifications and Airworthiness Directives or their equivalent; and

J. a record of major component changes.

10.6. Validity of C of A

C of A will normally be valid for one year and shall be renewed after following the procedures as described above. Under no circumstances, it shall be issued or renewed for a period of more than one year, the same however could be restricted below one year if felt necessary by the Airworthiness Section.

10.7. Ferry Flight of Aircraft where C of A is Suspended

Where the C of A is suspended, or deemed to be suspended for any reason ferry flight permission can be granted to take/bring the aircraft back where the repair facilities are available. However, such ferry flight should be permitted without any passengers with the minimum crew required for the flight as mentioned in the Flight Manual and the maintenance or repair which is considered essential has been carried out for the purpose of ferry flight. The requirements for issuance of ferry flight are given in CAR 21

10.8. Validation of Certificate of Airworthiness

Annex 8 requires that when a State of Registry renders valid a Certificate of Airworthiness issued by another Contracting State it shall provide a suitable statement of authorization to be carried with the original certificate. The validity of the authorization shall not extend beyond the period of validity of the original certificate; however, whenever the period of validity of the certificate is renewed, the authorization may be renewed or another authorization issued by the State of Registry for a period not exceeding the period of validity of the original certificate.

The validation Procedures described above generally pose no major difficulty to the validating State in those cases where the Certificate of Airworthiness being validated has been issued on a non-expiring basis.

In this above subject *DGCAR does not validate the C of A issued by another Contracting State.*

10.9. Verification of operation derived equipment

Airworthiness inspector shall verify operation derived equipment in accordance to applicant request for issuing certificate of airworthiness as following:

1- Applicant request for certificate of airworthiness to Flight Safety Department
2- Assign an Airworthiness inspector by Chief of Airworthiness
3- Verification of operation derived equipment in accordance with check list AWR 025/ AWR 024 (subpart K and L) and AWR 034 or delivery checklist.
4- Review document and conduct physical survey for complying with related regulation
5- Fill the AWR 025/ AWR 024/ AWR 034 or delivery checklist as appropriate
6- Communication with applicant for finding(s) related to operation derived equipment (if necessary)

7- Keep a copy of checklist and the related finding(s) (if applicable) in folder of aircraft as Operation Derived Equipment (CAR OPS Subpart K and L/ PACA requirements raised by the inspectors) and so available for Operation Section.
8- Prepare a copy of checklist for applicant if request

11. SPECIAL FLIGHT PERMITS

11.1. Introduction

1.1 Special Flight Permit is a permission granted by the Director General of Civil Aviation & Regulation to fly an aircraft that may not meet current applicable airworthiness requirements but is capable of undertaking safe flight. A qualified airworthiness inspectors are empowered to prepare a special Flight Permit in order to be signed by the DGCAR via flight Safety Director.

1.2 This Chapter describes the procedure to be followed by the Airworthiness Inspector Section while issuing Special Flight Permit.

11.2. Purpose

2.1 Defects and damages may be encountered during operation of an aircraft for which repair facilities may not exist at en-route stations. At times in order to carry out a mandatory modification/ inspection/ Airworthiness Directive, it is essential for the aircraft to be dispatched to base. In certain other conditions, evacuation of aircraft or persons from, areas of impending danger may be required. There may be occasions where the aircraft has to be flown for experimental or test flights including production test flights without valid C of A. In these circumstances, special flight may be authorized, if the aircraft is otherwise safe, to conduct the intended flight.

Note: Special Flight Permit is not required in case of test flight of an aircraft for the purpose of renewal of CoA, where the CoA has expired provided a certificate for release to service (CRS) of flight has been issued by qualified authorised person after appropriate maintenance checks and tests.

2.2 A Special flight permit may be issued by DGCAR through Director of Flight Safety when Certificate of Airworthiness has been suspended or deemed to be Suspended or has become invalid. Such aircraft may not currently meet applicable airworthiness requirements but is capable of performing safe flight for the following purposes:

i) Ferry fly to a base without fare paying passengers or property on board where repair, modification and maintenance are to be performed to remove the suspension of the C of A.

ii) Test flying after modification / repair during a process of applying for a supplementary type certificate.

iii) Evacuation of aircraft or persons from areas of impending danger or in the case of force majeure.

iv) Ferry fly to a point of Temporary/Permanent storage.

v) Operation of an aircraft at a weight in excess of its maximum certified take-off weight for flight beyond the normal range over water, or over land areas where adequate landing facilities or appropriate fuel is not available. The extra weight that is limited to additional fuel, fuel tanks and navigation equipment necessary for the flight.

11.3. Procedure

3.1 The owner/operator seeking a special flight permit (in accordance to CAR 21 Subpart P) shall submit an application as per Appendix I (Form AWR 046), together with a report covering assessment of defect and extent of damage sustained if applicable, to Flight Safety Department under whose jurisdiction the

aircraft has sustained damage. The operator shall also forward a copy of relevant document(s) for information to the Flight Safety Department where the aircraft is based. The operator should substantiate how the aircraft can be flown safely and the steps taken for safe flight. The application shall be concurred and signed by the engineering and operations departments of the operator signifying that the proposed operation is safe from engineering and operational aspects. In case the aircraft sustains damage/defect outside the country, application for special flight permit shall be submitted to the Flight Safety Department where the aircraft is based.

3.2 The report sent along with the application, detailing the condition of the aircraft and the steps taken for safe flight will be analysed by the airworthiness inspector based on the assessment with regard to safety of aircraft (also persons on board). Checklist as per Appendix lll of this chapter shall be completed by the designated airworthiness inspector. In case of any doubt regarding damage or safety of the aircraft, the Flight Safety Department may require the operator to make the aircraft available for inspection. Upon being satisfied, the designated airworthiness has to check the below items before sending the document to the Flight Safety Department, the director may grant special flight permit as per Appendix II subject to the following conditions/ limitations and valid till arrival of the aircraft at intended destination or specific date mentioned in the permit as applicable.

a) A copy of the special flight permit shall be carried on board the aircraft when operating under this special flight permit;

b) The registration marks assigned to the aircraft shall be displayed on the aircraft in conformity with the requirements;

c) Person or property shall not be carried for compensation or hire;

d) No person shall be carried on the aircraft unless that person is essential to the purpose of the flight and has been advised of the contents of the permit and the airworthiness status of the aircraft;

e) The aircraft shall be operated only by flight crew members who are aware of the purpose of the flight and any limitation imposed, and who hold appropriate licence issued or validated by PACA;

f) All flights shall be conducted so as to avoid areas where flights might create hazardous exposures to person or property;

g) All flights shall be conducted within the performance operating limitations prescribed in the aircraft Flight Manual and any additional limitations prescribed for the particular flight; and

h) The flight shall be conducted within the period of the validity of the Permit.

i)Before undertaking the flight, the aircraft shall be inspected and repaired to a degree necessary to ensure safe flight, and a maintenance release signed by a person/organisation licensed/ authorized.

j) If the flight involves operation over States other than Sultanate of Oman, the operator of the aircraft must obtain necessary overfly authorization from the respective authorities of each of those States prior to undertaking the flight.

3.3 It is the responsibility of the operator/owner to ensure that the aircraft is capable of performing safe flight for the intended purpose. However, Flight Safety Department may require the applicant to make the aircraft available for inspection especially when the aircraft is damaged or the airworthiness/safety of aircraft is in doubt.

3.4 If the damage is sustained or ascertained when the aircraft is in the territory of another Contracting State, the authorities of the other Contracting States shall be entitled to prevent the aircraft from resuming its flight on the condition that they shall advise DGCAR immediately, communicating to it all details necessary to formulate the judgment necessary for ascertaining the nature of the damage and its effect on airworthiness and safety.

3.5 When the DGCAR considers that the damage is of a nature such that the aircraft is no longer airworthy, it shall prohibit the aircraft from resuming flight until it is restored to airworthy condition. The DGCAR may however, in exceptional circumstances, prescribe particular limiting conditions to permit the aircraft to undertake a non-commercial operation to an aerodrome at which it will be restored to an airworthy condition. While prescribing such conditions the DGCAR shall consider all limitations proposed by the Contracting State that had originally, in accordance with para 3.4, prevented the aircraft from resuming its flight. DGCAR shall permit such flight or flights within the prescribed limitations.

3.6 When PACA considers that the damage is of a nature such that the aircraft is still airworthy the aircraft shall be allowed to resume flight.

11.4. Action Post Special Flight Completion

Upon completion of the special flight the operator will render a report to the Flight Safety Department, where the aircraft is based and a copy forwarded to the authority who had issued the special flight permit which shall include.

a) Any abnormality encountered during flight.

b) Action taken at base to render aircraft airworthy.

c) Result of production test flight.

d) Any other information regarding the flight as deemed necessary.

11.5. Grant of Special Flight permit

The Flight Safety Department may refuse to grant permit to any flight if there is reasonable doubt that such flight may jeopardizes the safety of the aircraft and/ or persons on board.

11.6. Record Keeping

The FSD will establish a system to maintain records of all documents generated and received during the process of evaluation and issue of Special flight permit.

11.7. Appendix I

PACA الهيئة العامة للطيران المدني	**APPLICATION FOR ISSUE OF SPECIAL FLIGHT PERMIT**	**Form**	AWR 046
		Edition	Original
	Public Authority for Civil Aviation- DGCAR	**Revision**	1
		Date	1/01/2019

1. Particular regarding the applicant

1.1 Owner/Operator:
1.2 Address:

Phone	Fax	e-mail

2. Particular regarding the aircraft

2.1 Aircraft Registration	2.2 Aircraft manufacturer	2.3 Aircraft model	2.4 Aircraft Serial number	2.5 Year of Construction
A4O-:	:	:	:	:

3. Purpose of Special Flight Permit:

☐	Ferry for Repairs, Maintenance, Storage etc	☐	Evacuating Aircraft	☐	Delivery Aircraft
☐	Test Flight	☐	In Excess of MTOW	☐	Other Specify:

4. Proposed Itinerary:

Flight information:
From : (Place) To : Place :
Period on which the special Flight Permit is requested
From: To : Proposed Departure Date

5. Details of crew required to operate the aircraft:

Name(s):	Licence and Rating(s):	Licence validity:

6. Details of non-compliance to airworthiness requirements: (Attach supporting documents including damage assessment report if any)

7. Details of limitation/ restriction, the applicant considers necessary for safe operation of the aircraft:

Engineering:

Operation:

8. Proposed action to make the aircraft fit for special flight:

9. Any other information relevant to the flight for the purpose of prescribing Operating limitations

10.**Statement of Operator/owner :**

Certified that the aircraft is capable of safe flight to the intended destination. The above particulars and full documents submitted in support of this application are true in every respect.

Name & Signature of CAM/Quality Manager/	**Name & Signature of Chief of Operations/**:

For DGCAR Use Only

NAME OF FLIGHT OPERATION INSPECTOR :

Date:	Flight Operation Inspector proposal of decision and Signature:

NAME OF AIRWORTHINESS INSPECTOR:

Date:	Airworthiness Inspector proposal of decision and Signature:

11.8. Appendix II Special Flight Permit XX/YYYY

Special Flight Permit XX/YYYY In accordance with Sultanate Oman Civil Aviation Law , this Special flight permit is hereby granted:			
PURPOSE:			
AIRCRAFT MANUFACTURER:			
Airlines/ operator:			
FLIGHT:	FROM: Milano (Entry point LILK)		
	TO: Milano (Exit Point LILK)		
REGISTRATION MARKS:	A4O-		
AIRCRAFT TYPE / MODEL:		SERIAL NUMBER:	
DATE OF ISSUANCE:		VALID UP TO:	

The Special Flight Permit is valid till _____ and subject to the following conditions:

1. A copy of the special flight permit shall be carried on board the aircraft when operating under this special flight permit;
2. The registration marks assigned to the aircraft shall be displayed on the aircraft in conformity with the requirements as laid down in Civil Aviation Regulations;
3. Person or property shall not be carried for compensation or hire;
4. No person shall be carried on the aircraft unless that person is essential to the purpose of the flight and has been advised of the contents of the permit and the airworthiness status of the aircraft;
5. The aircraft shall be operated only by flight crew members who are aware of the purpose of the flight and any limitation imposed, and who hold appropriate license issued or validated by PACA;
6. All flights shall be conducted so as to avoid areas where flights might create hazardous exposures to person or property;
7. All flights shall be conducted within the performance operating limitations prescribed in the aircraft Flight Manual and any additional limitations prescribed for the particular flight; and
8. The flight shall be conducted within the period of the validity of the Permit.
9. Before undertaking the flight, the aircraft shall be inspected and repaired to a degree necessary to ensure safe flight, and a maintenance release signed by a person/ organisation licensed/ authorized.
10. If the flight involves operation over States other than Sultanate of Oman, the operator of the aircraft must obtain Necessary overfly authorization from the respective authorities of each of those States prior to undertaking the flight.

Any other conditions or limitations as decided by PACA considered necessary by the operator for safe operation of flight:

Date:_____ Place**: _____**

Name: _____ & Authorized Signatory: _____

11.9. Appendix III Internal Checklist for the Issue of Special Flight Permit

S/N	Document(s) Requirement	Remarks
1	Name of the operator	
2	Type of Aircraft Registration No. of Aircraft	
3	Receipt of application	
4	Purpose of Flight	
5	Whether detailed assessment report of damage / defect is submitted by the operator	
6	Whether certificate for fitness of aircraft for safe flight to the intended destination is signed by the Chief of Engineering.	
7	Whether certificate for fitness of aircraft for safe flight to the inte nded destination is signed by the chief of Operation.	
8	Whether details of limitation of the flight is received from the ope rator.	
9	Whether inspection or test carried out by the operator for determining the safety of aircraft for the intended flight to thateffect is certified by appropriately authorized person.	
10	Whether damage or defect of the aircraft is considered safe for the flight or aircraft is required to be inspected.	
Recommendation for issue of special flight permit: **Date: (Name and Signature of the Airworthiness inspector)**		
Issue of Special Flight Permit: Approved / Not Approved		
Reference No. of Special Flight Permit Issued:		
Date:_____ **Director, Flight Safety**:_____ **(Name and Signature)**		

12. Export Certificate of Airworthiness

12.1. Introduction

12.1.1. General

The National Aviation Authority of the country of the country of import usually requires evidence from the Airworthiness Authority of the country of export as to the airworthiness of the aircraft concerned. The evident of airworthiness adopted and accepted internationally is usually in the form of an Export Certificate of Airworthiness.

12.1.2. Authorisation

The Export Certificate of Airworthiness does not, by itself, give authority for the aircraft to be flown. Such authority will have to be obtained from the Airworthiness Authority of the country in which the aircraft is to be registered.

12.1.3. Definition

The Export Certificate of Airworthiness is not a Certificate of Airworthiness as defined by Article 31 of the Convention and therefore does not confer the right of international flight and cannot be validated in accordance with Annex 8, Part II, Chapter 3 Paragraph 3.2.4. To fly internationally, an aircraft having an Export Certificate of Airworthiness will require a valid Certificate of Airworthiness issued by the State of Registry.

12.2. Application

The applicant will inform DGCAR in writing of his intention to export the aircraft and submit the Application made on PACA Form AWR045 to the flight Safety Department. The application and all documents shall be submitted at least 30 days prior to the actual issue date of the Certificate.

12.3. Requirements

12.3.1. General

The documents and other evidence specified in the AWR 045 shall be furnished to the Flight Safety Department to qualify an aircraft for the issue of an Export Certificate of Airworthiness.

On receipt of the application and requisite documents, the designated airworthiness inspector should commence work for issuance of export C of A in accordance with CAR 21 Subpart L. The airworthiness inspector shall carry out:

A) Application form review;
B) Review and its compliance of Special requirements and conditions of the country of import;
C) Aircraft configuration identification;
D) Aircraft documentation review; and
E) Aircraft inspection.

Airworthiness section assigns inspector for evaluation of application form. Airworthiness inspector is responsible for identification of additional special requirements or conditions from the CAA of the importing State. Airworthiness inspector is responsible to mention in export certificate of airworthiness any additional special requirement of the exporting State that the product does not comply with or

statement of compliance with any additional special requirement or special conditions specified by the importing State. Finally, relevant certificate delivers to applicant, after signature of DGCAR.

12.3.2. Exemptions

The certifications referred to in paragraph 3.1 shall be accompanied by details with respect to requirements or design standards with which the aircraft does not comply and for which exemption has been granted by the respective National Aviation Authority.

12.3.3. Authorisation

The requirement if any, of any special requirements or derogations required by the importing National Aviation Authority. These must be submitted in writing and have the written agreement from the importing NAA.

12.3.4. Program of events

The time scale for the issue process and the proposed departure date of the aircraft.

12.3.5. Fees

The applicable fee as per CAN1-6

12.3.6. Maintenance Approvals

Confirmation that the aircraft continue to be maintained in accordance with the Approved Maintenance Programme.

The certifications referred to in paragraph 3.1 and 3.2 shall have a valid Certificate of Airworthiness.

12.4. Survey/Inspection of the Aircraft and its document.

12.4.1. General

The Airworthiness Inspector responsible for processing the application will arrange with the applicant for a convenient date on which the aircraft and its documents can be inspected.

Any deficiencies will be recorded on the Aircraft Inspection Report if found.

12.4.2. Approvals

The designated airworthiness inspector will inspect all modifications and changes carried out as required by the importing NAA.

12.4.3. Certification

The Export Certificate of Airworthiness will not be issued until all deficiencies listed on the Inspection Report have been satisfactory addressed, or an agreement has been reached that these deficiencies will be included as derogation on the Certificate.

12.5. Issue of the Export Certificate of Airworthiness

12.5.1. Requirements for the issue of an Export CoA

When the Airworthiness Inspector is satisfied that all items have been satisfactorily addressed he will recommend the issue of the Export Certificate of Airworthiness giving due consideration to the followings;

a) If no derogations or special requirements are stated on the Export C of A the applicant may retain the current C of A. In such cases, the Airworthiness Inspector will advise the applicant as follows.
   I. Of the necessity to return the C of A to DGCAR, following de-registration of the aircraft.
   II. The aircraft must continue to be maintained to the approved maintenance programme in order to retain the validity of the C of A.
   III. If the aircraft has been assigned a 'Mode S' code, it is essential that the code be removed as soon as the aircraft id registered in another contracting state. As a reminder to the new operator, the inspector must make an entry in the Log Book advising that the 'Mode S' must be changed to one relevant to the new country of registration.
b) If the aircraft is being de-registered in the Sultanate of Oman and is being exported on a Special Flight Permit or any other document issued by the importing Authority, then the 'Mode S' code must be changed to a code issued by the new registration Authority.
c) The aircraft Log Book shall be underlines and dated at the point of the last entry to indicate the aircraft hours at the time of issue of Export Certificate of Airworthiness.
d) The DGCAR be issued with an Export Certificate of Airworthiness only for the Class I product (for complete aircraft).
e) The Sultanate of Oman Export Certificate of Airworthiness will certify only to the eligibility of the aircraft to receive the Certificate of Airworthiness in a particular category and unless specifically endorsed will not certify compliance with the airworthiness requirements of the importing Aviation Authority.
f) The requirements to be fulfilled by the operator before issuing the Export Certificate of Airworthiness are stipulated in CAR 21.

12.6. Records keeping:

The Flight Safety Department should establish a system to maintain records of all documents generated and received. It may be ensured that all related records are maintained. The following records must be available in the aircraft file:

(i) Records relating applications and supporting documents for the Export Certificate of Airworthiness;

(ii) correspondence of airworthiness authority of importing State regarding any special requirements for export,

(iii) Other information relevant to the Continuing Airworthiness of the aircraft

PACA الهيئة العامة للطيران المدني	**APPLICATION FOR THE ISSUE OF EXPORT CERTIFICATE OF AIRWORTHINESS**

Aircraft Registration Marks: A4O -

Note: when an item is not applicable, the letters "N/A" should be entered

Owner:
Operator:
Contact information:

Make:	Model:	Status: ☐ Used ☐ Newly overhauled (if applicable)		
TCDS No. and revision status	MSN:	Line No		Effectivity :
Year of manufacture:	Max take-off weight:	ARC? ☐ Yes ☐ No		C of A? ☐ Yes ☐ No
Category:	Flight Crew:	Observers:	C/A seats	Pax Seating Capacity

ENGINE:

Make:	Model:	TCDS No. and revision status:

PROPELLER:

Make:	Model:	TCDS No. and revision status:

APU:

Make:	Model:	TCDS No. and revision status:

Location of aircraft:	Country of destination (importing country):

I the *Owner /* Operator of the aircraft above, hereby apply to the Authority for an Export Certificate of Airworthiness.

Date:_____ Name (in block letters):_____

Signature of Accountable person: _____

Aircraft Registration Marks: A4O -

Note: When an item is not applicable, the letters "N/A" should be entered

GENERAL:

Total aircraft hours:		Total aircraft cycles:
Initially manufactured for:		
Maintenance Programme:		
A/C in compliance with AMP? If NO, list non-compliance in Part 3 ☐ Yes ☐ No	AMOC for AD's. ☐ Yes ☐ No	Flight manual number /Revision status/ Date of Revision: _____

PRIOR OPERATOR/CAMO HISTORY:

Dates (from – to)	Operator	CAMO	Approval No.

LANDING GEAR STATUS AS OF DATE……

Pos	Part Number	Serial No.	TBO/CBO	CSO	Date Last O/H
NLG					
Left WLG					
Right WLG					
Left BLG					
Right BLG					
CTR LG					

ENGINE STATUS AS OF DATE……MFG &MODEL :……..…

Pos	Serial No.	TTSN	TSO	TBO	Remaining Hrs	Date of Last Shop Visit
1						
2						
3						
4						
5						
6						

Aircraft Registration Marks: A4O -

APU STATUS AS OF DATE ……MFG &MODEL :……

Pos	Serial No.	TTSN	TSO	TBO	Rmng Hrs	Date of Last Shop Visit
1						

GEARBOXES STATUS AS OF DATE ……MFG &MODEL :……

Pos	Serial No.	TTSN	TSO	TBO	Rmng Hrs	Date of Last Shop Visit
1						
2						
3						
4						

MAIN ROTOR BLADES STATUS AS OFDATE ……MFG & MODEL :……

	Serial No.	TTSN	TSO	TBO	Rmng Hrs	Date of Last Shop Visit
1						
2						
3						
4						
5						
6						

AIRFRAME STATUS AS OF DATE:……MFG & MODEL :……..

Description of Check	Time/Cycle	Date Last Accomplished	Performed by	Next due per AMP A/C Total time/cycle

Status of compliance with special requirements of importing country

☐ No ☒ Yes If special requirements of importing country have been complied with, list those require ments and method of compliance.

Special requirements of importing country	Method of compliance

This confirms that the aircraft records have been assessed for airworthiness and applicable Type Certificate requirements by the applicant. All applicable airworthiness directives and other regulatory requirements have been complied with, except as stated. I hereby recommend and request that the above aircraft will be issued an Export Certificate of Airworthiness.

Maintenance Manager:

Signature:

Date:

Quality Manager:

Signature:

Date:

FOR DGCAR USE ONLY

Flight Safety Directorate Decision if satisfactory prepare the Certificate of Export to be signed by DGCAR.

Airworthiness Inspector Name: ……

Date:

Signature and Stamp : Satisfactory for Airworthiness Yes ☐ No ☐

GUIDANCE ON APPLICATION FOR THE ISSUE OF EXPORT CERTIFICATE OF AIRWORTHINESS

1. General

This information letter is intended to give guidance to the applicant for the preparation of aircraft documentation when applying for an Export Certificate of Airworthiness.

2. Records and documentation Presentation

Aircraft records when presented shall be complete, accurate and structured in a way that makes investigation process possible. A responsible person shall be available on behalf of the applicant to present aircraft records and status.It is recommended that a summary of the current records and related information are compiled into a book / folder or other concise document in order to simplify the record review process.

3. Recommended Format of Records and Documentation

Section one – Aircraft Certificates

This section should contain all aircraft / operator certificate such as Certificate of Airworthiness and Registration, ARC, Noise Certificate, Radio Station License, statements etc.

Section two – Engines and APU

This section should contain Release Certificates from last shop visit and status of all life limited parts for all engines and APU.

Section three – Gear Boxes

This section should contain Release Certificates from last shop visit and status of all life limited parts for Gear Boxes.

Section four – Landing Gears

This section should contain Release Certificates from last overhaul and status of life-limited parts for landing gears as applicable.

Section five – Airworthiness Directives (AD's)

This section should contain certified AD compliance list for the aircraft, its engines and appliances. The list should contain all Ads issued by the TC state for the type of aircraft/engine/appliances, a brief description of the AD, if it's applicable or not, if repetitive, open or terminated, when performed, reference to accomplishment documentation and when due if open or repetitive. It is recommended that this section contain copies of all applicable Ads and pertinent accomplishment documentation

Section six – Maintenance programme status

This section should contain status of aircraft to the approved maintenance programme including structural inspections and CPCP tasks. This section should also contain status of life-limited components and other hard-time components.

Section seven – Modifications

This section should contain all modifications to the aircraft with reference to the applicable approved data and to the accomplishment documentation.

Section eight – Repairs

This section should contain list of all structural repairs on the aircraft with reference to the applicable approved data and to the accomplishment documentation.

4. Copies of aircraft records

The operators shall provide copies of the following documents to the Authority:

1. Certificate of Registration
2. Certificate of Airworthiness
3. Radio Station License
4. Noise Certificate
5. Last Export Certificate of Airworthiness issued by state of manufacture
6. Insurance Certificate
7. Current AD compliance list
8. List of AMOCs
9. Status of aircraft to the Approved Maintenance Programme
10. CPCP Status
11. Life Limited Component Status
12. Last CRS and status of life limited components for Landing Gears
13. Last CRS and disk sheets for Engines and APU

14. List of Major Mods
15. List of Structural mods
16. Current Weight and Balance Report
17. List of work being performed at location (if applicable)
18. Approved LOPA (for passenger aircraft)
19. Emergency Equipment Layout
20. Current Dent and Buckle report with mapping of dents and damages
21. Accident / Incident statement
22. CRS for work being performed at location
23. PACA invoice fee payment

Copies can either be printed or stored on CD-Rom.

The Export Certificate of Airworthiness shall be issued in the format given below.

PUBLIC AUTHORITY FOR CIVIL AVIATION– SULTANATE OF OMAN

EXPORT CERTIFICATE OF AIRWORTHINESS

REGISTRATION MARK/MM/YYYY

This certifies that the aircraft identified below and particularly described in Specification(s) of, Type Certificate No: _____ has been examined and as of the date of this Certificate, is considered airworthy in accordance with applicable Civil Aviation Regulation in Sultanate of Oman and with the special requirements notified by the importing country as listed.

Note: *This certificate does not attest compliance with any agreements or contracts between the vendor and purchaser, nor does it constitute authority to operate an aircraft.*

Year of Construction	Manufacturer and Manufacturer's Designation of Aircraft	Aircraft Serial Number

Engine Model:

Propeller Model :

Country to which Exported :

Category :

	New		Newly Overhauled		Used Aircraft

Exceptions :

Date : DD, Month YYYY **Director General of Civil Aviation Regulation**

Note: No entries or endorsement may be made on this certificate except by an authorized person. If this certificate is lost, the PACA should be informed at once. Any person finding this certificate should forward it immediately to the Director General of Civil Aviation Regulation, PO Box 111, Muscat International Airport, Sultanate of Oman.

13. Management personnel qualifications

13.1. Background

13.1.1. Objective

This chapter provides guidance on evaluating the qualifications of maintenance and engineering management personnel for applicants conducting operations under CAR-OPS and CAR 145.

13.1.2. General

Personnel responsible for the inspection and maintenance and CAMO organizations should possess the qualifications acceptable to the DGCAR as per CAR OPS x.175, CAR OPSx.035, CAR 145.30, CAR M and CAN 3-22 paragraph 22.5. If an operator elects to contract out all maintenance, the positions defined by CAR-OPS / 145/CAR M are still required. The positions that are required include the following:

- The Director of Maintenance or equivalent post responsible for administering the operator / applicant's maintenance program;
- The Quality Manager or equivalent post responsible for administering the operator/applicant's program;
- Other post as identified in PACA CARs.

A. Consolidated Positions.

(1) Depending upon the needs of the maintenance organization, management positions may be consolidated with other positions. When management positions are consolidated, the individual serving in the consolidated position must meet the qualifications of both positions.

(2) Before allowing an individual to serve as Director of /CAMO/Maintenance / Quality Manager or equivalent post, consideration must be given to other duties performed by that person. For example, if that person also plans to serve as a flight crew member, the Airworthiness Inspector must ensure those duties will not interfere with the responsibilities as Director of Maintenance or Quality Manager or its equivalent.

13.2. Procedures

13.2.1. Procedures

A. Review Operator/Applicant's Submitted Candidate Data.

Review the following:

(1) DGCAR license / certificate for appropriate ratings and validity;
(2) Previous violation history, if any;
(3) Employment history (resume) to ensure that:
- The necessary experience requirements are met;
- Similar position was not previously held and contributed materially to any certificate revocation.

B. Interview the Candidate.

Determine the candidate's knowledge of the following:

- Maintenance sections of the operator/applicant's manual;

- Operator's operations specifications and AMO / Design approval;
- Relative maintenance operation provisions of CAR-M and 145.

C. Determine the Eligibility of Candidate.

Base the decision on the data review and the interview.

D. Debrief the operator/Applicant.

Inform the operator/applicant of the inspection results.

13.2.2. Task outcomes

Completion of this task will result in one of the following:

(1) Acceptance of the candidate by approving of the application form PACA Form AWR/032 / MOE relevant pages and one of the following-

(a) A letter to the operator/applicant indicating approval for Omani Operator and acceptance for the foreigner operator.

(b) A letter telling the operator/applicant to request a deviation if the candidate does not meet experience requirements or wishes approval of different positions or number of positions. The candidate must have been found acceptable based on the interview.

(2) Rejection of the candidate by sending a letter to the operator/applicant listing the reasons for rejection.

14. Continued Airworthiness Management Exposition (CAME) Approval

14.1. Background

14.1.1. Objective

This chapter provides guidance for evaluating an operator/applicant's Continued Airworthiness Management Exposition to ensure that policies, procedures and technical criteria in their CAME meet regulatory requirements.

Point M.A.704 of CAR-M and related AMCs and Appendix (Appendix V to AMC M.A.704 to CAR-M) give guidance to CAMOs for preparing and also PACA inspectors for reviewing Continuing airworthiness management expositions.

14.1.2. General

A. The continuing airworthiness management organization or operator shall provide a continuing airworthiness management exposition (CAME) containing the information in Point M.A.704 to CAR-M and associated AMCs. CAME should enable the operator's personnel to carry out their task at a high level of safety. The complexity of the exposition will vary with the complexity of the operation. The manual must cover specific items in accordance with the Civil Aviation Regulations and Civil Aviation Notices but may include additional items at the discretion of the applicant.

14.1.3. Reviewing Operator / Applicant's CAME

A. CAME should define all aspects of the continuing airworthiness management organization. As a minimum, the CAME must contain the requirements of CAR-M and related AMCs.

B. The CAMO/operator shall provide the PACA with a copy of the operator`s continuing airworthiness management exposition, together with all amendments and/or revisions to it.

C. CAME must be easy to revise and must show the date of the last revision on each page. The CAME must have a page control system showing the number of pages and including the latest revision.

D. The operator/CAMO is responsible for ensuring that CAME represent adequate guidance to meet all regulatory requirements.

E. The CAME and its amendments shall be approved by the PACA. The CAMO/Operator shall ensure the continuing airworthiness management exposition amended as necessary to keep the information contained therein up to date.

F. minor amendments to the exposition may be approved indirectly through an indirect approval procedure. The indirect approval procedure shall define the minor amendment eligible, be established by the continuing airworthiness management organisation as part of the exposition and be approved by PACA.

14.2. Procedures

14.2.1. Procedures

A. Brief Operator/CAMO

Provide the operator/CAMO with policies and regulatory requirements. Schedule and conduct a preliminary meeting, if necessary.

B. Evaluate General CAME Requirements

Ensure that the operator/applicant's policies and procedures included in CAME is in compliance with the requirements of CAR-M, M.A.704 and related AMC

The CAME must include a description introducing its philosophy and goals. If it is in more than one volume, the CAME must describe the division of contents between the volumes.

c. Evaluate Manual Contents

Airworthiness section personnel must use PACA **Form AWR 53** to review and evaluate submitting CAME.

A. Debrief Operator / Applicant

After the review, the manual must be returned to the operator/applicant with a list of any discrepancies found. The operator/applicant must be informed that final certification will not be completed until discrepancies are corrected. Inspectors should be concerned primarily with ensuring regulatory compliance.

Discuss Discrepancies and advise what areas need corrective action.

B. Content of CAME

Submitted CAME shall cover the requirement of CAR-M, M.A.704 and related AMC and contain the following information:

1. a statement signed by the accountable manager to confirm that the organisation will work in accordance with this Part and the exposition at all times, and;
2. the organisation's scope of work, and;
3. the title(s) and name(s) of person(s) referred to in points M.A.706,
4. an organisation chart showing associated chains of responsibility between all the person(s) referred to M.A.706,
5. a list of the airworthiness staff referred to in point M.A.707, specifying, where applicable, the staff authorised to issue permits to fly in accordance with point M.A.711(c),
6. a general description and location of the facilities, and;
7. procedures specifying how the continuing airworthiness management organisation ensures compliance with CAR-M, and;
8. the continuing airworthiness management exposition amendment procedures, and;
9. the list of approved aircraft maintenance programmes, or, for aircraft not used by licensed air carriers, the list of 'generic' and 'baseline' maintenance programmes.

Also the PACA review content of CAME regarding these items:

Part 0 General organisation

Part 1 Continuing airworthiness procedures

Part 2 Quality system or organisational review (as applicable)

Part 3 Contracted maintenance — management of maintenance (liaison with maintenance organisations)

Part 4 Airworthiness review procedures (if applicable)

C. Issuance of CAME Approval

After resolving and correcting discrepancies of CAME and submitting to PACA, the CAME Approval will be issued by PACA and signed by Director of Flight Safety.

15. Maintenance Organisation Exposition (MOE) Approval

15.1. Background

15.1.1. Objective

This chapter provides guidance for evaluating an operator/applicant's Maintenance Organisation Exposition to ensure that policies, procedures and technical criteria in their MOE meet regulatory requirements.

Point 145.A.70 of CAR-145 and related AMCs give guidance to Maintenance Organisation for preparing and also PACA inspectors for reviewing Maintenance Organisation expositions.

15.1.2. General

Maintenance organisation exposition' means the document that contain the material specifying the scope of work deemed to constitute approval and showing how the organisation intends to comply with CAR-145.

The Maintenance organization shall provide a Maintenance Organisation exposition (MOE) containing the information in Point 145.A.70 of CAR-145 and associated AMCs. MOE should enable the Maintenance Organisation personnel to carry out their task at a high level of safety. The complexity of the exposition will vary with the complexity of the operation. The manual must cover specific items in accordance with the Civil Aviation Regulations and Civil Aviation Notices but may include additional items at the discretion of the applicant.

15.1.3. Reviewing Maintenance Organisations MOE

A. MOE should define all aspects of the Maintenance organization. As a minimum, the MOE must contain the requirements of CAR-145 and related AMCs.

B. The Maintenance organization shall provide the PACA with a copy of the MOE, together with all amendments and/or revisions to it.

C. MOE must be easy to revise and must show the date of the last revision on each page. The MOE must have a page control system showing the number of pages and including the latest revision.
D. The Maintenance Organisation is responsible for ensuring that MOE represent adequate guidance to meet all regulatory requirements.
E. The MOE and its amendments shall be approved by the PACA. The Maintenance Organisation shall ensure the Maintenance Organisation exposition amended as necessary to keep the information contained therein up to date.
F. minor amendments to the exposition may be approved indirectly through an indirect approval procedure. The indirect approval procedure shall define the minor amendment eligible, be established by the Maintenance organisation as part of the exposition and be approved by PACA.

15.2. Procedures

15.2.1. Procedures

A. Brief Maintenance Organisation

Provide the Maintenance Organisation with policies and regulatory requirements. Schedule and conduct a preliminary meeting, if necessary.

B. Evaluate General MOE Requirements

Ensure that the operator/applicant's policies and procedures included in MOE is in compliance with the requirements of CAR-145, 145.A.70 and related AMC

The MOE must include a description introducing its philosophy and goals. If it is in more than one volume, the MOE must describe the division of contents between the volumes.

C. Evaluate Manual Contents

Airworthiness section personnel must use PACA **Form AWR 51** to review and evaluate submitting MOE.

D. Debrief Maintenance Organisation

After the review, the manual must be returned to the applicant with a list of any discrepancies found. The operator/applicant must be informed that final certification will not be completed until discrepancies are corrected. Inspectors should be concerned primarily with ensuring regulatory compliance.

Discuss Discrepancies and advise what areas need corrective action.

E. Content of MOE

Submitted MOE shall cover the requirement of CAR-145, 145.A.70 and related AMC and contain the following information:

1. A statement signed by the accountable manager confirming that the maintenance organisation exposition and any referenced associated manuals define the organisation's compliance with CAR-145 and will be complied with at all times. When the accountable manager is not the chief executive officer of the organisation then such chief executive officer shall countersign the statement;

2. A general description of the scope of work authorized under the organization's terms of approval, a description of the organization's procedures, of quality and safety policy as specified by requirement 145.A.65;

3. the title(s) and name(s) of the persons nominated accepted by PACA under requirement 145.A.30;

4. the duties and responsibilities of the persons nominated under requirement 145.A.30 and specified in subparagraph (3), including matters on which they may deal directly with the PACA on behalf of the CAR-145 Approved Maintenance Organisation;

5. An organisation chart showing associated chains of responsibility between the persons nominated under requirement 145.A.30(b) specified in subparagraph (3);

6. a list of certifying staff, support staff (if need it) and, if applicable, airworthiness review staff and staff responsible for the development and processing of the maintenance programme, with their scope of their authorization and of their approval;

7. A general description of manpower resources;

8. A general description of the organization's facilities located at each address specified in the CAR- 145 approved maintenance organization`s certificate of approval;

9. A specification of the approved maintenance organisation's scope of work relevant to the extent of approval;

10. The notification procedure of CAR 145.A.85 for CAR-145 Approved maintenance organisation changes and a description of the procedures for implementing changes affecting the approval of the maintenance organization.

11. The maintenance organisation exposition amendment procedure;

12. The CAR-145 Approved maintenance organisations procedures, quality and safety systems established by the organisation under requirements 145.A.25 to 145.A.90 and any additional procedure followed in accordance with CAR-M;

12.1. A description of the procedures used to establish the competence of the maintenance personnel required by this CAR-145.

12.2. A description of the method used for the completion and retention of the maintenance records required by 145. A.55.

12.3. A description of the procedures for preparing the maintenance release and the circumstances under which the release is to be signed

12.4. A description of the procedures for complying with the information reporting requirements of CAR 145. A.60.

12.5. A description of the procedure for receiving, assessing, amending and distributing within the maintenance organization all necessary airworthiness data from the organization responsible for the type design; and

13. A list of aircraft operators, if appropriate, to which the CAR-145 approved maintenance organization provides a maintenance service.

14. A list of sub-contractor, if appropriate, as specified in CAR 145.A.75 (b) including a description of the maintenance function contracted to each sub-contractor.

15. A list of line stations, where applicable, as specified in requirement 145.A.75(d);

16. A list of contracted CAR-145 approved maintenance organizations, if appropriate.

(b) The maintenance organization exposition shall be amended as necessary to keep the information contained therein up-to-date. The exposition and any subsequent amendment shall be approved by the PACA.

(c) Copies of all amendments to the maintenance organisation exposition shall be furnished promptly to all organisations and persons to whom the manual has been issued.

(d) Notwithstanding paragraph (b) minor amendment to the exposition may be approved through an exposition procedure, subject to the criteria of the minor amendment is defined in the exposition.

(e) Notwithstanding paragraphs (a) and (b), the PACA may accept the exposition produced by the organisation supplemented by specific control procedures to address the differences to ensure compliance with CAR-145.

Note: Guidance material on the content of a maintenance organization's procedures manual is contained in ICAO Doc 9760.

F. Issuance of MOE Approval

After resolving and correcting discrepancies of MOE and submitting to PACA, the MOE Approval will be issued by PACA and signed by Director of Flight Safety.

16. Aircraft maintenance programme Approval Procedure

16.1. Background

16.1.1. Objective

This procedure provides guidance for evaluating and approving a maintenance program developed by an operator / applicant.

1.0 Purpose

The Purpose of this procedure is to provide guidance to Airworthiness inspector in order to ensure that Aircraft Maintenance Programme are standardised and are included with all items required by M.A.302 and related AMC/GM of CAR-M before approval.

Maintenance of each aircraft shall be organised in accordance with an aircraft maintenance programme.

The aircraft maintenance programme and any subsequent amendments shall be approved by the PACA.

The operator / applicant shall provide, for the use and guidance of maintenance and operational personnel concerned, a maintenance programme, approved by the state of registry. The design and application of the operator`s maintenance programme shall observe Human Factors Principles.

2.0 Development of AMP

The AMP should be prepared by the operator based on the maintenance data information made available by the state of design or by the organisation responsible for the type design of Aeroplane, Engine, Propeller, Components and any additional applicable experience and submitted to the Flight Safety Department for approval. This information is generally available in the form of a maintenance review board report, maintenance planning documents of the type of aircrafts, aircraft maintenance manual, engine maintenance manual, component maintenance manual, Ads, SBs/SLs etc. various regulatory requirements of the PACA are also required to be included in the AMP. Maintenance specific to Airplane/Helicopter operation, such as but not limited to compressor wash / rinse, aircraft external wash, RVSM, EDTO and any other such applicable activity are also included as part of AMP/AMS.

Note 1: For a newly type-certificated aircraft where no previously approved maintenance programme exists, it will be necessary for the owner or the CAMO to comprehensively appraise the manufacturer's recommendations (and the MRB report where applicable), together with other airworthiness information, in order to produce a realistic programme for approval.

Note 2: For existing aircraft types it is permissible for the operator, owner or CAMO to make comparisons with maintenance programmes previously approved. It should not be assumed that a programme approved for one owner or the CAMO would automatically be approved for another.

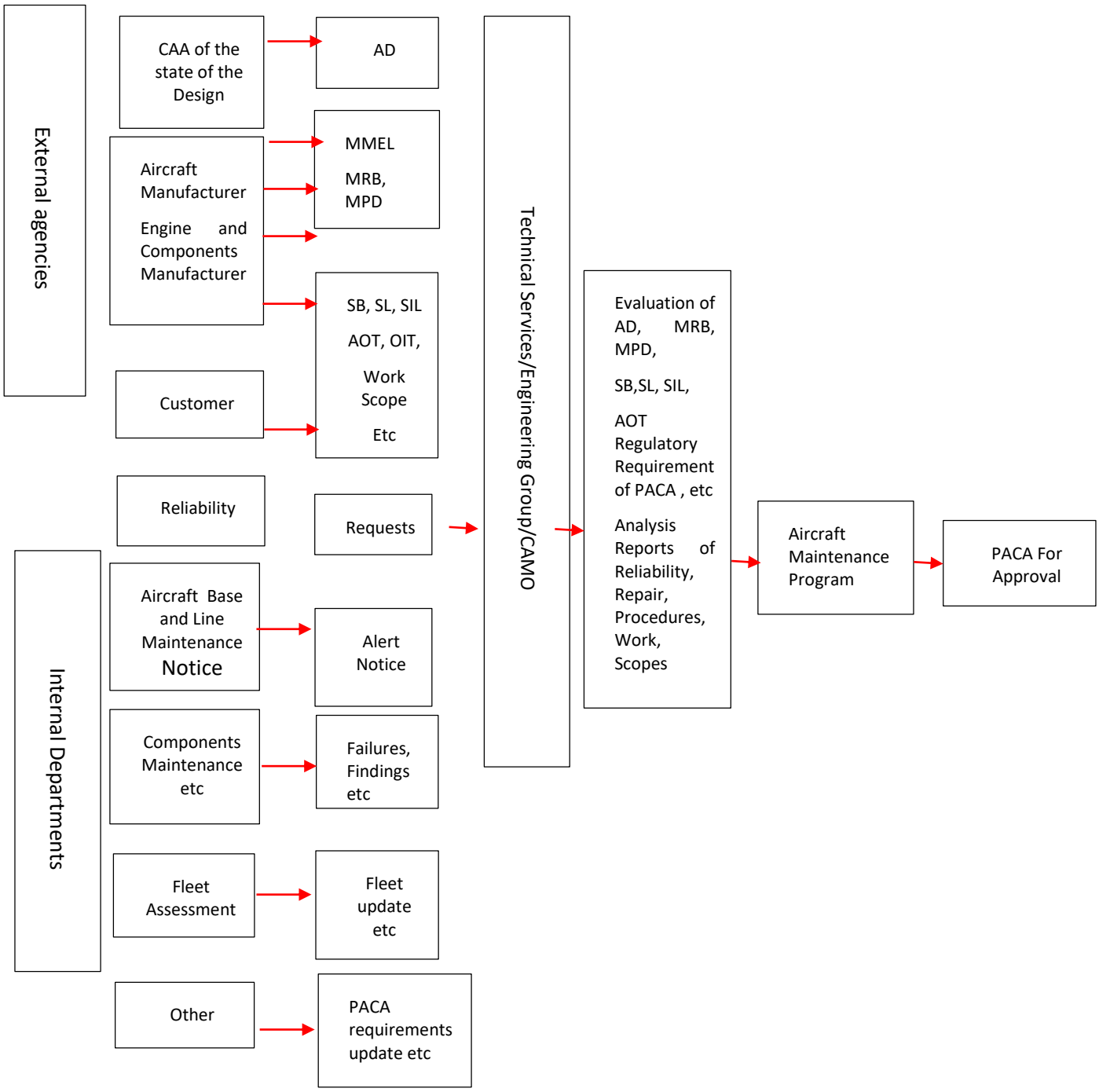
Evaluation should be made of the aircraft/fleet utilisation, landing rate, equipment fit and, in particular, the experience of the owner or the CAMO when assessing an existing programme. Where the PACA is not satisfied that the proposed maintenance programme can be used as is, the competent authority should request appropriate changes such as additional maintenance tasks or de-escalation of check frequencies as necessary.

Critical Design Configuration Control Limitations (CDCCL): If CDCCL have been identified for the aircraft type by the TC/STC holder, maintenance instructions should be developed. CDCCL's are characterised by features in an aircraft installation or component that should be retained during modification, change, repair, or scheduled maintenance for the operational life of the aircraft or applicable component or part.

Periodicity of Checks as per the anticipated utilization of the aircraft shall be stated in the AMP with a tolerance of not more than 25%. For very low utilization of aircraft, calendar time limits for inspection should also be included.

The task intervals are commonly specified in the MRB report in terms of relevant usage parameters such as cycles, flight hours or calendar time. For planning convenience, it is usual for the air operator (or the MRB) to group the tasks into packages or scheduled maintenance checks (for example, A-check or 150 hour check). When this is done, it is important to retain visibility of the original MRB recommended usage parameter for use when task and/or scheduled maintenance check interval adjustments are evaluated; and some operators may prefer to accomplish scheduled maintenance checks in separate “phases” which combine to make up a complete check. This is acceptable provided that the interval between repetitions of tasks is not exceeded (this may require some phases to be accomplished long before they are due during the first cycle).

A Flow Chart indicating samples of Source documents required to be referred for development of AMP is as follow


External agencies
CAA of the state of the Design
AD
Aircraft Manufacturer
Engine and Components Manufacturer
MMEL
MRB, MPD
SB, SL, SIL
AOT, OIT,
Work Scope
Etc
Customer
Internal Departments
Reliability
Requests
Aircraft Base and Line Maintenance Notice
Alert Notice
Components Maintenance etc
Failures, Findings etc
Fleet Assessment
Fleet update etc
Other
PACA requirements update etc
Technical Services/Engineering Group/CAMO
Evaluation of AD, MRB, MPD,
SB,SL, SIL,
AOT Regulatory Requirement of PACA , etc
Analysis Reports of Reliability, Repair, Procedures, Work, Scopes
Aircraft Maintenance Program
PACA For Approval

3.0 Contents of AMP

3.1 The maintenance program should contain the following information:

a) The type/model and registration number of the aircraft, engines and, where applicable, auxiliary power units and propellers.

b) The name and address of the owner, operator or CAMO managing the aircraft airworthiness.

c) The reference, the date of issue and issue number of the approved maintenance programme.

d) A statement signed by the owner, operator or CAMO managing the aircraft airworthiness to the effect that the specified aircraft will be maintained to the programme and that the programme will be reviewed and updated as required.

e) Contents/list of effective pages and their revision status of the document.

f) Maintenance tasks and the intervals at which these are to be performed, taking into account the anticipated utilization of the aircraft and operating environment of the aircraft. The maintenance programme based on information made available by the State of Design or by the organization responsible for the type design and any additional applicable experience. The basic requirements for a maintenance programme include but are not limited to:

i) Inspection;

ii) Scheduled maintenance;

iii) Overhaul and repairs;

iv) Structural inspection; and

v) Maintenance tasks and intervals specified and identified as mandatory in approval of the type design.

g) when applicable, a continuing structural integrity programme (SIP) which at least includes:

i) Maintenance of structural Integrity by damage Tolerance and Supplemental Structural Inspection Programmes (SSID).

ii) corrosion prevention and control;

iii) structural modification and associated inspections;

iv) repair assessment methodology; and

v) widespread fatigue damage (WFD) review;

h) Procedures for changing or deviating from b) and c) above for tasks that do not have mandatory designations from the State of Design; and i) Provision to record the date and reference of approved amendments incorporated in the maintenance programme.

j) Details of pre-flight maintenance tasks that are accomplished by maintenance staff

k) The tasks and the periods (intervals/frequencies) at which each part of the aircraft, engines, APU's, propellers, components, accessories, equipment, instruments, electrical and radio apparatus, together with the associated systems and installations should be inspected. This should include the type and degree of inspection required.

l) The periods at which components should be checked, cleaned, lubricated, replenished, adjusted and tested. The periods at which overhauls and/or replacements by new or overhauled components should be made.

m) If applicable details of ageing aircraft system requirements together with any specified sampling programmes.

n) If applicable, details of Critical Design Configuration Control Limitations together with appropriate procedures.

o) A cross-reference to other documents approved by the Agency which contain the details of maintenance tasks related to mandatory life limitations, Certification Maintenance Requirements (CMR's) and ADs. Note: To prevent inadvertent variations to such tasks or intervals these items should not be included in the main portion of the maintenance programme document, or any planning control system, without specific identification of their mandatory status.

p) when applicable, condition monitoring and reliability programme descriptions for aircraft systems, components and engines.

Note. — In the context of e) above, "when applicable" means that the condition monitoring and reliability programmes are only applicable to aircraft types where the maintenance programme was derived using the maintenance review board process

q) A statement that practices and procedures to satisfy the programme should be to the standards specified in the TC holder's Maintenance Instructions. In the case of approved practices and procedures that differ, the statement should refer to them.

r) Each maintenance task quoted should be defined in a definition section of the programme.

4.0 Evaluation and approval process by DGCAR

4.1 The applicant shall fill form AWR 052 and submit it to PACA.

4.2 The maintenance program shall be evaluated to ensure that items as per the source documents as required as per AMC of M.A.302 of CAR-M are included in the AMP. The airworthiness inspector responsible for evaluation of AMP shall ensure that all the requirements of PACA are also complied with. The airworthiness inspector uses the application PACA form 052 for the evaluation of the maintenance program as guidance.

4.3 When assessing aircraft maintenance programmes for approval, the PACA should verify that the maintenance programme is acceptable for the continuing airworthiness of the specific aircraft listed and it is appropriate for the proposed operating environment and scheduled utilisation.

4.4 After evaluation, if discrepancies are found, a notice listing specific discrepancies found and recommendations, outlining what will be required to correct the discrepancies is issued to the operator concerned for necessary correction.

4.5 The following requirements for content of the maintenance programme should be considered by the responsible airworthiness inspector during the evaluation of the proposed maintenance programme for approval.

a) MRB report approved by the State of Design;

b) MPD issued by the type certificate holder or manufacturer;

c) ALIs specified in the type certificate data sheet. These may include CMRs, safe life airworthiness limitation items, and damage tolerant ALIs;

d) Specific operation requirements of the DGCA. These requirements may relate to maintenance of additional configuration items required for the type of operations and to any additional maintenance tasks required by DGCA regulations. Examples include maintenance requirements relating to operations over uninhabited terrain, operations over water, EDTO, reduced vertical separation minima (RVSM) operations, all-weather operations (AWOPS) and navigation system requirements relating to polar operations and minimum navigation performance specifications (MNPS). Additional maintenance requirements relating to extreme climates (temperature, humidity, salt spray, ice or dust) in the area of operations may also be required by national regulations, specific maintenance requirements relating to the flight data recorder (FDR) system, the cockpit voice recorder (CVR) system, emergency equipment and other systems;

e) mandatory life limits for engine life-limited parts specified by the manufacturer;

f) engine and APU off-wing maintenance as specified in the engine and APU work scope planning guides; and

g) Instructions for continuing airworthiness (ICAs) specified for air operator installed equipment or required by STC modifications, including emergency equipment.

h) All items in the maintenance programme should have the source document clearly identified and mandatory items (such as CMRs, ALIs and ADs) must be clearly distinguished from items that are subject to adjustments or changes based on operating experience.

i) PACA DOES NOT allow any escalation from the operator/owner if the request is not having an approved data by the state design.

Note 1: *Except where stated otherwise in point M.A.302(c) the maintenance programme and its amendments shall be approved directly by the DGCAR*

Note 2: *In order to approve a maintenance programme according to Note 1, the DGCAR shall have access to all the data required in points M.A. 302(d), (e) and (f).*

4.6 Indirect approval: In the case of indirect approval, the maintenance programme procedure shall be approved by the DGCAR through the continuing airworthiness management exposition.

a) Approval of an aircraft maintenance programme through a procedure established by a CAMO should require the organisation to demonstrate to the DGCAR that it has competence, procedures and record keeping provisions, which will enable the organisation to analyse aircraft reliability, TC holder's instructions, and other related operating and maintenance criteria.

b) According to the complexity of the aircraft and the nature of the operation, the maintenance programme procedures should contain reliability centered maintenance and condition monitored maintenance programme procedures and have procedures relating to the programme control which contain the following provisions:

(i) task escalation or adjustment,

(ii) maintenance programme review,

(iii) SB or Service Information assessment,

(iv) component and structures in service performance review,

(v) maintenance programme revision and documentation control,

(vi) maintenance procedure effectiveness review and amendment,

(vii) maintenance review board report (MRBR) or manufacturer maintenance planning document (MPD) review and assessment, as appropriate,

(viii) AD review and assessment,

(ix) owner/maintenance/CAMO liaison,

(x) training (if applicable).

4.7 A representative from airworthiness section may attend the meetings held to consider maintenance implications arising from reviews of the above provisions.

4.8 The DGCAR may elect to publish a proposed maintenance schedule for a piston engine aircraft type or a group of piston engine aircraft types below 2 730 kg maximum take-off mass (MTOM) or for a sailplane, powered sailplane or balloon type or for a group of sailplanes, powered sailplanes or balloon types. When owners/operators of the aircraft mentioned above elect to use a DGCAR proposed maintenance schedule, all the out of phase manufacturer recommendations should be incorporated into the final maintenance programme in order for it to be approved.

4.7 When satisfied with the program contents and periodicity of items of AMP, the designated airworthiness inspector prepares the letter of approval to the flight safety. The AMP of effective approval pages should be returned to the operator with a covering letter and a copy is to be retained in the Flight Safety Department.

4.9 The documentation issued by the DGCAR to approve the operator's aircraft maintenance programme may include details of who may issue certificates of release to service in a particular situation and may define which tasks are considered as complex maintenance tasks or limited pilot owner maintenance according to Appendix VIII to CAR -M.

4.10 The DGCAR may approve an incomplete maintenance programme at the start of operation of an aircraft or an operator, subject to limiting the approval of the maintenance programme to a period that does not exceed any required maintenance not yet approved.

5.0 Periodical Review of Maintenance Programme and Amendments:

5.1. Amendments (revisions) to the approved maintenance programme should be made by the owner or the CAMO, to reflect changes in the TC holder's recommendations, modifications, service experience, or as required by the DGCAR.

5.2. The owner or the CAMO approved maintenance programmes should be subject to periodic review to ensure that they reflect current TC holder's recommendations, revisions to the MRB report if applicable, mandatory requirements and the maintenance needs of the aircraft and necessary revisions are to be proposed and submitted to the flight Safety Department.

5.3. The owner or the CAMO should review the detailed requirements at least annually for continued validity in the light of operating experience.

6.0 AMP Compliance:

6.1. In order to ensure continuing airworthiness of the aircraft, various maintenance actions called for in the aircraft maintenance programme are required to be carried out at specified intervals. All such maintenance work will be carried out by AMO approved under CAR-145, as per the procedures documented in MOE. The compliance of the AMP shall be also ensured by the airworthiness section during C of A renewal / Initial COA.

6.2. If the DGACR is no longer satisfied that a safe operation can be maintained, the approval of a maintenance programme or part of it may be suspended or revoked. Events giving rise to such action include:

a) An operator changing the utilisation of an aircraft;

b) The owner or CAMO has failed to ensure that the programme reflects the maintenance needs of the aircraft such that safe operation can be assured.

7.0 Record Keeping

7.1. Flight Safety Department should establish a system of record keeping that allows adequate traceability of the process of evaluation, approval and amendment of AMP.

7.2. The record-keeping system should ensure that all records are accessible whenever needed within a reasonable time. These records should be organized in a consistent way throughout into PACA library.

7.3. All records containing sensitive data regarding applicants or organisations should be stored in a secure manner with controlled access to ensure confidentiality of this kind of data.

17. Procedure for Approving MEL

17.1. Objective

A MEL is required for each type and model of aircraft to be operated which provides for the operation of the aircraft, subject to specified conditions, with particular equipment inoperative. This list, prepared by the applicant, in conformity with, or more restrictive than, the master minimum equipment list (MMEL) for the type approved by the State of Design, is tailored to the applicant's aircraft and installed equipment. The MEL is required to be approved by the State of the Operator. The MEL needs to be available to flight crew, maintenance personnel and personnel responsible for
operational control. The MEL also needs to include instructions for its use, including defects entry, categories, and actions to be taken (maintenance or operation) and placarding. The Airworthiness inspector should ensure that the tasks described in the MEL are within the privilege of a pilot or
maintenance staff, the maintenance actions and deferral meet the regulatory requirements of the State, and it reflects the applicant's aircraft configuration.
Note. — Annex 6 provide guidance on the MEL.

17.2. Procedure

The operator is required to prepare the MEL based on the MMEL and shall submit it with PACA Form AWR/OPS 36 to the Flight Safety Department. Upon receiving the operator request the designated airworthiness inspector and Flight Operation inspector shall scrutinize the MEL as per the PACA Form AWR/OPS 36, and on the basis of the MMEL ensuring the following:

(a) The MEL is prepared based on the MMEL. It shall be ensured that the MMEL has all the latest revisions approved by FAA/EASA/regulatory authority of the country of design/ manufacture whose TC is accepted by DGCAR. The first page of the MEL should indicate the Revision No. and date of the MMEL revision to which it has been updated. The MEL and its preamble should be customized keeping in view the operational specifications, configuration of the particular aircraft, modifications status, applicability of regulatory requirements etc.

(b) The Preamble of the MEL document shall contain the requirement that the defect will be rectified within a time frame as defined for each category of defect/un-serviceability.

(c) The regulatory requirements referred to in the MMEL such as TCAS, GPWS, CVR, DFDR etc. should be included based on the relevant requirements in the PACA regulatory requirement. A list of such MEL items shall be obtained from Operator's Continuing Airworthiness Manager.

(d) Operator's Continuing Airworthiness/Maintenance manager shall certify that the MEL has been prepared in consultation with the flight operations department representative. A similar certificate shall be given while applying for each amendment of the MEL.

(e) It shall be ensured by Flight Safety Department that the MEL is not less restrictive than the MMEL.

(f) Approval of Operating and Maintenance Procedures

(i) Dispatch with inoperative items is often acceptable only with the creation of special operating or maintenance procedures.

(ii) Where the MMEL indicates that this is the case, the operator must establish, publish and obtain approval for appropriate procedures.

(iii) The operator, when comparing the MEL against the MMEL must ensure that where the (O) or (M) symbols appear, an operating or maintenance procedure has been developed

that provides clear direction to the crew members and maintenance personnel of the action to be taken. This procedure must be included in the MEL.

(iv) The only exception is when the procedure is contained in another document that is available:

1. to the flight crew on the flight deck, such as an Aircraft Flight Manual, Aircraft Operating Manual, or the Company Operations Manual;
2. to the flight attendants, such as a Company Operations Manual or Flight Attendant Manual;
3. to the maintenance crew, such as an Aircraft Maintenance Manual (e.g.- the Aircraft Deactivation Procedures Manual), CAME or Alternate compliance manual, etc.

(v) Most manufacturers of large aircraft produce operating and maintenance procedures such as Dispatch Deviation Procedure Guides/ Dispatch Deviation Guides, for use by operators. While approving the MEL, the procedures against (M) and (O) items are also required to be approved. If the aircraft manufacturer has not published operating or maintenance procedures, the operator must develop appropriate procedures and submit them to DGCAR for approval as part of the MEL approval process.

(vi) In case the manufacturer has provided a Dispatch Deviation Guide (DDG) for the type of aircraft, while approving the MEL, it shall be ensured that the DDG is customized to the specific aircraft configuration and MEL.

(g) For items not included in the MMEL, but forming part of the MEL, due justification for the same shall be provided by the operator.

(h) After scrutiny, by the designated airworthiness inspector, it shall be submitted to the assigned Flight Operation Inspector on file for further scrutiny of the MEL from operational angle. A copy of the latest MMEL shall also be provided to the assigned FOI.

(i) Coordination between flight ops and Airworthiness inspectors: The MEL shall be reviewed by the flight operation inspector before granting the approval.

(j) The designated FO inspector shall verify, review and sign the MEL check list form 36 for items related to flight operation and send it back to the Airworthiness inspector.

(k) Any deficiency noticed during scrutiny either by Airworthiness Inspector or FOI shall be referred to the operator for corrective action. On being satisfied that the proposed MEL meets the MMEL and DGCAR regulatory provisions from maintenance and operational aspects, the MEL shall be approved by both designated inspectors and a letter of approval must be signed by the Director of Flight Safety Department in order to be send to the operator.

17.3. MEL Revisions

The procedure as given above for approval of MEL shall also be followed for approval of any revision/amendment to the MEL by the Flight Safety Department.

17.4. Status of MMEL

It will be primarily operator's responsibility that an updated and approved MEL is on board each aircraft. This may be checked by Airworthiness inspector during spot checks and surveillance.

17.5. General

When MEL has been invoked and could not be revoked within the time period stipulated for a particular category due to unavoidable circumstances, the Continuing Airworthiness Manager in extreme exigencies may approach Flight Safety Department which in turn shall forward such request with proper justification to FSD.

17.6. Maintenance of MEL/MMEL

Flight Safety Department shall maintain approved MELs and updated copies of MMEL for those aircraft for which manufacturers have issued MMELs. Upon receipt of revision status of MMEL, Flight Safety Department shall ensure that operators under their jurisdiction revise the MEL for aircraft operated by them accordingly and follow the procedure given in paragraph 3 for approval.

17.7. Record Keeping

The Flight Safety Department shall maintain the following records pertaining to approval of MEL and its subsequent revisions:

(i) Request of the operator for approval/ revision of MEL;
(ii) Revision status showing the following details **(**PACA Form AWR/OPS 36**)**
   a) Operator's application details;
   b) Reason for issue/ revision;
   c) MMEL Revision status including references of relevant CARs/ Circulars, if any;
   d) MEL revision status & date;
   e) Approval letter reference;
(iii) Completed checklist **(**PACA Form AWR/OPS 36**)**
(iv) Approval letter;
(v) Records pertaining to extension of MEL, if any.

18. Maintenance contractual arrangement

18.1. Background

1. Objective

This chapter provides guidance for evaluating a maintenance contractual agreement for a CAR-145 and CAR M (CAN 3-02 para 2.3)

2. General

A. A contractual arrangement extends the maintenance facilities and capabilities of an operator for accomplishing elements of the approved maintenance program. An operator contracting to have maintenance performed by another certificate holder may be authorized by DGCAR specifications to adopt all or part of the contractor's maintenance program, including involvement in that contractor's reliability program.

(1) The operator retains primary air-worthiness responsibility regardless of the terms of any contractual arrangement. It is the operators' responsibility to verify the suitability of the arrangement.
(2) A contractor must have the capabilities and facilities to perform the contracted work.
(3) The operator may adopt the publications of a contractor in part or in total as methods, techniques and standards. The operator's manual must describe the applicability and authority of the affected publication.
(4) The CAME of the operator must describe the policies and procedures for administering the contractual arrangement.
   (a) CAR 145.70 (a) (15) requires an operator to list in its manual the persons with whom it contracts for maintenance and include a description of the contracted work.
   (b) The operator should develop appropriate procedures for administering such arrangements and include these procedures in its CAME in accordance with the requirement of CAR M.

B. Contractual Categories, Related Provisions and Restrictions

The following paragraphs describe general categories of contract maintenance:

(1) **Category A:** Operator arranges for the performance of maintenance. This category includes contracts with AMO or other certificated operators to repair, inspect or overhaul engines, structures, airframes and / or appliances. Work is accomplished in accordance with the operator's approved program. The operator's manual CAME must list the names of these organizations and the scope of the work contracted. This type of contractual arrangement is required to be approved by DGCAR.

(2) **Category B:** Operator contracts for an all-encompassing maintenance program.
   (a) In this category, all maintenance is performed in accordance with the contractor's programs, methods, procedures and standards. The operator's equipment is considered part of the contractor's fleet for purposes of maintenance program content and maintenance intervals, including reliability control. Reliability data generated by the operator's equipment must be accounted for in the contractor's reliability program, unless data generated by the contractor's fleet is adequate and appropriate to the operator's fleet. Data generated by the operator's fleet should be compared periodically to data from the contractor's fleet. The contractor must account for all inconsistencies. This type of contractual arrangement must be authorized by the DGCAR.

(b) Maintenance program content changes and interval adjustments requires approval by the DGCAR. If approval is required, the operator is obliged to provide the Airworthiness Inspector with supporting data on which such changes are based.

(c) The operator generally is approved for the contractor's existing maintenance intervals. Special requirements may be needed to compensate for configuration differences, operational and environmental conditions (geographic areas, etc.) or other variables (hours per cycle v/s cycles per hour). The maintenance time limitations section of the operations specifications must identify any special requirements, either specifically or by reference to another document approved by the DGCAR.

(d) All maintenance, whether performed by the contractor or by other persons, shall be performed in accordance with the contractor's methods, standards and procedures.

(3) **Category C:** Operator contract specific functions using the contractor's approved maintenance program. This category is similar to Category B except that the contract covers specific functions rather than an all-encompassing program. For example, the contract may cover heavy maintenance on engines under the contractor's approved maintenance program. These contracts shall be approved for use by the DGCAR.

(4) **Category D:** Operator contracts to participate in the contractor's approved reliability program. In this category, the operator does not use the contractor's maintenance program, but participates in the contractor's approved reliability program. This type of contractual arrangement may encompass the entire aircraft or engines and must be included in the contractor's fleet for reliability purposes. This arrangement must be approved for use by DGCAR.

C. Company Exposition

Company exposition must provide sufficient detail to control the contractual arrangement including data transactions and records. The contract and details of the obligations / commitments of each participant must be referenced on the expositions.

18.2. Procedures and guidance

18.2.1. Procedures

A. Review the data submitted by the Operator

Ensure that the following are present:

- A copy of the contract and referenced documents if applicable
- Contractor's AMO certificate and rating
- Contractor's exposition and revisions to the operator's manual

B. Ensure that Contract/Reference Documents describe the following:

- The work scope and methods of compliance
- Responsibilities of all participants
- Location of contracted work
- Duration of the contract if applicable
- Compliance with Oman Civil Aviation regulations.

C. Ensure that the Operator's Manual CAME includes the following:

(1) A list of all contracted persons, including:

- Certificate number
- Ratings and limitations
- Description of work scope authorized

(2) Procedures to ensure:

- Proper transfer of all required documents and reports between contractor and operator as required by CAR-M
- Work is accomplished by the contractor.
- Periodic evaluations of the contractor's facilities are accomplished as required by CAR-M
- Contracted personnel are approximately certificated, trained, qualified and authorized to perform maintenance, inspections, and the operator's Required Inspection Items (RII).
- The contractor's maintenance manuals or portions thereof that are to be used for the contract maintenance are accepted in the operator's manual.

D. Determine the Capabilities of Contractor

Airworthiness Inspector must inspect the facilities and determine the contractor's authorizations and capabilities.

18.2.1.1. Guidance on contractual arrangements for maintenance

In approving an operator contracted maintenance arrangement, the DGCAR ensure that the following minimum requirements are satisfied:

(a) The operator, subject to contractual maintenance arrangements must ensure each aircraft it operates is maintained in an airworthy condition;

(b) The AMO contracted to perform the maintenance should have access to the operator's currently approved maintenance programme that includes the make and model of the aircraft subject to t he contract and the operator's CAME;

(c) An AMO performing maintenance for an operator under the terms of its organization certification should be appropriately rated and capable of performing the work contracted for, a nd that work should be performed in accordance with the air operator's approved CAME

(d) The AMO should have the facilities and capabilities to perform the work for which it has been contracted;

(e) When an air operator contracts with an appropriately rated AMO, the air operator should have a vailable the names of these organizations and the scope of the work contracted;

(f) The contractor's manual may be used in part or in total for methods, techniques and standards provided the air operator's CAME describes the applicability and auth ority of the affected manuals. The same applies to work forms;

(g) g) The air operator's CAME should also describe the policies and procedures for the evaluation and the air operator's approval of contractual arrangements;

(h) A procedure for maintaining maintenance records and for transmitting related information r egarding continuing airworthiness should be established.

(i) The arrangement should clearly describe the operators and AMO s responsibilities regarding the control, planning and scheduling of the maintenance tasks to be performed.

(j) The arrangement should ensure compliant with Oman Civil Aviation regulation.

Note : A Maintenance Contracts Review Checklist is dedicated for operators and inspectors for guidance.

19. APPROVAL OF SPECIAL OPERATIONS- ETOPS OPERATION

1. Purpose and Scope

CAR-OPS 1 requires the Omani operator to seek PACA approval prior to operating their aircraft for RVSM operation. Detailed airworthiness/operations requirements for ETOPS approval are described in the above CAN 3-37. This chapter provides guidelines to Airworthiness Inspector to be followed for ensuring compliance of policy and PACA requirements while processing the requests for grant of Initial and subsequent approvals to operators to undertake ETOPS operation. Each aircraft is required to be approved for ETOPS operation. This procedure is issued to provide guidance and information to air operators to Operate Extended Diversion Time Operations/Extended Range Operation with Two-Engine Aeroplanes (EDTO/ETOPS) of aeroplanes to ensure compliance with the PACA regulations. An Aircraft operator will not operate the airplane in an EDTO/ETOPS configuration unless is issued with an approval by the PACA.

2. Procedure- Initial Approval

2.1 Application for approval of ETOPS shall be submitted to the Flight safety department attached with PACA Form AWR/OPS 027 in order to be in compliance of the CAN 3-37 related to the operation and ETOPS manual. The supporting documents confirming compliance with requirements of CAN and the Checklist attached with this chapter shall also be enclosed by the concerned operator seeking approval. The checklist should clearly show the compliance and the location of the compliance in the notes section. Verification remarks column to be used by the designated airworthiness inspector while reviewing the operator request for approval.

2.2 The operator should further furnish details of the procedure/instructions and methodology for continued capability to adhere to conditions laid down at the time of grant of approval in a separate ETOPS Manual for use by personnel involved in ETOPS. Any amendment to the ETDO/ETOPS manual requires PACA approval.

3. Contents of the ETDO/ETOPS manual:

ETDO/ETOPS Manual should include procedures and guidelines for the maintenance program and other requirements for ETDO/ETOPS. In addition, all ETDO/ETOPS requirements, including supportive programs, procedures, duties and responsibilities including actions to be taken in case of adverse trend, including IFSD rate, reliability level etc. should be identified and documented. The content of manual should be as per the CAN 3-37 as mentioned above. The manual shall be scrutinized and approved by Flight Safety Department.

4. Airworthiness consideration for ETDO/ETOPS approval including enhancement of threshold time

4.1 The designated Airworthiness inspector shall carry out necessary investigation of the application from airworthiness point of view. Contents of Manual shall be as per the CAN. The manual is to be scrutinized to ensure that all ETDO/ETOPS requirements, including supportive programme procedures, duties and responsibilities, are identified and be subject to revision control.

4.2 The designated airworthiness inspector should ensure that the aircraft is in Compliance with type design standards at certification or by post certification modification action. The necessary amendments to the Approved Maintenance Programme / Schedule have been approved, MEL is amended. It is to be ensured that the necessary ETDO/ETOPS applicable amendments to the Maintenance documents, Maintenance programme, and CAME (as appropriate) have been supplied and approved where necessary.

4.3 Any deficiency noticed during evaluation by Airworthiness shall be notified to the operator by email or letter, etc for corrective action. Verification/ remark Column on the checklist shall be completed by the airworthiness inspector.

4.5 On being satisfied with proposal, and completeness of checklist and contents of ETDO/ETOPS manual, the Airworthiness inspector forward the proposal to the designated Flight Operation inspector for further evaluation from Operational aspect.

5. Demonstrations flight

The Airworthiness inspector in coordination with the designated flight Operations inspector shall associate with the proving/validation flight required completing the process of demonstration of flight for initial ETDO/ETOPS approval process.

6. Issue of initial Approval for ETDO/ETOPS

Grant approval letter related to the concerned of aircraft, Threshold time, route (s) will be issued by FSD and Ops Specification will be updated.

7. Approval of additional aircraft

Whenever an additional aircraft is added by an operator to their fleet for ETDO/ETOPS that already has such approvals (i.e. holding same type of Airframe /engine combination approval) , the approval may be granted by the Flight safety Department after scrutiny of operator request from Airworthiness aspect and recommendation received from the assigned Flight Operation Inspector from Operational aspect. The necessary amendment of ETDO/ETOPS manual shall be approved by the Flight Safety Department before approval of additional aircraft is considered. The checklist from Airworthiness aspect shall be completed by the responsible Airworthiness inspector. Approval letter for the specific aircraft will be issued by the Flight Safety Department (airworthiness &Flight Operation) and inclusion in Ops Spec of aircraft upon receiving the request from the operator.

The airworthiness section via their inspectors will ensure the compliance for maintenance and regulatory requirement relevant to the ETDO/ETOPS approval during routine surveillance. Necessary follow up action depend upon nature of finding shall be initiated in accordance with enforcement policy and procedure manual. Ongoing monitoring for AOC maintenance support arrangements, will be subject to the routine audit as per normal procedures. As part of continuing surveillance of ETDO/ETOPS, the fleet average engine in-flight shutdown (IFSD) rate for the specified airframe-engine combination should be monitored by the Flight Safety department. In the event that an acceptable level of reliability is not maintained, significant adverse trends exist, or if significant deficiencies are detected in the design of the aeroplane or propulsion system, the ETDO/ETOPS approval granted to the operator may be reviewed. The monitoring of above data is reviewed in periodic basis during reliability meetings. The airworthiness inspector shall attend the reliability program meeting conducted by the operator periodically as an observer and record it as part of oversight audit program.

A PACA AWR /OPS Form 027 shall be used to cover all ETOPS requirements.

8. Record Keeping

The Flight Safety Department will maintain records of all documents generated and received during the process of evaluation and approval of ETDO

20. APPROVAL OF SPECIAL OPERATIONS- RVSM OPERATION

1. Purpose and Scope

CAR-OPS 1 requires the Omani operator to seek PACA approval prior to operating their aircraft for RVSM operation. Detailed airworthiness/operations requirements for ETOPS approval are described in the above CAN 3-36. This chapter provides guidelines to Airworthiness Inspector to be followed for ensuring compliance of policy and PACA requirements while processing the requests for grant of Initial and subsequent approvals to operators to undertake RVSM operation. Each aircraft is required to be approved for RVSM operation.

2. Procedure- Initial Approval

2.1 Application for initial approval for RVSM operations shall be submitted in PACA Form AWR/OPS 044 to the Flight Safety Department along with compliance of the CAR related to the RVSM operation. The supporting documents confirming compliance with requirements of CAR attached with PACA application for RVSM Approval form shall also be enclosed by the concerned operator seeking approval. The checklist into the Application form should be properly filled by the Omani Operator. Verification remarks column of the checklist to be used by the related inspector airworthiness and Flight Operation inspector while reviewing the operator request for approval.

2.2 The designated airworthiness inspector shall carry out necessary evaluation of the application from airworthiness point of view. The airworthiness inspector should ensure that the aircraft is in compliance with type design at certification or by post certification modification action. The necessary amendments to the Approved Maintenance Programme/Schedule have been approved, MEL is amended and CAME / or equivalent documents.

2.2.1 It is to be ensured that if aircraft is operated in accordance with an AOC has the necessary RVSM applicable amendments to the Maintenance documents, Maintenance programme, and CAME (as appropriate) have been supplied and approved where necessary. These should include;

2.2.1.1 Details of how the operator, in conjunction with the contracted maintenance organisation will manage and report height-keeping errors including details of an appropriate and discrete reliability-monitoring programme.

2.2.1.2 It should be clearly described how the in-house Engineering/Flight Operations interface works with regard to the downgrading and upgrading of the RVSM capability of individual aircraft.

2.2.1.3 Training of personnel involved in RVSM maintenance should include recurrent training elements at regular intervals as defined.

2.2.1.4 The provision of, or access to all necessary test equipment and procedures.

2.2.2 For non-commercial air transport aircraft, the owner/operator will need to be able to demonstrate how they addressed/organized the following:

2.2.2.1 A maintenance programme/schedule amendment, which includes the equipment-installed IAW the manufacturer's service bulletin to enable the special operation, this may require an additional reliability programme.

2.2.2.2 Either an Engineering Manual, CAME (if applicable) or a supplement to the Operations Manual defining; General Organisation including an accountable manager or nominated person for maintenance and their responsibilities, RVSM Maintenance Procedures including procedures for upgrading and downgrading the operating system, Contracted Maintenance including the approved organisation nominated to maintain the operating systems and recommend the C of A renewal. This should also consider training (initial and recurrent) of personnel involved in RVSM maintenance.

2.2.2.3 Contracts or agreements between the operator and the contracted maintenance organisation.

2.2.2.4 Ensure that the PACA inspectors have access to the aircraft and contracted maintenance provider for the initial and subsequent audit/inspections.

2.2.3 Any deficiency noticed during evaluation pertaining to Airworthiness shall be referred to the operator by email or letter signed by the Flight Safety Department for corrective action. Verification/ remark column on the compliance checklist shall be completed by the airworthiness inspector.

2.2.4 On being satisfied with the proposal and completeness of checklist, the Airworthiness inspector forward the proposal to the designated Flight Operation inspector for further evaluation from Operational aspect.

2.2.5 Grant RVSM Approval and insert RVSM approval into Ops Specification of Aircraft

2.2.6 For continuation of RVSM approval, The airworthiness / flight operation have direct access to MIDRMA shall forward a completed MIDRMA Form-2 or coordinate with them to update MIDRMA database related to the RVSM Omani Fleet approval.

Note: To process the application, PACA adopts the standard 5-step approach, namely: pre-application meeting, formal submission of application, evaluation and/or assessment of documents, flight proving/validation and final approval or rejection of application.

3. Approval of additional aircraft.

Whenever an additional aircraft is added by an operator to their fleet for RVSM operation that already has such approvals, the approval may be granted by the Flight Safety Department after scrutiny of operator request from Airworthiness aspect and recommendation received from the assigned Flight Operation Inspector from Operational aspect. The application including the checklist from Airworthiness aspect shall be completed by the assigned Airworthiness inspector. Approval letter for the specific aircraft will be issued by the Flight Safety Department and inclusion in Ops Specification of aircraft upon receiving the request from the operator.

4. Continuing surveillance

The Flight Safety Department (The assigned flight Operation/Airworthiness Inspectors having an access to the MIDRMA database) shall ensure the compliance for maintenance and regulatory requirement relevant to the RVSM approval (airworthiness aspects) during routine surveillance. Necessary follow up action depend upon nature of finding shall be initiated in accordance with enforcement policy and procedure manual.

5. Record Keeping

The Flight Safety Department will maintain records of all documents generated and received during the process of evaluation, approval and of RVSM operation.

21. OPERATIONS - CAT II/CAT III OPERATION

1. Purpose and Scope

CAR-OPS 1 requires the operator to seek PACA approval prior to operating their aircraft for CAT II/CAT III Operation. Detailed airworthiness /operations requirements for CAT II/CAT III approval are described in the CAR-OPS. This Chapter provides guidelines to Airworthiness Inspectors to be followed for ensuring compliance of policy and PACA requirements while processing the requests for grant of Initial and subsequent approvals to operators to undertake CAT II /CAT III operation. Each aircraft is required to be approved for CAT II /CAT III Operation.

2. Procedure- Initial Approval

2.1 Application for approval for CAT II /CAT III operations shall be submitted to the Flight safety department PACA application Form AWR 049 along with para wise compliance of the CAR related to the operation. The supporting documents confirming compliance with requirements of CAR and the PACA application form related to CAT II /CAT III joined with the related document shall also be enclosed by the concerned operator seeking approval. The checklist inside the PACA application form should clearly show the compliance and the location of the compliance. Verification remarks column to be used by the designated airworthiness inspector while reviewing the operator request for approval.

2.2 The operator should further furnish details of the procedure/instructions and methodology for continued capability to adhere to conditions laid down at the time of grant of approval in a separate CAT II/CAT III procedure for use by personnel involved in CAT II/CAT III. Any amendment to the CAT II/CAT III procedure requires PACA approval.

3. Contents of the CAT II /CAT III procedure:

CAT II/CAT III Manual should include procedures and guidelines for the maintenance program and other requirements for CAT II/CAT III operations. In addition, all CAT II/CAT III requirements, including supportive programs, procedures to ensure continued serviceability, accuracy, reliability, characteristics in case of failures and degree of redundancy of the system, duties and responsibilities etc., this procedure should be submitted two months in advance to the Flight SAFETY Department before seeking approval of CAT II/CAT III flight. The content of procedure should be as per the PACA requirements. The procedure shall be scrutinized and approved by Flight Safety Department.

4. Airworthiness consideration for CAT II /CAT III Approval

4.1 The designated Airworthiness inspector shall carry out necessary evaluation of the application from airworthiness point of view. Contents of procedure shall be as per the CAR. The procedure is to be scrutinised to ensure that all CAT II/CAT III requirements, including supportive programme procedures, duties and responsibilities, are identified and be subject to revision control.

4.2 The designated airworthiness inspector should ensure that the aircraft is Compliant by build standards at certification or by post certification modification action. The necessary amendments to the Approved Maintenance Programme/Schedule have been approved, MEL is amended. It is to be ensured that the necessary CAT II/CAT III applicable amendments to the Maintenance documents, Maintenance programme, and CAME (as appropriate) have been supplied and approved where necessary.

4.3 Any deficiency noticed during evaluation by Airworthiness shall be notified to the operator by email or letter, etc for corrective action. Verification/ remark Column on the checklist shall be completed by the airworthiness inspector.

4.4 On being satisfied with the proposal and completeness of checklist of the PACA form 039, the Airworthiness inspector forward the proposal to the designated Flight Operation inspector for further evaluation from Operational aspect.

4.5 Grant CATII /III Approval (if found satisfactory) and Ops Specification of the operator will be updated.

5. Approval of additional aircraft.

Whenever an additional aircraft is added by an operator to their fleet for Cat II/III operation that already has such approvals, the approval may be granted by the Flight Safety Department after scrutiny of operator request from Airworthiness aspect and recommendation received form assigned FOI from operational aspect. The necessary amendment of Cat II/III manual shall be approved by the Flight Safety Department before approval of additional aircraft is considered. The checklist from Airworthiness aspect shall be completed by the responsible Airworthiness inspector. Approval letter for the specific aircraft will be issued by the flight Safety Department and inclusion in Ops Spec upon receiving a satisfactory request from the operator.

The necessary amendment of Cat II/III company procedure such us CAME shall be approved by the Flight Safety Department before approval of additional aircraft is considered.

6. Continuing surveillance

Airworthiness Section will ensure the compliance for maintenance and PACA regulatory requirement relevant to the CAT II/CAT III approval during routine surveillance. Necessary follow up action depend upon nature of finding shall be initiated in accordance with enforcement policy and procedure manual.

7. Record Keeping

The Flight Safety Department will maintain records of all documents generated and received during the process of evaluation, approval of CAT II/III operation.

22. Maintenance training program / record

22.1. Background

1. Objective

This chapter provides guidance for evaluating and accepting an operator/applicant's maintenance/inspection training program.

2. General

Effective training is the basis for a successful maintenance/inspection program. Although many procedures for maintaining and inspecting aircraft may be similar, the equipment, procedures and task documentation used may all be unique to the operator/applicant's specific programs.

A. CAR-M and CAR 145 require that maintenance/inspections be performed in accordance with the operator/applicant's manual.

B. Maintenance/inspection training programs are the most efficient manner to inform personnel of the requirements of the operator/applicant's program.

3. Coordination requirements and scheduling

Airworthiness Inspectors should encourage applicants to discuss pending maintenance/inspection training program development with the certification team before the program is submitted for final acceptance. It is especially important that programs be reviewed for conformity with appropriate regulatory requirements. This review can reduce the number of major changes an operator will have to make after a program has been printed and distributed.

4. Scheduling maintenance training programs

Delays in program acceptance results in delays in the certification process. To facilitate the evaluation of the training programs, the applicant should be encouraged to schedule a classroom training session in a timely manner.

5. Content of maintenance/inspection training programs

The operator/applicant'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.

A. Company Indoctrination

Each maintenance/inspection employee should receive instruction in the use of the operator/applicant's manuals, policies, procedures and forms.

B. Maintenance/Inspection Technical Training

(1) Training may consist of a combination of formal (classroom) instruction and on-the-job training. The operator/applicant may give training credit to individuals for experience gained while employed by other operators.
(2) Procedures unique to the operator/applicant should be taught. Training records should indicate the amount of formal training, on-the-job training and experience each individual receives.
(3) Technical training may be contracted to another operator, manufacturer or in the case of a specialized process, to a person knowledgeable in that specialized process. The operator/applicant is responsible for the content and quality of such training.

(4) The DGCAR does not establish a fixed amount of time for indoctrination or technical training courses, but should use a minimum time proportional to the operator/applicant's complexity.

C. Responsibilities for persons other than an Operator's employees

CAR-OPS M requires each certificate holder to be primarily responsible for having a training program and ensuring that the training received throughout the operator's system is of equal quality and effectiveness. This covers all persons such as the certificate holder's employees, contract personnel for emergency maintenance and servicing, etc.

(a) CAR 145.30 (d) relates in part that each certificate holder or person who performs maintenance shall have a training program to ensure that each person, including inspection personnel, is fully informed about procedures, techniques and new equipment in use and is competent to perform the applicable duties.
(b) CAR 66.45 relates in part that no person may use any person to perform required inspections unless the person performing the inspections is appropriately certificated, properly trained, qualified and authorized to do so.

Note: CAR 1 defines a person as an individual, firm, partnership, corporation, company, association, joint-stock association or governmental unit.

D. Category II/III Maintenance Personnel Training

Each applicant for Category II/III must establish an initial and recurrent training program. This program must be acceptable to the DGCAR and cover all personnel performing quality control inspection and maintenance work on Category II/III airborne systems and equipment. Training records for such personnel are to be kept current and made available to the DGCAR for inspection.

E. Continuation Training

The operator/applicant's training program should ensure that deficiencies discovered through continuous analysis and surveillance and / or reliability programs are corrected during recurrent training. Additionally, recurrent training should include at least the following:

- Review, reinforcement and upgrading of all training given in both indoctrination and technical subjects
- Input from maintenance bulletins and/or maintenance newsletters
- Critical tasks, such as run-up/taxi, Required Inspection Items (RII) and Non-destructive Inspection (NDI)

F. Training Records

Training records must be retained by the operator/applicant to document that personnel are adequately trained. Training records should be maintained at a central location, but may be maintained at other locations provided these locations are listed in the operator/applicant's manual.

G. Special Emphasis Training

Special maintenance/inspection training programs are required when new or different types of aircraft and/or equipment are introduced.

22.2. Section 2 procedures

22.2.1. Procedures

A. Review Operator File

B. Review Schedule of Events

If this task is performed as a part of an original certification, review the schedule of events to ensure that this task can be accomplished in accordance with the schedule.

C. Review Maintenance Training Programs

The program should include the following elements:

(1) The name of the person responsible for the overall administration of the maintenance training program.
(2) The name(s) of the person(s) responsible for other processes within the maintenance training program (e.g., record keeping, revisions to training programs and security of the program).
(3) Designated maintenance training instructors.
(4) A description of how instructors are determined to be qualified.
(5) Procedures used to authorize instructors.
(6) A file on the instructors consisting of qualifications, authorizations and other documents pertaining to instructor assignments.
(7) A list describing what type of training is required for new employees (Indoctrination, on-the-job training, etc.).
(8) Procedures for evaluating, crediting and documenting a new employee's previous training.
(9) Procedures for determining what additional training are required for a new employee.
(10) A schedule for continuation training, a description of continuation training and procedures for determining requirements for other training.
(11) Record keeping procedures, including records of the following:

- Training dates
- Who performed the training (instructor should indicate by signing)
- The number of hours of training performed
- The content of the training performed

(12) Criteria for determining the quality of the training program (training standards).
(13) Evaluation of the need to revise training programs.
(14) A training syllabus that describes the following:

- Content of each training course
- Format of training (classroom, on-the-job training)
- Duration of training courses
- Standards for grading students
- Training aids

(15) Criteria to determine acceptability of contract training, to include:

- Qualifications of instructors
- Criteria to establish appropriateness of reference material being taught
- Reporting procedures to inform operator of student progress

- Criteria to determine adequacy of facilities
- Criteria to evaluate contractor's training syllabus

D. Observe Operator/Applicant Performing Training

This observation is performed regardless of whether the operator performs the training or contracts with another company.

(1) Ensure that facilities are adequate, including classrooms, training aids and reference materials.
(2) Evaluate the instructor's presentation and knowledge.
(3) Ensure that course content and instruction is in accordance with the training syllabus.
(4) Ensure that training record keeping is performed in accordance with maintenance / RII inspection program.

E. Analyse Findings

Evaluate all deficiencies to determine what changes will be required.

F. Debrief the Operator/Applicant

(1) If deficiencies are discovered during the review, return the program to the operator/applicant with a letter describing the problem area, if necessary. If this review is being performed as a part of a certification, inform the operator/applicant that issuance of the certification will be withheld until deficiencies are corrected.
(2) Schedule a meeting with the operator/applicant to discuss the problem areas if it may be helpful in resolving deficiencies. Discuss how to resolve deficiencies.

22.2.2. Task outcomes

A. Successful completion of this task will result in the following:

- A letter to the operator/applicant approving the program
- The original approval program sent to the operator/applicant along with instructions to provide a copy of the program to the DFS.

B. Document task

File all supporting paperwork in the operator/applicant's file.

23. APPROVAL OF MAINTENANCE ORGANISATION

Scope

This chapter describes the administrative procedures which the Airworthiness section shall follow when exercising their tasks and responsibilities regarding issuance, continuation, change, suspension or revocation of maintenance organization approvals.

23.1. CERTIFICATION PROCESS

Purpose

This procedure provides a simplified guidance to individuals and organisations that would like to have a privilege of getting Maintenance Organisation Approval to perform maintenance and inspection functions on aircraft and components and for airworthiness inspectors to perform their audit and oversight activities on AMOs.

23.2. General Information

Contact the Airworthiness Section

Contacting the Airworthiness Section to discuss the requirements for certification as an approved maintenance organization should be done early in the planning stages of starting a maintenance organization. This action will save the individual or company a significant amount of finance and time. The AW Section will discuss required process and requirements.

23.2.1. DGCAR Role

General

CAR-145 stipulates that organisations engaged in the maintenance of aircraft and aircraft components shall be approved by PACA. The Airworthiness section has been vested with the responsibilities for the issuance, continuation, change, suspension or revocation of a maintenance organisation approval.

23.3. Certification Process

The objective of this chapter is to describe how the maintenance organisation shall proceed when applying for CAR-145 approval and how PACA will handle the initial investigation, renewal and the continued oversight of the approval of the maintenance organisation according to CAR-145 requirements.

The process provides for interaction between the applicant and the DGCAR from initial inquiry. It ensures that programs, systems, and intended methods of compliance are thoroughly reviewed, evaluated, and tested. The certification process consists of five phases:

- Pre-application Phase
- Formal Application Phase
- Document Compliance Phase
- Demonstration and Inspection Phase
- Certification Phase

23.3.1. Pre-Application Phase

During this phase, the prospective applicant can make initial enquiry regarding regulatory requirements/ processes to be followed to obtain the approval.

The Airworthiness inspectors should brief the applicant regarding regulatory requirements, processes, timelines etc. to be followed for grant of approval.
The applicant should be represented by the Accountable Manager or the designated Quality Manager. It will also be explained to the applicant at this time the need for an appropriate person designated as the focal point for the company during the AMO certification process. It is preferable that this designated person be a senior technical member or the Quality Manager and he/she will serve as the coordinator for the applicant during the Certification Process. One of the functions of this person will be to assure that all the findings issued by the PACA are directed to, and properly addressed by the appropriate personnel within the organisation. As a minimum, the following points will be discussed during this meeting:

a) specify the regulation and the applicable procedures;
b) clarify the requirements related to the MOE;
c) clarify the associated requirements (data, tool, staff, training etc.);
d) determine if the applicant's business activities justify the grant of CAR-145 approval;
e) specify the need for appointing a focal point

23.3.2. Formal Application Phase

The applicant shall fill PACA Forms AWR 030 and AWR 51 and submit them to the Flight Safety Department along with Maintenance Organization Exposition (MOE) prepared in accordance with point 145.A.70 of CAR-145.

In addition, following documents will be required to be submitted:

- PACA form 4 along with resume for post holders.
- SMS Manual along with associated documents, if applicable
- Applicable PACA fees when receiving PACA invoice as per CAN 1-06.

Note1: *The intended scope of approval should be detailed as much as possible. It should mention class and the ratings sought.*

- Upon receipt of application, the same will be scrutinised to determine eligibility and completeness of the application according to CAR-145.
- Incorrect or incomplete application will not be processed further and the applicant notified accordingly.
- While submitting the application, the applicant should provide evidence of compliance of following requirements:
  a) **Personnel Requirements:** Compliance of regulation as stated in 145.A.30 Personnel requirements. The persons nominated in accordance with CAR 145.A.30 to function as Accountable Manager, Base Maintenance Manager, Line Maintenance Manager, Workshop Manager and Quality Manager, as applicable.

b) **Facility Requirements**: Compliance of regulation as stated in 145.A.25 Facility requirements and related AMC, as appropriate.

23.3.3. Submit Formal Application

The formal application phase includes the application form (AWR 030) supported by documentation as required in the application. The AW team determines whether the package is complete. If not, the package is returned for additional work or documents. If formal application package is acceptable for further review, a Formal Application meeting will be arranged. In that meeting, an agreeable Schedule of Events will be worked out.

After the Pre-Application Phase, the applicant wants to put together the manuals, contracts, and other documents that the AW section indicated in writing that would be needed with the formal application. The actual list of items that must be submitted with the formal application is included in the application itself.

23.3.3.1. Completing the Application Form.

Complete the Application form (AWR 030) for Approved Maintenance Organization Certificate and/or rating. This is the checklist that advises the AW Section that the applicant have included the required items in the formal application package.

23.3.3.2. Resumes of Management Post holders

The resumes of management personnel must be included in the formal application package for the required management listed in the Form 4 (AWR 032) with the application forms. It must be clear from the resume that the person is holding which post.

23.3.3.3. Allocation of the certification team

Upon receipt of the application at Flight safety department, and prior to the Formal Application Meeting, a Certification Team is assigned to oversee the AMO certification process of the new applicant by the designated airworthiness inspector by the Flight Safety Director. The composition and size of the certification team may consist of a Team Leader to manage and airworthiness inspector(s). The size of the team may vary depending upon:

a) Size of the applicant organization;

b) Complexity of the organization approval applied for;

c) Number of sites proposed to be covered by the approval;

d) Nature of the services to be covered by the organization and its impact to aviation safety.

Scheduling of Formal Application meeting: The concerned airworthiness inspectors will intimate the date of formal application meeting along with detail of certification team to the applicant. Prior to scheduling the formal application meeting, the certification team will initially review the application package and make a determination of its acceptability within 15 working days. The team leader will provide written notification of acceptance or rejection of the formal application.

The main objectives of the Formal Application Meeting are to:

a) Introduce the Organization's Management personnel to the PACA Maintenance Certification Team.

b) Assure that the applicant's maintenance team understands the AMO certification process.

c) Resolve the queries raised by the Applicant, if any.

23.3.4. Document Evaluation Phase

The next phase is the Document Evaluation Phase. Airworthiness inspectors actively reviewing MOE and associated procedures and other documents and proposed records for acceptability. The application and the documents will be evaluated in conjunction with Internal checklist and PACA Form 6. The evaluation and assessment of the airworthiness inspector shall consist of following items:

a) Evaluation and acceptance of Post holders and other personnel and completion of PACA Form 4 (AWR 032)
b) Review and scrutinizing PACA Form 51 /MOE / associated procedures
c) Review of SMS Manual and associated procedures

23.3.4.1. Evaluation and acceptance of Post holders and other personnel and completion of PACA Form 4 (AWR 032)

1) The Accountable Manger should demonstrate to Flight Safety Department that he has a reasonable understanding of applicable regulations and of his role within the approved organisation, but also that he has all necessary means, in particular financial, to fulfil the Accountable Manager's duties as detailed in the MOE. The Accountable Manager is accepted via approval of the MOE containing the Accountable Manager's commitment statement. The PACA may reject an Accountable Manager where there is clear evidence that they previously held a senior position in any approved Organisation and abused that position by not complying with the particular CAR requirements.

2) The proposed post holders are required to demonstrate to PACA appropriate essential requirements of qualification, experience in accordance with 145.A.30 and are competent to perform their function. If satisfied, the formal acceptance of the post holders is granted through the corresponding PACA Form 4 (AWR 032) by PACA. Once the post holders have been approved for local AMO /accepted for Foreign AMO by the Flight Safety Director, the names of the post holders shall be reflected in the MOE.

3) The organisation shall also have adequate appropriate aircraft rated certifying staff and support staff listed in their MOE.

23.3.4.2. Review of MOE and associated procedures:

(1) The maintenance organisation shall identify and analyse the maintenance processes intended to be included in the CAR-145 approval and ensure compliance of such processes with CAR-145 regulation "as amended" and applicable PACA requirements which are available on the PACA web site. Based upon the analysis /review the maintenance organisation shall develop and provide MOE ncluding associated procedure(s) as applicable.

(2) The Certification Team will evaluate the AMO Organization's MOE including associated procedure(s) as applicable to ensure full compliance with the applicable requirements and in order to establish that it complies with 145. A.70. The evaluation will be conducted using the PACA Checklist given in

PACA Form AWR 51. The MOE must include the subject headings listed in AMC 145.A.70(a) and reflect the associated procedures. The PACA designated airworthiness inspector is required to ensure that the procedures specified in the exposition are in compliance with the intent of CAR-145.

(3) When the proposed exposition is not acceptable (i.e. procedures or required information not available, not compliant with CAR-145 requirements and therefore could not be reviewed within the allocated time, the assigned team leader is required to return the MOE back to the maintenance organisation for corrections. The assigned airworthiness inspector will notify in writing the Applicant of the non-compliance's and/or corrections. A copy of this notification letter should also be inserted in the AMO's Certification file appropriate section(correspondence). The maintenance organisation will have to correct the MOE in accordance with the relevant CAR requirements and submit it again to PACA.

(4) On the basis of the findings/discrepancies in the MOE, the AMO is responsible for the relevant corrective actions/modifications required by the Flight Safety Department (Airworthiness section). The certification team members must properly track each item in order to ensure its rectification.

(5) If after several exchanges, should the maintenance organization still fail to provide acceptable documents (MOE/Associated procedures,), PACA will determine the most appropriate actions including termination of the application.

(6) MOE approval will be accomplished when all items identified in the PACA Form AWR 51, have been identified and evaluated as satisfactory and the AMO application form is properly filled.

23.3.4.3. **Review of SMS Manual**

(1) As a part of state safety programme, aircraft maintenance organisation shall implement a safety management system acceptable to the PACA that shall meet the following objectives:

i. Identify safety hazards;

ii. Assesses the impact of these safety hazards and mitigates risks;

iii. Ensures that remedial action necessary to maintain an acceptable level of safety is implemented;

iv. Provides for continuous monitoring and regular assessment of the safety level achieved; and

v. Aims to make continuous improvement to the overall level of safety.

(2) The airworthiness inspector, who has undergone training on SMS, should evaluate the request and required supporting documents including compliance checklist. In case any discrepancy observed during evaluation, the same should be intimated to the concern organization in writing.

(3) The safety management manual and the documentation submitted by the organisation shall be scrutinized by Airworthiness section and on being satisfied with the evaluation, the request along with all documents submitted by the organization, shall be forwarded to the Flight Safety Department (Airworthiness section) for acceptance. It shall be ensured that safety management system is accepted by PACA before formal approval of the AMO.

23.3.5. Inspection and Demonstration Phase

When that phase is complete, next is the Demonstration and Inspection Phase. During this period, the Inspectors will audit and inspect facilities, technical documents, equipment, … in accordance with CAR-145 requirements.

The following inspections and demonstrations should be expected be required for the different groupings of the organisation during the inspection and demonstration phase. These inspections must be judged satisfactory in order to complete the certification process.

23.3.5.1. **Internal audit report from the maintenance organisation's quality system.**

Once the draft of the MOE and the applicable PACA Forms 4/AWR 032 are confirmed as being acceptable by Certification team, the maintenance organisation's Quality department shall audit the maintenance organisation in full for compliance with the MOE and CAR-145 requirements. All relevant regulation/guidance dealing with specific technical matters (i.e. certifying staff, line maintenance, composite repairs, etc.) as applicable to the specific maintenance organisation, shall be also used as reference.

A statement signed by the organization's Quality Manager shall be provided to the PACA before the audit takes place confirming that processes, facilities, documentation, tools, equipment, material, components and personnel subject to the application have been reviewed and audited showing compliance with all applicable CAR-145 requirements. This means that all findings raised during this internal audit must have been closed with appropriate corrective actions before issuing this statement. The relevant internal audit report(s) including the associated corrective actions shall be provided by the maintenance organisation along with the QM statement to the PACA.

23.3.5.2. **Preparation of the Audit**

After receipt of the Quality Manager statement and the internal quality audit report, the Certification team initiate the on-site investigation in accordance with Airworthiness Procedure Manual. The maintenance organisation shall provide any necessary administrative support in order to complete the inspection. The Team leader will:

a) Liaise with the maintenance organisation for scheduling the audit;
b) Prepare and notify the maintenance organisation of the audit plan.

Note: *In case of modification to the initial application, the maintenance organisation shall notify PACA before the investigation takes place by sending a revised PACA Form AWR 030.*

23.3.5.3. **On-Site Audit**

The Certification team shall start the investigation audit with an opening meeting with the maintenance organization's management and where possible with the Accountable Manager. During the on-site inspection phase the facilities, services, procedures, tools and equipment of the AMO organization are assessed for acceptability. The following points shall be considered when carrying out the meeting:

a) Confirmation of the audit schedule including objectives and scope of the audit.
b) Confirmation of the required interviews / availability of the people involved in the CAR-145 process.
c) Explanation on the method used for reporting non conformities.
d) Confirmation of the applicable regulation and standards

During the on-site Audit, each member of Audit team to be accompanied by a senior technical member, preferably the Quality Manager of the AMO. Progressively complete the CAR-145 checklist, recording any findings against the sub-paragraph of the requirement and the applicable area of the audit, following the completion instructions. All findings must be confirmed in writing to the organisation. The Certification team should inform the head of the office of the findings made during the audit who shall in turn inform the same to the Quality Manager for necessary corrective action.

The Certification team is required to inform Head of the Airworthiness about any inconsistencies with the number of staff required to meet the manpower requirements of the approval scope and rating as detailed in CAR 145.A.30 and the manpower aspects of CAR 145.A.30 (d) and as detailed in the MOE.

If the initial investigation lead to significant and/or numerous discrepancies, this would show insufficient understanding / compliance of the maintenance organisation and a lack of effectiveness of the Quality system. In that case, PACA may take the decision and inform the maintenance organisation accordingly:

a) To terminate the application. If the maintenance organisation wish to re-apply for CAR-145 approval, a new application need to be submitted to PACA;
b) To limit the requested scope of work;
c) Not to accept the concerned post holders and/or nominated personnel as defined in CAR 145.A.30 (a) & (b).

For an initial audit the findings shall not be classified as Level 1 or 2 as the maintenance organisation is not approved. A maximum of three months is allowed to take corrective action for each finding raised during the initial audit. Failure to close these findings during the agreed period without adequate justification could lead PACA to terminate the application.

The PACA shall verify that the organisation is in compliance with the requirements of CAR-145. For this purpose, the following procedure may be adopted while auditing the organisation for grant/ variation of approval:

i. For a large organization, one large team audit or a short series of small team audits may be carried out.
ii. It is recommended that the audit is carried out on a product line type basis in that, for example, in the case of an organisation with Airbus A310 and A320 ratings, the audit be concentrated on one type only for a full compliance check and dependent upon the result, the second type may only require a sample check against those activities seen to be weak on compliance for the first type.
iii. The designated airworthiness inspectors should always ensure that they are accompanied throughout the audit by a senior technical member of the organisation. Normally this is the quality manager. The reason for being accompanied is to ensure the organisation is fully aware of any findings during the audit.

Depending on the extent and nature of the findings and the delay of corrective actions implementation, an additional audit may be necessary.

The AMO organization responds to findings (if applicable) and resubmits the Audit Finding Form(s) with either the full corrective action described on the form or cross referenced as an attachment. Certification Team evaluates the closures, where necessary, carrying out a follow-up audit and closes the findings, completing also PACA Form 6 and PACA Checklist CL 145.

The Airworthiness inspector shall record all findings, closure actions (actions required to close a finding) and recommendations.

The reports should include the arising date of each finding was cleared together with reference to the PACA report or letter that confirmed the clearance.

23.3.6. Certification Phase

Once the maintenance organization's compliance with CAR-145 has been established and all findings are closed, the Certification team will make a recommendation to issue the CAR-145 approval to the maintenance organisation. For initial approval all findings must be corrected before the approval can be issued.

The recommendation package (Document review and the on-site audit report including closure of findings) will be reviewed for compliance and accuracy. A quality review of the PACA Form 6 audit report form and PACA Audit Checklist CL 145 should be carried out by the designated airworthiness inspector. The review should take into account the relevant paragraphs of CAR-145, the details of finding and the closure action taken. Satisfactory review of the audit forms should be indicated by a signature on the audit form.

23.3.6.1. Issue of approval

The Director of Airworthiness shall formally approve the exposition and associated procedures and issue to the applicant approval certificate, which includes the approval ratings. The approval of the exposition and associated procedures shall be intimated in writing. The certificate of approval shall only be issued when the organization is in compliance with CAR-145.

The approval will be based only upon the organizational capability (including any associated sub-contractors) relative to CAR-145 and not limited by reference to FAA/ EASA type certificated products. For example, if the organization is capable of maintaining within the limitation of CAR -145 the Boeing 737-200 series aircraft the approval schedule should state A1 Boeing 737-200 series and not Boeing737-2H6 which is a particular airline designator for one of many -200 series.

(a) The approval of the exposition shall be intimated in writing.
(b) The conditions of the approval shall be indicated on approval certificate. The validity of the CAR-145 approval will be for a period not exceeding two years.
(c) The reference number shall be included on approval certificate. The numeric sequence should be unique to the particular approved maintenance organisation.
(d) For organizations having multiple locations, the approval shall be issued by the FSD/AWS. The periodic renewal also may be carried out by the FSD/AWS. The oversight functions are performed by FSD/AWS.
(e) Fees: For grant of approvals, or changes to the approval ratings by inclusion of additional type of Aircraft (aircraft and engine combination) on the Certificate of approval, renewal of approval fees shall be charged in accordance with CAN 1-06. FSD/AWS must ensure that a correct fee is charged as required by CAN 1-06.

Note: *A certificate may be obtained from the Accountable Manager regarding number of employees for the purpose of Fee to be levied.*

At this stage the following documents should be placed in the AMO's Certification File:

(a) Application Form AWR 030
(b) PACA Form 4s (AWR 032) along with supporting documents/evidences and copy of acceptance letter
(c) MOE approval letter and file record
(d) PACA Form 6,
(e) Team Report letter and Audit Finding Closure documents
(f) Duly filled Internal Checklist
(g) Approval Certificates
(h) Letter to AMO forwarding the Approval Certificates

23.3.6.2. Change to the Scope of CAR-145 approval (145.A.85)

An application for change of CAR-145 Maintenance Organisation approval should be made to the PACA/FSD by using the PACA Form AWR 030 along with the following documents:

(a) Soft and hard copy of amended MOE and associated procedure manuals;
(b) Details of personnel including post holders
(c) No. of employees certified by the Accountable Manager;
(d) Applicable fees as per CAN 1-06.

The guidelines for initial approval process will be followed by the concerned PACA /AWS for change in scope of approval.

23.3.6.3. Renewal of an approval (145.A.90)

An application for renewal of CAR 145 Maintenance Organisation approval should be made to the PACA/FSD by using the PACA Form AWR 030 along with the following documents;

(a) Internal audit report and status of closure of findings of the organisation;
(b) Validity and scope of approval of organisation, as relevant;
(c) No. of employees certified by the Accountable Manager;
(d) Applicable fees as per CAN 1-06.

Each organization must be completely reviewed (audited) by PACA for compliance with CAR-145 at periods not exceeding 24 months. PACA should use complete the PACA Form 6 for the purpose. It should be ensured by the concerned PACA that no finding is open at the time of renewal of approval.

23.3.7. CAR-145 Approved Organisation Records

Records of approval of an organization shall be retained for an adequate period that allows adequate traceability of the process to issue, continue, change, suspend or revoke each individual organization approval. The records shall include as a minimum:-

a) The application for an organization approval, including the continuation thereof.
b) The continued oversight program including all audit records and PACA Checklist CL145.
c) The organization approval certificate including any change thereto.
d) A copy of the audit program listing the dates when audits are due and when audits were carried out.
e) Copies of all formal correspondence including Form 4 (AWR 032) or equivalent.
f) Details of any exemption and enforcement action(s).
g) Any other regulatory authority audit report forms.
h) Maintenance organization expositions.

23.3.8. Approval process of Foreign Aircraft Maintenance Organization

Applications of foreign firms seeking approval under CAR-145 are dealt with by PACA/FSD. Such applications shall be accompanied by the following:

i. Letter of Intent from the Omani operator desirous of using the facility.

ii. FAA/EASA and Local Authority approval and approved Capability List.

iii. Recent audit findings from the above mentioned authorities and internal audit report. (maybe requested).

iv. Resolution of the audit findings.

v. MOE with proposed amendments to comply PACA CAR-145 requirements.

vi. Fees

Upon receipt of the above document an inspector is designated by the Flight Safety Department. The designated inspector shall carry out the necessary investigation and prepare a report along with completed Form 6 and check lists to the Flight Safety Director. Thereafter, approvals of the firm may be issued by PACA. The investigation and continued oversight of the approval may be carried out by specific teams appointed by PACA.

23.3.9. Continuation of an approval

The continuation of an approval shall be monitored in accordance with the applicable initial approval process under 145. B.20. In addition:

The Airworthiness section shall maintain and update a program listing the approved maintenance organisations under its supervision, the dates when audit visits are due and when such visits were carried out. Credit may be claimed by the airworthiness inspector for specific item audits completed during the preceding 11 months' period (i.e., each item of PACA form 6 may be deferred by 11 months from the due date of the same item, if the previous results were satisfactory) subject to following four conditions:

(i) the specific item audit should be the same as that required by CAR-145 latest amendment;

(ii) there should be satisfactory evidence on record that such specific item audits were carried out and that all corrective actions have been taken;

(iii) the airworthiness inspector should be satisfied that there is no reason to believe standards have deteriorated in respect of those specific item audits being granted a back credit; and

(iv) the specific item audit being granted a back credit should be audited not later than 23 months after the last audit of the item.

Each organization must be completely reviewed (audited) by PACA for compliance with CAR-145 at periods not exceeding 24 months.

(i) Where it has been decided that a series of audit visits are necessary to arrive at a complete audit of an organisation, the program will indicate which aspects of the approval will be covered on each visit.

(ii) It is recommended that part of an audit concentrates on two ongoing aspects of the CAR-145 approval, namely the organisations internal self-monitoring quality reports produced by the quality monitoring personnel to determine if the organization is identifying and correcting its problems and secondly the number of concessions granted by the quality manager.

(iii) At the successful conclusion of the audit including approval of the exposition, an audit report form will be completed by the auditing aw inspector including all recorded findings, closure actions and recommendation. A PACA Form 6 should be used for this activity.

(iv) In the case of line stations a sampling program based upon number of line stations and complexity may be adopted.

A meeting with the Accountable Manager shall be convened at least once every 12 months to ensure he/she remains informed of significant issues arising during audits and to ensure he/she fully understands the significance of the approval.

20.3.9. Maintenance Organization Exposition (MOE) amendments

For any change to the Maintenance Organisation Exposition (MOE):

(i) In the case of direct approval of the changes in accordance with point 145.A.70(b), the PACA/FSD/AWS shall verify that the procedures specified in the exposition are in compliance with CAR-145 before formally notifying the approved organisation of the approval.

(ii) In the case an indirect approval procedure is used for the approval of the changes in accordance with point 145.A.70(c), the PACA/FSD/AWS shall ensure

a. that the changes remain minor and

b. that it has an adequate control over the approval of the changes to ensure they remain in compliance with the requirements CAR-145.

A simple exposition status sheet should be maintained which contains information on when an amendment was received by PACA/FSD/AWS and when it was approved.

The PACA/FSD/AWS may define some class of amendments to the exposition which may be incorporated without prior authority approval. In this case a procedure should be stated in the amendment section of the MOE.

The exposition chapter dealing with scope of work/approval should not be subject to this procedure.

The organization should submit each exposition amendment to the PACA whether it is an amendment for approval or a delegated approval amendment. Where the amendment requires approval by the PACA/FSD/AWS, PACA/FSD/AWS when satisfied that the amendment meets the requirement of CAR 145, an approval to the same shall be indicated in writing and with intimation to PACA/FSD/AWS.

23.3.10. Admonition, Warning, Revocation, suspension and limitation of approval

In case of any of violation affecting the safety instructions issued by PACA/FSD/AWS from time to time shall be followed in order to:

a) suspend an approval on reasonable grounds in the case of potential safety threat; or

b) admonish, warn, suspend, revoke or limit the approval granted to a person or organization pursuant to 145.B.50.

Note: *Enforcement action shall be taken as per the detail procedure(s) given in the Enforcement Manual.*

23.3.11. Findings

When during audits or by other means evidence is found showing non- compliance with the requirements of CAR- 145, the following actions shall be taken:

(i) For level 1 findings, immediate action shall be taken to revoke, limit or suspend in whole or in part, depending upon the extent of the level 1 finding, the maintenance organisation approval, until

successful corrective action has been taken by the organization. In practical terms a level 1 finding is where a significant non-compliance with CAR-145 is found.

The following are examples of level 1 finding:

i. Failure to gain access to the organisation during normal operating hours of the organisation in accordance with 145.A.90 (2) after two written requests.

ii. If the calibration control of equipment as specified in 45.A.40 (b) had previously broken down on a particular type product line such that most "calibrated" equipment was suspect from that time then that would be a level 1 finding.

Note: *A complete product line is defined as all the aircraft, engine or component of a particular type.*

For a level 1 finding it may be necessary for airworthiness inspector section to ensure that further maintenance and re-certification of all affected products is accomplished, dependent upon the nature of the finding.

(ii) For level 2 findings, the corrective action period granted must be appropriate to the nature of the finding but in any case initially must not be more than 30 days. In certain circumstances and subject to the nature of the finding 30 days period may be extended up to 45 days subject to a satisfactory corrective action plan agreed. In practical terms where an airworthiness inspector finds a non-compliance with CAR-145 against one product, it is deemed to be a level 2 finding. The following are example level 2 findings:

i. One time use of a component without any serviceable tag.

ii. The training documents of the certifying staff are not completed.

Action shall be taken to suspend in whole or part the approval in case of failure to comply within the timescale granted.

i. Where the organisation has not implemented the necessary corrective action within the stipulated period, necessary action shall be taken in line with requirements/guidelines as stipulated in the enforcement manual/ enforcement procedure.

23.3.12. AMO Certificate and scope of approval

The AMO approval is the primary evidence to other foreign civil aviation authorities that a Maintenance Organization has completed the safety certification process and on-going surveillance is being conducted. These must be received by the applicant before conducting any functions as an AMO. No maintenance function other than those listed in scope of approval is authorized for an AMO.

Note: *It is important that in case of change to the organisation IAW point 145.A.85 of CAR-145 an AMO holder notify the PACA of any proposal to carry out any of the following changes before such changes take place to enable the PACA to determine continued compliance with CAR-145 and to amend, if necessary, the approval certificate, except that in the case of proposed changes in personnel not known to the management beforehand, these changes must be notified at the earliest opportunity:*

1. *the name of the organisation;*
2. *the main location of the organisation;*
3. *additional locations of the organisation;*

4. *the accountable manager;*
5. *any of the persons nominated under requirement 145.A.30(b);*
6. *the facilities, equipment, tools, material, procedures, work scope, certifying staff and airworthiness review staff that could affect the approval.*
7. *the organisation's documentation as required by this Regulation, safety policy and procedures must have the written approval of PACA before use.*

23.4. Record-keeping

Records of approval of an organisation shall be retained for an adequate period that allows adequate traceability of the process to issue, continue, change, suspend or revoke each individual organization approval.

(i) The records shall include as a minimum:

a) the application for an organisation approval, including the continuation thereof.
b) the continued oversight program including all audit records.
c) the organisation approval certificate including any change thereto.
d) a copy of the audit program listing the dates when audits are due and when audits were carried out.
e) copies of all formal correspondence including PACA Form or equivalent.
f) details of any exemption and enforcement action(s).
g) any other regulatory authority audit report forms.
h) maintenance organization expositions.
i) The minimum retention period for the above records shall be four years except (c) & (h), which should be retained permanently.

(ii) Either a paper or computer system or any combination of both may be used subject to appropriate controls.

(iii) The record-keeping system should ensure that all records are accessible whenever needed within a reasonable time. These records should be organized in a consistent way throughout (chronological, alphabetical order, etc.). Copies of policy letters should also be retained in separate folders for future reference.

(iv) All records containing sensitive data regarding applicants or organizations should be stored in a secure manner with controlled access to ensure confidentiality of this kind of data.

(v) All computer hardware used to ensure data backup should be stored in a different location from that containing the working data in an environment that ensures they remain in good condition. When hardware or software changes take place special care should be taken to ensure that all necessary data continues to be accessible at least through the full period as specified above.

23.5. Exemptions

All requests pertaining to exemptions shall be forwarded to the PACA with all requirement as per CAR 10 with recommendation for approval or not approved along with supporting documents.

23.6. Inspection of Facilities and Support Arrangements

After completion of the Document Evaluation Phase, the following observations and inspections will be conducted to assess that infrastructure and support arrangements are acceptable to the AW Section.

Description

- Maintenance Hangar & Shop Facility Inspections
- Equipment Manufactures Manuals and other Technical Data
- Evaluation of Precision Tools and Test Equipment
- Records of Precision tools and Test Equipment Calibration.

23.7. Requirements for Ongoing and Programmed Surveillance

The PACA is required by ICAO Standards to have a system of surveillance for its Certificate holders. AMO certificate approvals are valid for a period of 24 months from the date of issue and once in two year full audits are conducted on the organisation before renewal of the approval.

The minimum numbers of these inspections that must be completed are included in Inspectorate surveillance plan and frequencies are dependent on the size of the organisation. All safety issues identified during the inspections must be resolved before the renewal/re-issuance of the AMO.

23.8. Approval for Foreign Maintenance Base to Maintain Oman Registered Aircraft

This is a requirement when the Oman Air Operator requests to obtain services of foreign maintenance company for the maintenance of their aircraft registered in Oman Civil Aircraft Register. The type of maintenance may be in the form of Line Maintenance, Base Maintenance or its associated component maintenance/overhaul and Specialise Services.

Under those circumstances the PACA works on the criteria of recognising the approval procedure followed by the foreign contracting state to issue AMO approval. In other words that the above company no needs to follow the full AMO approval procedure explained in this guidance. Such an organisation applies for the AMO approval submitting following documents.

1. Duly completed AMO application Form AWR 030 and Biographical Details of Person nominated by an organisation in respect of Approval Form AWR 032.
2. The letter of intent from the Oman aircraft operator.
3. The contract agreement signed by both parties.
4. Approved MOE and its supplement to address CAR-145 requirements.
5. The audit report of the Oman air operator and corrective action taken by the applicant for review and acceptance.
6. Existing AMO approval granted by the respective Aviation Authority and scope of approval covering the type of aircraft required to be maintained.
7. Required fees.

Note- *The surveillance of the maintenance facility will be carried out by the AW section as explained in the paragraph 4 above. More commonly the provisional approval will be issued for a limited period to subject to carryout surveillance audit as and when the above other requirements are meeting.*

23.9. Safety Management

As a part of state safety programme, aircraft maintenance organisation shall implement a safety management system acceptable to the PACA that shall meet the following objectives:

i. Identifies safety hazards;
ii. Assesses the impact of these safety hazards and mitigates risks;
iii. Ensures that remedial action necessary to maintain an acceptable level of safety is implemented;
iv. Provides for continuous monitoring and regular assessment of the safety level achieved; and
v. Aims to make continuous improvement to the overall level of safety.

The safety management manual and the documentation submitted by the organisation shall be forwarded to FSD AW for further acceptance by PACA and to be checked in accordance with CAR100. It shall be ensured that safety management system is accepted by PACA before formal approval of the AMO.

24. Maintenance records

24.1. Background

24.1.1. Objective

This chapter provides guidance for evaluating an applicant's procedures for utilizing, preserving and retrieving the maintenance records required by CAR-M and CAR 145.

24.1.2. General

To comply with the maintenance recording requirements of the CAR, the applicant's maintenance exposition must identify and contain procedures to complete all applicable documents used by the applicant.

A. Current Airworthiness Directive Status

The applicant must keep a record showing the current status of applicable Airworthiness Directives (ADs), including the method of compliance.

(1) This record shall include the following:

- A list of ADs applicable to the aircraft
- The date and time in-service or cycles, as applicable
- The method of compliance
- The time in-service or cycles and/or date when the next action is required (if it is a recurring AD).

(2) An acceptable method of compliance description should include one or more of the following:

- Reference to a specific portion of the AD
- A manufacturer's service bulletin, if the bulletin is referenced in the AD
- Another document generated by the applicant that shows compliance with the AD, such as an Engineering Order (EO)

(3) When an Engineering Order is used, the details must be retained by the applicant. If the Engineering Order also contains the accomplishment instructions and sign-off, it must be retained indefinitely.

(4) An applicant may apply for an alternate method of compliance for accomplishing ADs. Alternate methods of compliance must be approved by the DFS and will apply only to the applicant making the application.

(5) The applicant's manual must have procedures to ensure compliance with new and emergency ADs within given time limits. The procedures must ensure that the individuals responsible for implementation during other than routine duty hours are notified, as necessary.

(6) The document that contains the current status of ADs/method of compliance may be the same as the record of AD accomplishment, although the retention requirements are different.

(a) The record of AD accomplishment must be retained with the aircraft indefinitely.

(b) The AD method of compliance record will only be retained until the work is superseded/repeated or until two years after the work is performed.

B. Total Time In-Service Records

(1) Although CAR-M does not specifically call for total time in-service records of engines, propellers and rotors, it does require a record of life-limited parts for these components. The only way to accomplish this is by keeping records for total time-in service.

(2) Total time-in service records may consist of aircraft maintenance record pages, separate component cards or pages, a computer list or other methods as described in the applicant's manual.

C. Life-Limited Parts Status Records

CAR-M requires records for components of the airframe, engine, propellers, rotors and appliances that are identified to be removed from service when the life-limit has been reached.

(1) The current life-limited status of the part is a record indicating the operating time limits, total number of hours or accumulated cycles or the number of hours or cycles remaining before the required retirement time of the component is reached. This record must include any modification of the part in accordance with ADs, service bulletins or product improvements by the manufacturer or applicant.
(2) The following are not considered a current life-limited status record:

- Work orders;
- Maintenance installation records;
- Purchase requests;
- Sales receipts;
- Manufacturers documentation of original certification;
- Other historical data.

(3) Whenever the current status of life-limited parts records cannot be established or has not been maintained (e.g. a break in current status) and the historical records are not available, the airworthiness of that product cannot be determined and therefore it must be removed from service.

D. Certificate of Release to Service (CRS)

(1) When maintenance, preventive maintenance or alterations on an aircraft are performed, a CRS must be completed prior to operating the aircraft. Using the procedures described in the manual, the applicant must be able to retain all of the records necessary to show that all requirements for the issuance of a CRS have been met.
(2) The applicant must identify those persons authorized to sign CRS. This includes any personnel outside of the applicant's organization who perform contract maintenance. Personnel authorized to sign must be appropriately certificated as required by CAN 3-08 para (8.7) (b).

E. Overhaul List

The applicant is required to develop manual procedures for recording the time since the last overhaul of all items installed on the aircraft that are required to be overhauled on a specified time basis. The items requiring overhaul are listed either on the operations specifications or in a document referenced in the operations specifications.

(1) The overhaul list includes the actual time or cycles in-service since the last overhaul of all items installed on the aircraft. If continuity cannot be established between overhaul periods, the last overhaul records must be reviewed to re-establish the currency of the overhaul list.
(2) The overhaul list refers to the time since the last overhaul of an item and must not be confused with an overhaul record, which requires a description of the work and identification of the person who performed and/or approved the work.

F. Overhaul Records

(1) A record must be made whenever an item of aircraft equipment is overhauled and must include the following:

- A description of the work performed or reference to data acceptable to the DGCAR;
- The name of the person performing the work if the work is performed by a person outside of the applicant's organization;
- The name or other positive identification of the individual approving the work.

Note: A return to service tag does not constitute an overhaul record

(2) The applicant must retain the record and be able to make it available to the DGCAR upon demand. The overhaul records shall be retained until the work is superseded by work of equal scope and detail.

G. Current Aircraft Inspection Status

The applicant is required to retain a record identifying the current inspection status of each aircraft.

(1) This record shall show the time in-service since the last inspection required by the inspection program under which the aircraft and its appliances are maintained.
(2) Inspection work packages or routine and non-routine items generated while performing any part of the inspection program must be retained as follows:

- For one year after the work is performed;
- Until the work is repeated or superseded by other work.

H. Major Alteration and Major Repair

Applicants are required to retain records of current major repairs and major alterations that are accomplished on the following:

- Airframe;
- Engine;
- Propeller;
- Rotor;
- Appliance.

(1) Major appliances must be listed with the date of alteration and a brief description of the work accomplished. The manual must have procedures for the following:
    - Extracting the information required for the list from the actual alteration record of accomplishment;
    - For transmitting an alteration report to the FSD office.
(2) The manual must contain procedures for retaining a report of each major repair and making it available for inspection by the DGCAR.

24.2. Procedures

24.2.1. Procedures

A. Review the Applicant's Maintenance Procedures/Exposition Manual

(1) Ensure that the necessary procedures exist in the applicant's manual to ensure a suitable system for creating, preserving and retrieving required records.
(2) Ensure that all the records will contain the following information, as applicable:

- Description of the work performed (or reference to data acceptable to the DGCAR);
- Name of the person(s) performing the work when the personnel are not employed by the applicant's organization;
- Name or other positive identification of the individual approving the work.

B. Review the Applicant's Manual's Procedures

Review the applicant's record keeping procedures to ensure that the requirements of CAR-M / 145 are met for the following:

(1) Certificate of Release to Service Records (CRS)

Ensure the following:

(a) CRS will be retained for two years after the works performed or until the work is repeated or superseded.
(b) The applicant's manual identifies the person(s) authorized to sign a CRS

(2) Flight Maintenance Records

Ensure that procedures provide for the following entries:

- Flight discrepancies to be entered at the end of each flight;
- Corrective actions and sign-off, per manual procedures;
- Minimum Equipment List (MEL) deferment per the manual procedures.

(3) Total Time In-Service Records
(a) Evaluate the method of recording total time-in-service of airframes. This record must show the current time in-service in hours.
(b) Ensure that procedures are in place to retain the records until the aircraft is sold and that the records will then be transferred with the aircraft.

(4) Life-limited Parts Status
(a) Ensure that the applicant has procedures for tracking the current status of life-limited parts for each airframe, engine, propeller, rotor and appliance to include the following information:

- Total operating hours (including calendar time)/cycles accumulated;
- Life-limit (total service life);
- Remaining time/cycles;
- Modifications.

(b) Ensure that procedures are in place to retain the records until the aircraft is sold and are then transferred with the aircraft.

(5) Time Since Last Overhaul Records

Ensure that the manual includes a method/procedure for updating this document from the overhaul records and ensuring that this document accompanies the aircraft upon sale.

(6) Overhaul Records
(a) Ensure that the manual describes how the applicant will document the last complete overhaul of each airframe, engine, propeller, rotor and appliance. The overhaul record should include the following information:

- Disassembly data;
- Dimensional check data;

- Replacement parts list;
- Repair data;
- Re-assembly/test data;
- Reference to data including overhaul specifications.

(b) Ensure that these records will be retained until the work is superseded by work of equivalent scope and detail

(7) Current Aircraft Inspection Status

(a) Evaluate the method the applicant will use to record the time in-service since the last inspection.

(b) Determine if procedures ensure these records are retained until the aircraft is sold and are then transferred with the aircraft.

(8) Airworthiness Directive (AD) Compliance

Evaluate how the applicant will comply with the record keeping requirements of the ADs, including emergency ADs. The procedures must generate a record that contains the following data:

(a) Current status. Ensure that the current status data will include the following:

- A list of all ADs applicable to the aircraft;
- The date and time of compliance;
- The time and/or date of next required action (if a recurring AD).

(b) Method of Compliance. Ensure that this data will include either a record of the work performed or a reference to the applicable section of the AD.

Note: *This data must be retained until the aircraft is sold and transferred with the aircraft.*

(9) Major Alteration Records

(a) Evaluate the manual procedures to ensure that the applicant prepares and maintains a list of current major alterations to each airframe, engine, propeller, rotor and appliance.

(b) Ensure that the list includes the following information:

- The date of the alteration;
- A brief description of the alteration.

(10) Major Repair Records

Evaluate the manual procedures to ensure that the applicant prepares and maintains a report of all major repairs to each airframe, engine, propeller, rotor and appliance.

C Analyse the Findings

Evaluate all deficiencies to determine if corrective actions will be required.

24.2.2. Task Outcomes

A. Successful completion of this task will result in the following:

- A letter to the applicant confirming the results of inspection;
- Continuation of the certification process.

B. Document the Task

File all supporting paperwork in the applicant's office file.

C. Future activities

Schedule follow-up inspections as required.

25. Aircraft lease/interchange agreement

25.1. Background

25.1.1. Objective

This chapter provides guidance for evaluating aircraft leases and interchange agreements for Oman certificated operators.

25.1.2. General

A. Definitions

(1) Lease:
Any agreement by a person (the lessor) to furnish an aircraft to another person (lessee) to be used for compensation or hire purposes. This does not include an agreement for the sale of an aircraft or a contract of conditional sale.

(2) Dry Lease:
Any agreement in which a lessor, (which could be an air carrier, bank or leasing company) leases an aircraft without flight crewmembers to an air carrier (the lessee) and in which the lessee maintains operational control.

(3) Wet Lease:
Any agreement in which a lessor, (Omani air carrier only), leases an aircraft, with at least one pilot, flight crewmember to either an Omani air carrier, foreign air carrier or a foreign person (the lessee).

(4) Interchange Agreement:
Any agreement between operators (Omani and foreign) in which the operational control of an aircraft is transferred for short periods of time from one operator to another. With this type of agreement, the latter operator assumes responsibility for the operational control of the aircraft at the time of transfer.

(5) Operational Control:
The exercise of authority over initiating, conducting or terminating a flight.

(6) Lessee:
The party using the aircraft under the provisions of a lease.

(7) Lessor:
The party furnishing the aircraft under a lease.

B. Determining Operational Control of a Dry-Leased Aircraft

Normally, operational control of any dry-leased aircraft rests with the lessee. In most dry lease agreements, the lessor is a bank of either a leasing or a holding company. In neither case will the lessor have the operational expertise, the facilities or the desire to assume responsibility and liability for controlling the day-to-day operations of the aircraft.

C. Determining Operational Control of Wet-Leased Aircraft

The fact that the DGCAR characterizes a lease as a wet lease does not necessarily make the lessor responsible for operational control. When DFS determines who has operational control, the DGCAR must be advised by letter. The DGCAR must make this letter a matter of record in the operator's office file.

D. Other Factors in Determining Operational Control of Leased Aircraft

(1) DGCAR shall determine if a person has operational control if that person exercised authority and responsibility for a specified number of operational functions. This could include scheduling flights and crewmembers, initiating flights and terminating flights.

(2) In cases where there is doubt or controversy over who exercises operational control, the DGCAR may consider additional factors, such as who is responsible for maintenance, servicing and crewmember training.

25.1.3. DGCAR responsibilities

A. Review the Lease

An aircraft lease agreement is reviewed to determine if all of the responsibilities of the lessor/lessee are described. The inspector must ensure that the lease contains all effective dates and provisions required by regulation. Those items not required by regulations must be reviewed to determine their applicability and compatibility with the regulatory requirements.

B. The Lessor's Operator's Manual

The lessor's manual must be reviewed for the following:

(1) The continuous airworthiness maintenance program, for the aircraft, engines, propellers (if applicable) and appliances.
(2) The maintenance reliability program.
(3) A training program for the maintenance personnel on the aircraft.
(4) Fuelling procedures for the aircraft.
(5) Provision for use of an approved Minimum Equipment List (MEL).
(6) Provisions for leasing the aircraft to the lessee.

D. The Lessee's Operator's Manual

The lessee's manual must be reviewed for the following:

(1) To determine if the manuals provide adequate procedures and guidance for incorporating leased aircraft into its operating system.
(2) Procedures for the use of the lessor's continuous airworthiness maintenance program, for the aircraft, engines, propellers (if applicable) and appliances.
(3) Procedures for the use of the maintenance reliability program, if applicable.
(4) Procedures in the maintenance training program that is adequate to provide for configuration differences, if the aircraft is maintained under the lessor's maintenance program.
(5) Fuelling procedures for the aircraft.
(6) Provisions for use of an approved MEL.

E. Aircraft Maintenance Records

The lessor will maintain the aircraft maintenance record and ensure that the items required to be inspected, repaired or overhauled are addressed in those records.

F. Aircraft Conformity Inspections

Aircraft conformity inspections are conducted to ensure that:

(1) Differences between aircraft already in a lessee's fleet and aircraft being leased are noted. These differences must be addressed with:

- Amendments to the lessee's operations specifications;
- Revisions to the lessee's maintenance manual.

(2) Configuration of the aircraft meets the regulatory requirements of the intended operation.

25.2. Procedures

25.2.1. Procedures for lease agreements

Note: *Refer to CAN 2-01 for guidance*

A. Determine if a Lease Agreement has occurred

Request a copy of the lease or lease memorandum in the evaluation of the lease agreements.

B. Review the Lease.

Ensure that:

(1) The lessor and lessee are properly identified on the lease
(2) The lease is signed by the appropriate personnel in both the lessor's and lessee's organisations.
(3) All strikeover, erasures and corrections are initialled by both the lessor and the lessee.
(4) The aircraft subject to the lease agreement are identified by aircraft make and model, registration number and serial number.
(5) The effective dates of the lease are identified.
(6) Operational control is specifically designated.
(7) Responsibilities for performing maintenance are specifically designated.
(8) Responsibilities for keeping aircraft maintenance records are specifically designated.
(9) Maintenance programs (lessee's or lessor's) that will be utilized are designated.

C. Review the Lessee's Manuals

Ensure that the manual contains the following:

(1) Procedures adequate to incorporate the leased aircraft into his operating system, i.e. aircraft acceptance checks, etc.
(2) Provisions in the maintenance training program to account for any differences in the configuration of the leased aircraft form the existing fleet.
(3) A program that is adequate to provide for configuration differences if the aircraft is to be maintained under the lessee's maintenance program.
(4) A Minimum Equipment List (MEL) that is applicable to the leased aircraft.

D. Perform an Aircraft Conformity Inspection

After performing the inspection, review the results to ensure that the differences between the leased aircraft and the aircraft already in operation are identified and will be addressed in operation specifications and the lessee's maintenance manual.

25.2.2. Task outcomes

A. Completion of this task will result in one of the following:

(1) Approval of the agreement by accomplishing the following:

- Sending a letter to the operator indicating approval of the agreement;
- Approval of operations specifications.

(2) Disapproval of the agreement by sending a letter to the operator/applicant listing the reasons for disapproval.

B. Document task. File all supporting paperwork in the operator/applicant's office file.

26. Leased aircraft maintenance programme authorisation

26.1. Background

26.1.1. Objective

This chapter provides guidance for authorizing an operator (lessee) to maintain a leased aircraft in accordance with the previous operator's (lessor's) current and approved maintenance program for that type aircraft.

26.1.2. General

A. CAR-OPS operators have leased aircraft from other air carriers with the understanding that the aircraft will be returned to the previous operator upon termination of the lease. It may be to the lessor's advantage to have the aircraft maintained under the lessor's maintenance program rather than the lessee's program so that it can be readily integrated back into the fleet when the lease expires.

B. The key factor in this type of arrangement is the lessee's capability of accomplishing the program to the lessor's standards. The lessee's responsibility for the effectiveness of the adopted program is the same as for any other maintenance program approved for the lessee's use.

26.1.3. Accomplishing the task

An operator intending to maintain a leased aircraft in accordance with the lessor's program must substantiate that:

(1) The lessor's program as carried out by the lessee will result in a level of airworthiness equivalent to that of the aircraft maintained by the lessee.
(2) The lessee is capable of accomplishing the lessor's program with regard to facilities, equipment, personnel, training, etc.
(3) The lessee arranges for the maintenance of equipment or installations not covered by lessor's program such as life vests, life rafts, emergency locators, pressure cylinders, etc.
(4) The lessee takes adequate steps to ensure that maintenance programs for the leased aircraft and any owned aircraft are kept separate and are applied to their respective aircraft.
(5) The lessee receives and maintains the records required by CAR-M or has arranged with the lessor to gain access to these records. The lessee must have and maintain adequate records to determine the status of applicable airworthiness directives, life-limited parts, time controlled items and inspections.
(6) The lessee had the necessary records to schedule maintenance tasks at the intervals specified by the lessor's program or has arranged with the lessor for this service.
(7) The lessee has adequate manuals and technical material to accomplish the lessor's maintenance program.
(8) The lessee amends its weight and balance program as necessary to accommodate the leased aircraft. This may require co-ordination with the Principal Operations Inspector.
(9) The lessee has procedures for reporting maintenance activities and data to the lessor (e.g., component replacements, scheduled inspections, Airworthiness Directive notes, engine trend monitoring data and major repairs).

26.2. Section 2 Procedures

26.2.1. Procedures

A. Schedule and Conduct an Informal Meeting

The operator/applicant must indicate its intention to utilize aircraft under a short term lease agreement with the use of the lessor's maintenance program. Advise the operator/applicant of the following requirements:

(1) The aircraft must conform to all applicable requirements of CAR-OPS 1 and CAN 2-01.
(2) The lessee must have the capability to support and maintain aircraft in accordance with the lessor's program to include:

- Personnel;
- Training;
- Facilities;
- Equipment;
- Manuals.

(3) The lessee must have current records to determine the status of the following:

- Scheduled inspections;
- Airworthiness Directives;
- Life limited items;
- Time controlled components.

(4) The lessee must have the current weight and balance data for the leased aircraft.
(5) The lessee must provide a copy of the contract between the lessor and lessee.
(6) Lessee must initiate procedures for transfer of aircraft maintenance and performance data to lessor.
(7) Lessee must have procedures that ensure that maintenance programs for the leased aircraft and the lessee's own are kept separate and are applied to the respective aircraft.

B. Conduct Formal Meeting

The operator should state that aircraft, records, facilities are ready for inspection and must present required data and proposed operations specifications.

C. Review the Contract

Examine the following:

- Length of contract;
- Maintenance responsibilities;
- Data reporting requirements.

D. Review Lessor's Maintenance Program and Operations Specifications

E. Review Lessee's Technical Data

Ensure that lessee has all appropriate technical data to support the aircraft. This includes such items as maintenance manuals, wiring manuals, etc.

F. Ensure that Lessee has adequate Personnel to support the aircraft

G. Determine if Differences in Equipment and Installations have been addressed and personnel have been trained accordingly

H. Ensure that facilities are sufficient to support additional aircraft

This includes special tooling, test equipment, spare parts and equipment. Conduct evaluation of operator/applicant facility.

I. Determine if adequate procedures are in place to ensure that separation of maintenance programs for leased aircraft.

Ensure that these procedures are applied to the respective aircraft.

J. Review Weight and Balance Data for Leased Aircraft

Ensure that data is compatible with lessee's program. If data is not compatible, ensure that procedures have been developed and are in place.

K. Review Aircraft Records

L. Inspect Aircraft, if necessary

Conduct spot inspection of Operator's aircraft

M. Review Operations Specifications Parts D and E

N. Analyse Results

Determine whether the operator/applicant meets all necessary requirements.

O. Meet with Operator/Applicant to discuss deficiencies

Advise the operator/applicant on which areas require corrective action.

27. Approval of Reliability Programme

27.1. Objective

This chapter provides guidance for approving airline reliability programmes and providing technical assistance to the certificate holder.

Approval for the establishment of a reliability control programme and/or condition monitoring programme will be dependent on the operator submitting adequate details of the company policies and for administering such programme.

Note - *Reliability programmes establish the time limitations or standards for determining intervals between overhauls, inspections, and checks of airframes, engines, propellers, appliances and emergency equipment Guidance on the programme elements is listed in FAA Advisory Circular (AC) 120-17A, Maintenance programme Management through Reliability Methods, as amended, the Airline /Manufacture Maintenance Planning Document, and /or Maintenance Tasks. It is important that the Airworthiness Inspector explains all of the programme requirements to the operator/applicant.*

27.2. Maintenance Reliability Programme

The maintenance reliability programme required as part of the system of maintenance provides an appropriate means of monitoring the effectiveness of the maintenance programme, with regard to spares, established defects, malfunctions and damages, and to amend the maintenance programme. Actions resulting from a reliability programme may include escalating or deleting a maintenance task, or de-escalating or adding a maintenance task, as necessary.

27.3. Maintenance Reliability Programme Requirement

All operators of transport category aircraft engaged in commercial operations shall, as part of the system of maintenance for those aircraft, have in place a maintenance reliability programme where:

a. The aircraft's maintenance programme is based on MSG-3 logic process; or
b. The aircraft's maintenance programme includes condition monitored components; or
c. The aircraft's maintenance programme does not contain overhaul time periods for all significant system components; or
d. It is required by the manufacturer's maintenance planning document (MPD) or Maintenance Review Board (MRB) report issued by the Civil Aviation Authority responsible for type certification of the aircraft.

Note - *A maintenance reliability programme is not required, where:*

- *The maintenance programme is based on the MSG-1 or 2 logic process, but only contains hard time or on condition items; or*
- *The aircraft's MTOW is 5700 kg or below; or*
- *The aircraft maintenance programme provides overhaul time periods for all significant system components.*

27.4. Provision of Reliability Reports to DGCAR

PACA may accept maintenance reliability reports through:

a. Hard copy; or

b. Any other method as described in the approved MCM/MME/CAME, including giving access to the DGCAR to the operator database.
c. For all aircraft, reliability reports shall be forwarded to DGCAR in every month or as in the approved MCM/MME/CAME.
d. For aircraft used in ETOPS operations, reliability reports shall be forwarded to the Authority:
   - At least on every month (or as approved in MMC/MME/CAME) and
   - Reports shall be made as soon as practicable, but in any case, within 72 hours, whenever the operator observes adverse trend(s) detrimental to ETOPS and RVSM flights. Details of investigation and corrective action may also be provided to PACA.

27.5. Information to be included in a Reliability Report

a. Fleet reliability summary

This summary relates to all aircraft of the same type, and shall contain the following information for the defined reporting period:

- Number of aircraft in fleet
- Number of aircraft in service
- Number of operating days (less maintenance checks)
- Total number of flying hours
- Average daily utilisation per aircraft
- Average flight duration
- Total number of cycles/landings
- Total number delays/cancellations
- Technical incidents.

b. Aircraft technical delays/cancellations

All technical delays more than 15 minutes and cancellation of flight(s) due to technical malfunction are required to be reported with moving average rate and, where appropriate, the Alert Level. The operator shall present the information for a minimum period of 12 consecutive months, but need not repeat the occurrences in descriptive form.

c. In-flight diversions due to mechanical malfunction or failures (known or suspected)

While all in-flight diversions due to mechanical malfunction or failures (known or suspected) shall be reported through normal Incident Reporting System, a summary of all in-flight diversions shall be provided.

d. Engine unscheduled shutdown or propeller feathering

All in Flight Shut Down (IFSD) and IFSD rates or propeller feathering in flight, if applicable, listed by type of engine and aircraft for the reporting period shall be reported and presented in graphical form. When dealing with small numbers of IFSD, IFSD rate, or propeller feathering in flight, this information should be presented in such a way as to show the trend over a period of at least one year.

e. Incidents involving inability to control engine/obtain desired power

All incidents involving inability to control engine/obtain desired power during the reporting period, shall be reported and presented in graphical form. When dealing with small numbers of such incidents, this information should be presented in such a way as to show the trend over a period of at least one year.

f. Unscheduled engine removals due to mechanical failures

All unscheduled engine removals due to mechanical failures, listed by type of engine and aircraft for the reporting period shall be reported and presented in graphical form. When dealing with small numbers unscheduled engine removals, this information should be presented in such a way as to show the trend over a period for at least one year.

g. Component unscheduled removal

All unscheduled removal of components, by ATA chapter, during the defined reporting period shall be reported and presented in graphical form. In situations that need observing thousands of components, only those components having significant removal rate will be presented in graphical format. Other components may be presented in tabular format. The format of component removal information shall be such that:

- Both unscheduled removals and confirmed failures rates should be compared with the Alert Levels so as to identify when the Levels are likely to be exceeded; and
- Current and past periods of operation should be compared.

h. Fleet dispatch reliability rate

Fleet dispatch reliability rate during the defined reporting period shall be reported and presented in graphical format.

i. Operation of aircraft with multiple MEL items invoked

A monthly (or in 3 months as approved) reliability report shall include trend reporting of dispatch of aircraft with multiple MEL items invoked and shall present the information for a minimum period of 12 months. The report need not repeat the occurrences in descriptive form

j. Pilot reports (PIREPS)

PIREPS shall be reported by ATA chapters in graphical and/or tabular form as a count and rate for the defined reporting period, and comparison thereof with the Alert Level:

- In case PACA understands that the pilot-reported defects are not a valid reliability indicator. In such situations, reporting of PIREPS will not be required.

k. ETOPS specific operations

In addition to non-ETOPS reliability reporting requirements, the following information shall be provided for ETOPS flights:

- Number of ETOPS flights during the defined reporting period
- Aircraft/engine type/combination involved in the programme.
- Details of aircraft involved in the programme during the reporting cycle
- Average fleet utilization time and cycles during the reporting cycle
- ETOPS critical component failures or malfunctions, by ATA chapter. However, ETOPS critical system failure reporting would also be acceptable to the Authority.

l. RVSM

The operator shall monitor the RVSM item during the reliability programme.

27.6. Approval of Maintenance Reliability Programme and Monitoring of Reliability Reports

The following factors are acceptable for establishing or revising a reliability programme's performance standards

a. Past and present individual operator and industry experience. If industry experience is used, the programme must include a provision for reviewing the standards after the operator has gained 1 year of operating experience.
b. Performance analysis of similar equipment currently in engines.
c. Aircraft or equipment or manufacturers' reliability engineering analysis.
d. History of experience where reliability standards were acceptable to the airline industry.

The responsibilities of the AWI in respect of approval of a maintenance reliability programme, and monitoring of reliability reports thereafter, shall be as follows:

- Airworthiness Section shall advise and make recommendation on policy and procedures in relation to the approval of a maintenance reliability programme.
- The assigned Airworthiness Inspector in coordination with the Maintenance Reliability Engineer of the operator shall approve maintenance reliability programmes.
- All operators shall forward periodic reliability reports required by the Airworthiness Section and the provision of individual reliability reports to the Airworthiness Section.
- Airworthiness Section shall nationally monitor all reliability reports against international and national trends and prepare recommendations and/or observations, if any, for further action.
- Airworthiness Section shall determine any variations to reliability reporting requirements and shall retain responsibility for administration and oversight of the national reporting requirements
- Airworthiness Section shall conduct periodic reliability meetings with representatives of airline operator or vice versa. The purpose of such meetings is to relay national and international reliability trends and to impart specialist knowledge necessary for the oversight of reliability programmes.

PACA	**Reliability Safety Oversight Checklist**
Operator: …… Location:…… Date:……	

Item	Subject	Unsatisfactory	Satisfactory	Remarks
1	Technical Delays			
2	Technical cancellation			
3	Return to stand			
4	Technical Incidents			

5	Dispatch reliability			
6	Pireps / Mareps Rate			
7	Technical delay &return to stand rate			
8	Technical Incident/Accident Rate			
9	Rate (Engine Removals& Inflight Shutdown)			
10	Unscheduled removal			
11	Oil Consumption			
12	RVSM Components			
13	ETOPS/EDTO Components			
14	LVTO Components			
15	Engine Removal			
16	Engine Oil Consumption			
17	APU Removal			
18	APU Oil Consumption			
19	APU High altitude Starting Monitoring			
20	Autoland Performance			
21	Unsatisfactory Autoland Approach			
22	Quality review			
23	Operational Review			
24	Scheduled Maintenance Planning			
25	Flight Hour And Cycle Monitoring			
26	AD and SB Status Monitoring			
27	Modifications			
28	Maintenance Program Review			
29	System and component performance			
30	Others			

Inspector/s Comments:
Inspector/s Name/s: 1 …….. Signature:……..
Inspector 2:. …… Signature:……..
Date:……

28. Review Engineering Order

28.1. Background

28.1.1. Objective

This chapter provides guidance for evaluating an Engineering Order (EO).

28.1.2. General

A. An engineering order provides an operation / AMO with a format for:

(1) Documenting major repairs and alterations to equipment the operator uses
(2) Recording DGCAR approved data and procedures for accomplishing alterations and repairs to aircraft, propellers, power plants, accessories and components. If no previously approved data exists, the operator must obtain approval through DFS, a Designated Engineering Representative (DER) or DGCAR field approval.
(3) Developing procedures and data used to comply with and provide verification of Airworthiness Directives

B. In evaluating an engineering order, an inspector must approach this task in the same manner as reviewing/approving a major repair or alteration**.**

C. In reviewing an engineering order, the inspector should be aware that the order serves not only as a maintenance record but also as a planning document for the operator. The authorization will normally contain material and personnel requirements, diagrams (blueprints, schematics, etc.), detailed procedures and sign-offs. The inspector should ensure that all data is correct, complete and does not conflict with existing authorizations or maintenance procedures.

D. If the engineering order concerns new or modified equipment, maintenance procedures may have to be revised or developed. Coordination with the Operations Inspector may be required to ensure that the operations manual and/or Approved Flight Manual (AFM) contain the revised or new procedures.

28.2. Procedures

28.2.1. Procedures

A. Review the Operator's Submitted Engineering Order

Ensure the following:

(1) Operator's classification (minor/major) is correct.
(2) If classified as major, that data has previous DGCAR approval.
(3) Diagrams and procedures are clear, precise and complete.
(4) Proper materials are listed and employed
(5) Individual maintenance and inspection task sign-offs are provided for and are adequate to ensure authorization compliance
(6) The authorization does not affect existing systems and/or procedures
(7) Maintenance/operating manuals and procedures are revised to include new or revised procedures that may be required as a result of the authorization.

B. Analyse Findings

If discrepancies are noted, contact the operator and request corrective action.

29. Short term escalation procedures

29.1. Background

29.1.1. Objective

This chapter provides guidance for approving short-term escalation procedures.

29.1.2. General

Time limitations are maintenance intervals established by the provisions of an approved reliability program or by an operator-established maintenance monitoring program. They are based on continuing analysis and surveillance of a fleet's operating performance. Since operators try to avoid delays due to units being operated to the point of failure, the time limitations used are a conservative average. An operator therefore may need to adjust these intervals for an individual component engine or aircraft.

A. Use of a Short-term Escalation

(1) Under controlled conditions, an operator may use a short-term escalation for an individual component, engine or aircraft without affecting safety. These procedures require close monitoring to ensure that they do not conceal unsound maintenance practices, maintenance program deficiencies, or poor management decisions.

(2) Short-term escalations for operators not under a reliability program must be approved by the DGCAR on operations specifications.

(3) Operators do not require prior approval before using an escalation. The operator must however, inform the DFS of an escalation as soon as possible after the escalation is put into effect.

(4) A short-term escalation should only be used after carefully analysing the history of the aircraft and its components. A review of the proposed escalation should include:

- Previous inspections results;
- Supplemental/additional inspections that may be needed to ensure continued airworthiness during the escalations;
- Items not covered by the escalation. The escalation must not cause these items to exceed their maintenance intervals.

(5) Maximum short-term escalation intervals may be a percentage of an existing interval for a particular inspection or may be designated in hours of service, in cycles or in other increments. Except under certain conditions maximum time for an escalation is 100 hours' time-in-service or 5% _____ limit/cycle or its equivalent.

B. Extension of Short Term Escalations

The 100 hours or 5% _____ limit/cycle maximum time limit for an escalation is usually sufficient for an operator to position and/or repair the affected item. Occasionally, an operator cannot effectively accomplish the task within this time limit. After an in-depth review of this situation, an individual item may be extended beyond the limit. In order to do this, an operator must submit justification to the FSD Office prior to approval. This extension remains in effect for a prescribed time limit unless the component or inspection is accomplished prior to the time limit.

29.2. Procedures

29.2.1. Procedures

A. Review the Applicant's Short Term Escalation Procedures

Ensure that the procedures accomplish the following:

(1) List the operator's management personnel with escalation approval authority. These personnel must have at least the equivalent authority for approving:

- An operations specifications time increase;
- A maintenance interval adjustment controlled by a reliability program;

(2) Define the maximum limitations for a short-term escalation
(3) Contain criteria that defines the type of data acceptable for justifying a short-term escalation
(4) Correspond with the overall maintenance program. The procedures must ensure that an escalation will not create an unsafe condition.
(5) Restrict the occurrence of repetitive short-term escalations that indicate a need for a change in the maintenance program.
(6) Provide a method for recording all escalations with provisions for submitting/reporting each request/use of an escalation to the FSD.

29.2.2. Task outcomes

A. Completion of this task will result in one of the following:

- A letter to the operator indicating disapproval of the short-term escalation authorization;
- An amendment to the operator's operation specifications, if applicable, approving short-term escalation authorization.

B. Document task

File all supporting paperwork in the operator's office file.

3. Future activities

Close monitoring of the operation may be required to ensure the following:

- The authorization is not being abused;
- The manual procedures are being followed.

30. Approving parts/parts pool/parts borrowing

30.1. Background

30.1.1. Objective

This chapter provides guidance in evaluating and approving aircraft parts, a CAR-M parts pool and a CAR-M parts borrowing authorization.

30.1.2. General

A. Definitions

(1) Articles: Materials, parts or appliances
(2) Operator Manufactured Parts: Parts manufactured and documented by the operator for use only on that operator's aircraft. The parts must comply with the original type design and cannot be part of a pool of borrowing agreement.
(3) Parts: Any engine, propeller, component, accessory, material or hardware used on an air carrier aircraft.
(4) Parts Manufacturer Approval (PMA): PMA parts are parts produced by manufacturers other than the type certificate holder. These parts must be identical to parts covered under a type certificate and they must be marked as such. A manufacturer with parts manufacturer approval authority may approve these parts for use.
(5) Supplemental type Certificate (STC): When a major change in type design does not require a new application for a type certificate, a supplemental type certificate is issued. Parts manufactured under a supplemental type certificate are approved under the supplemental type certificate.
(6) Technical Standard Order (TSO): A technical standard order is a minimum performance standard for specified articles used on civil aircraft and is issued by FAA/JAA. These articles may be used on a variety of equipment items.
(7) Type Certificate (TC): A type certificate includes the type design, operating limitations, type certificate data sheet, applicable regulations and any other conditions or limitations prescribed by the DGCAR.
(8) An operator must ensure that all replacement parts meet or exceed original certification standards. Standard hardware and materials can be used and exchanged without special procedures. When special requirements must be met, accurate documentation must be maintained. Purchase, use and exchange of parts require special procedures that must be part of the operator's manual and in certain circumstances, part of the operator's operations specifications.

30.1.3. Parts pool agreement authorisation

These authorizations apply only to CAR-OPS 1 operators operating outside Oman or at any place nominated as Maintenance Base.

A. When operating under this authorization, all other provisions of CAR-OPS remain applicable. In addition, CAR-M requires surveillance of the foreign facilities and their procedures to ensure that all work on pooled parts is performed according to the operator's manuals.

B. These authorizations are approved by issuance of operations specifications. The operations specifications are required only to list those participants (and their locations) inspected by the operator and approved by the DGCAR.

C. Foreign Facility Inspections

(1) Foreign facilities should be inspected annually by the DGCAR.

(2) The operator must have in its manual procedures to inspect the parts pooling facilities. The manual also must include procedures to ensure the maintenance of parts according to the operator's maintenance manuals.

30.1.4. Parts borrowing authorisation

A. A certificate holder operating under CAR-OPS 1 may be issued operations specifications to allow it to borrow a part with a higher time since overhaul than authorized, subject to certain conditions and limitations. Since no regulations govern this activity, the operations specifications must specify that the operator can borrow a part from another operator when the time in service of the available part exceeds the operator's approved overhaul time limit. The parts, however, cannot exceed the lender's approved time limits.

B. If the number of landings controls the part's service or overhaul time limit, an operator may borrow and use a part for a maximum of 100 hours or 50 landings when the time in service of the part exceeds the borrower's approved time limits. The following limitations must be met:

(1) The part must have a minimum time of 200 hours or 100 landings (if approved time is controlled by landings) remaining before service or overhaul in the lender's program.
(2) If the part is life limited, the part may not be operated beyond its approved life limit.

30.1.5. Parts approval

A. Under present regulations, the DGCAR does not have the authority to prevent the sale of use of aircraft parts of questionable serviceability. Although it is the operator's responsibility to be aware of the possible consequences of using questionable parts on certificated aircraft, the inspector should offer guidance to help prevent possible problems. An operator using a part of unknown quality, condition or origin must be able to prove conclusively that such parts conform to the provisions of CAR M and CAN 3-20.

B. The operator is responsible for maintaining parts in a condition that ensures the parts continue to meet the original type design. Procedures to ensure this proper maintenance must be part of the operator's manual.

C. Repair stations or air carriers may manufacture replacement parts as part of their maintenance program. These parts are acceptable, provided they are manufactured according to acceptable DGCAR approved data.

D. Parts, appliances and components from aircraft that have been involved in accidents or crashes are available to the industry as replacements. CAR M requires that serviceability is assured before use.

E. Ex-military aircraft now under civilian type certificates create parts problems, particularly when the original manufacturer has ceased production. Certain parts of original manufacture are available for a given aircraft for a number of years after its departure from military status. If original manufacturer fabrication can be substantiated for such parts, they are acceptable providing they comply with all applicable airworthiness directives.

F. Certain parts for ex-military or currently manufactured aircraft are and have been scarce. Occasionally, parties other than the original or approved manufacturer produce these parts illegally and offer them for sale. These illegal parts constitute a hazard to flight safety.

30.2. Procedures

30.2.1. Procedures

A. Review Operator's Manual for Parts Pool Authorization

Ensure the manual includes:

(1) Procedures to ensure qualified personnel of the operator's organization perform an initial inspection of the involved foreign facilities. This inspection should ensure that facilities meet the certificate holder's manual requirements, have properly qualified and trained personnel and can furnish the parts intended.
(2) Procedures to provide for biennial inspections of the foreign facilities to ensure continued conformity to the operator's manual in supplying the required parts.
(3) Inclusion of, or reference to, the foreign facilities' maintenance programs in the operator's manual, if applicable.

B. Inspect the Parts Pool Authorization Facility.

The DGCAR inspector must inspect the facility once a year.

C. Review Operator's Manual for Parts Borrowing Authorization Procedures

(1) Ensure the manual includes the following procedures:
  (a) Procedures that restrict the overhaul time limits to those authorized by operations specifications
  (b) Procedures that restrict a remaining minimum time to overhaul to that authorized by operations specifications
(2) Ensure the operator has an approved list of authorized vendors, repair stations and air carriers from which it may borrow parts.

D. Analyse Results

Advise the operator of any deficiencies discovered during the inspection. Schedule a meeting with the operator to discuss and/or resolve the problem area(s).

30.2.2. Task outcomes

A. Successful completion of this task will result in issuance of the Parts Pooling Authorization, Operations Specifications.

B. Document Task

File all supporting paperwork in the operator's office file.

30.2.3. Future activities

Normal surveillance

31. Certification of CAR 147 approved maintenance training organisation

31.1. Background

31.1.1. Objective

This chapter provides guidance for certifying an Approved Maintenance Training Organization under CAR 147.

31.1.2. General

A. Certification Process

The certification process provides for interaction between the applicant and the DGCAR from initial inquiry to certificate issuance. It ensures that programs, systems and methods of compliance are thoroughly reviewed, evaluated and tested. The certification process consists of the following five phases:

- Pre-application Phase;
- Formal Application Phase;
- Document Compliance Phase;
- Demonstration and Inspection Phase;
- Certification Phase.

B. Authority

CAR 147 provides regulatory authority for certifying Approved Maintenance Training Organizations.

C. Airworthiness Inspector's Responsibility

Airworthiness Inspectors should not become involved in determining the market need for the school, the selection of resources, people or materials. Inspectors must remain objective in evaluating the applicant's facilities, personnel and curriculum content. The Inspector may participate as an advisor, but not as a voting member on school advisory boards or committees.

31.1.3. Pre-application phase

A. Initial Inquiry

Upon initial contact from an applicant the district office manager or unit supervisor will advise the applicant of the necessity for a pre-application meeting. The Airworthiness Inspector also directs the applicant to which regulations must be met and where copies of the regulations may be obtained. The Inspector does not schedule a pre-application meeting until the applicant has reviewed these requirements and has completed the application.

B. The Pre-Application Statement of Intent (PASI)

(1) The submission of a PASI expresses an intent by the applicant to initiate certification. It also allows the PACA to plan activities and commit resources. Therefore, a potential applicant should submit a copy of the PASI only after reviewing the appropriate regulations and advisory material. The applicant should consider the personnel, facility, equipment and paperwork requirements for certification and operation.

(2) The FSD should use the PASI to evaluate the complexity of the proposed operation and to ensure that trained and experienced Inspectors are available to certify the applicant. The FSD should also use the PASI to initiate its own files on the potential applicant and to obtain a re-certification number.
(3) The FSD may use the PASI to assess the workload and forecast staffing needs.

C. Establish Certification Team

Upon receipt of a completed PASI, the FSD establishes a team of Inspectors to conduct the certification. One team member will be designated as the Certification Project Manager (CPM).

D. Pre-application Meeting

During the pre-application meeting, the Inspector should counsel the applicant concerning regulatory requirements and PACA policies. Applicants should be made aware of any ethical considerations involved.

(1) The applicant should understand that the purpose of an Approved Maintenance Training Organization is to qualify the student to perform the duties of an aircraft maintenance engineer. The airworthiness inspector should emphasize to the applicant the contribution made to aviation safety by a licensed aircraft maintenance engineer.
(2) Applicants should be encouraged to set high goals when establishing courses. The applicant should recognize and accept responsibility to maintain high standards and continuously improve programs.
(3) The inspector should make an informal on-site visit to check the facilities and equipment, if available.

31.1.4. Formal application phase

The formal application phase requires a formal Application Meeting to present the required certification documents and discuss those issues relevant to the particular application. The Certification Project Manager meets with the official(s) representing the Organization. The Application, the compliance statement, the curriculum, standards for graduation, attendance and make up procedures, grading procedures, facility layout and the instructor qualifications are reviewed for conformity to the regulations.

A. Compliance Statement

To benefit the applicant, the compliance statement ensures that all applicable regulatory requirements are addressed during the certification process. The compliance statement must list each applicable CAR 147 section and provide a brief narrative or a specific reference to a manual or other document describing the planned method of compliance with the regulations.

B. Curriculum

For guidance on curriculum requirements, refer to CAR 147 Aviation Curriculum/Revision and Instructor Qualifications.

(1) Practical projects referred to in CAR 147.85 include all functions specified in the curriculum that involve hands-on tasks.
(2) CAR 147.85 addresses the maintenance of curriculum requirements. Generally, the Civil Aviation Regulations prescribe minimum standards for certification and operation. These standards may be exceeded, but only when approved as part of an approved curriculum.

C. List of Instructors and Qualifications

The certificate number, ratings and subjects must be listed for each instructor. There must be at least one certificated instructor for every 25 students in each shop or laboratory class. The suitability of non-certificated instructors to teach certain general courses will be evaluated on an individual basis.

D. Student Enrolment Statement

This statement indicates the maximum number of students to be taught for each rating during each enrolment period.

E. Written Description of Facilities

This description must include a facility layout plan indicating the relative location of classrooms to shops/laboratories, including dimensions and the relative location of each facility to each other facility when there is more than one site or location for the school.

F. Inventory of Equipment, Materials and Tools

The inventory must detail which tools will be provided by the school and which tools must be furnished by the students.

31.1.5. Document compliance phase

In the Document Compliance Phase, the applicant's manuals and other documents are reviewed thoroughly and then approved or rejected. Each document must be given an in-depth review to ensure that it complies with applicable regulations and conforms to safe operating practices.

31.1.6. Demonstration and inspection phase

In this phase, the certification team makes an on-site inspection to determine whether the applicant's proposed procedures and programs are effective. At this time, the applicant demonstrates that the facilities and equipment are safe and satisfactory. Emphasis is on compliance with the regulations. Throughout the Demonstration and Inspection Phase, the Certification Project Manager must ensure that each aspect of the applicant's required demonstration is first observed and then approved or disapproved.

A. Suitability of facilities, equipment, tools and materials is determined in relation to the approved curriculum. For example, an area may not be suitable for aircraft assembly. However, with appropriate scheduling and proper consideration of factors such as light, heat, noise, etc., that same area may be suitable for classroom instruction.
B. The amount of materials and the kinds of equipment and tools to be used also depend on the curriculum and number of students. For example, the applicant must demonstrate that the school has the appropriate tools and equipment to accomplish each project.

31.1.7. Certification phase

An applicant is entitled to a certificate when the following have been accomplished:

- The certification process is completed;
- Each unsatisfactory item has been corrected;
- It is determined whether the applicant has met all regulatory requirements and understands the related responsibilities;
- It has been demonstrated that the applicant is capable of conducting operations in a safe manner.

31.2. Procedures

31.2.1. Pre-Application phase

A. Handle Initial Inquiry

Upon initial contact with the applicant, determine if the proposed operation is subject to CAR 147. If it appears that the applicant is capable of meeting the regulatory requirements for certification, accomplish the following:

(1) Advise the applicant as to which regulations must be met and where copies of the regulations may be obtained.
(2) Instruct the applicant to complete the Pre-Application Items of Intent (PASI) and submit it to the FSD.

B. Schedule Pre-Application Meeting

Upon receipt of a completed PASI, the FSD assigns a Certification Project Manager to the project. The CPM schedules a pre-application meeting and advises the applicant that key management personnel, as listed on the PASI, should attend the meeting. Inform the applicant that these key personnel must be prepared to discuss specific aspects of the applicant's proposed operation.

C. Review PASI

The FSD_____ designs, reviews the PASI for _____ accuracy.

D. Conduct Pre-Certification Inspections

If possible, visit the proposed school before a formal application is filed. Inspect and make necessary recommendations regarding the following:

- Classrooms;
- Work areas;
- Materials;
- Laboratories;
- Technical data;
- Instructional aids;
- Other areas as needed.

E. Select Certification Team Members

The Flight Safety Director select a list of team audit and their particular areas of specialty.

F. Conduct Pre-Application Meeting

(1) Ensure that the applicant is aware of the regulatory requirements and DGCAR policies regarding certification and operation of maintenance training organization.
(2) Inform the applicant that a formal application consists of at least the following:
   (a) A letter of application and information when facilities and equipment will be ready for formal inspection.
   (b) A compliance statement listing each applicable CAR 147 section and providing either a brief narrative or preferably, a specific reference to a manual or other document which describes the manner of compliance with the regulation.

(c) A detailed description of the proposed curriculum. Emphasize that since the actual curriculum must be approved before certification, the applicant can save time and money by submitting the actual curriculum with the formal application.
(d) A written description of the facilities to be used for instruction. Ask the applicant to provide detailed drawings with dimensions of classrooms and laboratory/shop facilities. The drawings should show the relative location of each school facility.
(e) An inventory of the materials, equipment and tools to be used. Advise the applicant to detail, which tools will be provided by the school and which must be furnished by the student.
(f) A list of instructors showing any required certificate number(s), ratings and subjects to be taught by each. Each subject in the proposed curriculum must be accounted for on the instructor listing. Ensure that the applicant understands that technical maintenance courses other than certain general subjects must be taught by appropriately certificated LWTR. Inform the applicant that at least one certificated instructor is required for every 25 students in each class.
(g) A statement indicating the maximum number of students to be taught for each rating during each enrolment period. This information will also be shown on the application form.
(h) The appropriate and current technical data necessary for the rating(s) sought. The procedures should demonstrate how and by whom the data will be updated. The data should include the following:

- Civil Aviation Regulations;
- Civil Aviation Notices;
- Type certificate data sheets;
- Airworthiness Directives (ADs);
- Supplemental Type Certificates;
- Maintenance Manuals;
- Other instructional material as required by CAR 147.

(3) Ensure that the applicant understands the purpose and content of the formal application attachments.
(4) Inform the applicant that the school must have approved systems for determining final course grades and for controlling and recording attendance. Advise the applicant to present these systems to the DGCAR in writing for approval.
(5) The applicant must provide procedures for updating the technical data library and calibration of precision tools.
(6) Inform the applicant of administrative and record keeping requirements for certification.

31.2.2. Formal application phase

A. Review the Formal Application and Attachments

Review the application and attachments. Determine whether all documents have been submitted and are complete.

B. Schedule and Conduct Formal Application Meeting

Meet with key school personnel to discuss submitted formal application. Resolve any open questions or discrepancies at this time.

C. Accept or Reject Formal Application

Based on the initial review of the application and any meetings with the applicant, accept or reject the application. Advise the applicant in writing of the results. If the application is rejected, return the application and attachments with a letter stating the reasons for rejection.

31.2.3. Document compliance phase

A. Review Document

Thoroughly review the applicant's curriculum and other documents to ensure that each complies with the applicable regulations. Approve, accept or reject each document as appropriate. Documents reviewed during this phase may include the following:

- The compliance statement;
- Curriculum;
- Instructor requirements and qualifications;
-
- Minimum standards for graduation and method of determining final grades;
- Procedures for recording and controlling attendance and provisions for makeup classes;
- Procedures for maintaining, keeping and distributing student records and transcripts;
- Procedures for updating technical data library and calibration of precision tools;
- Facility layout.

B. Document Deficiencies

If deficiencies are found in any document submitted by the applicant, return the document with a letter outlining the deficient areas.

Note: The certification team should be ready to offer suggestions on how to improve the product but should avoid "writing" the applicant's documents.

C. If necessary, terminate the Certification Process

If the documents are of insufficient quality, advise the applicant that continuing the certification project is impractical and schedule a meeting with the applicant to discuss each deficiency in detail. Prepare a letter advising the applicant of the reasons for termination. Advise the applicant that a new PASI is required to initiate the certification process again.

31.2.4. Demonstration and inspection phase

A. Observe Demonstrations and Conduct Inspections

Ensure that the applicant's proposed procedures and programs are effective and that facilities and equipment are safe and satisfactory. Ensure compliance with the regulations as follows:

- Facilities meet the requirements of CAR 147;
- Instructional aids meet the requirements of CAR 147;
- Materials, tools and shop equipment meet the requirements of CAR 147.

B. Document Deficiencies

If deficiencies exist provide a list of discrepancies to the applicant. Schedule a meeting to discuss in detail the appropriate corrective action to be taken. Place documentation in the certification file.

(1) If the applicant does not demonstrate compliance or if discrepancies cannot be resolved, send a letter of rejection and a list of discrepancies.
(2) Inform the applicant that the Certification Project Manager must be notified in writing of all corrective action taken.

31.2.5. Certification phase

A. Issue Certificate

When all regulatory requirements have been met, accomplish the following:

(1) Approve the curriculum by signing and dating the list of effective pages and revision pages.
(2) Prepare the certificate. Give the original certificate to the new certificate holder.

B. Prepare Certification File

Once the school is certificated, prepare a file. The file must include the name and title of each Inspector who assisted in the certification. The file is signed by the Certification Project Manager. The file shall contain at least the following:

(1) Copy of the PASI;

(2) The compliance statement;

(3) Copy of the Certificate issued;

(4) Copy of the approved curriculum;

(5) List of the instructors, their qualifications and the courses they will be teaching;

(6) Facility layout;

(7) Procedures for updating the technical library and calibration of precision tools;

(8) Summary of any difficulty encountered during certification.

31.2.6. Task outcomes

Completion of this task will result in one of the following:

- Issuance of an _____ certificate;
- A letter to the applicant indicating that the certificate is denied;
- A letter to the applicant confirming termination of the certification process by the applicant.

31.2.7. Future activities

A. Observe the school during the first 90 days of operation.

B. Additional inspections may be necessary to determine compliance with the applicable Civil Aviation Regulations.

C. The Airworthiness Inspector may direct changes in the methods or techniques of. CHAPTER 14 35, CAR 147 approved maintenance training organisation curriculum/revision and instructor qualifications

32. CAR 147 approved maintenance training organisation curriculum and instructor qualification

32.1. Section Background

32.1.1. Objective

This chapter provides guidance for evaluating the curriculum or curriculum revision of an Approved Maintenance Training Organization certificated under CAR 147.

32.1.2. General

A. Definitions

(1) Check
A check verifies the item's proper operation but does not require it to return to service. The item checked does not have to be the item overhauled.

(2) Quality Standards
A school's highest priority is to develop, in the student, those manipulative skills needed to stimulate return to service. However, it is not necessary for the training aid itself to meet "return to service" standards.

(3) Trouble-shooter
In order to "troubleshoot" the airframe, power plant or aircraft component, the item must be made operational.

B. Curriculum Background

CAR 66 sets forth the minimum curriculum requirements. Maintenance of curriculum requirements is set forth in CAR 147.38

(1) Practical experiences include all functions specified in the curriculum that involve hands-on tasks.
(2) CAR 147 addresses the maintenance of curriculum requirements. Generally, the Civil Aviation Regulations prescribe minimum standards for certification and operation. These standards may be exceeded, but only when they are part of an approved curriculum.
(3) An Approved Maintenance Training Organization must adhere to its approved curriculum. Any new course material the school wishes to add must be incorporated into the approved curriculum and approved by the DGCAR before it may be used. This does not prohibit a school from teaching unapproved courses, such as refresher courses or academic courses required to complete a degree program. However, those courses must be clearly distinguishable from Approved Maintenance Training Organization courses.
(4) The Airworthiness Inspector should inform the school of what will be required to keep its approved curriculum current with industry needs by revising courses. It must be made clear, however, that these revisions require DGCAR approval before they can be implemented.

C. Curriculum Component

The curriculum or revision must be approved by the DGCAR. The curriculum will consist of the following of each subject:

- Subjects taught;
- Course content;
- Teaching level requirements;
- Test requirements;

- Classroom or theory hours;
- The total number of hours required for successful completion;
- Shop or lab hours;
- A schedule of required tests or quizzes;
- Order of instruction for each rating.

Note: At the discretion of the Airworthiness Inspector and in consultation with the school, it may be advantageous to include the school's operating rules in the curriculum.

D. Texts

If specific texts are approved as part of the curriculum, any change to a different text will require DGCAR approval as a revision.

32.1.3. Curriculum requirements

A. Order of Instruction

The curriculum must describe the order of course progression for each rating offered. For example, Basic Electricity would be followed by Aircraft Electrical Systems.

B Subjects Prescribed by CAR 66

The curriculum must cover the subjects and items prescribed in CAR 66.

(1) Subjects that are submitted for approval as part of the curriculum will not be made part of the curriculum until approved by the DGCAR.

(2) Each subject item must be taught at the minimum level of proficiency as defined in CAR 147, appendix A. When the school wishes to teach a subject item to a level beyond the requirements, the teaching level must be made part of the approved curriculum. Subject items must not be taught to a level less than that shown in the approved curriculum.

(3) Additional subjects/courses that are required by the school for their purposes, i.e. degree programs, shall not be submitted as part of the DGCAR approved curriculum.

(4) A distinction shall be made between additional courses/subjects that are part of the approved curriculum under CAR 147 and those that are not.

C. Practical Experience

(1) The curriculum shall list the practical experience that must be completed for each subject item. There must be sufficient practical projects to address the requirements of CAR 147. The curriculum shall include enough detail to evaluate the practical experience for correct teaching level, for equipment and tools needed and for performance standards and objective grading criteria.

(2) The teaching level must be specified for each practical experience under each subject item.

(3) The curriculum must show an appropriate amount of time for each practical experience.

(4) The curriculum shall provide that each task in each subject item is accomplished. For example, if a practical experience requires that the student inspect and repair to accomplish a practical experience, a requirement for both inspection and repair must be included in the plan.

(5) The overall curriculum must be taught at least 50% in the shop or lab. However, not every subject item lends itself to 50% shop work. The Airworthiness Inspector should ensure that shop and theory are balanced as appropriate to the subject item being taught. The Inspector should review the curriculum if the courses seem artificially organized to meet the 50% requirement.

D. Scheduling of Tests

Upon completion of each curriculum subject, a test must be scheduled. In addition, quizzes may be scheduled between subject items.

E. Grading criteria

A generally accepted academic standard for passing is a minimum of 80%. However, the school may require a higher minimum passing grade. All theoretical and practical portions of each subject listed in the curriculum must be passed to the approved grading standard. Each practical project must be passes as well to the approved standard.

F. Make up Provisions

(1) The curriculum must show a number of hours of allowed absences.
(2) All material missed shall be made up in the same subject areas.
(3) All practical projects missed shall be made up.

32.1.4. Revisions to the curriculum

Changes to the approved curriculum must be approved before implementation. Changes in the curriculum may include changes in any of the following:

- Teaching level;
- Hours of instruction;
- Testing;
- Make-up provisions;
- Course content;
- Equipment or facilities affecting instruction in theoretical subjects or the accomplishment of practical projects;
- Order of instruction;
- Addition or deletion of a rating.

32.1.5. Credit for previous instruction or experience

A. Crediting Previous Instruction at an Approved Aviation Maintenance Training Organization

The school must use either a reliable method of evaluating documentation or an entrance test to ensure that previous is comparable to that offered by the crediting school. When not using an entrance test, schools should be encouraged to use catalogues, course descriptions and other documents to determine the credit to be granted.

(1) Students may take a course of study for one rating. The course of study will include the General portion of the curriculum. A student returning to school to study for a second rating after having graduated from the course for the first rating will not have to retake the General portion of the curriculum. The General portion undoubtedly must be separate and distinct from either the Airframe or the Power plant portions.
(2) If an approved maintenance training organization is under suspension by the DGCAR, courses taught during the suspension period should not be credited retroactively, even if the school becomes re-certificated later.
(3) An applicant must not teach students as an approved maintenance training organization before school certification and then give credit for that training after the school becomes certificated.

(4) A school may credit a student with instruction that was completed satisfactorily at another approved maintenance training organization either before or after its certification.

B. Crediting Previous Instruction from Other schools (Non-approved maintenance training organization)

As a general practice, credit may be granted only for subjects that apply to the General portion of the curriculum.

32.1.6. Instructor qualifications and faculty requirements

A. Facility Requirements

(1) An instructor must hold a DGCAR LWTR with type rating appropriate to the subjects that the instructor teaches.

(2) Individuals listed as instructors, lab assistants or teaching assistants also must be _____ properly if they are used for instruction in any subjects other than mathematics, physics, drawing or similar subjects. The suitability of non-certificated instructors to teach certain general courses will be evaluated on an individual basis. Cases have arisen where instructors have not taught these subjects in a manner applicable to aviation maintenance. _____ inspectors must be aware of this type of situation and ensure that the appropriate information is taught according to the DGCAR approved curriculum.

B. Student/teacher ratios

There must be at least one certificated instructor for each 25 students in each shop or laboratory class. The AWR must exercise discretion when prescribing a lower student to teacher ratio according to the needs of the class.

C. Performance

The AWR instructor should encourage the school to provide for regular assessment of instructor performance.

32.2. Procedures

32.2.1. Procedures

A. Review the Curriculum

For an initial certification, thoroughly analyse the curriculum prior to the date of the team inspection. Ensure the following:

- Instructor qualifications match the subject being taught;
- At least 50% of the total curriculum is spent in the lab and/or shop;
- The curriculum shows a schedule of tests for each subject;
- The curriculum states the minimum standards for a student to successfully complete the requirements for DGCAR certification;
- Grading criteria for academic and practical subjects have been developed;
- Make-up provisions are included;
- Procedures for crediting previous experience or instruction have been developed.

B. Review Instructor Qualifications

Ensure that the instructor's license is valid and that there are no cases pending.

32.2.2. Task outcomes

A. Curriculum/Revision/Instructor Qualifications are approved

(1) For an initial certification, submit an application with the following:

- The proposed curriculum;
- A list of proposed practical experiences;
- A schedule of required tests;
- A list of instructors' names with license numbers, type licensing, type and subject(s) to be taught.

(2) Revision – As appropriate to the approved method for recording revisions, initial the applicable document(s). Return the curriculum to the school.

B. Curriculum/Revision/Instructor Qualifications are not approved

Send a letter to the school outlining the deficiencies and explaining why the curriculum is unacceptable. If an instructor is found to be unqualified or otherwise ineligible to teach the subjects as designated by the school curriculum, notify the school in writing, detailing the specific problem.

33. CAR 147 - Approved maintenance training organisation facilities, equipment, materials, tools and records

33.1. Objective

This chapter provides guidance for evaluating the facilities, equipment, materials and tools for Approved Maintenance Training Organization. Such an evaluation occurs as part of an original certification, addition of a rating curriculum changes or change of location.

33.1.1. General

A. Definitions

(1) Common Hand Tools
Small, ordinary tools such as ratchets, sockets, etc.

(2) Instructional Aids
Equipment used to instruct such as mock-ups, diagrams, visual aids, aircraft, engines, components, etc.

(3) Shop Equipment

Machinery, fabricating devices, spray paint equipment, battery chargers, etc.

(4) Special Tools

Highly specialized tools such as tension meters, micrometres, torque wrenches, etc.

B. Appropriate Equipment and Facilities

An Approved Maintenance Training Organization must have instructional equipment and suitable facilities appropriate to the ratings taught and approved by the DGCAR Materials and tools must be of a type, quantity and quality appropriate to the needs of the curriculum and the number of students.

33.1.2. Pre-inspection activity

A. Initial Certification

The certification team will approve the curriculum before formal inspection of the facility. During the Pre-Application Meeting, the Certification Project Manager (CPM) may request a briefing and an information inspection of the facility. The applicant may request that an AWR inspector informally evaluate the facility to see if it appears to be within the guidelines of the Civil Aviation Regulations. This may be accomplished before completion of the facility, but only after submitting a Pre-Application Statement of Intent (PASI).

B. Added Rating/Curriculum/Location change

To add a rating or execute a change in curriculum or location that affects facilities, equipment, materials, or tools, etc., the office manager or airworthiness unit supervisor will determine whether one inspector or a team is necessary to accomplish the site inspection.

33.1.3. Demonstration activity

Ensure compliance with CAR 145

33.1.4. Facilities

The instructional equipment, shop equipment, hand tools and physical layout of the building must meet the requirements outlined in CAR 147.30. The inspector should keep in mind that the facility must constitute an environment suitable for learning.

A. Classroom Areas

An area suitable for classroom instruction may not be suitable for lab and/or shop. With appropriate scheduling and consideration of factors such as ventilation, lighting, noise and temperature control, an area appropriate for lab and/or shop may be acceptable for classroom instruction.

B. Shop Environment

Ventilation must be such that fumes from painting, fuelling, degreasing, doping facilities, etc. are properly removed from the immediate work area and are not allowed to pass into other instructional areas.

C. Facility Size and Location

(1) Facilities must be adequate to hold the number of authorized students participating in any of the shop/lab projects designated for that area.
(2) Facilities must be located and classes scheduled so that students can travel between classes without cutting into instructional time. Inspector should pay special attention to situations in which the students cannot go easily and quickly from one class to another.

33.1.5. Equipment

A. Instructional Equipment

(1) The instructional aids must be appropriate to the scope and depth of the curriculum of the school. The inspector shall determine whether the complexity of instructional aids is appropriate to the specific teaching level of the subject item.
(2) In some situations, the school may choose to use active aircraft for instructional purposes in the shop. This is permissible as long as the aircraft is on the premises at the time of instruction. The inspector shall remind the school that active aircraft used to comply with CAR 147 become part of the approved instructional equipment and must be available.
(3) The inspector shall ensure compliance with requirements for the ratio of instructional equipment to students in each shop course. Not more than eight students may work at any one unit of equipment at a time. However, the inspector may determine whether eight students are too many to complete a certain project safely and competently, such as live aircraft that are used for the demonstration of gear retraction systems.

B. Shop Equipment

(1) The inspector must determine if enough equipment is in place and in satisfactory operating condition to service the student enrolment adequately and meet shop project requirements.
(2) The equipment must be located so that it can be operated in a safe and efficient manner. Large standing equipment must be installed securely. Large pieces of equipment should be placed to provide sufficient aisle space so that the students can move about freely. The inspector must determine if the floor is free from clutter and items such as extensions cords.

33.1.6. Materials

The school must have sufficient materials in stock and properly stored to provide for the approved student enrolment. In order to ensure adequate instruction, the amount and variety of stocks should directly reflect the requirements of the curriculum.

33.1.7. Tools

A. Tool standards

All tools required to meet "return to service" standards must be in satisfactory working condition and of the proper kind for their satisfactory working condition and the proper kind for their intended purpose. The schools must have an adequate supply of materials and tools appropriate to the curriculum of the school.

B. Student Hand Tool Policy

The school may either provide common hand tools or require students to furnish their own. In either case, the school must establish a policy on provision of common hand tools. Any tools that the school requires the student to furnish must be listed in the curriculum. The school will furnish special tools, such as cylinder hold down wrenches, micrometres, etc.

33.2. Procedures

33.2.1. Procedures

A. Review the Applicant's file

Before inspecting the facility, review the applicant's application. Check for any previous violation history. Review previous correspondence. Check the curriculum or proposed curriculum for currency. Take a copy of the curriculum and facility layout to the school site.

B. Inspect the Facility

Compare the curriculum against the instructional aids, shop equipment and hand tools at the site. Compare the physical layout with the facility layout plan.

(1) Check the instructional aids for agreement with the curriculum. Determine if the items required for each course are actually at the site as required by the approved student level.
(2) Determine whether all instructional aids are actually operable and safe to use. For example, a retractable landing gear instruction device should operate properly.
(3) Ensure that adequate stocks of operational/maintenance instructions, parts manuals and technical data are at the site, according to the requirements of the curriculum.
(4) Determine if the number and size of classrooms and shop areas are consistent with the facility layout submitted with the curriculum. Ensure that the lighting and ventilation are adequate.
(5) Verify that the tools, materials and shop equipment match the inventories / descriptions required by the curriculum. Ensure that these items are stored properly.
(6) Verify that a record keeping system is in place for tool inventory, calibration and the updating of technical instructional materials.
(7) Inform the applicant of any discrepancies noted. Make a record of such deficiencies in the remarks section as appropriate.

33.2.2. Task outcomes

A. Facility approved

B. Facility disapproved

Write a letter to the applicant stating the reasons for disapproval. Advise applicant to re-submit a new application when the discrepancies are corrected. Upon receipt of a new application, re-schedule the facility inspection.

33.2.3. Future activities

Routine surveillance.

34. Process for remedial training

34.1. Background

34.1.1. Objective

This chapter provides guidance for using remedial training to achieve future compliance by certificated engineer through methods other than punitive legal enforcement action.

34.1.2. General

When a certificated airman commits an inadvertent act of non-compliance, constructive ways should be sought to restore the airman to an appropriate level of competence. Successful remedial training accomplishes this by showing the engineer what happened, why it happened and how to prevent a recurrence. The DGCAR Remedial Training Program (RT) involves the following:

- Bringing the incident to the attention of the airman in a positive manner;
- Ensuring future compliance through improved skills and competence;
- Documenting corrective action and providing a source of information for agency use;
- Achieving compliance of certificated engineer without the imposition and expense of certificate or civil penalty action.

A. Eligibility

The Remedial Training program applies to inadvertent violations of the Civil Aviation Regulations by a certificated engineer. Flight Safety Inspectors must determine inadvertency on a case-by-case basis, based on the investigation of the facts and circumstances of the incident. Inspector must also take into account the airman's past performance and overall attitude toward the incident.

(1) When assessing the engineer's eligibility for the Remedial Training program, Inspector must determine if future compliance can be ensured solely through remedial training. For an Inspector to establish airman eligibility, the act of noncompliance must meet the following criteria:

- The non-compliance cannot have been deliberate;
- The non-compliance cannot have caused an accident;
- The non-compliance cannot have indicated a lack of qualification;
- The non-compliance cannot have been caused by gross negligence;
- The non-compliance cannot have been of a criminal nature;
- The non-compliance cannot have been committed by an employee of a DGCAR approved maintenance organization while working under an air carrier approved aircraft program;
- The non-compliance cannot have been committed by certificate holders who were exercising the privileges of their certificate for compensation or hire in air transportation service.

(2) Also, the inspector must review the engineer's enforcement history and evaluate whether that history supports or precludes participation in the Remedial Training program. Although, ideally, program candidates should be first time offenders, previous enforcement history does not automatically exclude an airman from the program.

B. Remedial Training Process

(1) After determining engineer eligibility, the investigating inspector must make a recommendation for the program.

(2) The engineer must complete any agreed-upon Remedial Training program within 120 days of the DGCAR becoming aware of the violation. Failure to complete the program within the time limit will result in termination of the engineer's participation in the program and initiation of legal enforcement action by the investigation inspector.

Note: *Unavailability of equipment, engineer illness, etc., is conditions for extending the training period.*

(3) After the engineer has completed the training program and provided evidence to that effect to the FSD, the FSD informs the investigating inspector of the results. Based on that information, the inspector will accomplish one of the following:

- Issue a letter of correction to conclude the case and close out the Enforcement Investigation Report (EIR);
- Initiate legal enforcement action.

Note: *After successful completion of the training course, the* DGCAR *will discontinue seeking <u>any</u> legal actions against the engineer for that violation.*

34.2. Procedures

34.2.1. Procedures

A. Initiate the Investigation of the Alleged Violation

(1) Receive notification of the violation.

(2) Write a letter of investigation. Ensure that the letter includes a statement of what the alleged violation consisted and the assigned EIR number.

Note: *The regulation(s) violated should not be listed in the letter of investigation.*

B. Gather the Supporting Facts

Gather all related information. This can be accomplished by:

- Reviewing records;
- Taking photographs of items associated with the alleged violation;
- Acquiring witness statements;
- Reviewing technical documents, e.g., manufacturers maintenance manuals, aircraft flight manuals, etc.
- Interviewing the alleged violator;
- Acquiring technical information from other agencies, e.g. Meteorology and Air Traffic Control;
- Inspecting physical evidence.

C. Analyse the Supporting Evidence

(1) Review the data collected to ensure that it is relevant material and competent.
(2) Review the regulations in conjunction with the items of proof. Ensure that the following questions are answered for each relevant regulation:

- To whom does it apply;
- What does it say in its entirety;
- When must it be accomplished;

- How does it apply in this occurrence;
- Are there special conditions;
- Does this regulation clearly apply;
- Are any other regulations applicable to this violation?

(3) After this analysis and review, determine if the evidence warrants recommending the airman for the Remedial Training program.

D. Process an Applicant for Remedial Training

Ensure that all eligibility factors are thoroughly documented and proceed with administrative enforcement actions.

(1) As a part of the administrative enforcement action, inform the alleged violator, in the Letter of Investigation (LOI), of being eligible for the Remedial Training program.
   (a) Ensure that the alleged violator understands the necessity of responding within the response period as specified in the LOI.
   (b) If the alleged violator is co-operative and responds within the specified time. _____

(2) Advise the FSD of all facts, conditions and circumstances surrounding the alleged violation, to include sending a copy of the investigation file. The responsibilities of the DFS will include the following:
   (a) Scheduling a meeting with the alleged violator;
   (b) Making a final determination of airman eligibility;
   (c) Creating a course of study based on the following:

- Circumstances of the alleged violation;
- Probable strengths and weaknesses of the airman;
- Availability of training resources.

*Note: No discussion of the legal aspects of the alleged violation or merits of the case should take place between the engineer and the FSD***.**

   (d) Finalizing an agreement, in writing, that acknowledges the act of non-compliance and outlines the terms and conditions of the remedial agreement. This must be signed by both the FSD and the engineer.
   (e) Including in the investigation file the documentation of proof of completion, that consists of the following:

- A statement from the instructor/official of the training establishment;
- Documentary proof, such as logbook entries and aircraft or simulator rental invoices, etc.
- A record of discussion with the instructor providing the training, if available;
- Any other documentation the FSD feels necessary.

   (f) Notifying the investigating Inspector of the results of the remedial training and returning the complete investigation file.

34.2.2. Task outcomes

A. Upon notification by the FSD of either completion or termination of the remedial training, accomplish one of the following:

(1) If the Remedial Training program was successfully completed send a letter of correction to the participant.

(2) If the Remedial Training program was not finished, unsatisfactorily completed or was not even started due to a decision by either the airman or FSD, send a letter of rescission to the airman rescinding the airman's privilege to participate in the program. Resume the process of legal enforcement action.

35. Conduct ramp inspection of operators' aircraft

Refer to Ramp Inspection Manual.

36. Inspection and audit plan/checklists

36.1. Annual planning

The FSD prepare and approve an annual audit plan regarding AMO /ATO / CAMO/RAMP/ AOC holders.

37. APPROVAL OF MODIFICATIONS AND REPAIRS

37.1. Introduction

The purpose of this part is to provide guidance on the actions required to perform design changes to aircraft type design made through the accomplishment of aircraft modifications and aircraft repairs.

This part provides guidance on the actions necessary to change the aircraft type design, including the application to DGCAR, design change classification, establishing the certification basis, means of compliance, demonstration of compliance, finding of compliance, design change approval and post-approval requirements.

Modifications are intended to change a function, operation, limitation, performance, or characteristic of an existing aircraft, engine or propeller for the purpose of achieving a desired feature, role or capability for the affected product.

If an aircraft experience accidental damage, wear and tear environmental deterioration, fatigue, malfunction, and failure during its operational life. Repair is a corrective action intended to restore an aircraft back to its approved type design and, is regarded primarily as a maintenance function.

The Certification basis/standard explains in this part is the standard and recommended practise in the ICAO Annex 8 or any other standards developed in compliance with that, such as EASA Part 21 are FAA FAR 21 certification requirements.

Note- The guidance pertaining to review of engineering order is explained in the Chapter of this document.

37.2. Aircraft Design Change Application

37.2.1. Applicant for an aircraft design change

An applicant requesting approval of a proposed modification to an aircraft, engine or propeller can be the type certificate holder, an aeronautical product manufacturer, a specialized design engineering organization, an air operator with engineering capability, individual engineers as consultants, or an aircraft maintenance organisation or repair station.

The approval will be granted. In cases of complex design changes involving multi-national agreements, joint ventures, partnerships or similar collaboration, the applicant remains overall responsible for integrating all design data from its various sources, and submitting it to DGCAR as a complete and detailed proposal for the modification of an aircraft, engine or propeller.

The planning of major design changes to aircraft, engines or propellers should not be attempted unless the applicant has a sound knowledge of the design principles embodied in the aeronautical product being considered for a design change. There may be cases where access to the analyses and test reports from the original type certification activity of the aeronautical product is needed in order to assess compatibility or suitability of the proposed design change. If this is the case, it is recommended that the applicant seek ways for the participation in, or review and comment on, the design change by qualified representatives from the holder of the Type Certificate. Where such cooperation is not available, the DGCAR will not approve the design change unless it is confident that the applicant has:

a. a comprehensive knowledge, experience and capabilities in the applicable technologies, such that in-depth analyses can be performed where required; and
b. Sufficient information on the type design of the aircraft involved (if there is any doubt, consultation is required with the airworthiness authority of the State of Design).

37.2.2. Application data for an aircraft design change

A request for the approval of a proposed design change should be submitted together with the supporting technical information, as a minimum, the following:

a. the make and model of the affected aeronautical product (registration and/or serial number) and its Type Certificate number or other approval reference
b. the title, detailed description, and purpose of the proposed design change, including any changes affecting the noise and emissions level of the aircraft or engine
c. the type of approval requested
d. the proposed airworthiness standards, including environmental standards if applicable, to which the proposed design change is intended to comply
e. documentation and/or substantiating data of the design change

An application for a modification or repair is normally considered outstanding or open until an approval is finally issued. There is no validity period for an application within which DGCAR must grant the approval. The operating schedule of the aircraft operator normally indicates the time limitation by which an approval is needed, in order to release an aircraft back to service.

37.2.3. Classification of Aircraft Design Changes

Modifications will vary in design philosophy, application technology, complexity, and magnitude. Modifications should be categorised as either a major modification or a minor modification.

Repairs, including the installation of a replacement part, must be in accordance with the airworthiness requirements of DGCAR. Repairs are categorized as either a major repair or a minor repair.

37.2.4. Major Modification Classification

By definition, a major modification has an appreciable, effect on the airworthiness of an aeronautical product. The applicant should evaluate the technical merit of each modification proposal and establish a clear understanding of the intended and/or consequential effect on the affected product. The intensity of such effect will vary with the complexity and extent of the proposed design change, but is generally recognized as being, substantial, significant or not significant.

37.2.4.1. Substantial Modification

A proposed change in design, configuration, power, thrust, speed Limitations, or mass is so extensive that a substantially complete investigation of compliance with the applicable airworthiness standards is required. A design change at this level is generally viewed as having a technical scope and nature that the affected product, when modified, can be regarded as essentially a new product, i.e. there are differences in major design and/or production elements. Further, due to the extensiveness of the proposed modification, most of the existing substantiation of the product will no longer be applicable. Therefore, there is a need for a substantially complete, or complete, re-investigation of compliance of the new substantiating data with the applicable airworthiness requirements. A substantial change to an aeronautical product may evolve from single extensive design change proposal, or from previous relevant design changes that incrementally evolved an aircraft, engine or propeller over a period of time.

Some examples of modifications that are generally regarded as substantial are:

- in the case of aircraft, the modification involves change in the number or location of engines, change in the number of rotors, increase from subsonic to supersonic flight regime, change from high wing to low wing configuration, or change from an all metal aircraft to an all composite primary structure (fuselage, wing, empennage);

- in the case of an aircraft engine, the modification involves change in the principle of operation or use of different principles for propulsion; or
- in the case of propellers, the modification involves change in the number of blades or the principle of pitch change operation.

37.2.4.2. **Significant Modification**

A proposed change in the general configuration, principles of construction, assumptions used for the certification, or a combination of these, for a type certificated product, but not to the extent to be considered a substantial change. A significant change in the general configuration are design changes that are likely to require a new product model designation to distinguish it from other product models. A significant change to the principles of construction are changes to the materials and/or construction methods that affect the overall product's operating characteristics or inherent strength. A significant change to the assumptions used for certification are changes to the product level assumptions associated with the compliance demonstration, performance, or operating envelope so different that they invalidate the original assumptions. The assessment of the effect of a significant change is made on the overall aircraft, engine, or propeller, rather than at the level of a part, component or system. A significant change usually results in a modified product that is distinct from other models of the same product, while still retaining common major design or production elements.

In general, a significant change is either the result of an accumulation of previous modifications or occurs through an isolated but extensive major modification.

When assessing the proposed modification, the cumulative effect of previous relevant modifications in the areas related to the current proposal should be considered. For example, previous relevant aircraft design changes may address incremental increases in mass or thrust that, while individually not significant (for example, 2 per cent, 4 per cent, 5 per cent discrete increases) can, through a series of modifications, achieve a significant product level change. The collective and cumulative effects of previous modifications, along with the proposed modification, may result in the modified product being considerably different from the latest product or model. If this is the case, the proposed modification should be categorized as a significant change. Typically, significant product level changes result in a model change necessitating an amendment to the Type Certificate or an STC that rises to a level similar to that of an amended Type Certificate.

Some examples of modifications that are generally regarded as significant are:

- in the case of aircraft, the modification involves increase in the seating capacity, installation of floats or skids, conversion from passenger to freighter version, fuselage stretch, increase in design mass of more than 10 per cent, primary structure change from metallic to composite material, certification for flights into known icing conditions, or comprehensive flight deck upgrades;
- In the case of an aircraft engine, the modification involves use of new design fan blade and fan hub in a turbine engine, change in the containment case material, conversion from mechanical to electrical control systems, addition of a turbocharger, or conversion from spark-ignition to compression-ignition for piston engines; or
- in the case of propellers, the modification involves introduction of a different principle of blade retention.

37.2.4.3. **Not a Significant Modification**

This is a modification whose effect on the product does not rise to the level of either a substantial or significant modification. A Not Significant modification remains a major modification, and

should not be confused as equivalent to, or treated like, a minor modification. The effect of a Not Significant change is usually confined to a single area, system, or component of an aircraft, engine or propeller.

Some examples of modifications that are generally regarded as Not Significant are:

- in the case of aircraft, the modification involves general avionics upgrade, relocation of galley, installation of non-essential auxiliary power unit, substitution of one structural bonding method for another, installation of wheel skis, installation of quieter exhaust system, increase in fuel tank capacity, installation of new type passenger seats,
- or mass increase of less than 5 per cent;
- in the case of an aircraft engine, the modification involves change in oil tank design, fan blade re-design, software changes, bearing change, change in limits on exhaust gas temperature, change from one hydro-mechanical control to another hydro-mechanical control, change in crankshaft, or redesigned cylinder head, valves or pistons; or
- in the case of propellers, the modification involves change in the material of the bearing or change to a component in the control system.

37.2.5. Minor Modification Classification

By definition, a minor modification is a design change that is not classified as a major design change. It has a negligible, or no appreciable, effect on the mass, balance, structural strength, reliability, operational characteristics, or other characteristics affecting the airworthiness of the product. The accomplishment of minor modifications normally involves use of standard or generally accepted practices.

37.2.6. Major Repair Classification

A major repair is usually considered a repair that might appreciably affect mass, balance, structural strength, performance, power-plant operation, flight characteristics, or other qualities affecting airworthiness. A repair in this category normally requires some form of engineering analysis or assessment. The applicant should evaluate the technical merit of a repair design proposal, and establish a clear understanding of the intended or consequential effect on the affected product. For example, it may not be appropriate to approve a repair that is purposely designed to be much stronger than the structure being repaired because the effect may be an undesirable change in the original structural load distribution. For the purpose of illustration, the following are examples that can be used to categorise a major repair:

- Repairs involving a principal component of the aircraft structure, such as a frame, stringer, rib, spar of stressed skin
- Repairs to structural elements that were approved using damage tolerance or fail-safe evaluation
- Repairs to pressurized areas
- Repairs involving the installation of an item of mass necessitating structural re-evaluation
- Repairs to structural attach points intended for the stowage or retention of significant mass
- Repairs to load bearing structure of aircraft seats, harnesses, or to occupant restraint equipment
- Repairs involving substitution of materials, or use of a different repair process or technique
- Repairs to components, parts, appliances where form, fit, and function may be affected

37.2.7. Minor repair classification

By definition, a minor repair is a design change that is not classified as a major repair change. It has a negligible, or no appreciable, effect on the mass, balance, structural strength, reliability, operational

characteristics, or other characteristics affecting the airworthiness of the product. The accomplishment of minor repairs normally involves use of standard or generally accepted practices.

37.2.8. Other classification issues – noise and emissions

As part of an assessment of a design change as either major or minor, the effect on the noise and emissions levels should also be categorised and an emissions change category established.

The type certification of an aircraft and engine includes compliance with, and certification to, the environmental standards of ICAO Annex 16, Environmental Protection. The demonstrated levels of noise, exhaust smoke emissions, gaseous emissions and fuel venting for which an aircraft and/or engine were approved for purposes of issuance of a Type Certificate are those recorded in the Type Certificate Data Sheet (TCDS). The intent of ICAO Annex 16 is to ensure that these recorded levels are maintained, or improved, throughout the operational life of the aircraft or engine. If the proposed design change changes or improves the current emissions level of an aircraft or engine (such as retrofit of hush kits or re-engine programme), a re-certification is necessary to establish compliance with the applicable requirements. Three emission change categories are possible;

- Noise Level Change - Any change in the type design of an aircraft which may increase or decrease the noise levels of that aircraft
- Engine Emissions Change - Any change in the type design of the engine which may increase or decrease the exhaust smoke and gaseous levels of that engine
- Fuel Venting Change - Any change in the type design of the aircraft or engine which may affect the certification related to prevention of intentional fuel venting into the atmosphere

37.3. COMPATIBILITY OF AIRCRAFT DESIGN CHANGES

In a more general situation, modifications may be separately designed for the same basic aircraft type by different organizations with no knowledge of the other's work. The modifications may be shown separately to comply with all applicable airworthiness standards; however, they may physically interfere with each other. Alternatively, no problems may be encountered with the installations, but it may be found in service that the combination causes aerodynamic buffeting, stability or control problems, fatigue cracking, structural failure, electromagnetic interference, or other problems. If the concurrent installations of different modifications are not rigorously assessed for compatibility, there exists the possibility that in combination they may cause serious airworthiness hazards.

37.4. ESTABLISHING THE CERTIFICATION BASIS

The main objective of the aircraft design change approval process is to determine the overall compliance of a proposed change with the applicable airworthiness and environmental standards, such that the affected aeronautical product, when changed, will continue to have a valid and approved type design.

37.4.1. Establishing the certification basis - modifications

The type certificate data sheet (TCDS) of an aircraft, engine or propeller identifies the detailed certification basis by which the type design of that product was approved. The major components of a certification basis are the airworthiness and environmental standards, including if any, special conditions of airworthiness, findings of equivalent level of safety, and exemptions. Applicants should consider developing modifications to a level of safety higher than that intended by its original certification basis. This policy requires that modifications demonstrate compliance with design standards that are in effect

on the date of application, or with later amendments to the design standards recorded on the TCDS, whenever DGCAR deems that such policy will result in a material contribution to the safety of the modified product. The effect of such policy is a progressive upgrading of the inherent levels of safety of products to the greatest extent practicable, as it undergoes several modifications throughout its service or operational life.

In the application (Appendix) for a modification approval, the applicant proposes the airworthiness and applicable environmental standards to which they intend to demonstrate compliance. Depending on the modification, additional airworthiness or operational requirements may be imposed by the DGCAR, or an applicant may be required to show that the product meets additional standards in order to receive approval in another State, due to differences in requirements. All these requirements are established collectively to become the certification basis for the modification.

37.4.2. Certification basis for modifications - Conclusion

In establishing the certification basis to use, the applicant should document and supply to the DGCAR all substantiating data used. The certification basis used could include, but not be limited to:

- Compliance with the latest design standards is necessary.
- Compliance with an amendment level between the existing certification basis and the latest design standards would adequately address the hazard at an acceptable cost. Complying with the latest amendment level would not be practical. The applicant would then propose the intermediate amendment level of the requirement.
- The increased level of safety is not commensurate with the increased costs associated with meeting the latest amendment instead of the existing certification basis. Therefore, the applicant would propose the existing certification basis.
- The results of the assessment were inconclusive. Further discussions with the DGCAR are warranted.

The certification basis of the proposed modification can now be finalized, and may consist of a combination of the latest design standards, the design standard of the existing certification basis, or an intermediate level between the existing and the latest design standards. Areas of the aircraft, engine or propeller that are considered unchanged or not affected by the proposed modification can continue to comply with the existing certification basis (i.e. there is no need to re-visit the certification basis).

37.4.3. Establishing the certification basis - Repairs

The basis of approval for a repair design should be the same airworthiness standards used in the certification of the type design. The following is the basic policy for repairs;

- For an aircraft, the approval basis is the aircraft design standards recorded in the Type Certificate Data Sheet issued by the State of Design.
- For an engine or propeller, the approval basis is the engine or propeller design standards recorded in the Type Certificate Data Sheet issued by the State of Design of the engine or propeller. It is not the State of Design of the aircraft on which the engine or propeller is installed that applies.
- For a component, part, appliance or article that is not type certificated or has a separate design approval other than a Type Certificate, the approval basis is the airworthiness standard of the type certificated product (aircraft, engine, or propeller) on which the component, part, appliance or article is installed.

The approval basis for a repair design shall not include any proposal for an exemption or a finding of equivalent level of safety because a repair is a restoration to an approved type design. The intent of the repair is to maintain the same level of safety that the product was certified to.

The approval basis could also be affected by additional requirements that are not related to the original approval or type certification of the product. For example, a supplemental structural integrity programme or a repair assessment programme for ageing aircraft may influence repair designs to be held to higher design standards or evaluation techniques. In establishing the approval basis, the applicant should also account for other factors, such as maintenance or operating rules, which may affect the actual installation of the repair.

37.5. ESTABLISHING THE MEANS OF COMPLIANCE

It is the sole responsibility of the applicant to demonstrate compliance of the proposed design change with the certification basis defined by the DGCAR in accordance with the methods accepted by the DGCAR. In order to manage this aspect during the modification approval process, and before an applicant commits to any compliance action, it is necessary to agree on a certification compliance plan that clearly identifies the types of action to be applied against each item of the certification basis.

37.5.1. Means of compliance

The means of compliance is usually dictated by the specific item of the certification basis, and generally falls into one or any combination of the following;

37.5.1.1. Test

A test is performed when the requirement explicitly calls for a demonstration by test (physical, actual or simulation). Examples of test are flight test, ground test, fatigue test, simulation, fire or flammability test, environmental test (e.g. salt spray), functional test, bird strike test, and engine ingestion test.

37.5.1.2. Analysis

This is performed when the requirement explicitly calls for a demonstration by analysis (qualitative, quantitative, or comparative), or when the applicant can demonstrate, based on previously accepted test results, the validity of using analysis in lieu of testing. Examples include failure modes and effects analysis, weight & balance analysis, electrical load analysis, flight performance data reduction and expansion, structural loads analysis, and software evaluation.

37.5.1.3. Inspection or Evaluation

This is performed against an item that does not require test or analysis, but relies on observation, judgment, verification, evaluation, or a statement of attestation from the applicant or its vendors/contractors.

37.5.1.4. Derivation or Similarity

This can be used for repair design. A new repair design can be developed or derived from a previously approved repair and the two repair designs can be considered similar.

37.5.1.5. Certification compliance plan

The certification compliance plan is the primary document in the design change approval process that serves both as a checklist and official record of compliance. The applicant should prepare a certification

compliance plan and establish its contents with the agreement of the DGCAR. The certification compliance plan should, as a minimum, contain the following information:

SAMPLE COMPLIANCE CHECKLIST

The purpose of the compliance checklist is to document the applicable airworthiness design standards for the design change approval process and how compliance with those design standards is shown.

Instructions for completing this sample compliance checklist are as follows:

Paragraph: List the applicable requirements by paragraph number.

Subject: The subject or title of the applicable paragraph.

Method of Compliance: The method of compliance may include design drawings (D), analyses (A), tests (T), or other methods (O). Some compliance checklists simply list the letter corresponding to the applicable method of compliance or a more specific reference may be used. There should be an explanation of the format used if required.

Documentation Reference: List the documentation (test report number, analysis report number, etc.) that demonstrates compliance with the applicable paragraph.

To illustrate how the compliance checklist may be completed the example of the installation of new passenger seats on an aircraft where the USA is the State of Design is considered. In this case, one of the several requirements that may be applicable could be FAR 25.562, Emergency landing dynamic conditions. If compliance is to be demonstrated by a dynamic test and a report is to be submitted to the Authority then the entry in the compliance checklist may be as follows:

Paragraph	Subject	Method of Compliance	Documentation Reference
FAR 25.562	Emergency landing dynamic	Test	Test Report TR12345

37.6. DEMONSTRATION AND FINDING OF COMPLIANCE

Proof of compliance with the design aspects of the airworthiness requirements is established through the approval of the type design and the performance of necessary inspections, ground tests and flight tests. In the certification compliance plan, the means of demonstrating compliance (test, analysis, or inspection/evaluation) and the levels of involvement are already specified for each item of the certification basis. The applicant is responsible for demonstrating compliance through the agreed means. Demonstration of compliance should be recorded against each item in the plan, as evidence of a successful completion. The implementation of the plan and meeting the milestones in the modification approval schedule contained in the certification plan is the responsibility of the applicant.

The demonstration of compliance requires that the applicant submit substantiating data (design data, reports, analysis, drawings, processes, material specifications, operations limitations, flight manuals, instructions for continued airworthiness). The data should be complete and in a logical format for review by the DGCAR. Where the demonstration of compliance involves a test, a test plan should be developed

and approved prior to any actual test being performed. Official certification tests maybe witnessed by DGCAR personnel or by a DGCAR delegate, when authorised.

37.7. APPROVING THE AIRCRAFT DESIGN CHANGE

When the applicant has demonstrated compliance, to the satisfaction of DGCAR, on all items of the certification basis, including the resolution of outstanding items, approval may be granted. The approval of the design change means that:

- the areas of the type design affected by the modification meet all the relevant requirements specified in the certification basis, including special conditions of airworthiness (if any) issued by DGCAR
- all engineering and conformity inspections have been completed and the modified product has been found to meet all pertinent requirements
- in the case of aircraft, the modified aircraft has been test flown, as required, and found to comply with all the performance requirements of the pertinent airworthiness standards

37.7.1. Issue of approval – Major modification

Approval of a major modification is granted using one of the three forms of approval below, provided the proposed modification is not so extensive as to require a new Type Certificate. The form of approval for the proposed modification is usually indicated by the applicant at the time of application

- Amendment of a Type Certificate - Approval of design changes made by the holder of a Type Certificate. An amendment of a Type Certificate retains the holder's overall responsibility for the type design of an aircraft, engine or propeller, both as approved under the initial Type Certificate and as modified.
- Supplemental Type Certificate - A Supplemental Type Certificate is an approval of a major modification covering those areas or aspects of an aeronautical product that were modified. Together, the Supplemental Type Certificate and the relevant Type Certificate constitute the approved type design for a modified aircraft, engine, or propeller. It should be noted that an aeronautical product that does not have a Type certificate cannot be issued a modification approval under a Supplemental Type Certificate (examples are appliances, parts, components, instruments). Further, a Supplemental Type Certificate should not be issued for approval of minor modifications, or approval of replacement parts or repair, unless its installation represents a modification.
- Approval Letter - For modifications that do not warrant the detailed approval process of an Amended or Supplemental Type Certificates, approval is granted normally by an approval letter. Modifications that are candidates for this approval category typically involve on-demand design changes by aircraft operators, maintenance and/or design organizations, and manufacturers to support varying maintenance and operational needs under time constraints.

37.7.2. Issuance of approval – Minor modification

Approval of a minor modification is granted using an approval letter.

37.7.3. Issuance of approval – Repair

The DGCAR will document their approval through one of the following means:

- Issuance of an approval using a standard form established by DGCAR
- By signature or marking (stamp or seal) the repair approval document as submitted by the applicant

- In the case of recognizing foreign approvals, a statement of endorsement that such foreign approval is considered approved by DGCAR, may be issued, if requested.

DGCAR will stipulate limitations (if any) associated with their approval of the repair design including, but not limited to, time limits (in the case of temporary repairs, or life-limited repairs), follow-up or repeat inspection requirement, installation considerations, specific applicability (or repeatability of application) to aeronautical product(s), permitted deviations or substitutions from the repair design. The stipulation may also identify approved changes or revisions to the approved airworthiness limitations contained in the Instructions for Continued Airworthiness for the affected product.

Repair designs provided by the original equipment manufacturer (OEM), which includes aircraft, engine and propeller manufacturers, should clearly indicate the approval status of their repairs.

37.7.4. Responsibility for the design change approval

The person or organisation (holder) to whom the design change approval is granted has responsibility for the approved design change. If multiple participants (e.g. joint design ventures, partnerships, sub-contracting or similar arrangements) are involved in the design change, DGCAR will require one person or organisation to be responsible for the overall design change, and to whom the approval will be issued.

An approval granted for a design change (amended Type Certificate, Supplemental Type Certificate, Approval Letter) shall remain valid until otherwise specified or notified by DGCAR.

37.7.5. Providing evidence of design change approval

Applicants should provide clients or customers with a copy of DGCAR approval, or provide a declaration that a design change is DGCAR approved. The person or organisation performing the installation of a design change on an aircraft, engine, or propeller has a responsibility to ensure that the design changes are in accordance with approved data. In addition, prior to installation of a design change it must be determined that the interrelationship between the design change and any other previously installed design change (modification and/ or repair) will introduce no adverse effect upon the airworthiness of the product. DGCAR will identify this responsibility in the approval letter. Providing a copy, or making a declaration, of DGCAR approval, facilitates the fulfilment of an aircraft Operator's responsibility under the Maintenance provisions to retain details of design changes and evidence of its approval.

37.7.6. Documents necessary for a modified product

If the approved design change affects any of the documents necessary for approved type design or operation of the aircraft, the applicant should prepare the appropriate revisions to this information and submit to DGCAR for approval or acceptance. Following approval by DGCAR, the revised information should be provided as part of the design change approval documentation.

37.8. Post-approval activities

37.8.1. Retention of design change data

The data constituting the design change are contained in records, reports, drawings, and other documents that describe collectively the exact configuration of the design change when it was approved. The design change data must be maintained by the holder of the design change approval. The design change records are permanent and may not be destroyed. Data maintained by the design change approval holder must

be made available to DGCAR for such routine activities as production inspection, surveillance, design change reviews, development of corrective actions, or for any other reasons deemed necessary by DGCAR. The record keeping should consist of at least the following:

- the drawings and specifications, and a listing of those drawings and specifications necessary to define the configuration and design features of the design change as it was shown to comply with the requirements applicable to the product;
- reports on analysis and tests undertaken to substantiate compliance with the applicable requirements;
- information, materials and processes used in the construction of the aircraft, engine or propeller;
- an approved flight manual supplement or its equivalent (type-related document), including revisions to the master minimum equipment list and configuration deviation list, if applicable;
- approved revisions or recommendations to, maintenance programme or equivalent document, and aircraft maintenance manual with details of revisions to manufacturer's recommended and DGCAR accepted scheduled maintenance plan and procedures guidelines;
- any other data necessary to allow, by comparison, the determination of airworthiness and noise characteristics (where applicable) of modified products of the same type.
- If the holder of the repair design approval is different from the aircraft operator, the aircraft operator must retain the repair data as a permanent record for the affected aircraft, engine, or propeller for as long as the affected product remains in service.

37.8.2. Responsibility of modification approval holder

The holder of the modification approval remains responsible for the continued integrity of the design change to approved type design and it or it's representative must continue to be the DGCAR's contact point for resolving issues that may require corrective action. To fulfil this responsibility, the holder should have the continued capability, or access to a capability, of providing appropriate technical solutions for service difficulties when service experience warrants it, or when PACA requires mandatory corrective action. If the holder is no longer capable, PACA must be informed.

Applicants should note that if the approval holder is outside the jurisdiction of DGCAR and corrective action is needed, assistance will be requested from the National Aviation Authority of the approval holder.

37.8.3. Responsibility of repair approval holder

The activities following approval of a repair design involve; the actual accomplishment of the repair on the aeronautical product, documenting the repair accomplished, and the maintenance release of the affected aeronautical product as being airworthy.

Applicants should note that if the approval holder is outside the jurisdiction of DGCAR and corrective action is needed, assistance will be requested from the National Aviation Authority of the approval holder.

37.8.4. Responsibilities of design change installers

Because the holder of a design approval for a particular modification or repair cannot be expected to be aware and to have conducted analyses and tests for all the possible design changes installed on all aircraft of a given type, the installer has some responsibility to verify compatibility with other modifications and repairs before installing any design change. As stated in the following paragraph, the ultimate responsibility remains on the operator. The installer should survey the aircraft records and the aircraft itself to determine what other design changes exist on the aircraft. Any questions of incompatibility with other modifications or repairs arising from the survey should be referred for resolution to the operator.

37.8.5. Responsibilities of aircraft operators

Operators have the overall responsibility to ensure the compatibility of all design changes incorporated in their aircraft. The operator contracting with an installer for incorporation of any aircraft design change should provide the installer with information on all existing design changes to the aircraft so that compatibility may be verified. Any questions of design change incompatibility which may arise during installation or in service should be thoroughly investigated by consultation with the approval authority or approval holder, or by an independent engineering organization. In every case of incompatibility between modifications or repairs, the problem must be corrected and it must be established to the satisfaction of DGCAR that the modified aircraft continues to comply with the applicable standards of airworthiness.

The operator should report any design change incompatibilities detected during installation or in service to the design change approval holder, to the installer and to DGCAR and respective airworthiness authority of the design change approval holder.

The records required will vary with the complexity of the design change. In addition to the records of design approval and return-to-service approval, the following records should be included in any data retained for major modifications and repairs:

- master drawing list and the individual drawings
- photographs, specifications, records which locate the design change on the aircraft o mass and moment change records
- a record of any change in electrical load
- a Supplemental Type Certificate (STC) or equivalent document
- service bulletin or structural repair manual reference, if applicable.

The details of design changes to an aircraft and its major components should be retained until they have been permanently withdrawn from service. In the event of a temporary change of operator, the records shall be made available to the new operator; and, in the event of any permanent change of operator, the records shall be transferred to the new operator.

Supplements to the approved flight manual, maintenance instructions, instructions for continuing airworthiness and repair instructions pertaining to a modification or repair are operating data that the operator should incorporate into the existing operating data for the aircraft. Since these supplements become a permanent part of the operator’s operating instructions or instructions for continuing airworthiness, they need not be retained. The operator should record the incorporation of the required supplements in the appropriate revision logs.

The record retention requirements for minor modifications and repairs are much simplified. It is nevertheless necessary for the aircraft operator to retain sufficient records to:

- identify the modification or repair and record that it has been classified as minor
- record its location on the aeroplane
- record mass and moment change, if significant
- record the return-to-service approval.

37.8.6. Continuing airworthiness

Service experiences involving faults, malfunctions, defects and other occurrences that may affect the continuing airworthiness of the aircraft are required to be recorded, reported, and assessed. This information is used to determine if an unsafe or potentially unsafe condition exists in an aircraft. The design change approval holder plays an important role in deciding if and when airworthiness action is needed to either correct an unsafe, or avoid a potentially unsafe, condition.

Note. *In practice, PACA has no Airworthiness Engineering Section right now. Therefore, the designated Airworthiness inspector upon receiving the application form for modification or repair approval shall verify the completeness and accuracy of the require information provided by the applicant. The Airworthiness Inspector may communicate with the State of Design as part of his assessment for the repair or modification application, as necessary. If the application is found satisfactory, approval maybe given by the Airworthiness Inspector based on the submitted repair or modification form and as per approved data of the State responsible for the type design. if the application and assessment of the repair or modification form is found unsatisfactory, approval is rejected.*

37.8.7. Acceptance of Data for Modification and Repairs Guidance

PACA accepts modification, STCs and Repairs approved by a competent Authority of the State of Design according to following criteria:

1. Direct acceptance

Readily available data and related instructions of a Type Certificate Holder /Type Acceptance Certificate Holder of Aircraft Type Accepted in Oman such as service bulletins, structural repair manuals, vendor manuals, and overhaul and maintenance manuals that are competent authority approved or accepted, as appropriate, are directly accepted by PACA,

2. Acceptance of data of Type Certificate Holder /Type Acceptance Certificate Holder other than readily available data for modification or Repairs;

2.1 Type Certificate / Type Certificate Data Sheet Amendments:

Changes to Type Certificates, which require amendment of TC and/or associated TCDS, including changes to the documented certification basis needs PACA notification for approval. The Type Certificate Holder /Type Acceptance Certificate Holder notifies PACA of the change and submits the following in support of its PACA application form 039:

a) The details of the change,

b) The means of compliance,

c) The declaration of compliance, and

d) The amended TC/or TCDS,

e) Other data that maybe requested by PACA after the review of the change details.

2.2 Repair actions (either interim or permanent) that specifically require designing a repair scheme and data; The Type Certificate Holder /Type Acceptance Certificate Holder repair data is accepted according to Type Certificate Holder procedures, the repair data must first be approved by the Type Certificate Holder competent authority or through a system approved by that competent authority, e.g. FAA, EASA .... The repair classification, scheme, installation instructions, supplements (as applicable) and the approval form/or document (e.g. RAS, FAA form 8110-3 ... etc.) are submitted to PACA for acceptance after being scrutinized by the designated airworthiness inspector following the application PACA form 039 if found satisfactory he will proceed for approval of the modification request on the PACA application form 039 of the applicant and a letter signed by Flight Safety Director.

All repairs must be classified as major or minor according to the classification criteria established by the Type Certificate Holder /Type Acceptance Certificate Holder. The criteria shall at least be equivalent to the criteria defined in CAN 3-35 changes and repairs developed by an organization other than the

Type Certificate Holder; Data for changes (including STCs) and/or repairs of this category need PACA acceptance before installation on aircraft in accordance with the procedures established by PACA. The application package for the acceptance shall include the following:

2.3 Modification and repairs developed by an organization other than the TCH;

Data for changes (including STCs) and/or repairs of this category need CARC acceptance before installation on aircraft in accordance with the procedures established by CARC. The application package for the acceptance shall include the following:

a) The State of Design Competent Aviation Authority data approval or the approval issued by an organization through a system approved by that competent authority for the organization including all details (e.g. STC package, Repair approval, etc., the master data/drawing list, the instructions for installation/repair, instruction for testing, the affected publications supplements, the weight and balance report, the electrical load analysis, ... etc.),

b) The written consent of the organization (the design approval holder) to use data on the affected aircraft (Jordanian Registered), other product, part or appliance,

c) Description of the design basic data, characteristics and performance,

d) Identification of the applicable airworthiness and environmental requirements,

e) A document showing the classification of the modification/or repair and the criteria used for the classification. The criteria shall at least be equivalent to the criteria set here below as defined in CAN3-35, as applicable,

- Does it have appreciable effect on mass?
- Does it have appreciable effect on Balance?
- Does it have appreciable effect on structural strength?
- Does it have appreciable effect on reliability?
- Does it have appreciable effect on operational characteristics, noise, fuel venting, exhaust emission, or other characteristics affecting the airworthiness of the product?

If any answer to any of the above questions is "Yes" then the classification IS "Major".

If all answers are "No" then we go by the following:

- Does it require adjustment of the certification basis?
- Does it imply new interpretation of the requirements used for Type Certification basis?
- Does it need 'aspects of compliance demonstration' not previously accepted?
- What are the extent of the new substantiation data and the degree of required reassessment and revaluation?
- Does it alter the approved limitations?
- Is it mandated by an AD, or is it a terminating action of an AD?
- Does it introduce or affect function where failure condition IS catastrophic or hazardous?

If any answer to any of the above questions is "Yes" then the classification is "Major". If all answers are "No" then the classification is "Minor".

2.4 PACA review and evaluation of data

The designated Airworthiness inspector conducts a review of the PACA application form 039 and its attachments; In case of clarification is required or the application is incomplete or incorrect, the applicant will be advised to deliver the required clarification or information within three months, and if a decision is to be taken that the application cannot be accepted , PACA will notify the applicant with reasons and shall show good cause why it was decided to return the application without acceptance.

Upon acceptance of the application attached with the technical data and being scrutinized by the designated airworthiness inspector, The Flight Safety Department informs the applicant by means of a formal letter issued by Flight Safety Department that declares the approval of the request of the applicant by letter and into PACA form.

2.5 Embodiment of modification or repair

The embodiment of PACA accepted foreign modification or repair shall be performed by an appropriately approved maintenance organization or production organization in accordance with its approved privileges. The embodiment approval shall be processed for an individual Serial Number (SN), as applicable, product, part, or appliance.

5 Suspension or Cancellation of acceptance

PACA may suspend or cancel an accepted modification/or repair data if it considers that it is necessary to do so in the interests of aviation safety. An inability on the part of the foreign design approval holder to provide ongoing technical support for the accepted/approved design data constitutes grounds for such suspension or cancellation. If the approval holder on which the PACA acceptance is based is suspended or cancelled by the Competent Authority of the State of Design, Airworthiness section must consider the effect on product, part or appliance on which the modification or repair is installed.

APPLICATION FORM

DIRECTORATE GENERAL OF CIVIL AVIATION AND REGULATION

OF SULTANATE OF OMAN

Modification and repair Approval form sample

PACA الهيئة العامة للطيران المدني	**Modification and repair Approval**

1. Owner/Operator: ……
2. Address:…….

3.Aircraft:	Mark(s):	Model:
	Serial No:	Registration Mark:

4.Unit Identification:

Unit	Mark	Model	Serial N	Mod/Repair	
				Major	Minor
Airframe					
Power Plant					
Propeller					
Component					

5. Applicability

5.1 TC Holder	
5.2 Foreign Approval (If applicable)	

6 Certification Basis:

6-1 Original Certification	
6-2 Proposed Certification Basis	

6-3 Affected Documents (Tick the box (X)).

	Structural Repair Manual		Electrical Load Analysis		Parts Manual
	Aircraft Flight Manuel		Wiring Diagram Manual		Radio License
	Maintenance Schedule		Maintenance Manual		Noise /Emission
	Certificate of Airworthiness		Weight and Balance Report		Others (to specify)

6-4 Weight and balance change:

Original	New	% Change

7.Description of work:

8. Assessments and attachments:

(1) I have reviewed all the substantiation documents submitted herewith and found them to be complete and order. I have checked all the technical requirement to ensure the continued airworthiness of the aircraft have been carried out and I fully concur with the recommendations/results from the tests.

(2) I am satisfied that no aspect of the modification/Repair will comprise the airworthiness of the aircraft.

(3) Notes:

(4) This form (in duplicate) must be submitted with one complete set of substantiation documents and a Covering Letter. An incomplete submission may delay the approval of the modification/Repair. The standard evaluation period is 30 days upon receipt of the application form. Depending on the complexity of the modification, the evaluation period of 30 days may be extended. If the modification/repair is major or uncommon, the applicant is advised to inform and involve Flight Safety Directorate at an early stage by first submitting a letter of intent in order to take the proper technical action. Flight Safety Directorate may require to witness the tests / On site presence, etc as part of the process to approve the modification/ Repair.

9. Applicant reference (If applicable)	Contact person	Telephone:	Signature	Date
		Email:		

For Official Use Only

if considered necessary;

Performance Flight test	Compliance Check	Physical inspection of repair/ modification carried out,	Other requirement
Yes /No. *If Yes*, Date;……	Yes / No *If Yes*, Date;……..	Yes / No *if Yes*, Date;……	

10. DGCAR Approval (FSD)

Approval	Rejected	Remarks	
Approval DGCAR Reference:	Name	Signature	Date

38. Training of Airworthiness Inspectors

38.1. GENERAL

International aviation standards require that a civil aviation authority provide its safety inspectors with comprehensive training to ensure the competency of its inspector workforce.

Technical Training of Airworthiness Inspectors may be accomplished from several sources. These can be contracted to an operator, who offers a course that it approved for use in that country for use by their citizens, or from aircraft manufacturers or from operators of the Sultanate of Oman. Of these, the least desirable is from an operator over which the DGCAR has certification and surveillance jurisdiction.

38.2. QUALIFICATION AND TRAINING - GENERAL

(a) The PACA should ensure appropriate and adequate training of its personnel to meet the standard that is considered necessary to perform the work. To ensure personnel remain qualified, arrangements should be made for initial and recurrent training as required.

(b) The basic capability of the PACA inspectors is a matter of recruitment and normal management functions in selection of personnel for particular duties. Moreover, the PACA should provide training in the basic skills as required for those duties. However, to avoid differences in understanding and interpretation, all personnel should be provided with further training specifically related to Regulation.

(c) The PACA may provide training through its own training organization with qualified trainers or through another qualified training sources.

(d) When training is not provided through an internal training organization, adequately experienced and qualified persons may act as trainers, provided their training skills have been assessed. If required, an individual training plan should be established covering specific training skills. Records should be kept of such training and of the assessment, as appropriate.

38.3. The DGCAR's Training Program has five components:

(a) Initial Training

(b) Field Training (OJT)

(c) Recurrent / Refresher Training

(d) Specialized Training.

The multiple facets of the Training Program reflect the fact that the program is intended to support not only training for new inspectors, but professional development of inspectors throughout their careers. This Chapter provides the general guidelines and procedures for the DGCAR's Training Program.

38.4. POLICY ON INSPECTOR TRAINING.

The Director General acknowledges that all inspectors must be appropriately qualified and trained to perform all duties and tasks required. The DGCAR will ensure that all such personnel are provided the initial training, specialized training and OJT necessary to carry out their duties, as set forth in this Chapter.

The Director General also acknowledges that recurrent training is required for inspectors to be able to keep abreast of industry and DGCAR developments and thereby continue to be able to provide appropriate safety oversight. The DGCAR will ensure such recurrent training is provided, as set forth in this Chapter.

38.5. INDIVIDUAL TRAINING PLANS.

The Director General will ensure appropriate training by directing that the Flight Safety department establish and maintain Individual Training Plans that sets out the training to be provided to each of their inspectors for at least a 12-month period.

Each inspector's plan will be updated by FSD as necessary to adjust the timing of the planned courses and activities or to amend the list of planned courses and activities to meet a newly identified need.

38.6. INITIAL TRAINING.

Flight Safety Department provides an in-house Initial Training courses for each newly recruited inspector. The purpose of this course is to familiarize him/ her with the DGCAR and the functioning of the DGCAR and the department.

Newly recruited inspectors are required to complete the Initial Training course in **Appendix A**.

Those courses ensure that new DGCAR personnel who will be serving as Airworthiness Inspectors have a clear understanding of the Civil Aviation Regulations (CARs); Inspector Procedure Material and other materials needed as detailed in training program to perform their Inspector job functions.

Successful completion of this training course will prepare new inspectors to begin on-the-Field training on all aspects of their core duties.

38.7. FIELD TRAINING/On Job Training (OJT)

Field Training provides direct experience in the work environment in which the inspector is performing or will be performing on the job. The DGCAR's structured Field policy and procedure is set forth in detail in **Appendix B.**

Field Training entails the completion of three levels of training for each technical job function. The three levels encompass the study of reference materials, task observation, and task performance, as further defined below. A Field Trainer must validate all Levels (I, II, and III) of performance.

Evaluation of need for OJT:

Concerning the OJT flight Safety Department has such types of OJT as detailed below:

1- New recruited inspector without any previous experience: This inspector has to go through the training program.
2- The inspectors with previous experience: needs for the (OJT) is assessed and reflected into the **INTERVIEW ASSSESSEMENT FORM**. The inspectors are assessed by the interview form which covers the main subjects related to the airworthiness activities. In addition, they have to be trained on PACA indoctrination training as detailed into PACA On-Job-Training Record.
3- The Flight Director can grant limited authorisation for airworthiness inspector assistant having at

least three years' experience based on the result of interview form related to the authorised area.

38.7.1. Level I Training (Knowledge):

Level I training is related to that body of knowledge associated with a specific job task. This knowledge is contained in orders, rules, guidance, and standards. Level I training typically involve a review of all reference materials applicable to the job tasks for which training has been identified. Level I training may be satisfied through classroom training or other delivery methods.

38.7.2. Level II Training (Task Observation):

Level II training involves observation of the performance of specific job tasks. This training typically involves the trainee observing and/or assisting the Field trainer in the performance of those specific job tasks for which the trainee will be held accountable. Level II training may be satisfied through appropriate training that provides the opportunity for the trainee to observe and/or assist the trainer performing the task.

38.7.3. Level III Training (Task Performance):

Level III training involves the application of knowledge and skills to the performance of specific job tasks. Typically, the trainee performs the job task under the observation of a qualified field trainer or a senior inspector. The trainer or a senior inspector assesses the performance of the task and indicates on the trainee's Field training plan when Level III performance is achieved.

The Field Training process begins with the DGCAR formulating a Field Training plan for the newly hired inspector. The Field Training plan is based on specific job tasks that are part of his or her particular work assignments; allows for credit for classroom training (such as indoctrination) or prior experience that equate to Level I or Level II Field Training for one or more tasks; and includes, as applicable, specialized tasks that newly hired inspectors may need to be able to perform.

All of the OJT training shall be documented in accordance to OJT form in **appendix C.**

Specialized Tasks related to airworthiness section are such as: special operational approval i.e. EDTO/ETOPS, RVSM, LVO (CAT II/III), RNP, Ramp Inspection, Air operator certification and related process as defined by Flight Safety Department.

Note - *In order to accomplish the airworthiness tasks, qualified Airworthiness Inspectors will be appointed to the Flight Safety Department against established posts, and will carry out their duties as per the policies laid down by the DGCAR.*

38.8. RECURRENT / REFRESHER TRAINING.

Director General acknowledges that all inspectors must be provided Recurrent Training to appropriately qualify to perform all duties and tasks required. The DGCAR will ensure that all such personnel are provided the Recurrent Training necessary to carry out their duties as set forth in this Chapter.

Each respective Division provides an in-house Recurrent Training course for inspectors that are already having working knowledge and experience. The purpose of the Recurrent Training course is to improve

the inspector's decision making capability, develop maturity to share more responsibilities in elevated position, and provide knowledge with international standards.

The Recurrent Training course may share content with the Initial Training course, but varies in emphasis from one to other, as the Initial Training course provides a fuller treatment across all subject area. The Recurrent Training course focuses on changes from year to year in regulations, guidance material as well as significant events occurring in the industry and the local environment from time to time.

The recurrent training program should reflect, at least, changes in aviation legislation and industry. The program should also cover the specific needs of the inspectors and the authority.

As recurrent or Refresher Training the PACA can provide following trainings to the inspectors once the inspector gets experience he should be aware of the current knowledge Recurrent /Refresher Training courses may contain following,

i. Changes in PACA basic regulation or Airworthiness regulation
ii. Change in OPM and certification process
iii. PACA State Safety program amendments.
iv. Safety Oversight of Foreign Registered Aircraft (Ramp Inspection)
v. Quality Audit Techniques/Quality System
vi. Safety Management system (SMS)
vii. any training mandates due to change of regulation, procedure, technologies, etc

The course outline of the above courses may change from time to time depending on latest requirement and the developments of technology.

38.9. SPECIALIZED TRAINING.

The purpose of specialized (or continuation) training is to upgrade the knowledge and competency of existing inspectors on par with international standards and for efficient functioning.
Specialized and technical training programs are developed by DGCAR as applicable to a particular inspector's duties. The DGCAR works in association with international organizations under special training programs/ schemes. Duration of training is based on the course and the hosting organization.
As advanced training, PACA may provide courses outlined in **table 1** to the Airworthiness Inspectors for getting more knowledge in advanced techniques and standards.

Airworthiness Inspector shall comply with level I specialized training, in accordance to authorization for doing job functions and level II specialized trainings are not mandatory and depends on Flight Safety Department and authorization of specific job function could be applicable.

38.10. Type Specific Training.

38.10.1. Type Training for Airworthiness Inspectors.

AWIs will normally be required to carry out certification/ surveillance/ inspection tasks related to the type of aircraft, so the AWIs are required to be familiar with the systems, manuals, checklists and procedures required to monitor the safety of the maintenance and operations.

While it is not prudent to accept training from an operator over which the DGCAR has jurisdiction, it is acceptable to require an operator to arrange and pay for training when the aircraft to being introduced by

that operator is a type that the DGCAR has no type rated Inspectors. The training stated above is type-rating training for one or more types of aircraft.

38.11. TRAINING FILES AND RECORDS.

All training completed by an inspector will be documented in his or her inspector-training file. Inspectors who complete a formal external or in-house training course will receive a Certificate of Completion to be added to their inspector-training file.

When Field Training is delivered to an inspector, the individual Field Training activity will be notated on the inspector's Field Training plan.

The Flight Safety Department will establish and maintain an inspector-training file for each inspector that includes qualification and training certificate.

38.12. EXTERNAL TRAINING.

Formal training courses may be obtained from external training centres, or through relevant manufacturer training programs, subject to the approval of the DGCAR based on the procedure set forth herein.

The DGCAR evaluates the quality of such training pursuant to the following Procedures.

(a) **Pre-Course Request**: The DGCAR requests that the external training centre submit the training course syllabus for review.

(b) Pre-Course Review and Approval:

The DGCAR evaluates the general completeness, content and overall quality of training course information, and confirms whether the training adheres to the requirement of the CARs and DGCAR standards. Following review, the DGCAR either determines that the training course is acceptable or not.

(c) Post-Course Evaluation: Following a DGCAR inspector's completion of an accepted training course, the inspector will submit the following for review:

(i) The certificate indicating completion of the training course.

(ii) A course evaluation form that rates the quality of the training curricula, courseware, facilities, instructor, and any other appropriate type of supporting information.

Note: Appendix D *provides the Training Evaluation Form used by DGCAR inspectors to review a course.*

38.13. REVIEW OF TRAINING PROGRAM.

DGCAR will periodically review the Training Program and carry out revisions so that the training of inspectors is continuously updated to keep abreast of the latest developments taking place in the aviation field.

38.13.1. FEEDBACK ANALYSIS.

Analysis of feedback received after training should be considered for revision of policies, syllabus, and curriculum. The DGCAR utilizes a Training Evaluation Form, set forth in Appendix D, for this purpose.

Appendix A

QUALIFICATIONS REQUIRED FOR INSPECTOR ACTIVITIES

DGCAR Airworthiness Inspectors' Orientation Course:

(a) Initial training program:

The initial training program for inspectors should include, as appropriate to their role, current knowledge, experience and skills in at least all of the following:

(1) Basic Familiarization course on Chicago convention, ICAO and working arrangement, relevant ICAO Annexes and documents

(2) PACA Aviation legislative framework including Role and Structure of PACA, rights and obligations of inspecting personnel, Role of Airworthiness Inspector, enforcement procedure;

(3) PACA Office Procedure Manual (Airworthiness inspector manual);

(4) Quality Audit Techniques/Quality System

(5) Safety Management system (SMS);

(6) Airworthiness requirement such as CAR 21, CAR M, CAR 145, CAR 66, CAR 147, CAR 47, CAR39, CAR MEL, CANs and etc.

APPENDIX B

FIELD TRAINING STRUCTURE.

1. INTRODUCTION.

"Field Training is planned training conducted at a work site by an authorized Trainer. This type of training provides direct experience in the work environment in which the inspector is performing or will be performing on the job."

The Field Training Program is an essential part of inspector's training and adds value to the overall training effort. By applying knowledge and skills learned, the trainee inspector completes the learning process. At the same time, the DFS gains confidence in the trainee's capabilities. With the completion of Field Training, the DFS can certify the trainee as a qualified inspector.

The inspector's Field Training Program is a process for implementation and management of a structured Field Training system using DGCAR guidelines. The program can be tailored to the tasks in which inspector needs training and may also include training on tasks unique to an office. The training can be provided immediately when the need or opportunity arises.

Field Training empowers an inspector to develop needed inspection skills. When a training need exists, Field Training can be provided. Field Training has been identified as the best method for delivering the needed training, or if no other means to receive the training is available.

Throughout the career, Field Training remains a valuable tool for continually broadening technical skills and capabilities of an inspector. Cross training in tasks to be coordinated with other directorates may not be possible through other training means due to resource limitations but may be more easily attainable through a structured Field Training Program.

2. Field Training Basics.

Definitions.

(a) Certification.

Certification work activities validate the competency of an air operator, maintenance organization, or certifying personnel and their compliance with appropriate statutory and regulatory requirements prior to active performance in the aviation Industry.

(b) Level I Field Training.

Level I training is related to that body of knowledge associated with a specific job task. This knowledge is contained in orders, rules, guidance, and standards. Level I training typically involve a review of all reference materials applicable to the job tasks for which training has been identified. Level I training may be satisfied through classroom training or other delivery methods.

(c) Level II Field Training.

Level II training involves observation of the performance of specific job tasks. This training typically involves the trainee observing and/ or assisting the Field Training trainer in the performance of those specific job tasks for which the trainee will be held accountable. Level II training may be satisfied through

appropriate training that provides the opportunity for the trainee to observe and/ or assist the trainer performing the task.

(d) Level III Field Training.

Level III training involves the application of knowledge and skills to the performance of specific job tasks. Typically, the trainee performs the job task under the observation of a qualified Field Training trainer. The trainer assesses the performance of the task and indicates on the trainee's Field Training plan when Level III performance is achieved.

(e) Principal Field Training Program Coordinator.

The Principal Field Training Program Coordinator is the in-charge of implementing the Field Program in DGCAR as a whole. He is responsible for approving the Field Training Program prepared by Field Training Program Coordinator of each Division of DGCAR and reviewing the implementation and improvements in Field Training Program based on feedback.

(f) Field Training Program Coordinator.

The Inspector, designated to establish and maintain the Field Training Program for the respective Division, has the key role in establishing the Field Training Program.

(g) Training Coordinator.

The inspector, designated to establish and implement the Field Training program in each respective Division, has the key role in the implementation of the Training Program.

(h) Field Training Trainer.

A trained inspector designated to provide Field Training instruction to trainees on specific tasks at Levels I, II, and III, in accordance with the procedures established in this document. Field Training trainers or senior inspector should be designated in each respective office.

(i) Field Training Record.

A tool used to record the trainee's Field Training plan, progress, and completion.

(j) Field Training Steering Committee.

A group of inspectors with oversight of the Field Training Program.

(k) Field Training Task.

A unit of work with a meaningful result and is one that can be taught and learned on the job.

(l) Surveillance.

One of the most significant duties of the DGCAR is to conduct surveillance in all areas of air transportation. The primary objective of surveillance activities is to provide the DGCAR with accurate, real-time, comprehensive information for the evaluation of the safety status of the air transportation system.

3. Job Task Analysis.

(a) A Job Task is, "A single identifiable unit of work that is regularly accomplished by an inspector in the course of a normal work."

(b) Each Job Task is supported by a detailed Job Task Analysis. This analysis is a written summary that describes how to perform the Job Task. More specifically a Job Task Analysis is, "A written description of

the materials, procedures, and requirements that are used to accomplish a Job Task, including, supporting documentation, completion standards, narrative description of the task, and step by step listing of the required sub tasks."

(c) Trainee Inspectors must complete Field Training for each Job Task that they will be asked to perform without assistance. Field Training Program coordinator is responsible for determining which tasks are required for each inspector based on the trainee inspector's work assignment. Field Training must be completed for each of the required Job Tasks.

4. ROLES AND RESPONSIBILITIES OF INDIVIDUALS

4.1. The Field Training Steering Committee.

A Field Steering Committee may be established by DGCAR with FSD as the Principal Field Training Program Coordinator to supervise the management of the Field Training program. When so designated, the Field Training Steering Committee should be composed of Field Training Program Coordinators of each Division of PACA and chaired by the Principal Field Training Program Coordinator. The committee provides oversight and guidance for the implementation of the Field Training Program of each Division. The Committee shall monitor and assess accomplishment of program objectives and shall recommend changes to the program. The committee should meet at least annually to discuss training issues.

The FSD is responsible for the implementation of the Field Training program in the Flight Safety Division.

4.2. The FSD is responsible for the items discussed below.

(a) Ensuring that this Field Training Program is implemented efficiently and effectively.

(b) Ensuring the designation of Field Training Trainers who meet the selection criteria outlined below.

(c) Planning and budgeting to ensure that the Field Training Program continuously receives the resources necessary for the effective accomplishment of its goals.

(d) Specifying the particular Job Tasks that apply to trainee inspectors in the office.

(e) Establishing a standardized method to ensure that trainees are provided adequate time and resources required for completing Field Training on specific tasks.

(f) Obtaining assistance from a Field Training Trainer located at another office when a training requirement cannot be fulfilled locally due to the lack of internal instructional expertise.

(g) Ensuring that trainees begin their Field Training Program as soon as possible.

(h) Authorizing and signing the Training Record for Field Training.

(i) Reviewing with each Field Training Trainer, on a regular basis, the progress of assigned trainee inspectors and initiating any corrective action necessary to improve performance and/or training deficiencies.

(j) Final sign off in the Training Record of an inspector to certify completion of all Field Training requirements for each Job Task. This sign off is DGCAR authorization for the inspector to begin accomplishing that Job Task without further assistance.

(k) Evaluating Field Training Trainer performance annually with a mid-year review based on:

(i) Feedback from trainees.

(ii) The Trainer's ability to meet training plans.

(iii) The selection criteria.

(l) Assuming the role of mediator and decision maker when there are Field Training problems and/or disagreements involving Field Training Trainers and trainee inspectors.

(m) Acting upon feedback from trainees concerning the DFS Program.

(n) Assisting the DFS in implementing program improvements.

(o) Verifying that, prior to conducting Field Training, selected Field Training Trainers have successfully completed required training courses.

(p) Monitoring Field Training Trainer performance and guiding Field Training Trainers on effective methods and techniques.

4.3. Field Training Trainers.

(a) Completing a course of training in Instructional Techniques,

(b) Conducting Field Training with trainees,

(c) Ensuring that Field Training instruction is consistent with applicable DGCAR regulations and practices,

(d) Updating general entries in Field Training trainee records,

(e) Entering data in a trainee's training record after instruction when necessary to certify completion of individual Job Tasks,

(f) Exhibiting objective, constructive, empathetic, and other behaviours conducive to supporting all Field Training trainees,

(g) Conducting Field Training according to the trainee's individual training plan as developed by the FSD.

(h) Assessing the trainee level of knowledge and skill on specific tasks,

(i) Providing structured, well planned, and documented Field training with stated objectives and expected levels of performance,

(j) Communicating with the FSD about trainee progress, and

(k) Ensuring that the trainee has accomplished all elements of Field Training instruction associated with a particular task in an acceptable manner before notifying the FSD that the trainee is able to perform the task without assistance and is ready for final sign off.

4.4. Trainee.

(a) Fulfilling their Field Training requirements as established within the office,

(b) Participating in the feedback process to help ensure continual improvement including feedback on the performance of the Trainer, and

(c) Participating, in a constructive manner, in their own training progress reviews and checking the accuracy of completed tasks during the review meetings.

5. FIELD TRAINING SYSTEM IMPLEMENTATION.

This part of the Field Training policy discusses the implementation of the Field Training system process. This process consists of three phases:

(a) Phase 1 Planning

(b) Phase 2 Delivery

(c) Phase 3 Evaluation.

Phase 1 – Planning.

The following should be ensured by the FSD:

(a) Should communicate with people at all levels

(b) Should make presentations to groups

(c) Should set up a program and to oversee its implementation

(d) Should have Knowledge of Field Training instruction.

(e) Should track Field Training for each inspector in the Region.

(f) Should complete a course of training on instructional techniques.

Selection of Field Training Trainer.

(a) The FSD should estimate trainer Requirements while planning the Field Training program. At a minimum, there should be one trainer for each represented occupational specialty in the office.

As a maximum, not more than 50% of all inspectors in the office should be Field Training trainers. When selecting Field Training trainer, the following should be considered:

(i) How many inspectors, including new recruits, are expected to need Field Training for the planning period?

(ii) What knowledge and skills will the Field Training trainer require? What specialties are represented in the needed training? This should come from the profiles developed earlier.

(iii) How can Field Training trainer resources be best utilized?

(b) The following criteria should be used to identify Field Training trainers:

(i) Qualification in the job specialty and job tasks they are intended to teach advanced knowledge, skill, and experience that match the identified training needs along with the necessary skills to support and enhance training and create a learning environment.

(ii) Ability to demonstrate a task in a clear and logical order.

(iii) Willingness to prepare training, instruct and coach trainees on performance of tasks being trained.

(iv) Ability to communicate technical information, concepts, and procedures clearly, concisely, and positively in a variety of ways.

(v) Desire to be a trainer

(vi) Compliance with the standards and definitions of professionalism.

(c) It is important for all the trainers to attend a course of training on instructional techniques to ensure consistency in delivering Field Training and in evaluating trainee progress. The DFS will work with the trainer to reinforce training concepts and the value of a structured, planned training activity for each trainee.

(d) Once individuals are appropriately trained to be Field Training trainer, the DFS will prepare and sign a letter stating that the individual meets the criteria to be a trainer, that he has completed the formal

training course on instructional techniques, and is authorized as a Field Training trainer. The letter will list the specific roles and responsibilities assigned to the Field Training trainer if different from those roles and responsibilities listed for Field Training trainer in this policy.

(e) Only those Field Training trainers who are so authorised are considered to be Field Training trainers under the respective Field Training Program.

Development of Individual Field Training Plans.

(a) Development of the trainee's Individual Field Training Plan. The DFS shall review training program expectations and responsibilities to be sure that the trainee understands the process.

The following points should be discussed:

(i) Review of the importance and goals of Field Training.

(ii) Review of the roles of the trainee and Field Training trainer.

(iii) Review of the Field Training process

(iv) Informing the trainee that Field Training is a means of receiving individualized

training but does not substitute for required formal classroom training.

The DFS shall consider the proposed work assignment for the trainee. He may decide that the trainee should become proficient in all the job functions performed in the office.

Phase 2 – Delivery.

Scheduling of Field Training.

(a) The FSD and Field Training trainers will jointly develop a proposed schedule for providing training according to the trainee's individual Field Training plan developed. The Field Training trainer shall ensure that sufficient time is allotted to allow the Field Training to take place. When practical, the trainee's work program should be adjusted to accommodate the trainer's schedule. When allocating work time to accomplish Field Training, consideration should be given to the specific level of the Field training to be accomplished (Level I, II, or III) and the complexity of the task. The following should be considered for the different levels of training:

(b) Level I training is typically a self-study effort on the part of the trainee with guided discussion and validation conducted by the Field Training trainer afterwards. The time allowed for this should be appropriate to the complexity of the task and the amount of material to be studied.

(c) Levels II and III involve the actual performance of the task. A good general guideline is to take the normal amount of time to conduct the task and add an additional 50% of that time to allow for instruction and questions. For example, a task that normally takes 1.0 hour should be allowed 1.5 hours for Field Training.

(d) As the process of scheduling Field Training is continuous in nature, the schedule for delivering Field Training should be updated as opportunities for Field Training arise.

Preparation to Deliver Field Training.

When preparing for the delivery of Field Training, the trainer should review the Job Task Analysis, Associated technical guidance materials, and Field Training Guidance material.

Job Task Analysis.

(a) To review the Job Task Analysis for the task to be presented.
(b) To gather all needed equipment, hardware, and software (as applicable).
(c) To determine if any assistance from other sources is needed regarding the task and how it should be performed. If personnel other than an authorized Field Training Trainers are used as informational resources, the training should be observed by an authorized Field Training trainer to ensure compliance with the training plan and other objectives contained in this policy.
(d) To create a specific lesson plan for the training event when necessary to properly organize the training.
(e) To finalize logistical arrangements for training in the office or off site as appropriate to the training event.

Guidance Materials.

To review all technical guidance material to ensure that the training will be conducted in accordance with current approved procedures. These guidance materials may include such things as orders, Procedure Manual, regulations, ICAO publications and other documents that are relevant to the task.

The Field Training Process.

The Field training process follows a logical progression of three levels as shown in the table below:

Level	Trainee	Trainer
Level I – Knowledge	Study	Discuss
Level II – Understanding	Observe	Demonstrate
Level III – Performance	Perform	Evaluate

(a) Level I training is typically a self-study effort on the part of the trainee with guided discussion and validation conducted by the Field Training trainer afterwards. Levels II and III involve the actual performance of the task.

(b) Each task assigned to a trainee requires certification at all three levels. Both formal training and Field Training are integral parts of a well-developed training program and should be scheduled to complement each other.

Teaching of the Task.

(a) The content of each training session must be appropriate to the task and to the level of training that is being presented. A typical Field Training event will include some or all of the following activities:

(i) Establishment of a training environment
(ii) Development of a rapport with the trainee
(iii) State of learning objectives and expected performance outcomes
(iv) Review of technical requirements
(v) Assessment of the trainee's existing knowledge and skill in performing the task
(vi) Tasks demonstration.
(vii) Motivation to the trainee.
(viii) Observation of the trainee performing the task
(ix) Allowing sufficient time for the trainee to practice task
(x) Asking questions to check for understanding
(xi) Providing explanations
(xii) Reviewing and summarizing information
(xiii) Providing feedback to evaluate the trainee's performance
(xiv) Additional training when required.

Updating of Field Training Records.

(a) Permanent training records must be maintained for each inspector. This shall be accomplished using a hard copy paper system as in **Appendix C**, and also through computerized record keeping system.

(b) The training coordinator is responsible to maintain and update Training records. This responsibility may be delegated to the Field Training trainers when necessary. Entries should be updated as training is delivered. The DFS and Field Training trainers have access to the training records. Trainees have read only access to their own records.

(c) When a training event is successfully completed, the Field Training trainer should notify the DFS. This can be done via e mail or another locally implemented procedure that will provide a record that a trainee has completed training on a task. The notification should include:

(i) The task trained
(ii) The level of training completed
(iii) The date that training was completed.
(iv) Confirmation that the trainee successfully achieved the objectives.

(d) On receipt of report from Field Training trainer about completion of a Field Training task, the DFS shall issue a certificate to the trainee intimating such completion and authorizing him to carry out the tasks without any further assistance. With the DFS approval the Field Training trainer will then update the trainee's records with the new information.

Conducting Review.

(a) A simple review of the trainee's Field Training performance should be conducted at the end of each Field training session. More in depth reviews of the trainee's progress in the Field Training program should be conducted quarterly, or as needed. The frequency of these reviews will depend on various factors such as the amount of Field Training assigned, problems encountered, and the changing needs of the office. This meeting should be attended by the Training Coordinator, Field Training trainer and the trainee.

(b) The Training Coordinator shall schedule a meeting with the trainee and the Field Training trainer. The following areas should be discussed:

(i) Review of Field Training since the last meeting

(ii) Present training status
(iii) Accuracy of completed tasks
(iv) Trainee feedback on the Field Training process
(v) Problems encountered
(vi) Modification of trainee's Field Training plan as needed
(vii) Identification of next tasks to be presented
(viii) Identification of opportunities for Field Training.

(c) If problems are encountered between the trainee and his trainer the Training

Coordinator should meet with the trainer to discuss the issues and provide coaching as needed.

Phase 3 – Evaluation.

Evaluate the Field Training Program.

The program shall be evaluated by the Training Coordinator with the input of Field Training Trainers and trainees. This evaluation shall be done at least twice a year. The Training Coordinator will evaluate the Field Training program through meetings and observation. The review is one way of determining if the Field Training program is working properly. The feedback should be analysed and suggested changes discussed with the Field Training Program Coordinator. These evaluations should be conducted even if there are no new recruits in the office. On site visits may be conducted on need basis.

Communicate Findings.

The Training Coordinator is responsible for communicating program suggestions and changes for his Directorate. This can include any recommendations arising from the evaluation. A meeting shall be scheduled to discuss the Field Training program. The meeting should be attended by the Field Training Program Coordinator, Training Coordinator and Field Training Trainers to discuss the status of the program, problems encountered, and suggestions for improvement. The results of these meetings shall be implemented to improve the Field Training Program in the Directorate.

Implementation of Improvements.

The Field Training Program Coordinator is critical in implementing changes as needed to ensure the inspectors develop the skills and capabilities. The Field Training Program Coordinator shall develop an implementation plan for needed improvements, answering the following types of questions:

(i) What improvements are needed to the Field Training Program?
(ii) What are the benefits of these improvements?
(iii) What are the competing needs?
(iv) Do these improvements affect DGCAR standards and policies?
(v) What approvals are required?
(vi) What budgetary support is required?
(vii) What is the plan for implementing improvements?
(viii) Who is responsible for carrying out the improvements?
(ix) What is the estimated timeline?

APPENDIX C

EMPLOYEE'S FIELD TRAINING RECORD

1. IDENTIFYING INFORMATION

Last Name: First Name:

Position: Section / Division:

2. FIELD TRAINING ACTIVITY DOCUMENTATION

	Date Level Completed			
Field Task or Subject Matter	Level 1 (Understanding)	Level II (Demonstration)	Level III (Performance)	*Name(s) and Signature of Field Trainer

3. CERTIFICATION

(a) * By appending my signature in this column, I certify that the trainee has completed the Field Training documented above and is competent to perform the task without supervision.

(b) I hereby confirm that I have completed the Field training documented above with the qualified Field Trainer(s).

Signature: _____ Date: _____

Appendix D

TRAINING EVALUATION FORM						
IDENTIFYING INFORMATION						
Name:						
Training Location:						
Course Title:						
Instructor Name:						
Course Completion Date:						
EVALUATION						
Rate each of the following statements using the scale below. Indicate your rating by marking the applicable letter to the right of each statement. Place additional comments in the space provided on page two. Use back of the page if you need more room for comments and suggestions.						
A = Strongly Agree	B = Agree	C = Neither Agree or Disagree	D = Disagree	E = Strongly Disagree		
1. The objectives were clearly presented for each lesson.			A	B	C	D	E
2. The design (organization, pace, sequence, transitions, feedback) of the lessons enhanced by ability to meet the course/ lesson objectives.			A	B	C	D	E
3. The lesson content was directly related to the stated intent (objectives) of the lessons.			A	B	C	D	E
*4.*The information in the course materials supported the lesson objectives.			A	B	C	D	E
5. The learning environment was free from distractions.			A	B	C	D	E
6. The instructor provided assistance when I needed it.			A	B	C	D	E
7. The facilities supported the lesson objectives.			A	B	C	D	E
8. The course provided opportunity to demonstrate my knowledge and practice my skills.			A	B	C	D	E
9. The skill performance evaluations assessed my proficiency level.			A	B	C	D	E
10. The tests reflected the course materials presented			A	B	C	D	E
11. I feel confident that I met the stated objectives			A	B	C	D	E
12. Overall, this training was highly effective.			A	B	C	D	E
Training Evaluation Comments							
If you answered “Disagree” or “Strongly Disagree,” please explain why. Overall course evaluation:							
Describe the effectiveness of instructors:							
Please note any additional suggestions for improving the course:							

APPENDIX E

PACA may provide some or all of the following courses to the airworthiness inspectors based on his/her current knowledge, experience and skills once the experience of five years or more is gained by the inspector as described in the table 1.

PACA الهيئة العامة للطيران المدني	**INTERVIEW ASSSESSEMENT FORM** **Public Authority for Civil Aviation- DGCAR**
Name of the Candidate	
Proposed Position	**AIRWORTHINESS INSPECTOR**
Date /Time/Place Of Interview	DD/MM/YYYY / HH:MM : PACA OFFICE
Interviewers	

1- FUNCTIONNAL COMPETENCIES

#	Key Area in Airworthiness Inspector	Poor 2 points	Average 4 points	Good 6 points	Very Good 8 points	Excellent 10 points	Score
1	Good knowledge of Aircraft certificate knowledge CoA , RC ,noise Certificate etc.						
2	Experience in approval of MOE , CAM ,MEL AMS and surveillance in a Civ Aviation Authority						
3	Inspections/auditing AMO, ATO, AOC and CAMO report finding, and recommendation to ensure compliance with Civil Aviation Regulations and aviation Safety						
4	Approval of RVSM ,ETOPS,EFB ,lease approval ,Article 83 Bis						
5	ICAO Standards , annexes Knowledge, EFOD , PQs						
TOTAL – 50 Points							

2- BEHAVIOR SKILLS

#	Key Areas	Below satisfactory 1 point	Satisfactory 3 points	Above Satisfactory 5 points	Score
1	Appearance				
2	Confidence				

3	Attention to detail				
4	Analytical Thinking				
5	Communication Skills				
TOTAL – 25 Points					

3- RELEVANCE EXPERIENCE

Below Satisfactory below 10 points	**Satisfactory 10-17 points**	**Above satisfactory 18-25 points**

4- AGGREGATE SCORE

Functional Competencies	**Behavioural Competencies**	**Relevance of Experience**	**Total**

FSD Comments: FSD Decision:

APPENDIX F

PACA On-Job-Training Record

Instruction:
- All new inspectors should fill this form and approve by their Director.
- Inspector should attach related documents that approve his OJT listed in this form.
- Both soft and hard copies are required of the form and attachments.
- All dates in this form should be entered as dd/mm/yyyy.

Employee's Name:
Job Title: Airworthiness Inspector
Department: Flight Safety Department
Employee's Joining Date:

OJT Location/Notes and/or Subject	Date Received	OJT Duration
1.0 Module One – Administrative duties		
Inspector identification Photo Identity Card Headquarters building security requirements and procedures Complete form for airport entry pass, if applicable Photo taken for building pass, if applicable.		
Correspondence procedures The language requirements for documents, correspondence and e-mails The internal and external correspondence system – file numbers, signature blocks, due dates, coordination procedures The procedures for protected documents The procedures for executive correspondence The procedure to finalize correspondence and documents		1 day /6hours
2.0 Module Two – PACA ORGANIZATION		
Objective: At the completion of this section the inspector will be able to: Explain Airworthiness Division function in Flight Safety Department and relationship with other divisions within PACA and OMAN service providers		
General organization Departmental organization chart		
Airworthiness Division Interfacing with other Inspectors, divisions, branches,		

directorates (protocols) Role of the Inspector including line and functional authority General and Acting responsibilities / Documentation / Work Description Right and obligation of inspectors Enforcement policy Brief Description of Annual training plan		
3.0 Module Three – Aviation Regulatory Documents		1 day / 6 hours
Regulatory documents CARs, LAW, CANs. Aircraft documentation (C of R, C of A, RSL, Noise Certificate, ...) Brief Description of Civil Aviation Requirements (CAR 145, CAR M, CAR 39, CAR21, CAR 11, CAR 47, CAR MEL, CAR 66, CAR 147 and relevant CAN, etc) Air Operators Certificates and Approved Maintenance Organisation, CAMO, … Brief Description of Airworthiness Inspector manual (OPM) and process relevant to issue approvals and related checklist		
4.0 Module Four – Familiarization with Airworthiness Division		1 Day/6hours
Objective: At the completion of this section the Inspector will be able to: Recognize the major differences between industry and PACA; Locate and utilize the various documents necessary to effectively do his/her work. Required Documents Airworthiness Inspector Manual		

Table- 1 Training program for Airworthiness Inspector

Directorate	Department	Position	Required Qualification	Course				Supporting Comments
				Initial Training	Recurrent Training	Specialized Training	OJT	
DGCAR	**FSD**	**AWI**	Refer to qualification of airworthiness inspector	- Basic Familiarization course on Chicago convention, ICAO and working arrangement, relevant ICAO Annexes and documents - PACA Aviation legislative framework including Role and Structure of PACA, rights and obligations of inspecting personnel, Role of Airworthiness Inspector, enforcement procedure - PACA Office Procedure Manual (Airworthiness inspector manual) -Quality Audit Techniques/Quality System -Safety Management system (SMS) -Airworthiness requirement such as CAR 21, CAR M, CAR 145, CAR 66, CAR 147, CAR 47, CAR39, CAR MEL, CANs and etc.	-Changes in PACA basic regulation or Airworthiness regulation -Change in OPM and certification process -PACA State Safety program amendments. -Safety Oversight of Foreign Registered Aircraft (Ramp Inspection) -Quality Audit Techniques/Quality System -Safety Management system (SMS) - any training mandates due to change of regulation, procedure, technologies ,etc	Level I -Human Factors principles - Knowledge of relevant sample of the type(s) of aircraft gained through a formalized training course and at least at a level 1 general familiarization that cover airframe and avionics system. - Fuel Tank Safety. - Safety Oversight of Foreign Registered Aircraft (Ramp Inspection). - Maintenance and reliability Program. - NDT (Non-Destructive Testing) General Familiarization. - Airworthiness requirement of relevant parts of Air operation certification including operation specifications or operation approval such as ETOPS, RVSM, PBN, LVO (CAT II/III), MEL and etc. - State Safety Program (SSP). - General Familiarization on Accident, incident Investigation. Level II Advanced -Foreign Air Operator Certification -Management skills -Oversight of Foreign registered Leased Aircraft -Advanced Safety Oversight Airworthiness Inspector -Investigation of Incidents and Accidents advanced course -Type certification /validation programme -ICAO Auditors Course -Hazards Identification and Risks Management - Unmanned Aircraft.	On the Job Training including: *observation of maintenance organization procedure, *Observation of Continuing Airworthiness Management process, *Aviation Store management techniques	STD A6 Part I, App. 5, 4 Part III, App. 1, 4 A19 App. 1, 4.1 GM Doc 9683 Part 1, C6 Doc 9734 Part A, C3 Doc 9760 Part II, 4.5.5 & 4.5.6 Doc 9824 5.7 PACA regulation on AWI Section such as CAR M , CAR 145, etc

39. Safety Management System

CERTIFICATION PROCESS

39.1. PURPOSE

Safety has always been the overriding consideration in the conduct of all aviation activities. Safety is the state in which the risk of harm to persons or property damage is reduced to, and maintained at or below, an acceptable level through a continuing process of hazard identification and risk management.

Due to the nature of the aviation industry, the total elimination of accidents or serious incidents is unachievable. No human endeavour or human-made system can be free from risk and error, and failures will be expected to occur in spite of the most accomplished prevention efforts. The system must, however, seek to understand and control such risks and errors.

This section provides a simplified guidance to individuals to understand and apply the safety management application among AOC holders and CAR-145 organisations. This was developed giving references to ICAO Annex 1, ICAO Annex 6, ICAO Annex 8, ICAO Safety Management Manual (Doc 9859), the CAR 145, and CAR M Regulations.

39.2. SMS REGULATORY REQUIREMENTS

All CAR-145 AMOs are exposed to safety risks during the provision of their services are required to implement a safety management system. Such a system shall include the following high-level functions:

1. Identifies safety hazards;
2. Ensures the implementation of remedial action necessary to maintain agreed safety performance;
3. Provides for continuous monitoring and regular assessment of the safety performance; and
4. Aims at a continuous improvement of the overall performance of the safety management system.

The framework for the implementation and maintenance of a safety management system must include, as a minimum, the following twelve elements:

Safety Policy and Objectives

a) Management commitment and responsibility
b) Safety accountabilities of managers
c) Appointment of key safety personnel
d) Coordination of emergency response planning
e) SMS documentation

Safety Risk Management

f) Hazard Identification
g) Safety risk assessment and mitigation

Safety Assurance

h) Safety performance monitoring and measurement
i) The management of change
j) Continuous improvement of the SMS

Safety Promotion

k) Training and education
l) Safety Communication

A safety management system shall clearly define lines of safety accountability throughout the organisation, including a direct accountability for safety on the part of senior management.

CAR145 AMOs are free to build their SMS based on the complexity of their operations. Organisations have a wide range of procedural options for compliance, and are encouraged to

identify the best method of compliance to meet their individual circumstances. The key to a successful SMS is to develop and grow the SMS based on the organisation's needs and customized to its operations

39.3. SENIOR MANAGEMENT'S ACCOUNTABILITY FOR AVIATION SAFETY

The senior management of the organisation led by the Chief Executive Officer is ultimately responsible for the entire organisation's attitude towards safety. Its organisation safety culture will depend on the senior management's level of commitment toward safe operations.

A safety management system will not be effective if it receives attention only at the operational level. PACA therefore considers it the responsibility of the Chief Executive Officer, as the Accountable Manager, to effectively implement the organisation's safety management system.

The Accountable Manager, having full authority over human resources and financial issues, must ensure that the necessary resources are allocated to the management of safety

The Accountable Manager, supported by the organisation's senior management team, must therefore be responsible for:

- Developing the organisation's safety policy
- Establishing safety objectives and performance indicators
- Communicating, with visible endorsement, the safety policy and objectives to all staff
- Providing the necessary human and financial resources

39.4. IMPLEMENTING A SAFETY MANAGEMENT SYSTEM

To establish an SMS, the organisation would need to build up its key SMS components. Following are guidance on what those components would be like. Organisations may scope these components to suit their operations:

The comprehensive explanation of understanding and application of SMS components together with examples are in the ICAO Safety Management Manual (DOC 9859) respective regulation for study and understanding purposes to review by the Airworthiness Inspectors.

39.5. SMS Documentation

A SMS Manual (or exposition) is the key instrument for communicating the organisation's SMS approach and methodology to the whole organisation. It will document all aspects of the SMS, including the safety policy, objectives, accountabilities and procedures. A typical SMS Manual would include the following contents:

- Document Control
- SMS Regulatory Requirements
- Scope of the Safety Management System
- Safety Policy
- Safety Objectives
- Safety Accountabilities and Key Personnel
- Non-Punitive Reporting Policy
- Safety Reporting
- Hazard Identification and Risk Assessment
- Safety Performance Monitoring and Measurement
- Safety Investigations
- SMS/ Safety Training
- SMS Audit and Safety Review
- SMS Data and Records Management

- Management of Change
- Coordination of Emergency Response Plan

The Appendix provides further guidance on the compilation of the SMS Manual. An SMS exposition should preferably be a manual by itself. For small organisations, it is possible for the SMS exposition to be incorporated within an existing organisation's exposition manual. In either case, the various SMS components and their relevant integration should be adequately and systematically documented. Where the SMS manual is a standalone document, appropriate reference should be made to it in the relevant Organisation Exposition Manual. An organisation's SMS exposition/ manual shall be subject to PACA approval.

APPENDIX: GUIDANCE FOR THE DEVELOPMENT OF A SAFETY MANAGEMENT SYSTEM MANUAL

This appendix is designed to help organisations document the processes and procedures required for a Safety Management System. It is intended to provide guidance for the development of a Safety Management System Manual, which can be a separate stand-alone document or it could be incorporated into an existing manual, as required. This suggested format is one way in which an organisation can meet the documentation requirements of SMS.

The guide is formatted in the following manner:

- Section headings with numbering
- Objective
- Criteria
- Cross Reference Documents

Below each numbered section heading is a description of the "Objective" for that section, followed by its "Criteria" and "Cross Reference Documents".

The "Objective" is what the manual writer is expected to achieve.

The "Criteria' defines the scope of what must be considered when writing the section.

The "Cross Reference Document" is for you to annotate references of other manuals or SOPs of the organisation which contain relevant details of the element or process as applicable.

Manual Contents

1. Document Control
2. SMS Regulatory Requirements
3. Scope and Integration of the Safety Management System
4. Safety Policy
5. Safety Objectives
6. Safety Accountabilities and Key Personnel
7. Non-Punitive Reporting Policy
8. Safety Reporting
9. Hazard Identification and Risk Assessment
10. Safety Performance Monitoring and Measurement
11. Safety Investigations
12. Safety Training and Communication
13. Continuous Improvement and SMS Audit
14. SMS Data and Records Management
15. Management of Change
16. Coordination of Emergency Response Plan

39.5.1. Document Control

39.5.1.1. Objective

Describe how you intend to keep the manual up to date and ensure that all personnel have the most current version.

39.5.1.2. **Criteria**

Hard copy or controlled electronic media are used for manual distribution.

The initial correlation of this manual with other documentation, such as Company Exposition Manual, Maintenance Control Manual, Operations Manual, as applicable.

There is a process for periodic review of other safety management system related documentation and manuals to ensure their continuing suitability, adequacy and effectiveness.

The manual is readily accessible by personnel.

The manual is approved by the Accountable Manager.

Note - This SMS manual is subject to acceptance/approval by PACA

Cross Reference Documents:

39.6. SMS Regulatory Requirements

39.6.1.1. **Objective**

Elaborate on current PACA SMS regulations for necessary reference and awareness by all personnel.

39.6.1.2. **Criteria**

Spell out current PACA SMS regulations/standards. Include compliance timeframe and advisory material references as applicable.

Where, appropriate, to elaborate or explain the significance and implications of those regulations to the organisation.

Where, relevant, correlation to other safety related requirements or standards may be highlighted.

Cross Reference Documents:

39.7. Scope and Integration of the Safety Management System

39.7.1.1. **Objective**

Describe scope and extent of the organisation's aviation related operations and facilities within which the SMS will apply. The scope of HIRA eligible processes, equipment and operations should also be addressed.

39.7.1.2. **Criteria**

Spell out nature of the organisation's aviation business and its position or role within the industry as a whole.

Identify equipment, facilities, work scope, capabilities and other relevant aspects of the organisation within which the SMS will apply.

Identify the scope of all relevant processes, operations and equipment which are deemed to be eligible for the organisation's HIRA evaluation program; especially those which are pertinent to aviation safety. If the scope of HIRA eligible process, operations and equipment is too detailed or extensive, it may be controlled under a supplementary document as appropriate

Where the SMS is expected to be operated or administered across a group of interlinked organisations or contractors, such integration and associated accountabilities should be defined and documented as applicable.

Where there are other related control/ management systems within the organisation such as ISO: 9000, HFEM, OHS&S, QMS, MEDA etc., their relevant integration (where applicable) within the aviation SMS should be identified.

Cross Reference Documents:

39.7.2. Safety Policy

39.7.2.1. Objective

Describe the organisation's intentions, management principles, and commitment to improving aviation safety in the company. A safety policy should be a short description similar to a mission statement.

39.7.2.2. Criteria

The safety policy should be appropriate to the size and complexity of the organisation.

The safety policy states the organisation's intentions, management principles and commitment to continuous improvement in the aviation safety level.

The safety policy is approved by the Accountable Manager.

The safety policy is promoted by the Accountable Manager.

The safety policy should be signed by the Accountable Manager.

The safety policy is reviewed periodically.

Personnel at all levels are involved in the establishment and maintenance of the safety management system.

The safety policy is communicated to all employees with the intent that they are made aware of their individual safety obligations.

Cross Reference Documents:

39.7.3. Safety Objectives

39.7.3.1. Objective

Describe the safety objectives of the organisation. The safety objectives would be a short statement that describes in broad terms what you hope to achieve in this document.

39.7.3.2. Criteria

Safety objectives have been established

Safety objectives are expressed as a top-level statement describing the organisation's commitment to achieving safety.

There is a formal process to develop a coherent set of safety objectives.

Safety objectives are publicized and distributed

Resources have been allocated for achieving the objectives.

Cross Reference Documents:

39.7.4. Roles and Responsibilities

39.7.4.1. Objective

Describe the safety authorities, responsibilities and accountabilities for personnel involved in the SMS.

39.7.4.2. Criteria

The Accountable Manager is responsible for ensuring that the safety management system is properly implemented and performing to requirements in all areas of the organisation.

Appropriate Safety Manager (office), Safety Committee or Safety Action Groups have been appointed as appropriate.

Safety authorities, responsibilities and accountabilities of personnel at all levels of the organisation are defined and documented.

Safety authorities, responsibilities and accountabilities are promulgated to all personnel in key documentation and communication media.

All personnel understand their authorities, responsibilities and accountabilities with regards to all safety management processes, decision and actions.

A SMS organisational accountabilities diagram is available.

Cross Reference Documents:

39.7.5. Non-Punitive Reporting Policy

39.7.5.1. Objective

Describe the system or policy under which employees are encouraged to report errors, safety deficiencies, hazards, accidents, and incidents.

39.7.5.2. Criteria

There is a policy in place that encourages employees to report errors, safety deficiencies, hazards or occurrences.

Conditions under which punitive disciplinary action would be considered (e.g. illegal activity, recklessness, gross negligence or wilful misconduct) are clearly defined.

The policy is widely understood within the organisation.

Cross Reference Documents:

39.7.6. Safety Reporting

39.7.6.1. Objective

A reporting system should include both reactive (accident/incident reports etc.) and proactive/ predictive (hazard reports etc.) data. Describe how your reporting system is designed and how it works. Factors to consider include: report format, confidentiality, data collection and analysis and subsequent dissemination of information on corrective actions, preventive measures and recovery controls.

39.7.6.2. Criteria

The organisation has a process or system that provides for the capture of internal information including incidents, accidents, hazards and other data relevant to SMS.

The reporting process is simple, accessible and commensurate with the size of the organisation

Reports are reviewed at the appropriate level of management.

There is a feedback process to notify contributors that their reports have been received and to share the results of the analysis

The report form(s) is (are) simple, standardized and accessible across the organisation

There is a process to ensure that information is received from all areas of the organisation within the scope of the SMS.

There is a process in place to monitor and analyse trends

The organisation has a process for the systematic investigation and analysis of operational conditions or activities that have been identified as potential hazards

Cross Reference Documents:

39.7.7. Hazard Identification and Risk Assessment

39.7.7.1. Objective

Describe your hazard identification system and related schemes and how such data are collected. Describe your process for any categorization of hazards/risks and their subsequent prioritization for a documented safety assessment. Describe how your safety assessment process is conducted and how preventive action plans are implemented.

39.7.7.2. Criteria

There is a structured process for the assessment of risk associated with identified hazards, expressed in terms of consequence (severity) and likelihood (probability of occurrence).

Hazard identification and risk analysis procedures do manifest aviation safety as its fundamental context.

There is a criterion for evaluating risk and the tolerable level of risk the organisation is willing to accept together with any mitigating factors.

The organisation has risk control strategies that include corrective, preventive and recovery action plans.

The organisation has a process for evaluating and updating the effectiveness of the corrective, preventive and recovery measures that have been developed.

Corrective, preventive and recovery actions, including timelines, are documented

Cross Reference Documents:

39.7.8. Safety Performance Monitoring and Measurement

39.7.8.1. Objective

Describe how you plan to review the effectiveness of your SMS. This includes the safety performance of the company by reviewing the safety performance indicators.

39.7.8.2. Criteria

There is a formal process to develop and maintain a set of safety performance indicators and safety performance targets for monitoring:

- These shall be identified in this section of the manual and shall be subject to PACA acceptance.
- They shall be linked to the safety objectives.

Periodic planned reviews of company safety performance indicators including an examination of the company's Safety Management System to ensure its continuing suitability, adequacy and effectiveness.

Cross Reference Documents:

39.7.9. Safety Investigations

39.7.9.1. Objective

Describe how accidents/incidents are investigated. Explain how the contributing factors to an accident/incident are determined and how corrective action is recommended to prevent recurrence. Describe how such corrective/preventive actions are reviewed for updating any existing safety assessment or the need to initiate a safety assessment for newly uncovered hazards/risks.

39.7.9.2. Criteria

Measures exist that ensure reported occurrences and incidents are investigated where applicable.

There is a process to ensure that such investigations include identification of active failures as well as contributing organisational factors.

Investigation procedure and format includes the integration of safety related findings with the SMS. This ensures that appropriate SMS follow up actions on related as well as unrelated hazard or risks uncovered during the course of investigations are addressed.

Cross Reference Documents:

39.7.10. Safety Training and Communication

39.7.10.1. Objective

Describe the type of SMS and other safety related training that staff receives and the process for assuring the effectiveness of the training. Describe how such training procedures are documented. Describe the safety communication processes/ channels within the organisation

39.7.10.2. Criteria

1. Training syllabus, eligibility and requirements are documented.
2. There is a validation process that measures the effectiveness of training.
3. The training includes initial, recurrent and update training, where applicable.
4. The organisation's SMS training is part of the organisation's overall training program.
5. SMS awareness is incorporated into employment or indoctrination program.
6. Safety communication processes/ channels within the organisation.

Cross Reference Documents:

39.7.11. Continuous Improvement and SMS Audit

39.7.11.1. Objective

Describe the process for continuous improvement and review of your SMS.

39.7.11.2. Criteria

Regular audit/reviews of company safety performance indicators, including an internal assessment/ audit of the company's Safety Management System to ensure its continuing suitability, adequacy and effectiveness.

Describe any other programs contributing to continuous improvement of the organisation's SMS and safety performance e.g. MEDA, safety surveys, ISO systems, etc.

Cross Reference Documents:

39.7.12. SMS Data and Records Management

39.7.12.1. Objective

Describe your method of recording and storing all SMS related documents.

39.7.12.2. Criteria

The organisation has a records system that ensures the generation and retention of all records necessary to document and support the SMS.

Records kept include hazard reports, risk assessments reports, SAG/SRB meeting notes, safety performance monitoring charts, SMS audit reports, SMS training records, etc.

Cross Reference Documents:

39.7.13. Management of Change

39.7.13.1. Objective

Describe how you manage organisational internal/external/process changes that may have an impact on safety. How such processes are integrated with your SMS.

39.7.13.2. Criteria

The organisation has a standard procedure or policy to perform or review safety assessments for all substantial internal or external changes that may have safety implications.

There is procedure for performing safety assessment prior to introduction of new equipment or processes that may have safety implications before they are commissioned

All concerned stakeholders within or without the organisation are involved in such reviews. All such reviews are documented and approved by management as applicable

Cross Reference Documents:

39.7.14. Coordination of Emergency Response Plan

39.7.14.1. Objective

Describe the organisation's intentions and commitment to dealing with emergencies and their corresponding recovery controls. Outline the roles and responsibilities of key personnel. The Emergency Response Plan (ERP) can be developed as a separate document or it can be placed in this manual.

39.7.14.2. Criteria (Some may be applicable only to an AOC)

1. The organisation has an emergency plan that outlines roles and responsibilities in the event of a major incident, crisis or accident
2. There is a notification process that includes an emergency call list and an internal mobilization process
3. The organisation has arrangements with other agencies for aid and the provision of emergency services as applicable.
4. The organisation has procedures for emergency mode operations where applicable.
5. There is a procedure for overseeing the welfare of all affected individuals and for notifying next of kin.
6. The organisation has established procedures for handling media and insurance related issues.
7. There are defined accident investigation responsibilities within the organisation.
8. The requirement for preservation of evidence, securing affected area and mandatory/governmental reporting is clearly stated.
9. There is emergency preparedness and response training for affected personnel
10. A disabled aircraft or equipment evacuation plan is developed by the organisation in consultation with aircraft/ equipment owners, aerodrome operators or other agencies as applicable.
11. A procedure exists for recording activities during an emergency response.

39.8. Record Keeping:

The Airworthiness section should maintain records of all documents pertaining to acceptance of SMS. Copy of the SMS manual should be retained in the PACA FSD Office.

40. APPROVED CONTINUING AIRWORHINESS MAINTENANCE ORGANISATIONS (CAMO)

40.1. Initial Issue of a CAMO Approval – Application Process

40.1.1.1. Objective

The objective of this chapter is to describe how the an organisation shall proceed when applying for CAR-M Sub-part G approval and how PACA will handle the initial vetting, renewal and the continued oversight of the approval of such CAMO according to CAR M requirements.

40.1.1.2. Pre-Application Phase

4.1 During this phase, the prospective applicant can make initial enquiry regarding regulatory requirements/ processes to be followed to obtain the approval.

4.2 Once an applicant's letter of intent has been submitted to PACA, the latter will schedule a pre-application meeting. This meeting will take place at PACA (FSD) premises. A briefing shall be given to the applicant during this meeting on the CAMO certification process under CAR-M, applicable regulation, including guidance on the completion of the application form and conformance document. The Chief of the Airworthiness Section, or his delegate, is the person responsible to conduct and offer guidance at this pre-application meeting.

The applicant should be represented by the Accountable Manager OR the designated Quality Manager. It will also be explained to the applicant at this time the need for an appropriate person designated as the focal point for the company during the CAMO certification process. It is preferable that this designated person be a senior technical member or the Quality Manager and he/she will serve as the coordinator for the applicant during the Certification Process. One of the functions of this person will be to assure that all the findings issued by the PACA are directed to, and properly addressed by the appropriate personnel within the organisation. It will be much more efficient for the certification team to track the status of findings and comments through this person rather than several persons responsible for specific areas. Another function of this focal point will be to arrange the onsite visits and ensure that the appropriate personnel will be present and available.

Note: *During any meeting with the applicant, minutes should be kept and recorded in the relevant files.*

To summarize, during the pre-application meeting the following should be accomplished:

a) specify the regulation and the applicable procedures;

b) clarify the requirements related to the CAMO;

c) clarify the associated requirements (data, staff, training etc.);

d) determine if the applicant's business activities justify the grant of CAMO approval;

e) specify the need for appointing a focal point.

4.3 In case the applicant/ organisation is already holding a maintenance organisation approval under CAR 145, it shall be explained that the CAMO is totally independent from the approved maintenance organisation and the personnel engaged in the management of the CAMO functions are not the employee(s) of the maintenance organisation.

4.4 During the meeting, the applicant will be intimated to submit the formal application along with the requisite documents to the concerned PACA (FSD) where the organisation is based with a copy of the formal application to PACA .

5. Formal Application Phase

5.1 The applicant shall apply to the concerned PACA (FSD) by using PACA Form 2/AWR 030 along with Continued Airworthiness Management Organisation Exposition (CAME) prepared in accordance with CAR- M .

5.2 In addition, following documents will be required to be submitted:

a) PACA form 4 /AWR 032 along with resume for post holder.

b) Applicable fees to be charged as per CAN1-06.

c) Compliance checklist of CAR -M along with evidences.

d) CAME Conformance Document /Associated procedure Manual.

e) Evidence of registered name of organisation as mentioned in PACA form 30.

f) Schedule of Events describing the list of activities, and/or facility acquisitions, which must be accomplished or made ready, including the dates on which they will be ready for the PACA to inspect. The schedule should be realistic and contains sufficient flexibility to allow for unforeseen contingencies. A sample format of schedule of events is placed at Appendix 1.

Note: The intended scope of approval should be detailed as much as possible. It should mention class and the ratings sought.

5.3 Upon receipt of application, the same will be scrutinised to determine eligibility and completeness of the application according to CAR-M.

5.4 Incorrect or incomplete application will not be processed further and the applicant notified accordingly.

5.5 While submitting the application, the applicant should provide evidence of compliance of following requirements:-

a) Personnel Requirements: Compliance of regulation as stated in CAR-M 706 Personnel requirements. The persons nominated in accordance with CAR-M 706 to function as Accountable Manager, Continued Airworthiness Manager and Quality Manager, as applicable.

b) The nominated post holder shall not be employed by a CAR -145 approved organisation. The nominated person or group of persons must meet the requirement of qualification and experience as detailed in M. A. 706 of CAR M.

It may be ensured that the proposed personnel must be competent to manage the continuing airworthiness of the aircraft types as per the proposed scope of approval.

c) Facility Requirements : Compliance of regulation as stated in CAR-M Facility requirements and related AMC of CAR M, as appropriate.

5.6 Allocation of the investigation team.

5.6.1 Upon receipt of the application at PACA (FSD), and prior to the Formal Application Meeting, a "Certification Team headed is assigned by the Flight Safety Director to oversee the CAMO certification process of the new applicant by the Flight Safety Director . The composition and size of the investigation team may consist of a Team Leader to manage and lead the approval Team and if required, one or more additional team members. The size of the team may vary depending upon:

a) Size of the applicant organization;

b) Complexity of the organization approval applied for;

c) Number of sites proposed to be covered by the approval;

d) Nature of the services to be covered by the organization and its impact to aviation safety.

5.6.2 Scheduling of Formal Application meeting: The concerned head of the airworthiness will intimate the date of formal application meeting along with detail of certification team to the applicant. Prior to scheduling the formal application meeting, the certification team will initially review the application package and make a determination of its acceptability within 15 working days. The team leader will provide written notification of acceptance or rejection of the formal application.

5.6.3 The main objectives of the Formal Application Meeting are to:

a) Introduce the Organization's Management personnel to the PACA Certification Team.

b) Assure that the applicant's CAMO team understands the CAMO certification process.

c) Resolve the queries raised by the Applicant, if any.

d) Provide an initial comment on the compliance report of CAR-M provided by the applicant.

e) Discuss and agree upon the target dates for the various phases outlined in the Schedule of Events. Schedule of Events will be scrutinised for realistic timelines which will be mutually agreed. Any change in the timelines may affect the process.

6. Document Evaluation Phase

The application and the documents will be evaluated in accordance with CAR-M, PACA compliance checklist and PACA form AWR. The evaluation and assessment shall consist of following items:

a) Evaluation and acceptance of Post holders and other personnel and completion of PACA Form 4/AWR032.

b) CAR M compliance statement.

c) Review of CAMO and associated procedures.

6.1 Evaluation and acceptance of Post holders and other personnel and completion of PACA Form 4/AWR 032.

6.1.1 The Accountable Manger should demonstrate to PACA that he has a reasonable understanding of applicable regulations and of his role within the approved organisation, but also that he has all necessary means, in particular financial, to fulfil the Accountable Manager's duties as detailed in

the CAMO. The Accountable Manager is accepted via approval of the CAMO containing the Accountable Manager's commitment statement.

6.1.2 The proposed post holders are required to demonstrate to PACA appropriate essential requirements of qualification, experience as defined above and are competent to perform the function. If satisfied, the formal acceptance of the post holders is granted through the corresponding PACA Form 4/AWR032 by PACA. Once the post holders have been accepted by the PACA, the names of the post holders shall be included in the CAMO.

6.1.3 The organisation shall have adequate appropriate technical and auditing staff listed in their CAMO.

6.2 Review of compliance statement of CAR-M

The continued airworthiness organisation shall identify and analyse the continued airworthiness processes intended to be included in the CAR-M approval and ensure compliance of such processes with CAR-M requirements "as amended" and applicable PACA requirement in the form of CAR-M compliance statement.

The Certification Team will evaluate the CAR-M compliance statement. If the compliance report needs further work, it should be returned to the CAMO together with the comments summary.

6.3 Review of CAME and associated procedures:

6.3.1 The Continued Airworthiness Management Organisation shall identify and analyse the continued Airworthiness of aircraft to be included in the CAR-M approval and ensure compliance of such processes with CAR M regulation "as amended" and applicable PACA requirements which are available on the PACA web site. Based upon the analysis /review the organisation shall develop and provide the draft CAME (including associated list(s) and procedure(s)), as applicable.

6.3.2 The Certification Team will evaluate the Organization's draft CAME including associated list(s) and procedure(s) as applicable to ensure full compliance with the applicable requirements and in order to establish that it complies with CAR-M against the CAR M compliance statement and AWR Form 053. The evaluation will be conducted using the PACA Checklist of compliance statement of CAR M. The Checklist CAR-M compliance statement and PACA form 053 used to record queries, topics to be checked on audit and unsatisfactory items. If the CAME / Manual needs further work, it should be returned to the applicant together with the comments summary as an attachment.

The CAME must include the subject headings listed in CAR-M and reflect the preferred procedures. The airworthiness inspector is required to establish that the procedures specified in the exposition are in compliance with the intent of CAR M and then to establish if these procedures are, actually, intended for use.

6.3.3 When the proposed exposition is not acceptable i.e. procedures or required information not available, not compliant with CAR-M requirements and therefore could not be reviewed within the allocated time, the assigned team leader is required to return the draft CAME back to the organisation for corrections. The airworthiness inspector will notify in writing the Applicant of the non-compliance's and/or corrections. A copy of this notification letter should also be inserted in the CAMO's Certification file appropriate section (correspondence). The organisation will have to re-draft the CAME in accordance with the relevant CAR requirements.

6.4 Corrective Actions

6.4.1 On the basis of the findings against the CAME, the applicants is responsible for the relevant corrective actions / modifications required by the PACA.

The certification team members must properly track each item in order to ensure its rectification.

6.4.2 If after several exchanges, should the applicant still fails to provide acceptable documents (CAME, associated lists, procedures,.), PACA will determine the most appropriate actions including termination of the application.

6.4.3 CAME approval will be accomplished when all items have been identified and evaluated as satisfactory.

7. Inspection and Demonstration Phase

7.1 Internal audit report from the organisation ’s quality system.

7.1.1 Once the draft of the CAME and the applicable PACA Forms 4 /AWR 032 are confirmed as being acceptable by Certification team, the proposed Continued Airworthiness Management Organisation’s Quality department may audit the organisation in full for compliance with the CAME and CAR-M regulation “as amended” (if requested by the PACA team leader). All relevant regulation/guidance dealing with specific technical matters (i.e. publication, technical staff, auditor, etc.) as applicable to the specific organisation, shall be also used as reference.

7.1.2 A statement signed by the organization’ s Quality Manager shall be provided to the PACA before the audit takes place confirming that processes, facilities, documentation, technical publication subscription on the name of organisation and personnel subject to the application have been reviewed and audited showing compliance with all applicable CAR-M requirements. This means that all findings raised during this internal audit must have been closed with appropriate corrective actions before issuing this statement. The relevant internal audit report(s) including the associated corrective actions shall be provided by the organisation along with the QM statement to the PACA.

7.2 Preparation of the Audit

7.2.1 After receipt of the Quality Manager statement and the internal quality audit report, the Certification team may initiate the on-site investigation in accordance with Airworthiness Procedure Manual. The applicant organisation shall provide any necessary administrative support in order to complete the inspection.

This chapter shall be used for approval of CAR M Organisation and be followed to assess the capability of the organisation to undertake the function. The Team leader will:

a) Liaise with the organisation for scheduling the audit;

b) Prepare and notify the organisation of the audit program.

Note: In case of modification to the initial application, the organisation shall notify PACA before the investigation takes place by sending a revised PACA Form 2/AWR030.

7.3 On-Site Inspection(s)

7.3.1 The Certification team shall start the investigation audit with an opening meeting with the organization’s management and where possible with the Accountable Manager. During the on-site inspection phase the facilities, services, procedures, technical documents subscription of the

CAMO organization are assessed for acceptability. The following points shall be considered when carrying out the meeting:

a) Confirmation of the audit schedule including objectives and scope of the audit.

b) Confirmation of the required interviews / availability of the people involved in the CAR-M process.

c) Explanation on the method used for reporting non conformities.

d) Confirmation of the applicable regulation and standards

7.3.2 During the on-site Audit, each member of Audit team to be accompanied by a senior technical member, preferably the Quality Manager of the CAMO. Progressively complete the CAR M compliance statement checklist, AWR 053, recording any findings against the sub-paragraph of the requirement and the applicable area of the audit, following the completion instructions. All findings must be confirmed in writing to the organisation. The audit report form should be reflected into PACA letter attached with the PACA findings forms. The Certification team shall inform the Quality Manager for necessary corrective action.

7.3.3 If the initial investigation lead to significant and/or numerous discrepancies, this would show insufficient understanding / compliance of the organisation and a lack of effectiveness of the Quality system. In that case, PACA may take the decision and inform the organisation accordingly:

a) To terminate the application. If the organisation wish to re- apply for CAR M approval, a new application needs to be submitted to PACA;

b) To limit the requested scope of work;

c) Not to accept the concerned post holders and/or nominated personnel as defined in CAR M.

7.3.4 For an initial audit, the findings shall not be classified as Level 1 or 2 as the organisation is not approved. A maximum of three months is allowed to take corrective action for each finding raised during the initial audit. Failure to close these findings during the agreed period without adequate justification could lead PACA to terminate the application.

7.3.5 Depending on the extent and nature of the findings and the delay of corrective actions implementation, an additional audit may be necessary.

7.3.6 The CAMO organization responds to findings (if applicable) and resubmits the Audit Finding Form(s) with either the full corrective action described on the form or cross referenced as an attachment. Certification Team evaluates the closures, where necessary, carrying out a follow-up audit and closes the findings.

7.4 Recommendation.

Once the organization's compliance with CAR- M has been established and all findings are closed, the Certification team will make a recommendation to issue the CAR M approval to the organisation. This includes the recommendation for CAME, associated documents approval and management personnel acceptance.

Note: *In the case, it appears necessary to adjust the requested scope of approval, then a PACA Form 2/AWR 030 shall be reissued reflecting the scope of approval to be recommended.*

8. Certification Phase

8.1 The recommendation package (Document review and the on-site audit report including closure of findings) will be reviewed for compliance and accuracy. The review should take into account the relevant paragraphs of CAR-M, the details of finding and the closure action taken. Satisfactory review of the audit forms should be indicated by a signature on the audit finding form.

8.2 Once satisfied, following documents will be issued to the applicant:

a) the approval certificate as given CAR M;

b) the approval letter of the CAME together with its associated document;

c) the nominated personnel PACA Form 4/AWR032;

8.3 At this stage, the following documents should be placed in the CAMO's Certification File:

a) Application/ PACA Form 30.

b) PACA Form 4/AWR 032 along with supporting documents/evidences and copy of acceptance letter.

c) CAME approval letter and file record.

e) CAR M compliance statement.

f) Team Report and Audit Finding Closure documents.

g) Approval Certificates.

h) Letter to CAMO forwarding the Approval Certificates.

9. Change to CAR M approval.

9.1 An application for change of CAR M Organisation approval should be made to the concerned PACA by using the PACA Form 2/AWR030 along with the following documents:

a) Soft and hard copy of amended CAME and associated procedure manuals;

b) CAR-M statement compliance report along with relevant supporting documents.

c) Details of personnel including post holders

d) Applicable fees as CAN1-06.

9.2 The guidelines for approval process will be followed by the concerned PACA (FSD) for change in scope of approval.

10. Renewal of an approval

10.1 An application for renewal of CAMO approval should be made to the concerned PACA (FSD) by using the PACA Form 2/AWR032 along with the following documents;

a) Internal audit report and status of closure of findings of the organisation;

b) Validity and scope of approval of organisation, as relevant;

c) Applicable fees as CAN1-06.

10.2 Each organization must be completely reviewed (audited) by PACA (FSD) for compliance with CAR-M at periods not exceeding 12 months. PACA (FSD) should use complete the CAR M statement compliance for the purpose. It should be ensured by the concerned PACA (FSD) that no finding is open at the time of renewal of approval.

11. CAR M Approved Organisation Records

11.1 Records of approval of an organization shall be retained for an adequate period that allows adequate traceability of the process to issue, continue, change, suspend or revoke each individual organization approval. The records shall include as a minimum:

a) The application for an organization approval, including the continuation thereof.

b) The continued oversight program including all audit records.

c) The organization approval certificate including any change thereto.

d) A copy of the audit program listing the dates when audits are due and when audits were carried out.

e) Copies of all formal correspondence including Form 4/AWR032.

f) Details of any exemption and enforcement action(s).

g) Any other regulatory authority audit report forms.

h) CAME.

12. Surveillance/ Audit

12.1 Internal Audits by the Organisation:

12.1.1 The Quality Manager of the approved organisation should develop procedure to carry out periodical planned and unplanned audits to ensure proper compliance of the documented procedures as per approved CAME.

12.1.2 A report should be raised each time an audit is carried out describing what was checked and the resulting findings against applicable requirements, procedures and products.

12.1.3 If any finding of serious nature (Level-1) is detected during the audits, the same should be intimated to the concerned PACA (FSD) immediately. The responsible manager should take

appropriate action to mitigate the finding. The root cause analysis along with the measures taken to prevent such finding in future should be intimated in writing by Quality Manager to PACA (FSD).

12.1.4 In case there is any violation of the approved procedures, the Quality Manager is required to investigate the same and take necessary action under intimation to PACA (FSD).

12.2 Surveillance by PACA:

12.2.1 Flight Safety Department will carry out planned and unplanned surveillance inspection of organisation in accordance with an annual audit plan signed by the Flight Safety Director.

12.2.2 A report should be raised each time a surveillance is carried out describing what was checked and the resulting findings against applicable requirements, procedures and products.

12.2.3 In case there is any violation of the approved procedures, the PACA (FSD) should investigate the same and take necessary action as per the procedure detailed in the Enforcement Policy and Procedure manual against the organisation.

12.2.4 All the audit finding must be inserted in PACA database for follow up and oversight purpose.
Suggested Timelines for completion pf certification Process:

S/N	EVENTS	STARTING PERIOD	ENDING PERIOD	ACTION OFFICE
1	Pre-application Phase			Flight Safety Department (Airworthiness section)
	Submission of State of Intent by the applicant			
	Pre-application meeting	Within 2 weeks of the receipt of Statement of Intent		
2	Formal application Phase			
	Submission of formal application for grant of CAR M approval	D-90		
	1st Review Meeting with Operator		D-75	
3	Document Evaluation Phase	D-80	D-15	
	2'Jd Review Meeting with Operator		D-50	
4	Inspection and Demonstration Phase	D-50	D-10	
	3'd Review Meeting with Operator		D-40	
	4ft' Review Meeting with Operator		D-30	
5	Final Review Meeting with Operator		D-15	
	Certification Phase	D-10	D-5	

1. D is the estimated day of grant of approval. The above are suggestive times for completion of the certification process.
2. The Certification Team Leader shall be responsible for arranging and conduct of the review meetings mentioned above.
3. There may be a need to have less or more number of review meetings suggested above.
4. Record of each meeting needs to be recorded.

41. Continuing analysis and surveillance program / revision

41.1. Background

41.1.1. Objective

This chapter provides guidance for ensuring that an operator/applicant's Continuous Analysis and Surveillance Program (CASP) meets the necessary requirements for certification or revision.

41.1.2. General

A. The continuing analysis and surveillance system is usually included in the operator's maintenance manual. The system ensures the adequacy of an operator's maintenance program and confirms that the program is properly followed and controlled as required by CAR-M

B. Continuing Analysis and Surveillance Program Functions

(1) A continuing analysis and surveillance system has two functions:

(i) The "audit function" which includes a follow-up for those components removed and the teardown report must be a part of the Continuing Analysis and Surveillance Program. It must also include examining the administrative and supervisory aspects of the operator's program (including work done outside of the operator's basic organization). The audit must ensure that the Main Base, Sub Base, Line Station and shops operate in accordance with company procedure. The audit function includes such things as:

- Ensuring that all publications and work forms are current and readily available to the user.
- Ensuring that major repairs/alterations are classified properly and accomplished with approval data
- Ensuring that carryover items and deferred maintenance are properly handled
- Ensuring that vendors are properly authorized, qualified, staffed and equipped to do the contractor function according to the operator's manual.

(ii) The 'performance analysis function' includes daily and long-term monitoring and emergency response related to the performance of affected aircraft systems, including aircraft engines and components. This function includes monitoring such things as:

- Daily mechanical problems for affected aircraft (daily monitoring)
- Deferred maintenance items including excessive number and times (daily monitoring)
- Pilot reports (long-term monitoring)
- Mechanical Interruption Summary Reports (MIS) (long-term monitoring)
- Contained engine failures (emergency response)
- High number of unscheduled component removals (long-term monitoring)

(2) The continuing analysis and surveillance program should include a system of data collection and analysis, which may or may not be a part of a reliability program.

C. The continuing analysis and surveillance system also addresses operational matters, such as maintenance scheduling, control and accountability of work forms, conformity to technical instruction and compliance with procedural requirements. Additionally, it examines the adequacy of equipment and facilities, parts protection and inventory, mechanic competency and shop orderliness.

41.1.3. Reviewing the operator's program

A. For maximum effectiveness, the continuing analysis and surveillance program should be separated from other maintenance functions. Some operators establish a separate quality assurance organization for this purpose. Others assign this function to their inspection / quality control organization. When the analysis and surveillance responsibility is assigned to an organizational unit that has other duties, these functions should be performed independently of the other duties.

B. Mechanical performance analysis may be performed as part of a reliability program or as an independent data collection and analysis system. The system should include charting or other appropriate methods for recording and accounting of pertinent data at specified intervals. This will ensure continuous program operation. Data collection and analysis are essential elements for supporting the condition-monitoring process.

C. The use of contract agencies tends to complicate an operator's continuous analysis and surveillance system. When a contractor fails to provide the operator with essential information (such as failure characteristics, service times, etc.), gaps are created in the operator's data collection. This obstructs the continuous analysis and surveillance system. Therefore, the continuing analysis and surveillance program must include procedures for transmitting essential information back to the operator.

D. When aircraft fleets are grouped for purposes involving data collection, the data from the total of the fleets may provide a valid comparison for behaviour of one of the fleets. However, data generated by a single airplane or a small fleet can be obscured by a larger fleet of the group.

Note: Unacceptable performance of a small fleet may not contribute a significant statistical impact unless the data from the smaller fleet is reviewed individually.

E. When an operator uses a contractor for total maintenance support, the operator is responsible for the continuing analysis and surveillance requirement. The operator must have enough personnel and resources to accomplish both the audit and performance analysis functions.

F. The complexity and sophistication of the continuous analysis and surveillance system should relate to the certificate holder's operation. A small operator should not be expected to have a complex system similar to a large airline. However, small operators must have a system with continuous data collection which includes specified analysis points and repetitive examinations.

G. A data collection and analysis program can use a manufacturer as a collection and analysis center if the DGCAR agrees. The operator is still responsible for the development and implementation of corrective actions and the overall effectiveness of the program.

41.2. Procedures

41.2.1. Procedures

A. Brief Operator / Applicant on Program Requirements and Procedures

When an operator/applicant inquires about a continuing analysis and surveillance program, brief the operator/applicant about program requirements. Inform the operator/applicant that an acceptable program must have a continuous internal audit and analysis system that accomplishes the following:

- Evaluate the organization's performance
- Identifies the performance deficiencies
- Determines and implements corrective actions
- Determines the effectiveness of corrective actions

B. Review the Operator/Applicant's Program

When the operator/applicant presents the complete continuing analysis and surveillance program, ensure that the program audits and analyses the following:

- Aircraft inspections
- Scheduled maintenance
- Unscheduled maintenance
- Aircraft, engine, prop and appliance repair and overhaul
- Maintenance manuals

- Mechanical Reliability Reports (MRRs)
- Mechanical Interruption Summary Reports (MISRs)
- Vendor facilities and capabilities
- Maintenance organization staffing
- Required Inspection Item Program (RIIs)

C. Review Operator's manual

Ensure that the manual contains the following:

(1) An organizational chart that defines the lines of authority
(2) Definitions of responsibilities and duties
(3) The means by which the information will flow within the operator/applicant's organization and between any contractor/vendors and the operator/applicant
(4) Examples of forms or reports that are used
(5) Procedures that include a record review covering the following items:

- Accountability for all inspection requirements
- Routine and non-routine maintenance records
- Overhaul records
- Methods of Airworthiness Directives (ADs) compliance
- Service Bulletin compliance
- Major repairs and alterations approval data

D. Evaluate Available Staffing

Ensure that the staffing described in the manual is available and appropriate for the complexity of the operator/applicant's operation.

E. Analyse Results

Upon completion of the review, analyse the results and determine whether the operator/applicant's program meets all requirements. If problems exist, discuss the discrepancies with the operator/applicant and advise them as to what areas need corrective action.

42. Procedure for receiving, reviewing Airworthiness Directives issued by the state of design

1. PURPOSE

1.1 This procedure specifies the method of receiving, reviewing, Airworthiness Directives that originate from the state of the design.

2. INTRODUCTION

2.1 CAR-39 and CAR-M.303 stipulates that any applicable airworthiness directive must be carried out within the requirements of that airworthiness directive, unless otherwise specified by the Authority. Airworthiness Directives issued by the state of design of an aircraft, engine, propeller and appliance or a supplementary type certification state are deemed to have been adopted and mandated by the authority unless notified otherwise. Notwithstanding to the above, the owners/operators may comply with the modifications / inspections / Alert Service Bulletin / email by the type certificate holder.

2.2 the authority may also issue Airworthiness Directive in respect of any Omani civil registered aircraft, engine, propeller and appliance fitted to such aircraft to make good of any feature or condition affecting safety of the aircraft.

2.3 It may be noted that responsibility for compliance of all Airworthiness Directives, Service Bulletins, Service Instructions, Service Letters where applicable lies with the operator. However, the Flight Safety Department oversight and ensure that the Airworthiness Directives declared mandatory and all AD's issued by state of design must be complied by operators unless otherwise specified by the PACA.

2.4 This chapter details the procedures and guidelines to be followed by Airworthiness Inspector for reviewing the airworthiness directives issued by the state of design.

3. PROCEDURE

3.1 For declaring the ADs issued by state of design as mandatory, the Airworthiness Inspectors at PACA shall visit the websites of regulatory authorities of the State of Design in respect of all aircraft, engine, propellers, components, and items of equipment for all types of aircraft registered in Oman. The ADs will be reviewed for its applicability and /or effectivity prior to declaring these as mandatory. The downloaded AD from websites of regulatory authorities of the State of Design, where it is applicable, is then sent to the associated operator. The operator will in turn their jurisdiction and ensure compliance of these ADs during scrutiny of C of A issue/renewal and during routine spot check/ surveillance checks / audits. The applicable ADs will be saved on the PACA database and to be filed in sections according to Omani operators to monitor the status/accomplishment of the Ads.

FIGURE 1: RECEIVING, REVIEWING ADS BASED ON STATE OF DESIGN

3.2 In general, Airworthiness Directives issued by EASA will be declared mandatory by the Authority and will be processed accordingly in form of Bi-weekly reports. EASA publishes a biweekly report of ADs every second Wednesday. This report contains ADs issued or adopted by EASA through foreign Type Certificate holder, from Monday 2 weeks ago up until the Sunday right before Wednesday. For example, the biweekly report published on Wednesday, the 24th of October 2007, will contain all Publications from Monday the 8th to Sunday the 21st (2007/10/8 - 2007-10-21). Biweekly reports are obtained from EASA Safety Publication Tool website: https://ad.easa.europa.eu/biweekly .

On receipt of ADs Biweekly report, the report will generally contain a list of all affected aircraft. However, the Airworthiness Inspector will review the list to attain ADs that have an effect on Omani registered aircraft. The FSD then will issue PACA ADs Distribution list to Omani operators accordingly.

Before forwarding to operators, PACA ADs Distribution list is fed with following information:

a. TC Holder

b. Type of Aircraft/Components

c. Title/Subject

d. Date Issued

e. Date Received

f. Publisher (that is, FAA, EASA etc)

g. AD Reference Number

h. Accomplishment Status

i. ATA Chapter.

However, in case of Alert / Emergency AD issued by the State of Design an immediate e-mail will be sent to EASA Safety Publication Tool user/subscriber, and then direct communication by e- mail / telephone shall be made to the operator where such aircraft are based.

3.3 In case of a new type of aircraft being introduced in the country, a current AD list for the aircraft shall be obtained and this list will form the basis for declaring ADs for new type of aircraft as mandatory.

4. OVERSIGHT BY PACA

4.1 Airworthiness Inspectors may carry out spot checks as well as physically check the aircraft during issuance/renewal of C of A for the accomplishment of applicable ADs. They should also ensure the compliance of various procedures laid down in the exposition of the operator for the implementation of the continuing airworthiness information system.

4.2 It should be noted that non-compliance of an AD may render the C of A invalid. This fact should be brought to the notice of the operator and in case of not receiving any request for extension or the compliance status of a mandatory modification within the stipulated time; the authority should inform the operator in writing that the C of A of the aircraft is deemed to be suspended.

5. RECORD KEEPING

5.1 The Flight Safety Department will maintain the records of ADs issued by the State of Design and mandated by the Authority. The Authority will also establish a system to maintain records of all documents generated and received (hard copy). It may be ensured that all related records are maintained in chronological manner and all the pages are appropriately numbered. Traceability of all records should be ensured for future reference.

43. Surveillance program for Airworthiness Standards Section

A. Purpose:

This guidance material establishes the requirements of an annual surveillance program for airworthiness standards Section.

B. Effective Date:

This guidance material is effective from 01 November 2019.

C. References:

1. ICAO Doc. 9734·Safety oversight manual, Chapter 3: Critical elements of the safety oversight system,
2. ICAO Doc. 9760; Airworthiness Manual.
3. ICAO Doc. 8335, Part IV - Continuing Safety Oversight Of The Operator By The State Of The Operator
4. Civil Aviation Air Law of 2019.
5. Civil Aviation Regulations CAR 145, 147, M, 66, OPS and other PACA Requirements.

1. Surveillance Obligations of PACA

1.1 The PACA's obligation and responsibility for a safe and orderly international civil aviation system does not end with the issuance of licences, ratings, certificates and other approvals. Maintenance of continued safe operations, particularly during significant change, demands that the PACA also establish a system of ensuring continuing organizational, as well as individual, professional competency of licence/rating/certificate/approval holders; continuing validity of licences/ratings/certificates/approvals; continuing capacity to maintain a safe and regular operation by air operators and service providers; and continuing capacity to properly maintain aviation-related standards. Authority for this is contained in the provisions of the Civil Aviation Air Law read together with Civil Aviation Regulations.

1.2 Having issued a licence, the PACA shall ensure that the privileges granted by that licence, or by related ratings, are not exercised unless the holder maintains competency and meets the requirements for recent experience established by PACA, This requirement, of course, demands that PACA establish a system of continued control and supervision to ensure continued safe aircraft operation,

1.3 The continued validity of a certificate and, by extension, an equivalent document issued to an organization is dependent on the operator or organization maintaining the requirements established for its issuance, This is clearly provided for in the Civil Aviation Regulation and relates to the need of continued surveillance by the PACA.

1.4 Under the Civil Aviation Law, the Civil Aviation regulations and Civil Aviation Technical Standards promulgated thereof, PACA is given the authority and responsibility to conduct inspections, analyse operations, identify safety deficiencies, make recommendations, impose operating restrictions as well as grant, suspend, revoke or terminate licences, certificates or other approvals and, in the case of operator certificates, amend the corresponding operations specifications. Additionally, the PACA has the authority and responsibility for exercising continued surveillance over such operations to ensure that accepted safety practices and proper procedures that will promote safety in operations are maintained. To achieve this objective, the PACA, and more specifically the technical personnel, must continuously monitor operations conducted by holders of licences, certificates and/or approvals, as applicable.

2. PACA/AWS Surveillance Program

2.1 Required surveillance and the related inspections should be planned and conducted by PACA technical personnel responsible for personnel licensing and civil aviation technical inspections, possessing the required credentials.

2.2 The surveillance function should be accomplished on a continuing basis, performed at specified times or intervals, or conducted in conjunction with the renewal of a licence, certificate or other approval. ICAO publishes guidance on inspection periodicity in a number of guidance documents. In the case of an air operator (CAMO), a maintenance organization or an approved training organization, regardless of the method used for surveillance, all significant aspects of the organization 's procedures and practices should be evaluated and appropriate inspections conducted at least once in every 24- months period maybe extended to 36 months based on Flight Safety Director Decision . Scheduled inspections must be augmented by periodic random inspections of all facets of the operation.

2.3 Throughout all phases of the surveillance program, the standards of an organization's capability and competence should be equal to, or exceed, those required at the time of original certification. Accordingly, PACA technical personnel conducting surveillance and related inspections should carry out such activities in a thorough manner and require the organization to convincingly demonstrate that operations and/or maintenance are being conducted in accordance with the requirements of the certificate issued, the related operations/maintenance requirements/specifications, the organization expositions, control manuals and appropriate civil aviation regulations and that, as a consequence, the authority granted with the initial issuance of the certificate should continue.

2.4 The surveillance and inspection program should provide a comprehensive and conclusive assessment of the maintenance of competency of licence/rating/certificate/approval holders. Moreover, the associated inspection reports should indicate whether the inspection and surveillance system and procedures employed by PACA are effective in determining the licence/ rating/ certificate/ approval holder's competence, record of compliance and overall capability.

3. AME License Holders

3.1 PACA/AWS must ensure that the privileges of the holder of an aircraft maintenance licence shall be exercised only on condition that, within the preceding 24 months, the licence holder has either had experience in the inspection, servicing or maintenance of an aircraft or components in accordance with the privileges granted by the licence held for not less than six months, or has met the provision for the issue of a licence with the appropriate privileges, to the satisfaction of the Licensing Authority Of PACA.

3.2 Inspection of AMO and Operators, PACA/AWS Technical Personnel shall check the compliance of the AME license holder with the requirements mentioned in item 3.1 .

3.3 In order to show the evidence of compliance with the requirements mentioned in item 3.1, the AME license holder must conduct records in the AME license holder log book regarding his participation in maintenance tasks. The records must be certified by the supervisor and quality manager of organization.

4. Safety Assessment of Foreign Aircraft (SAFA)

- States are entitled, by Article 16 to the Convention on International Civil Aviation, to search aircraft from other States on landing and departure and to inspect the certificates and other documents prescribed by the Convention and its Annexes, provided there is no unreasonable delay to the operation.

- Annex 6, Part I, 4.2.2.2; and Part III, Section II, 2.2.2.2, requires that States shall establish a program with procedures for the surveillance of operations in their territory by a foreign operator and for taking appropriate action when necessary to preserve safety.

- Annex 8, Part II, 3.6, allows the State to prevent a damaged foreign aircraft from resuming its flight operation on the condition that the CAA shall advise the State of Registry immediately. The State of Registry will consider the airworthiness of the aircraft and prohibit the aircraft from resuming flight until it is restored to an airworthy condition or permit the aircraft to resume its flight, if considered airworthy, or permit the aircraft to conduct a noncommercial air transport operation, under prescribed limiting conditions, to an aerodrome at which it will be restored to an airworthy condition.
- The necessary safety inspections should therefore be planned by the PACA inspectors and conducted when aircraft from other States are within the territory of Jordan. These inspections should be planned such that they do not cause unreasonable delay in the operation of the aircraft
- All inspectors who conduct inspections of foreign aircraft are to be experienced inspectors
- These inspectors will be specifically trained and authorized to conduct such inspections and possess appropriate credentials identifying them as inspectors employed by the PACA .
- Selection of a particular aircraft to inspect should normally be done at random, in a non-discriminatory manner. However, PACA should apply principles of risk management to identify operations perceived to present a higher safety risk and, as a result, conduct additional inspection activities aimed at those operations that can be linked to a specific:

  a) State of the Operator or State of Registry;
  b) aircraft type;
  c) nature of operations (scheduled, non-scheduled, cargo, air taxi, etc.);
  d) foreign operator; or
  e) individual aircraft.

5. Resolution of Safety Concerns

5.1 The resolution of identified deficiencies and safety concerns is a critical element at the core of all safety oversight activities. A good safety oversight system will provide for the identification of deficiencies and safety concerns and the appropriate action required for resolution.

5.2 Should the surveillance and inspection program and related inspection reports reveal that the licence/rating/certificate/approval holder has failed or is unable to meet or maintain the required Standards, the PACA/Airworthiness Inspector primarily responsible for the surveillance of the operation must promptly advise the licence/ rating/ certificate/approval holder of the deficiency observed. Once the cause of the deficiency is determined, the PACA should provide deadlines for corrective action to be taken and initiate appropriate follow up to determine the effectiveness of the corrective action. Additional inspections should be conducted whenever problems in particular areas repeatedly recur.

5.3 If the licence/rating/certificate/approval holder does not correct the deficiency within the established deadlines, the Airworthiness Inspector should immediately inform the Director through the responsible division's chief with a recommendation that enforcement action shall be

taken against the licence/ rating/ certificate/ approval holder's by either imposing a fine or the privileges be temporarily or permanently withdrawn or restricted. If, after careful review of all circumstances involved and following necessary coordination and consultation within the PACA Commissioners Counsel, there is agreement on the need to impose a fine, suspend or revoke the licence/ rating/ certificate/approval holder's privileges, the Airworthiness Inspector should officially handover the case to the enforcement department thereafter inform the licence/ rating/ certificate/approval holder in writing summarizing both the proposed action and the reasons for it. When a certificate is cancelled or revoked for any reason, the licence/ rating/ certificate/ approval holder must promptly return it to the issuing official.

5.4 Through established and managed certificating and surveillance system, analysis of the various inspection reports will be reviewed for patterns of weaknesses or deficiencies, if such weaknesses or deficiencies exist, and will often also identify causes and possible remedies. Since the PACA CEO has a legal responsibility over safety, He must be satisfied that an Organization is competent to conduct safe operations. Therefore, PACA must rely heavily on the inspection reports and the recommendations of its Airworthiness Inspectors.

5.5 In view of the increasing complexity of modern operating techniques, aircraft and equipment, there is a continuing need to review the scope of inspections and related techniques and procedures in order to better evaluate specific areas of interest and ensure effective use of PACA Airworthiness inspectorate resources.

5.6 PACA has established systems for transmitting and/or receiving, as appropriate, information on faults, malfunctions, defects and other occurrences that cause or might cause adverse effects on the continuing airworthiness of the aircraft. Access to this type of information is necessary for the State of Design of Aircraft to analyse the deficiencies and develop the necessary airworthiness actions for resolution of the safety concern.

5.7 Accident investigations also play a crucial role in the identification of deficiencies and safety concerns. Safety recommendations can be issued in the course of or at the completion of an investigation. Another essential tool is a mandatory incident reporting system as well as voluntary incident reporting system (which shall be non-punitive).

The establishment of an accident and incident database and the analysis of the information contained in such a database is a means to identify safety concerns; a common classification is essential to allow for the exchange of information between the users of the aviation system worldwide.

5.8 An effective resolution of safety issues is highly dependent on the authority vested in PACA. This critical element can only be successful in situations clearly supported by and linked to the civil aviation Air Law and regulations. There should be technical guidance and procedures for both the technical inspectors and the industry. This guidance should be provided early in the program of safety oversight improvement to avoid inconsistent extremes of actions by PACA personnel.

5.9 PACA has established a graduated enforcement system applicable to the certificate Holder

5.10 PACA has established a graduated enforcement system applicable to the Organization's certificate Holder.

5.11 PACA risk assessment

6. Scope of Surveillance Program

The surveillance program of PACA/AWS must cover the following areas:

a) Continuing airworthiness of aircraft
b) CAMO activities
c) Maintenance organizations
    - Local Maintenance Organizations
    - Foreign Maintenance Organizations*1
d) Maintenance training organizations
e) Local Maintenance Training Organizations
f) Foreign Maintenance Training Organizations*1
g) AME licenses
h) Foreign Aircraft operators

Note: * Please refer to types of inspections necessary and the frequency of those inspections

7. Approval of surveillance program

The surveillance program for Airworthiness Section is approved by the PACA Flight Safety Director.

8. Inspection checklist and report

The Airworthiness inspector shall use an appropriate developed form for the specific inspection being carried out. After the inspection, the Inspector shall submit to the PACA/AWS and the Organization a formal inspection report after every inspection/audit performed. The report shall detail all the deficiencies and observations noted during the inspection.

9. Update AWS Database

All inspection reports raised shall be entered in the AWS System. This information includes, but is not limited to, all findings from the various Inspections specifying the category level of the findings and the audit report reference number as well as the time frame for corrections and the status of the findings (closed, open), will also be entered into the computerized system for tracking and historical record purposes. This information is kept up to date by including all subsequent changes (if any) to the Yearly Inspection Computerized System.

10. Continuous Surveillance

One of the most significant duties of PACA/AWS is to conduct surveillance in all areas of initial and continuing airworthiness. Surveillance is a continuing duty and responsibility of all aviation safety inspectors in PACA's Airworthiness Standards Department (AWS). The term "*Continuous Surveillance*," as used in this Chapter, relates to this ongoing duty and responsibility and related programs. Surveillance programs provide PACA with a method for a continual evaluation of organization compliance with CARC Regulations and safe operating practices. Information generated from the surveillance programs permits the CARC to act upon deficiencies which affect or have a potential effect on aviation safety. For surveillance programs to be effective, they must be carefully planned and executed during the conduct of specific inspection activity. Inspections provide specific data which can be further evaluated, therefore they support and maintain ongoing surveillance programs.

Inspections are specific work activities which have the following characteristics:

- A specific work activity title
- A definite beginning and a definite end
- Defined procedures
- Specific objectives
- A requirement for a report of finding (either positive, negative, or both)

This section contains information and provides direction and guidance on the planning and conduct of specific types of inspections in support of an overall surveillance program.

10.1 The primary objective of surveillance is to provide PACA/AWS, through the conduct of a variety of inspections, with an accurate, real-time, and comprehensive evaluation of the safety status of the air transportation system. This surveillance program objective is accomplished by inspectors performing the following:

- Determining each organization'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

10.2 There are four phases involved in planning and executing any type of surveillance program. These phases are as follows:

Phase One

Developing a surveillance plan by determining the types of inspections necessary and the frequency of those inspections

Phase Two

Accomplishing the surveillance plan by conducting the inspections

Phase Three

Analyzing surveillance data gathered from inspection reports and related information from other sources

Phase Four

Determining appropriate course of action

A. ***Phase One: Developing a Surveillance Plan.***

The development of a surveillance plan requires planning at PACA AWS, Airworthiness Chief Section, and individual inspector levels. 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 a known trend in maintenance or in operations based on previously recorded and analyzed surveillance data.

PACA Airworthiness Section produces an Annual Inspection Plan for the surveillance of organizations based on:

- Previous inspections results
- Compliance history
- Complaints
- Accident/incident information

The Plan is produced in January of every year and accounts for all Continuous Surveillance inspections for the new year. The completed Annual Inspection Plan is distributed to all Airworthiness inspectors. An electronic copy of the Plan is also made available on the share folder for immediate access by AWS Section's personnel.

As a general guideline the following inspection types and frequency will be included in the Plan:

I. Continuous Surveillance Inspections

- CAR MG CAMO – 1 full scale audit per 2 years
- Meeting with the Organization's Accountable Manager – At least once every 24 months

- CAR MF Maintenance Organization – 1 full scale audit
- CAR 145 Maintenance Organization – 1 full scale audit
- CAR 147 Maintenance Training Organization – 1 full scale audit
- CAR MG CAMO with Airworthiness Review capability – 1 airworthiness review under surveillance each 6 months
- Part 145 Foreign Maintenance Organization – 1 full scale audit per 2 years
- Part 147 Foreign Maintenance Training Organization – 1 full scale audit per 2 years

II. Spot Inspections

- Maintenance Program compliance and Reliability evaluation – 1 per year
- Aircraft Records and Tech Log system inspection – 1 per year
- Special Operations inspection (AWO, MNPS, RVSM, ETOPS, etc.) – as required
- Training In-Progress inspection – 2 per year per 147 organization
- Line Station inspection (Maintenance & Avionics) – 1 each Line Station (if applicable) per 2 years
- Aircraft Airworthiness Ramp inspection – 1 each aircraft type/ per year and a minimum of 25%
- of total aircraft on PACA register.
- Maintenance In-Progress inspections – 2 per year per CAR-145 or CAR M organizations
- Safety Assessment of Foreign Aircraft (SAFA) - Under SAFA program.

B. ***Phase Two: Conducting Surveillance Plan Inspections.***

During the conduct of the surveillance plan inspections by the AWI, accurate and qualitative inspection reporting is essential.

C. ***Phase Three: Analysing Surveillance Data.***

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

a. Non-compliance with regulations or safe operating practices
b. Possible trends (positive or negative)
c. Isolated deficiencies or incidents

D. ***Phase Four: Determining Appropriate Course of Action.***

PACA Airworthiness Inspectors must use good judgment when suggesting the most effective course of action to be taken. The appropriate course of action depends on many factors and also many actions can be taken, such as: taking no action, informal discussion with the operator/organization, formal written request for corrective action, withdrawal of PACA approval of a program, manual, or document, certificate, etc. Results of the evaluation of surveillance data and the operator's/organization's response to the course of action taken should be considered.

Part of the fourth phase of a surveillance program is for PACA to determine, as a result of the information gathered from the program, if it may be appropriate to increase or decrease the rate at which inspections are conducted during subsequent surveillance programs. It may also be appropriate to change the emphasis or objectives of surveillance programs by changing the types and numbers of inspections to be conducted. If such action is deemed necessary, the responsibility of any final changes to the Annual Inspection Plan rest with the Airworthiness Standards Director.

44. LEASE AIRCRAFT UNDER 83 BIS

CHAPTER 1 – GENERAL

1.1 This Chapter describes that no Omani operator shall take any aircraft on lease or give any aircraft on lease to a foreign operator without permission from the Director General of Civil Aviation\Director of Flight Safety, who may either permit short-term leasing (without an agreement under 83 bis) or take a decision regarding the need to conclude an agreement between Government of Oman and the State of Registry or the State of the Operator under Article 83 bis of the Convention.

1.2 These guidelines apply to parties involved in operational leasing arrangements, including Omani Air Operator Permit/ Certificate (AOP/AOC) Holders and any foreign air operator leasing aircraft. Financial or capital leases (such as sale and lease back arrangements between an operator and financial institutions) are not considered operational leases and are not addressed.

1.3 An Omani AOP/AOC holder planning to lease and operate aircraft registered in a foreign State must have at least one aircraft on its AOP/AOC which is registered in Oman.

1.4 In a lease arrangement, the leased aircraft may be registered in a State which is different from the State which issues the Air Operator Certificate. It is therefore essential, for both commercial and regulatory reasons, that the lessor and lessee are familiar with the requirements of the State of Registry and the State of the Operator. Typical obligations expected of the State of Registry and the State of the Operator to provide an idea of the regulatory compliance that the lessor and lessee can expect.

1.5 When the leasing arrangement involves safety oversight by foreign Authority(s), the leasing arrangement should include information on compliance with relevant regulations of both DGCAR Oman and the foreign Authority(s), without which, would effectively preclude the lease from taking place.

CHAPTER 2 – ARTICLE 83 *BIS* TO THE CHICAGO CONVENTION – TRANSFER OF STATE OF REGISTRY RESPONSIBILITIES

2.1 Article 83 *bis* to the Chicago Convention provides for the transfer of certain safety oversight responsibilities from the State of Registry to the State of the Operator. Such a transfer will be recognised by all other States which have ratified Article 83 *bis*. The transfer of responsibility may involve functions and duties under Article 12, 30, 31 or 32a) of the Chicago Convention, which address rules of the air, radio licensing, certificates of airworthiness, and personnel licences respectively.

Article 12- Rules of the air.

Article 12 makes States responsible for ensuring that every aircraft carrying its nationality mark, wherever such aircraft may be, shall comply with rules and regulations relating to the flight and manoeuvre of aircraft.

Article 30 – Aircraft Radio Equipment.

Aircraft radios must be licensed by the Sate of Registry if they are to be carried in or over the territory of other contracting States. The use of radio apparatus must be in accordance with the regulations of the State flown over. Radios can only be used by members of the flight crew licensed for that purpose by the State of Registry.

Article 31- Certificates of Airworthiness.

Every aircraft engaged in International navigation must be provided with a Certificate of Airworthiness issued or rendered valid by the State of Registry.

Article 32a)- Licenses of Personnel*.*

The pilot and crew of the aircraft engaged in international navigation must be provided with certificates of competency and licenses issued or rendered valid by the State of Registry. States can refuse to recognize, for the purpose of flight above their territory, certificates of competency and licenses granted to any of its nationals by another contracting State.

2.2 The above issues are interrelated responsibilities for the safe operation and airworthiness of an aircraft.

CHAPTER 3 – COMPONENTS OF AN ARTICLE 83 *BIS* AGREEMENT

3.1 When an aircraft leasing arrangement is being considered possibly utilising Article 83 *bis* provisions, the viability and practicality of such an agreement must be considered and negotiated between:

- an aircraft's Certificate of Registration holder/ Registered operator;
- the foreign operator intending to operate the aircraft overseas;
- the regulatory authority on whose Register the aircraft is recorded (State of Registry); and
- the foreign regulatory authority under whose jurisdiction the aircraft will be operated (State of the Operator).

3.2 Once it has been established that an Article 83 *bis* agreement is the best solution for maintaining effective airworthiness control and regulatory oversight of a particular aircraft that is subject to an international leasing arrangement, there are four mandatory components that must be addressed before an Article 83 *bis* agreement can come into force. These are:

3.2.1. ***A Formal Agreement*** between the two Contracting States, specifying who will be responsible for what. This agreement will be signed by the Director of Civil Aviation [however described] for the foreign regulatory authority; and, for Oman, the DGCAR.

3.2.2. ***An exchange of letters*** of undertakings between the two Contracting States:

- One letter from the State of Registry for the aircraft being transferred, requesting that the State in which the aircraft will be operated will undertake some specified regulatory oversight responsibilities. This will be signed by the PACA/ (Director of General Aviation and Regulation).
- One letter from the State in which the aircraft will be operated (State of the Operator) confirming to the State of Registry that it will indeed undertake the regulatory oversight responsibilities requested and agreed upon. This will be signed by the Head of Flight Safety Department .

3.2.3. ***A Delegations*** **Agreement** between the two Contracting States specifying:

In detail the transfer and on-going arrangements including the delegation of functions and responsibilities from one party to the other. This agreement will be signed by the Director of Civil Aviation [however described] for the foreign authority and for PACA Oman, the Director General of Civil Aviation.

3.2.4. ***An Agreement regarding the airworthiness responsibilities*** of each Contracting State, concerning the particular transferred aircraft. This Agreement should be signed by the Head of Airworthiness for the foreign authority and, for PACA Oman, the Director General.

3.3 Sample Agreements to be signed are at Appendix C.

3.4 Once all parts of the agreement have been signed by the various parties, PACA Oman, if it is the **State of Registry**, must **register the Article 83 *bis* Agreement with ICAO**. If the foreign Contracting State is the State of Registry and PACA Oman the State of the Operator, the foreign CAA must register the agreement with ICAO.

3.5 Generally, Oman entered into an Article 83 *bis* agreement for an Omani Registered aircraft to be operated by a foreign operator on a foreign AOC if:

(a) it is practical to do so;

(b) If there are no differences registered with ICAO by Oman as the State of Registry against the Standards and Recommended Practices published in the Annexes which would directly affect the regulatory oversight of the aircraft by the foreign State of the Operator;
(c) the Omani Registered aircraft will be based overseas for long duration and where it is impractical or not cost-effective for PACA Oman inspectors to conduct appropriate regulatory oversight;
(d) PACA Oman has sufficient confidence in the foreign operator's competence to safely operate and maintain the aircraft; and
(e) PACA Oman has sufficient confidence that the foreign regulatory authority under whose jurisdiction the aircraft will be operated is technically capable of undertaking the regulatory oversight work required and also has adequate resources to meet the obligations imposed by the Article 83 *bis* agreement.

3.6 Similarly, PACA Oman entered into an Article 83 *bis* agreement for a foreign registered aircraft to be operated within Oman under an Oman AOP if:

(a) It is practical to do so;
(b) If there are no differences registered with ICAO by the foreign State of Registry against the Standards and Recommended Practices published in the Annexes which would directly affect the regulatory oversight of the aircraft.
(c) PACA Oman has confidence in the foreign regulatory authority, on whose Register the aircraft is recorded, to meet all of the obligations and requirements to be undertaken as specified in the Article 83 *bis* agreement;
(d) PACA Oman has sufficient confidence in the Omani operator's competence to safely operate and maintain the foreign registered aircraft; and
(e) PACA Oman has sufficient technical personnel available to undertake the regulatory oversight and reporting commitments specified in the Article 83 *bis* agreement.

CHAPTER 4 – RESPONSIBILITIES OF THE STATE OF REGISTRY AND STATE OF THE OPERATOR

4.1 Operators intending to engage in leasing arrangement should familiarize themselves with the responsibilities of the State of Registry and the State of the Operator, in the event that the aircraft is registered in a State different from the State responsible for oversight of its operations. It is important that the responsibilities of the lessor and lessee to be explicitly specified in the lease agreement between the lessor and lessee, to provide for proper airworthiness and operational oversight and control of the aircraft to be leased.

4.2 The **State of Registry** is the State on whose register the aircraft is entered. The State of Registry is responsible for the safety oversight and airworthiness standards for aircraft on its register, including those aircraft that are leased. The person or organisation to which the aircraft is registered must ensure that the aircraft comply with all applicable requirements of the State of Registry. The responsibilities of the State of Registry include:

(a) notifying the State of Design that it has entered such an aircraft type on its register.
(b) ensuring that the aircraft airworthiness standards of the State of Registry are maintained.
(c) issuing and validating the airworthiness certificate for aircraft (CoA) on its register.
(d) overseeing the continuing airworthiness of the aircraft according to the standards of the State of Registry, regardless of where it is operated in the world.
(e) ensuring that personnel performing maintenance work on the aircraft meets the experience, knowledge and skill requirements in accordance with the requirements of the State of Registry.
(f) ensuring that flight crew operating the aircraft meets the experience, knowledge and skill requirements to safely operate the aircraft in accordance with the requirements of the State of Registry.
(g) ensuring that operational personnel related with the aircraft operation continues to meet the standards required by the State of Registry.
(h) ensuring timely and appropriate actions are in place to correct all deficiencies highlighted by the flight crew on the maintenance of the aircraft and its operation.
(i) Informing both the State of Registry and the organisation responsible for the type design on the faults, malfunctions, defects and other occurrences that cause or might cause adverse effects on the continuing airworthiness of the aircraft.
(j) ensuring that mandatory continuing airworthiness information from the State of Design is assessed and appropriate action is taken in a timely manner.

4.3 The State of the Operator is the State where the principal place of business of the operator is located, or if no such business exists, the permanent residence of the operator. The operator of the aircraft must make sure that the operations of the aircraft meet the requirements of the State of the Operator. The responsibilities of the State of the Operator include ensuring that its operators are able to:

(a) demonstrate safe and efficient operations prior to the initiation of any flight operations.
(b) conduct operations with respect to the original certification criteria or operational specifications on a continuing basis.
(c) take timely and necessary actions to resolve safety issues that are found with respect to the maintenance of aircraft, flight operations and other air operator responsibilities, including the actions of the operator's personnel.

CHAPTER 5 – TYPES OF OPERATIONAL LEASING ARRANGEMENTS

The types of operational leases are described below:

5.1 Wet or damp lease arrangement: The lessor assumes operational control of the aircraft operations. Aircraft operations must be in compliance with the requirements in the lessor's air operator certificate for the duration of the lease.

5.1.1 Types of Wet or damp leases:

(a) Wet or damp Lease(out) of Omani registered aircraft to a foreign operator ("Wet Lease Out")

(b) Wet or damp lease(in) a foreign registered aircraft by a Omani AOP holder ("Wet Lease In")

(c) Wet or damp lease of Omani registered aircraft between Omani AOP holders ("Intra State Wet Lease")

5.1.2 Duration of Wet or Damp Lease

Wet or Damp lease (out)	12 months
Wet or Damp lease (In)	12 months, maybe extended subject to PACA acceptance
Intra State Wet Lease	12 months, maybe extended subject to PACA acceptance

5.2 Dry lease arrangement: The lessor provides an aircraft without crew to the lessor. The lessee usually assumes operational control of the aircraft. The aircraft is operated under the lessee's air operator certificate. Compliance to other relevant regulatory requirements would depend on the civil aviation authority of the State where the aircraft is registered.

5.2.1 Types of Dry Leases:

a) Dry lease(out) of Oman registered aircraft to a foreign operator without change of aircraft registration ("Dry Lease Out")

b) Dry lease(in) of foreign registered aircraft by Oman AOP/AOC holder without change of aircraft registration ("Dry Lease-In")

5.2.2 Duration of dry lease.

Dry Lease (In)	12 months, subject to one time extension of additional 12 months
Dry Lease (Out)	12 months, subject to a one time extension of an additional 12 months

5.3 AIRCRAFT REGISTERED WITH THE AUTHORITY OF THE LESSEE

5.3.1 Parties to a dry lease agreement may register the aircraft with the Authority of the lessee. This change of registration of the leased aircraft will result in the lessee being solely responsible for the operational control and the airworthiness of the aircraft.

a) Dry lease-(out) of Oman registered aircraft to a foreign operator with change of aircraft registration.

Regulatory requirements related to Omani registered aircraft will not be applicable when the aircraft is de-registered from the Oman registry. The leased aircraft may be re-registered back onto the Oman registry at the end of the lease provided it meets all applicable PACA requirements at the time of re-registration.

b) Dry lease-(in) of foreign registered aircraft by Oman AOP/AOC Holder with change of aircraft registration.

This is similar to registering an aircraft by an Oman AOP/AOC holder. The Oman AOP/AOC holder will comply with all regulatory requirements related to an Omani registered aircraft and be responsible for the operational control of the aircraft for the duration of the lease.

CHAPTER 6 – LEASING PROCEDURE

6.1 General

6.1.1 Application for approvals of lease arrangements shall be received in Flight Safety Department of DGCAR in the prescribed form along with the requisite details.

6.1.2 Upon receipt of the information in accordance with the following paragraph, PACA may convene a meeting with the Omani operator with a view to finalising the arrangements and modalities for operation of the leased aircraft during the period of lease. Representatives of foreign operator as well as the foreign regulatory authority may also be allowed to participate in the meeting.

6.1.3 On the basis of the deliberations in the meeting, the DGCAR shall take a decision regarding desirability of conclusion of an agreement under Article 83 bis, with the State of Registry or the State of Operator, as the case may be, for transfer of certain regulatory functions, as considered appropriate.

6.2 Foreign registered aircraft leased to Oman Operators:

6.2.1 The Flight Safety Department on receipt of the application PACA airworthiness section follow the Airworthiness Evaluation Checklist for the approval of leases among commercial air transport operators checklist form with the related documents shall:

a) Ensure that checklist has been duly completed and signed in ink.
b) Will check the Oman Operator's leasing file to ensure that the Omani air operator has at least one aircraft on its AOC which is registered in Oman.
c) Will distribute the request of lease, a copy of the lease and other documentation received to the following Sections:

   (1) Chief of Airworthiness Section who will designate an Airworthiness Inspector.

   (2) Chief of Flight Operation Section who will designate a flight operation inspector.

d) When receiving the applicant lease request, Flight Safety Department will process the file for issuance of the leasing permission. The duration of the lease shall be as per the duration given in the Duration of Dry Lease table in 5.2.2.
e) The aircraft will be entered in the AOP / AOC of the Air Operator by way of issuance of an authorization after approval of the leasing operation which will be attached as an Appendix to the AOP/AOC.

6.2.2 Consent of Foreign Civil Aviation Authority

The consent of the applicable foreign civil aviation authority is required before a leasing permission can be issued. This consent should be in writing.

6.2.3 Aircraft Eligibility Requirements

To be eligible for permission, an aircraft must be:

- in the PACA type-acceptance list;
- registered in the foreign State;
- have a valid Certificate of Airworthiness; and
- will not be made the subject of another lease during the term of the lease authorized by PACA for that aircraft;
- less than 10 years of age for passenger transportation and less than 15 years of age for cargo operations;
- Free from accident; and
- have its maintenance programme approved from the foreign regulatory authority.

In addition to the above requirements, guidance given in Appendix A may be followed.

6.2.4 Maintenance Records Inspection

Prior to operation in Oman, the aircraft and its maintenance records must be inspected by PACA inspectors to ensure that the aircraft has been maintained to a standard equivalent to that contained in CARs/CANs.

6.2.5 Foreign Inspection Program

If the inspection program to be used is one that is required by the foreign air operator's regulatory authority, it must be evaluated and where necessary, supplemented by additional tasks to meet Oman airworthiness requirements.

6.2.6 Long Term Airworthiness Requirements

Certain airworthiness requirements have long term implementation times that are subject to additional compliance action. These include, but are not limited to, Airworthiness Directives (ADs) that address corrosion prevention and control programs. Aircraft that are subject to these ADs must be inspected and maintenance records reviewed to determine compliance with the provisions of the ADs, paying particular attention to the following:

(a) corrosion and structural related service bulletins;
(b) structural modifications and repairs, including major and multiple site damage repairs and damage tolerant repair;
(c) application of Supplemental Structural Inspection Programs (SSIPs);
(d) fatigue quality of multiple repairs; and
(e) major repair documentation, such as drawings, procedures and related technical data.

6.2.7 Modifications and Repairs – Review and Acceptance

A review of modifications and repairs on foreign aircraft shall be made. Following the review of embodied modifications and repairs, the acceptance should be recorded by attaching the list of the accepted modifications and repairs (including all supporting documentation) to the leasing file.

6.3 Oman registered aircraft leased to foreign operator:

6.3.1 Flight Safety Department on receipt of the lease application from the applicant shall:

(a) Ensure that the letter included has been duly completed and signed in ink.
(b) Will check the organization leasing file that the Omani air operator has not leased to a foreign air operator a number of aircraft that exceeds 25 per cent of the total number of Omani aircraft registered to that Omani air operator, rounded to the next highest whole number.
(c) Will distribute a copy of the lease and other documentation received to the following sections:
    (1) Chief of Airworthiness Section who will designate an Airworthiness Inspector.
    (2) Chief of Flight Operation Section who will designate a flight operation inspector.
(d) On receipt of applicant request, the Flight Safety Department will process the file for issuance of the leasing permission. The duration of the lease shall be as per the duration given in the Duration of Dry Lease table in 5.2.2.
(e) The aircraft will be removed on the AOP/AOC of the Air Operator after approval of the leasing operation.

6.3.2 Consent of Foreign Civil Aviation Authority

The consent of the applicable foreign civil aviation authority is required before a leasing permission can be issued. This consent should be in writing.

6.3.3 Airworthiness Eligibility Requirements

The following clarifies the requirements of the regulations and standards and is necessary to ensure the safe operation of an Omani registered aircraft by a foreign air operator:

(a) where the aircraft is to be maintained by or under the authority of the foreign air operator, the organization that will perform and certify the work must have a valid maintenance approval or equivalent document, for the aircraft type that is the subject of the leasing operation, issued by the airworthiness authority of the country of the lessee. This approval will ensure that an evaluation of the maintenance organization has been carried out by the foreign civil aviation regulatory authority; and
(b) DGCAR inspectors must assess the foreign air operator's ability to maintain the aircraft to Oman airworthiness standards by:
    i. inspecting the proposed maintenance facility, if required;
    ii. reviewing the qualifications of personnel who are assigned maintenance
    iii. supervision and certification responsibilities;
    iv. ensuring that the operator is aware of and can comply with Oman requirements in all respects; and
    v. reviewing foreign maintenance rules to determine that they are acceptable and do not conflict with Oman maintenance rules.

6.3.4 Responsibility for Airworthiness Surveillance

In case there is no transfer of responsibilities under Article 83 bis, the responsibility for airworthiness surveillance will remain with PACA where the aircraft is normally based. A surveillance schedule for the leasing operation will be developed based on a risk assessment of the safety of the operation.

6.3.5 Long Term Airworthiness Requirements

Certain airworthiness requirements have long term implementation times that are subject to additional compliance action. These include, but are not limited to, Airworthiness Directives (ADs) that address corrosion prevention and control programs. Aircraft that are subject to these ADs must be inspected and maintenance records reviewed to determine compliance with the provisions of the ADs, paying particular attention to the following:

(a) corrosion and structural related service bulletins;
(b) structural modifications and repairs, including major and multiple site damage repairs and damage tolerant repair;
(c) application of Supplemental Structural Inspection Programs (SSIPs);
(d) fatigue quality of multiple repairs; and
(e) major repair documentation, such as drawings, procedures and related technical data.

6.4 Leasing aircraft from one Omani operator to another Oman operator

6.4.1 Flight Safety Department on receipt of the lease application shall:

(a) Ensure that the application has been duly completed and signed in ink.
(b) Will check the organization leasing file to ensure that no Omani air operator shall lease its aircraft to another Omani air operator so as disrupt its own schedule.
(c) Will distribute the lease application, a copy of the lease and other documentation received to the following directorates:
    i. Chief of Airworthiness Section who will designate an Airworthiness Inspector.
    ii. Chief of Flight Operation Section who will designate a flight operation inspector.

(d) On receipt of lease applicant the airworthiness inspector scrutinize the file and the related documents if found satisfactory from both side airworthiness and operation side, The Flight Safety Department will process the file for issuance of the leasing permission. The duration of the lease shall be as per the duration given in the Duration of Dry Lease table in 5.2.2.

(e) The aircraft will be removed from the AOP of the lessor and entered in the AOP/ AOC of the lessee.

6.4.2 The above-noted directorates will review the LF-3, other relevant documentation, and conduct any inspection(s) necessary to determine compliance with PACA regulatory requirements as follows:

Provide evidence establishing that throughout the term of the lease, the aircraft:

- will be in the legal custody and control of the lessee; and
- will not be made the subject of another lease during the term of the lease permission for that aircraft.
- Evidence establishing that the lessor and the lessee each hold an Oman Air Operator Permit.
- Evidence establishing that the lessee is responsible for the maintenance of the aircraft in accordance with the applicable standards of airworthiness and the maintenance control system and the maintenance programme approved by PACA, and in accordance with any requirements set out in the permission issued.

6.4.3 Guidance for review by Airworthiness Inspectors for airworthiness assessment is given in Appendix A and by Flight Operations Inspectors for Operational Control assessment is given in Appendix B.

6.4.4 Job Aid(s) for Airworthiness Assessment and Operations Assessment shall be completed and returned to Flight Safety Department Director.

PACA الهيئة العامة للطيران المدني	**Application for Lease of Aircraft**	**Form**	**AWR 019**
		Edition	**Original**
	Public Authority for Civil Aviation- DGCAR	**Revision**	**2**
		Date	**01/09/2019**

A. Type of Lease

☐ Wet Lease-in ☐ Wet Lease-Out	☐ Dry Lease in ☐ Dry Lease out	☐ Damp lease in ☐ Damp Lease out	Duration: From ……To ……

B. Applicant Details

1. AOC holder		2. Contact person	
3. Contact (email)		4. Phone	
5. State of Registry			
6. State of Operator (if different from the State of Registry)			
7. Business place			

C. Aircraft Details

1. Aircraft Model			
2. Year of Manufacturing			
3. Aircraft Registration mark		4. MSN (Serial Number)	

D. Documents to be provided along with the application

1. Copy of AOC and Operations Specifications	☐ Attached	☐ No
2. Copy of Insurance as per the lease agreement	☐ Attached	☐ No
3. Copy of noise certificate *(in case of leasing in)*	☐ Attached	☐ No
4. Copy of Radio license *(in case of leasing in)*	☐ Attached	☐ No
5. Copy of the C of R and C of A *(in case of leasing in)*	☐ Attached	☐ No
6. Copy of the lease agreement	☐ Attached	☐ No
7. Others as deemed necessary		

E. Assessment Status

1. TCAS as per CAR-OPS 1.668 installed?	☐ Yes	☐ No	☐N/A
2. Compliance with Subpart K and L of CAR OPS-1?	☐ Yes	☐ No	☐N/A
3. Security Door as per CAR-OPS1.1255 installed?	☐ Yes	☐ No	☐N/A
4. Valid ARC? (if applicable)	☐ Yes	☐ No	☐N/A
5. Maintenance Control identified?	☐ Yes	☐ No	☐N/A
6. Compliance with CAR M	☐ Yes	☐ No	☐N/A
7. Compliance with CAR 145	☐ Yes	☐ No	☐N/A
8. Compliance with CAR –OPS1,3	☐ Yes	☐ No	☐N/A

For Dry Lease which involves transfer of oversight, continue with Paragraph F

F. Lease responsibility

1. Aircraft airworthiness and maintenance data, record and control?	☐ Lessor	☐ Lessee
2. Who is signing of maintenance release?	☐ Lessor	☐ Lessee

3. A consent from lessor not de-register aircraft under lease	☐ Lessor	☐ Lessee
4. A consent from legal owner of aircraft to the lease agreement	☐ Lessor	☐ Lessee
G. Airworthiness Evaluations and Recommendations		
1. This lease meets the Airworthiness Requirements set forth in Oman CAR	☐ Yes	☐ No

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Transfer Functions to Other National Aviation Authority (if any)

Decision making assessment completed	☐ Yes	☐ No	☐ N/A
Specific Transfer of authority and justification to be proposed by FOI &AWI in each area,	☐ Yes	☐ No	☐ N/A
For lease-out, is the maintenance organization approved by PACA? (and ensure that the foreign State of the Operator approves the maintenance of the aircraft)	☐ Yes	☐ No	☐ N/A
AWS Inspector Name:	Decision:		
Date:			
Ops Inspector Name:	Decision:		
Date:			

Appendix A - Guidance for Airworthiness assessment

The Airworthiness Inspector must assess the lease to ensure that it allows the aircraft to be maintained to a satisfactory standard. The registered operator is responsible for the maintenance and continuing airworthiness of the aircraft that is the lessee will become fully responsible for maintenance control and continuing airworthiness.

Areas to be addressed for completion of airworthiness assessment:

- Who will be responsible for maintenance, maintenance control and aircraft records (log Books)
- Where will maintenance work be undertaken and are the facilities adequate and approved under a Certificate of Approval
- For maintenance personnel engaged to work on the aircraft:
- What training will they receive and by who

Note: This must include training of personnel in the differences between the leased aircraft and the normal fleet aircraft and informing them of any special or particular arrangements that have been made under contract to cover maintenance during the period of the lease.

  - How will they certify for the completed maintenance work
  - What system of maintenance, and system of certification will be used

-what MEL will be used

- if applicable, has RVSM, RNP and EDTO requirements been addressed
- How will defects be managed and rectified including those occurring at airports without maintenance support
- How will the application for Airworthiness Directives (AD) Exclusion, System of Maintenance variations, Permissible Unserviceability approvals and Special Flight Permits be managed and by whom
- What maintenance documentation including approved data manuals will be made available for use by the organisation and who will provide them and ensure currency including the AFM
- Who will assess and control ADs and Service bulletins
- Who will control the Weight and Balance currency and ensure the loading system is approved
- How will parts provisioning be managed and by whom
- Is the leased aircraft subject to an aging aircraft maintenance programme or corrosion control programme? Where is this documented?
- Has the leased aircraft been included in the lessee organisation's Maintenance Control Manual/CAME
- Who will manage the reliability program
- Who will attend reliability meetings and who will decide what action should be taken on adverse trends
- How will maintenance communication be maintained between the Lessor and Lessee and - who will be responsible to ensure this has been maintained
- What considerations and arrangements have been made to assess the existing maintenance programme, as this programme may be based upon a different flight profile and usage than one flown by the second operator
- What considerations have been made for extended life limited components and maintenance interval extensions which may not apply to an operator with a different operational and flight profile or operating environment.

When leasing aircraft from another Omani AOP air operator significant maintenance aspects can be overlooked. If the lessee (the Operator the AOP) wishes to use the:

- Lessor's MCM/CAME
- SOM
- Operator MEL or
- Maintenance Release then:

PACA approval for those documents must be given to the Lessee AOP holder (the operator). This means that the lessee's MCM/CAME will reflect:

- The aircraft registration
- The relevant sections of the Lessor's MCM/CAME, only if the lessor is an Omani AOP holder
- The Lessor's Approved maintenance programme for the aircraft
- The Lessor's Operator MEL approved for use by the lessee
- The approved Lessor's Maintenance release which has been approved for use by the lessee's AOP operation
- The approved Reliability Program, if applicable for the aircraft type
- EDTO maintenance requirements if applicable
- RVSM and RNP maintenance requirements if applicable

Note: This information could be included in the lease agreement which forms an annex to the operators MCM/CAME. If this is not the case, a copy of the lease agreement relating to aircraft maintenance requirements must be in the MCM/CAME.

Verify any special airworthiness matters that are subject to the lease conditions:

-Are deviations from the manufacturer Maintenance Review Board (MRB) maintenance requirements permitted as a result of a reliability program determination or operational requirement which needs PACA approval?

-Is aircraft maintenance permitted to be carried out by overseas maintenance organisations?

-How will lease termination be handled with respect to aircraft continuing airworthiness?

Note: For Maintenance performed by foreign Maintenance Repair Organisations approved under CAR 145 and its certification. The lease agreement should limit this maintenance to one off occurrences only which shall not to be used as a permanent maintenance arrangement for scheduled maintenance.

Appendix B - Guidance for Operational Control assessment

Prior to adding a leased aircraft to an AOP/ AOC, PACA must assess the arrangements for operational control of the aircraft. ICAO defines operational control as, "*the exercise of authority over the initiation, continuation, diversion or termination of a flight in the interest of the safety of the aircraft and the regularity and efficiency of the flight*".

A wet lease is the provision of an aircraft with a crew. The Lessor and the Lessee will often be operating companies, and it is often difficult to determine the identity of the company or individual who is exercising "operational control" over the aircraft, in order to make a determination as to who should be the AOP holder. In most cases it will be the wet lessor who manages the aircraft, who owns the aircraft and controls through employees the operating systems, and maintains and offers the services of the aircraft to others.

The "operator" is considered the person or company who exercises authority and responsibility for operational functions such as assigning crew members for particular flights, directly paying crew members for their services, and initiating and terminating flights.

While reviewing the Operational aspects for the approval of leases, the following need to be ascertained:

a) Flight crew training,
b) Cabin crew training,
c) Operational control,
d) Dispatch and flight watch, and
e) Crew members scheduling.

In addition, the following approvals will need to be considered:

a) The method for establishing minimum flight altitudes;
b) The method of determining aerodrome operating minima;
c) Flight time, flight duty periods and rest periods;
d) EDTO;
e) Aircraft-specific minimum equipment list (MEL);
f) Performance-based navigation operations;
g) MNPS operations;
h) RVSM operations;
i) Procedures for electronic navigation data management;
j) Training in the transport of dangerous goods;
k) Pilot-in-command area, route and aerodrome qualifications; and
l) Use of flight simulation training devices.

Appendix C – Article 83bis Component Checklists

These checklist tables are intended as memory triggers only. For the understanding and enactment of Article 83 *bis* agreements, the full text in the following pages must be followed in order to successfully implement an agreement.

Table 1(a) – Foreign Contracting State Making Request to Oman for an Article 83 bis Agreement

Request for ICAO Article 83 *bis* Agreement from Foreign Contracting State	**Details of Request**	**Comments**
Foreign Contracting State/State of Registry:		
Content of Article 83 *bis* request:		
Aircraft Type, Model & Serial Number:		
Aircraft Registration:		
Name of the Foreign Aircraft Operator on whose AOC the aircraft currently is listed:		
Which Omani AOP holder is the intended Operator of the Foreign registered aircraft?		
Does the requested agreement relate to an aircraft that is to be employed in International Commercial Air Transport Operations?		
Period over which the Article 83 *bis* agreement will exist:		

Table 1(b) - Components of an agreement for a Foreign Contracting State Making Request to Oman for an Article 83 bis Agreement

COMPONENTS OF AN ARTICLE 83*bis* AGREEMENT – Foreign Request to Oman	Action Details	Comments - Notes
Component 1: (Formal request from Foreign Contracting State requesting Agreement with Oman).	Formal agreement between the Foreign Contracting State and Oman.	Request signed by Director of Civil Aviation – Foreign Contracting State. Response signed by DGCAR Oman.
Component 2: (Formal letters from Foreign Contracting State providing details of aircraft/operation and letter from Oman accepting Agreement).	Exchange of letters between Foreign State of Registry and Oman.	Letters signed by Joint Director General (Flight Standards) and & Head of Aircraft Maintenance in Foreign Contracting State Authority.
Component 3: (Agreement between State of Registry and Oman concerning Delegation of Authority for Functions identified in Convention).	Delegation of Authority Agreements.	Agreements signed by Director of Civil Aviation – Foreign Contracting State. Response signed by DGCAR Oman.
Component 4: (Agreement between State of Registry and Oman on Airworthiness Control and Oversight).	Airworthiness Responsibilities Agreement.	Agreements signed by Joint Director General (Airworthiness) & Head of Aircraft Maintenance/ Operations in Foreign Contracting State Authority.
Component 5: (Foreign State of Registry Responsibility).	Registering an Article 83 *bis* Agreement with ICAO.	Formal notification to ICAO should be made by the Director of Civil Aviation – Foreign Contracting State.

Table 2(a) – Oman Making Application to a Foreign Contracting State for an Article 83 bis Agreement

Oman Request for ICAO Article 83 *bis* Agreement to a Foreign Contracting State	**Details of Request**	**Comment**
Foreign Contracting State/State of the Operator:		
Content of Article 83 *bis* request:		
Aircraft Type, Model & Serial Number:		
Aircraft Registration:	A4O-	
Omani Aircraft Operator on whose AOP the aircraft is currently listed:		
Which foreign AOP holder located overseas is the intended Operator of the Oman registered aircraft?		
Does the requested agreement relate to an aircraft that is to be employed in International Commercial air Transport Operations?		
Period over which the Article 83 *bis* agreement will exist:		

Table 2(b) - Components of an agreement for Oman Making Application to a Foreign Contracting State for an Article 83 bis Agreement

COMPONENTS OF AN ARTICLE 83 *bis* AGREEMENT – Oman Request to Foreign Contracting State	Action Details	Comments - Notes
Component 1: (Formal request made by Oman to a Foreign Contracting State requesting Agreement).	Formal agreement between the Foreign Contracting State and Oman.	Request signed by DGCAR Oman. Response signed by Director of Civil Aviation – Foreign Contracting State.
Component 2: (Formal letters from Oman providing details of aircraft/operation and letter from Foreign Contracting State accepting Agreement).	Exchange of letters between Oman and Foreign State of the Operator.	Letters signed by Joint Director General (Flight Standards Directorate) & Head of Aircraft Maintenance in Foreign Contract State Authority.
Component 3: (Agreement between State of the Operator and Oman concerning Delegation of Authority for Functions identified in Convention).	Delegation of Authority Agreements.	Agreements signed by DGCAR Oman & Response signed by Director of Civil Aviation – Foreign Contracting State. .
Component 4: (Agreement between State of Registry and Oman on Airworthiness Control and Oversight).	Airworthiness Responsibilities Agreement.	Agreements signed by Joint Director General (Airworthiness) & Head of Aircraft Maintenance/Operations in Foreign Contract State Authority.
Component 5: (Foreign State of Registry Responsibility).	Registering an Article 83 *bis* Agreement with ICAO.	Formal notification to ICAO should be made by the Director of Civil Aviation, Oman.

Five Components for Implementing an Article 83 *bis* Agreement

COMPONENT 1

Formal Agreements between Contracting States under the Provisions of Article 83 bis

Aircraft leases which have some of the regulatory oversight responsibilities transferred from a State of Registry to a State of the Operator under an Article 83 *bis* will, depending upon the type of operation, require formal International Commercial Air Transport Operations Agreement.

The Agreement will contain many references to ICAO Annexes and documents. Details of these references are listed at the end of this Part under the heading: *ICAO Document References Quoted in the Three Agreements*.

Important Note Concerning the Agreements and Sample Letters

The sample Agreement and letters produced below are written in the context of an Omani registered aircraft being transferred to a foreign operator. This would require Oman to initiate and set in train the correspondence for the Article 83 *bis* agreement and would mean that Oman is the State of Registry and the foreign regulatory authority is the State of the Operator.

Should an Article 83 *bis* agreement be requested by a foreign authority for a foreign aircraft to be placed on an Oman AOP, then Oman would be the State of the Operator and the foreign regulatory authority would be the State of Registry. In this case, the foreign regulatory authority would initiate the Agreement and the other related documentation. Whichever Contracting State is the State of Registry or the State of the Operator, the documentation must follow the standard ICAO model presented below.

The Agreement and associated letters shown below are examples only. They provide a guide to the format, protocol and the detail of information expected by ICAO in this type of agreement. It is anticipated that there may be some variations from the examples provided and these will depend upon the aircraft type, system of maintenance requirements, operating conditions and location as well as any other arrangements that relate to the satisfactory oversight of an aircraft. It will also be observed that many of the terms and descriptions used in the various documents do not align with Omani terms and descriptions. The ICAO terminology has been left in place within the documentation in order for it to remain as close to the ICAO originals as is possible.

When undertaking the negotiation of an Article 83 *bis* Agreement, inspectors will need to re-write certain of the sample paragraphs or change terms and descriptions to align them with Omani legislation as appropriate. In doing this, it must be remembered that by the very nature of an Article 83 *bis* agreement, each and every one will be different. Under this ICAO provision, the content and requirements specified in an Agreement should follow the ICAO basic layout format, but the individual State regulatory authority undertakings will be entirely the responsibility of the two authorities.

SAMPLE ARTICLE 83 BIS AGREEMENT

International Air Transport Operations Agreement

Note: Please see the References Section at the end of this document for details of ICAO Annex references contained in this sample Agreement.

This is the sample model of a formal agreement which will be signed by the Director General of Civil Aviation of the Foreign Authority of the Contracting State and by the Director General of Civil Aviation and Regulation for Oman. This model closely follows the ICAO Guidelines.

AGREEMENT BETWEEN OMAN AND [foreign State] CONCERNING TRANSFER OF REGULATORY OVERSIGHT FUNCTIONS AND DUTIES

International Commercial Air Transport Operations

Whereas the protocol relating to Article 83 *bis* of the *Convention on Civil Aviation* (Chicago 1944) (hereinafter referred to as "the Convention"), to which Oman and [foreign State] are parties, entered into force on 20 June 1997.

Whereas Article 83 *bis*, with a view to enhanced safety, provides for the possibility of transferring to the State of the Operator all or part of the State of Registry's functions and duties pertaining to Articles 12, 30, 31 and 32a of the Convention;

Whereas in line with ICAO Doc 9642, Part VIII, Chapter 1, and in light of ICAO Doc 8335, Chapter 10, it is necessary to establish precisely the international obligations and responsibilities of Oman, as the State of Registry of the aircraft, and [foreign State], as the State of the operator of the aircraft, in accordance with the convention;

Whereas with reference to the relevant Annexes to the Convention, this Agreement organises the transfer from Oman to [foreign State] of functions and duties normally carried out by the State of registry, as set out in Articles III and IV below;

The Government of Oman and the Government of [foreign State] hereinafter referred to as the "Parties";

Declaring their mutual commitment to the safety and efficiency of international aviation;

Recognising that both Governments have mutual interest in ensuring the flight safety of aircraft engaged in international air navigation for aircraft operating on the Omani Register of Aircraft and Flight Crew under an Air Operator Certificate (AOC) is issued by [foreign State];

Desiring to ensure the continued safety of the aircraft operating on the Omani Register under a transfer agreement;

Have agreed as follows:

Article I

The Agencies responsible for implementing this Agreement shall be the Director General of Civil Aviation (PACA) for the State of Oman and the [foreign CAA] for the Government of [foreign State].

Article II

This agreement has been developed based on Articles 33 and 83*bis* of the Convention. This Agreement pertains to the transfer of certain functions and duties contained in the International Civil Aviation Organization (ICAO) Annexes set out below between and [foreign State] and is limited to aircraft on the Omani Register operated by [foreign State] air operators as specified by type, registration mark and serial number in the attached Schedule 1. In line with Chapter 10 of Doc 8335 and Part VIII, Chapter 1 of Doc 9642 issued by ICAO, it is necessary to establish the international obligations and functions and duties, according to the Convention, of Oman (State of Registry) and [foreign State] (State of the Operator) in accordance with Article 83 *bis*, the State of Registry may, by agreement with the State of the Operator, transfer to all or part of its functions and duties as the State of Registry. The State of Registry shall relieve the responsibility in respect of the functions and duties transferred.

Article III

In the case of Oman and [foreign State], Oman transfers to [foreign State] the following functions and duties, including oversight and control of relevant items contained in respective Annexes to the Convention:

Annex 1 – *Personnel Licensing,* for licences issued or rendered valid by the State of the Operator, Annex 1, 1.2.2.

Annex 2 – *Rules of the Air,* enforcement of compliance with the applicable rules and regulations relating to the flight manoeuvre of aircraft.

Annex 6 – *Operation of Aircraft,* Part I – *International Commercial Air Transport – Aeroplanes.* Functions and duties that are normally incumbent on the State of Registry. Functions and duties that are normally incumbent on the State of the Operator need to be transferred. Where functions and duties in Annex 6 Part 1 (particularly Chapters 5, 6 and 8) may conflict with the functions and duties in Annex 8 – *Airworthiness of Aircraft*, allocation of specific functions and duties is defined in the attached Schedule 2.

PACA will retain responsibility under the Convention for the regulatory oversight and control of the following ICAO Annex:

Annex 8 – *Airworthiness of Aircraft.*

Article IV

Responsibility for notifying directly other States of the existence and contents of this Agreement pursuant to Article 83 *bis* (b) rests with the State of the Operator. This Agreement, as well as any amendment to it, shall be registered with ICAO by the State of Registry or the State of the Operator in accordance with the *Rules for Registration with ICAO of Aeronautical Agreements and Arrangements* (ICAO Doc 6685).

Article V

The [CAA of foreign State] shall ensure that a certified copy of this Agreement in English and in [language of foreign State] is placed on board each aircraft to which this Agreement applies. The [CAA of foreign State] shall also ensure that a certified true copy of the relevant Air Operator Certificate issued, in which the aircraft concerned will be duly listed and properly identified, is carried on board each aircraft.

Article VI

Under this agreement, the only responsibility related to airworthiness transferred to [foreign State] is the approval of line stations used by the Operator located away from the Operator's main base. This is accepted by [foreign State].

Article VII

The airworthiness procedures that are followed will be contained in the Operator's Maintenance Control Manual (MCM/ CAME). Schedule 2 to this Agreement describes the functions and duties of the Parties related to airworthiness.

Article VIII

Meetings between PACA Oman and [CAA foreign State] and other interested parties, upon request, will occur at six-month intervals [or within a shorter period if appropriate] initially to discuss both operations and airworthiness matters resulting from inspections that have been conducted by the respective inspectors. These meetings will take place in Oman, the State of the Operator or on middle ground for the purpose of resolving any discrepancies found as a result of the inspections and in order to ensure that all parties are fully informed about the Operator's operation. The following subjects will be among those reviewed during these meetings:

- Flight operations;
- Continuing airworthiness and aircraft maintenance;
- Any other significant matter arising from inspections; and
- Operator's procedures, if applicable.

Notwithstanding these matters, PACA Oman retains the right to conduct inspections or audits, as it deems necessary, in order to verify that [foreign State] is fulfilling its safety oversight obligations as transferred from Oman. PACA Oman will be permitted access to [CAA of foreign State] documentation concerning the Operator. Such inspections will occur only after reasonable notice is given to [foreign State].

Article IX

During the execution of this Agreement, and prior to any aircraft being made the object of a sub-lease, the [CAA of the foreign State], remaining the State of the Operator shall inform PACA Oman of this intent. None of the functions and duties transferred from Oman to [foreign State] may be carried out under the authority of a third State without express written agreement of Oman.

Article X

Any disagreement concerning the interpretation or application of this Agreement shall be resolved by consultation between Parties and shall not be referred to any international tribunal, arbitration or third-party settlement.

Article XI

This Agreement may be amended by written agreement of the Parties.

Article XII

This Agreement, which supersedes all previous Agreements between Parties on this matter, shall enter into force upon signature of both Parties and shall remain in force until terminated.

In witness whereof, the undersigned Directors General of PACA Oman and [CAA of foreign State] have signed this present Agreement.

Signed

For the Government of [foreign State]

[Director General of Civil Aviation – CAA of foreign State]

Date: *day/month/year*

Signed

For the Government of Oman

Public Authority For Civil Aviation of Oman

Date: *day/month/year*

Attachments:

- Schedule 1 – Aircraft Affected by this Agreement.
- Schedule 2 – Responsibilities of Oman and [foreign State] related to Airworthiness.

This Agreement is made in two copies, in English and in [language of foreign State], and both are in force.

Schedule 1 - AIRCRAFT AFFECTED BY THIS AGREEMENT

Operator	Aircraft Type	Registration	Serial Number
[……]	[……]	[……]	[……]

Schedule 2 - RESPONSIBILITIES OF Sultanate of Oman AND [FOREIGN STATE] RELATED TO AIRWORTHINESS

Note: Specific details are required to be entered in both of the 'Responsibilities' tables below. The content will depend upon the terms of the agreement, the aircraft and any other relevant factors pertaining to each agreement.

ICAO Reference	Subject	Responsibilities of Oman, the State of Registry	Responsibilities of[foreign State] the State of the Operator
Annex 8, Part II, Chapter 4; Doc 9642, Part II, Chapter 1; Doc 9389, Chapter 1, 1.1.4 & Chapter 6, 6.1.2.	Continuing airworthiness of aircraft	Develop or adopt Requirements to Ensure the Continuing airworthiness of the aircraft during its service life. This requirement also covers the maintenance requirements of Annex 6.	
Annex 8, Part II, Chapter 4, 4.2.3, 4.2.4, 4.2.5; Doc 9642, Part VI, Chapter 1.	Communication with the State of Design	Communicate with the State of Design.	
Annex 8, Part II, Chapter 5; Doc 9642 Part IV, Chapter 3.	Validity of the C of A	Issue and re-issue of C of A.	
Annex 8, Part II, Chapter 6, 6.2.	Damage to Aircraft	Determine the Condition of Airworthiness of aircraft.	
Annex 6, Part I, Chapter 5, 5.2.3 & 5.2.4.	Operation of Aircraft in Compliance with the terms of the C of A		Assume responsibility of State of registry As defined in 5.2.4.
Annex 6, Part I, Chapter 8, 8.1.	Operator's maintenance responsibilities		Ensure that the responsibilities are contained in the Operator's MCM/CAME.
Annex 6, Part I, Chapter 8, 8.2.	Operator's MCM/CAME		Ensure that guidance contained in an MCM/CAME is acceptable to Oman.
Annex 6, Part I, Chapter 8, 8.3.	Maintenance programme	Approval of Operator's Maintenance programme.	Ensure that Maintenance programme responsibilities and development procedures are contained in the MCM/CAME.

Annex 6, Part I, Chapter 8, 8.4.	Maintenance records	Inspect maintenance Records and Documents every six months.	Inspect in Accordance with the requirements of the AOC.
Annex 6, Part I, Chapter 8, 8.5.	Continuing airworthiness information	Ensure that all Omani airworthiness Requirements are understood by the operator.	Ensure that Airworthiness reports are provided to Oman.
Annex 6, Part I, Chapter 8, 8.6: Doc 9642, Part Viii, Appendix A, 3.7.	Modifications and repair	Ensure that Modifications or Repairs are Approved by the State of design/Manufacture and issue approval.	Ensure that Procedures are contained in the Operator's MCM/CAME.
Annex 6, Part I, Chapter 8, 8.7.	Approved maintenance organisation	Approval of the Operator's base Maintenance organization and Procedures for Chapter 8, 8.7.	Approval of the Operator's line maintenance arrangements away from main base. Ensure that procedures are contained in the Operator's MCM/CAME.

Recommended ICAO Reference Material for Assisting with the Development of Article 83 bis Agreements

The following list of ICAO references provide guidance in general terms on the various processes and support material required to establish regulatory control of aircraft which are the subject of an Article 83 *bis* agreement.

- ICAO Cir 295-LE/2 *Guidance on the Implementation of Article 83 bis of the Convention on International Civil Aviation.*
- ICAO Doc 6685-C/767 *Rules for Registration with ICAO of Aeronautical Agreements and Arrangements.*
- ICAO Doc 7300/9 *Convention on International Civil Aviation.* Doc 9642-AN/941 C*ontinuing Airworthiness Manual.*
- Doc 8335-AN/879 *Manual of Procedures for Operations Inspection, Certification and Continued Surveillance.*
- Annex 1 – *Personnel Licensing*
- Annex 6 – *Operation of Aircraft – Parts I, II & III.* Annex 8 – *Airworthiness of Aircraft*

Job Aid for Operational Control assessment

(To be submitted along with Application and the required PACA documents as per PACA checklist lease)

Operator	
Aircraft types	
Type of Lease Sought	

Sl No.	Item	Operator's Response (To be filled by the applicant/ Lessee)	Remarks (To be completed by DGCAR Inspector) S – Satisfactory NS – Not Satisfactory A – Additional Information required
1	Who will be responsible for maintenance, maintenance control and aircraft records (log Books)		
2	Where will maintenance work be undertaken and are the facilities adequate and approved under a Certificate of Approval		
3	For maintenance personnel engaged to work on the aircraft:		
3.1	What training will they receive and by whom *Note: This must include training of personnel in the differences between the* *leased aircraft and the normal fleet aircraft and informing them of any special or particular arrangements that have been made under contract to cover maintenance during the period of the lease.*		
3.2	How will they certify for the completed maintenance work		
3.3	What system of maintenance, and system of certification will be used		
3.4	What MEL will be used		
3.5	If applicable has RVSM, RNP and EDTO requirements been addressed		

Sl No.	Item	Operator's Response (To be filled by the applicant/ Lessee)	Remarks (To be completed by DGCAR Inspector) S – Satisfactory NS – Not Satisfactory A – Additional Information required
3.6	How will defects be managed and rectified including those occurring at airports without maintenance support		
3.7	How will the application for Airworthiness Directives (AD) Exclusion, System of Maintenance variations, Permissible Unserviceability approvals and Special Flight Permits be managed and by whom		
3.8	What maintenance documentation including approved data manuals will be made available for use by the organisation and who will provide them and ensure currency including the AFM		
3.9	Who will assess and control ADs and Service bulletins		
3.10	Who will control the Weight and Balance currency and ensure the loading system is approved		
3.11	How will parts provisioning be managed and by whom		
3.12	Is the leased aircraft subject to an aging aircraft maintenance programme or corrosion control programme? Where is this documented?		
3.13	Has the leased aircraft been included in the lessee organisation's Maintenance Control Manual/CAME		
3.14	Has the leased aircraft been included in the lessee organisation's Maintenance Control Manual/CAME		

Sl No.	Item	Operator's Response (To be filled by the applicant/ Lessee)	Remarks (To be completed by DGCAR Inspector) S – Satisfactory NS – Not Satisfactory A – Additional Information required
3.15	Who will attend reliability meetings and who will decide what action should be taken on adverse trends		
3.16	How will maintenance communication be maintained between the Lessor and Lessee and who will be responsible to ensure this has been maintained		
3.17	What considerations and arrangements have been made to assess the existing maintenance programme, as this programme may be based upon a different flight profile and usage than one flown by the second operator		
3.18	What considerations have been made for extended life limited components and Maintenance interval extensions which may not apply to an operator with a different operational and flight profile or operating environment.		
4	When leasing aircraft from another Omani AOP air operator significant maintenance aspects can be overlooked.		
5	Does the lessee (the Operator/ the AOP/ AOC holder) wishes to use the: • Lessor's MCM/CAM • SOM • Operator MEL or • Maintenance Release then:	Yes/ No	
5.1	If Yes		
5.1.1	Approve the above documents and reflect in the lessee's MCM/CAME: • The aircraft registration		

Sl No.	Item	Operator's Response (To be filled by the applicant/ Lessee)	Remarks (To be completed by DGCAR Inspector) S – Satisfactory NS – Not Satisfactory A – Additional Information required
	• The relevant sections of the Lessor's MCM/CAME, only if the lessor is an Omani AOP holder • The Lessor's Approved maintenance programme for the aircraft • The Lessor's Operator MEL approved for use by the lessee • The approved Lessor's Maintenance release which has been approved for use by the lessee's AOP operation • The approved Reliability Program, if applicable for the aircraft type • EDTO maintenance requirements if applicable • RVSM and RNP maintenance requirements if applicable *Note: This information shall be included in the lease agreement which forms an annex to the operators MCM/CAME*		
5.2	If No		
5.2.1	A copy of the lease agreement relating to aircraft maintenance requirements must be in the MCM/CAME.		
6	Verify any special airworthiness matters that are subject to the lease conditions:		
6.1	Are deviations from the manufacturer Maintenance Review Board (MRB) maintenance requirements permitted as a result of a reliability program determination or operational requirement which needs PACA approval?		

Sl No.	Item	Operator's Response (To be filled by the applicant/ Lessee)	Remarks (To be completed by DGCAR Inspector) S – Satisfactory NS – Not Satisfactory A – Additional Information required
6.2	Is aircraft maintenance permitted to be carried out by overseas maintenance organisations?		
6.3	How will lease termination be handled with respect to aircraft continuing airworthiness? *Note: For Maintenance performed by foreign Maintenance Repair Organisations approved under CAR 145 and its certification. The lease agreement should limit this maintenance to one off occurrences only which shall not to be used as a permanent maintenance* *arrangement for scheduled maintenance*.		
Remarks:			
Date: _____		Signature of Airworthiness Inspector: Name of Inspector:	

Job Aid for Operational Control assessment

(To be submitted along with Application and the required PACA documents as per PACA checklist lease)

Operator	
Aircraft types	
Type of Lease Sought	

Sl No.	Item	Operators Response (To be filled by the applicant/ Lessee)	Remarks (To be completed by DGCAR Inspector) S – Satisfactory NS – Not Satisfactory A – Additional Information required
1	Flight crew training		
2	Cabin crew training		
3	Operational control		
4	Dispatch and flight watch		
5	Crew scheduling		
6	Ascertain following approvals:		
6.1	The method for establishing minimum flight altitudes;		
6.2	The method of determining aerodrome operating minima;		
6.3	Flight time, flight duty periods and rest periods;		
6.4	EDTO;		
6.5	Aircraft-specific minimum equipment list (MEL);		
6.6	Performance-based navigation operations;		
6.7	MNPS operations		
6.8	RVSM operations		
6.9	Procedures for electronic navigation data management;		
6.10	Training in the transport of dangerous goods;		
6.11	Pilot-in-command area, route and aerodrome qualifications; and		

Sl No.	Item	Operators Response (To be filled by the applicant/ Lessee)	Remarks (To be completed by DGCAR Inspector) S – Satisfactory NS – Not Satisfactory A – Additional Information required
Remarks:			
Date: _____		Signature of Airworthiness Inspector: Name of Inspector:	