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**HELLENIC CIVILAVIATION AUTHORITY**



**AIRWORTHINESS  
PROCEDURES MANUAL**



**Rev. 12**

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## Amendment Certification and Control Page

This Amendment Number 12 has passed the amendment review procedure detailed in section 5 of the HCAA Administrative Procedures Manual and is approved for inclusion in this manual as of:

Date: \_\_\_\_\_  
Signature: \_\_\_\_\_  
  
  
**F. Papadimitropoulou**  
Governor,  
Hellenic Civil Aviation Authority

## List of Revisions

Revision No.	Date	Reason for Revision
Original	18/08/2004	—
01	08/05/2005	Implementation of EASA Regulations
02	19/09/2005	Implementation of EASA Regulations
03	01/03/2006	Implementation of EASA Regulations
04	28/09/2006	BRNAV Conformance Document and Application
05	12/12/2006	PRNAV Procedures (see "What is new", page xx)
06	09/07/2007	Permit to Fly Procedure, minor typo corrections



Revision No.	Date	Reason for Revision
07	08/02/2008	ETOPS procedure, One-off authorization, minor typo corrections, JAR OPS 1 Subparts K & L, Amendment 10, Accountable Manager Approval guidance
08	24/03/2008	Added Chapter 20 - Part 21 procedures
09	17/6/2008	Additional CAMO Subpart G procedures, Library record keeping/retention additional instructions, Maintenance program review/approval, reliability program, indirect approval procedures additional guidance
10	10/03/2010	RVSM Application form, Chapter 16 Additional guidance, ADMS new procedures
11	25/10/2010	Added new procedure for continuous Regulation monitoring, minor typo corrections, temporary revisions incorporated, further guidance on Initial Airworthiness
12	11/03/2013	Endorsement of temporary revisions adding new procedures for RNP-10, VDL. Relevant existing procedures revised due to new Regulation (EC) 748/2012. Existing procedures 16.23, 18.3, 6.2.3, 16.11, 16.27 have been amended and minor type errors corrected.



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## What is New on this Revision

(Revision 12)

### In this Revision (Revision 12 – 11/03/2013):

- Table of Temporary Revisions added to track insertion of Temporary Revisions of the Manual
- Endorsement of Temporary Revisions TR-04, TR-05, TR-06, TR-07, TR-08  
(see *Table of Temporary Revisions on next page*)
- Minor typing errors correction.
- Repagination of affected sections of the Manual



## Table of Temporary Revisions (TR)

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## CHAPTER 1

### General Information

#### 1.1 Purpose

This *Airworthiness Procedures Manual (APM)* directs the activities and provides guidance for Airworthiness Aviation Safety Inspectors (ASI's), involved in the certification, technical administration and surveillance of individuals, facilities, operators and maintenance organizations in accordance with applicable EU, EASA and JAA Requirements and the policies provided in the AMC, GM, ICAO Standards and National Law.

In addition, this APM in conjunction with the HCAA Administration Manual defines the organization and procedures upon which compliance with EASA Regulations and ICAO Standards is based.

#### 1.2 Distribution

Two updated master copies of this manual will be permanently maintained with the complete list of revisions, for historical tracking purposes, one in the Office of the Flight Standards Division Director and the other in the Library. The updated master copy will also be published in the computer LAN network for convenience.

Furthermore, the manual is distributed to all ASI's of HCAA's Flight Standards Division through the Division's Intranet system.

#### 1.3 Cancellation

*This Manual, at its latest Revision, supersedes previously approved Revisions and will be updated to reflect the latest requirements and procedures as the need arises.*

#### 1.4 Manual Format and Utilization

This APM has been designed to serve as a document that will meet the needs of newly hired ASIs as well as experienced inspectors. It provides the means of standardization of certification/surveillance tasks among the Airworthiness personnel of HCAA's FSD.

The general layout of the manual is as follows:

*Chapters 1, 2 and 3* provide respectively, general information, a brief description of HCAA's airworthiness responsibilities under the Chicago Convention and a description of the applicable Hellenic Regulatory system.

*Chapter 4* is Reserved.

*Chapter 5* refers to the Airworthiness Section of the HCAA FSD, its function, ASI's qualifications, duties and responsibilities, inspector ethics.



*Chapters 6 – 13 and 17* represent separate tasks that can be accomplished by ASIs. Each Chapter begins with an “Objectives” paragraph which states the general objective of the particular task including the specific EASA part that the chapter applies to and the specific regulatory basis for the chapter (where applicable).

*Chapters 14 and 15* provide respectively a detailed description of Operator/Organization Continuous Surveillance System and Occurrence Reporting.

*Chapter 16* provides additional guidance to the ASIs, *Chapter 18* refers to specific ASI/FSD enforcement actions, *Chapter 19* deals with aircraft Airworthiness Review procedure(s), *Chapter 20* deals with Part 21 Subpart G approval and *Chapter 21* provides guidance on the implementation of Article 83 bis.

*Appendices*, at the end of the corresponding Chapter (where applicable), contain Official Forms used for the various certification tasks and/or additional guidance material.

*Paragraph Numbering* – Each paragraph is numbered consecutively starting at number 1 in each section of each Chapter.

*Chapter Pagination* – Each Chapter begins with page 1 and is identified with the Chapter number, i.e. “13-1” is Chapter 13, page 1. On each page the top margin contains the HCAA logo along with the title “HCAA – Airworthiness Procedures Manual” whereas the bottom margin contains the revision number and the revision date (left), as well as the page number (right).

## **1.5 Revision Control**

This Airworthiness Procedures Manual will be revised according to the relevant procedure detailed in *HCAA Administration Manual*, Chapter 5: Publications.

## **1.6 Manual Control Procedure**

The individual inspector is responsible for his/her knowledge of this manual and is expected to conduct AOC/Maintenance/Training Organization administration and supervision activities in accordance with the guidance of this manual.

The Director of Flight Standards shall have overall responsibility for the revision, control and distribution of this manual.

A List of Effective Pages indicating the correct revision status of each page held in the manual follows the Revision Certification Page and is also updated with each revision.



## CHAPTER 2

### Airworthiness Responsibilities of HCAA

#### 2.1 General

The airworthiness responsibilities are covered by European Legislation (EC) 216/08, (EC) 748/12 and (EC) 2042/03, National Legislation and the activities of the HCAA. The basic responsibilities involve all issues and aspects regarding issuance of Certificate of Airworthiness (EASA Form 25), issuance/renewal of Certificate of Airworthiness (under National Law, R.D. 634/70), Certification and continuous surveillance of Continuing Airworthiness Management Organizations (Annex I of EC 2042/03), Aircraft Maintenance Organizations (Annex II of EC 2042/03), Maintenance Training Organizations (Annex IV of EC 2042/03), as well as maintenance aspects of Air Operator certification and Special Approvals.

The minimum standards are set by ICAO through Annexes 6 and 8 of the Convention as well as the related guidance material. HCAA is the sole Authority responsible for ensuring that every aircraft on its register is maintained in an airworthy condition throughout its service life. It cannot be overemphasized that the Hellenic legislation regarding airworthiness is based on the aforementioned documents and HCAA procedures are tailored to ensure enforcement of this legislation as the basis of safety for all aviation activities.





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## CHAPTER 3

### The Hellenic Regulatory System

#### 3.1 Basic Aviation Law

The Hellenic Legislation and the European Legislation constitute the regulatory framework of all aviation activities within Greece. The Hellenic Legislation is divided in three main categories: the Laws, the Presidential and Royal Decrees, and the Decisions. The main Laws that have been instituted for the regulation of aviation activities are numerous. However, National Laws 1815/88 and 2912/01 are used as the primary regulatory basis. It should be obvious and is emphasized that all the aviation laws of Greece abide by the ICAO Regulations.

The Laws are proposed by the Government and are voted by the Hellenic Parliament before they enter into force. The Presidential Decrees provide the more detail guidelines regarding the application of the Laws. Royal Decrees were a previous form of Presidential Decrees. The Decisions provide certain detail regarding the application and enforcement of Presidential Decrees.

All applicable Community Regulations, as published in the Official Gazette, are directly applicable to the Hellenic Republic.

The scope of the basic aviation law includes but is not limited to, the establishment of the HCAA and the provision for the adoption of airworthiness regulations based on the Annexes of the ICAO, the authorization of the Director to perform all relevant activities such as aircraft registration, issuance of Certificates of Airworthiness, etc.



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## **CHAPTER 4**

### **Reserved**



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## CHAPTER 5

### HCAA Flight Standards Division – Airworthiness Section

#### 5.1 Organization

An airworthiness inspection organization, named the Airworthiness Section has been established within the Hellenic Civil Aviation Authority (HCAA), Flight Standards Division, to meet the requirements set forth in the ICAO Convention of 1944 and Annexes 6 and 8.

The Airworthiness Section is primarily responsible for matters concerning, continuing airworthiness, approval of maintenance organizations and maintenance certification of operators.

#### 5.2 Function

The Airworthiness Section has been established within the Hellenic Civil Aviation Authority (HCAA), Flight Standards Division, to meet the requirements set forth in the ICAO Convention of 1944 and Annexes 6 and 8. It is primarily responsible for matters concerning, continuing airworthiness, approval of maintenance organizations and maintenance certification of operators.

A more detailed description of the Airworthiness Section's Inspection activities is provided in HCAA Administration Manual, Chapter 3, Section 3.11.4.

#### 5.3 Qualifications, Duties & Responsibilities of Aviation Safety Inspectors (ASIs)

Aviation Safety Inspectors (ASIs) of the HCAA's Flight Standards Division Airworthiness Section are divided in two specialties

♦ Maintenance ♦ Avionics.

The qualifications, duties and responsibilities of the Aviation Safety Inspectors are outlined in detail in HCAA Administration Manual, Chapter 3, Section 3.11.

#### 5.4 Inspector Ethics and Conduct

To be developed

#### 5.5 Technical Library and Records

The Technical Library of HCAA's Flight Standards Division provides the most current and up to date information relating to operations and airworthiness of aircraft. This is accomplished by a central computer system where International/European Regulations can be found, including ICAO (Annexes, Documents), FAA (Orders, ACs, ADs, TSOs, STCs), JAA/EASA (CRs, JARs, TGLs, etc), UKCAA, TC, etc. All this information is also made available on the Division's LAN network for easy access by all Division's Inspectors and technical staff. In addition, on line connections have been established through formal agreements with aircraft manufacturers (Cessna, Boeing, etc) that provide the most current and up to date aircraft technical information (SBs, Manuals, etc).

Furthermore, the Technical Library maintains files on each aircraft registered in Greece containing records detailing applications for the certificates of airworthiness, copies of supporting documentation, copies of certificates issued, the maintenance program approved for the aircraft, completed operator certification files, AMO certification files, etc.



The administration of the Technical Library includes a computer-based system (LIMAS – Library Management System) that has been devised within the HCAA for the purpose of tracking all books, documents, files, microfiche and CD ROM documents held by the HCAA Library. LIMAS allows all users to instantaneously identify the person in possession of any file or book in addition to the revision status of these documents. LIMAS is also utilized for the identification and control of all documents held in the Library. This includes the Surveillance and Certification files of all companies falling under the jurisdiction of the HCAA.

Finally, access to the Library files and records is granted only to the Flight Safety Inspectors.

A complete description of the LIMAS system can be found in HCAA Administration Manual, Chapter 4: Procedures.

## 5.6 Continuous Monitoring of Aviation Legislation

HCAA Flight Standards Division monitors on a continuous basis, the aviation legislation pertaining to its duties and responsibilities, and relevant changes are communicated electronically to all FSD affected Departments by means of an Airworthiness Bulletin.

Flight Standards Director appoints a person, usually an Aviation Safety Inspector, with the additional task of monitoring European and International aviation legislation. The appointed ASI, monitors European (EASA, EU Commission, JAA, UK CAA, etc.) and International (ICAO, FAA, TCCA, etc.) legislative bodies and collects all newly-released, as well as revised or amended legislation. This is accomplished (a) for the European legislation, by visiting the corresponding web sites (EASA, EU-Lex, JAA, UK CAA, etc.), on a weekly basis and (b) for International legislation by means of a “Watch List” containing all ICAO Annexes, Documents, Digests and Circulars, FAA Orders, ACs, ADs, TSOs, etc.) through an AV-DATA subscription. When any of the documents, included in the above mentioned AV-DATA “Watch List” is changed, amended, revised or superseded, the responsible ASI, as well as the FSD Technical Library personnel are immediately notified by means of an e-mail, which is sent automatically by AV-DATA.

Upon collection of all information, the responsible ASI will determine which departments within the Flight Standards Division are affected by the new or amended legislation. This is accomplished in close co-operation with the FSD’s Airworthiness Department Technical Advisor (or OPS – if applicable), as well as the Department Head. A summary sheet is produced at this time, listing all newly released or amended legislation from all legislative bodies, date, HCAA FSD affected Department and the number/date of the issued Airworthiness Bulletin (See Appendix A to this Chapter).

All relevant legislation information is then communicated to all affected departments within FSD through the division’s intranet system, by means of an Airworthiness Bulletin. Copies of all Airworthiness Bulletins issued, as well as all summary sheets, are kept on a folder in the division’s Technical Library, which is updated on a weekly basis by the Tech Library’s personnel. Airworthiness Bulletins are also used to communicate important changes, additions, amendments to internal FSD procedures, Technical Orders, as well as Hellenic Republic newly-released or amended legislation (Government Gazette).

The Technical Library retains proof of electronic distribution within the FSD Departments of all Airworthiness Bulletins. In addition, an electronic backup is performed on a weekly basis.

The following is a (non-exhaustive) list of the monitored legislation and technical information publications:

**EASA:** Regulations (EC), Decisions, ADs, MMEL, NPAs, Explanatory Notes, Certifications (CS), SIBs, TCDS

**ICAO:** Annexes, Documents, Circulars, Digests

**FAA:** MMEL, ADs, TCDS, TSOs, Orders, ACs

**UKCAA:** CAPs, AILs (Airworthiness Information Leaflets), ANOs (Airworthiness Notices)



## CHAPTER 6

### Aircraft Registration, Certificates of Airworthiness and Approvals

#### 6.1 Registration of Aircraft

HCAA maintains, in accordance with international provisions, a registry of all aircraft registered in the Hellenic Republic. Aircraft registration is administered by HCAA Legal Affairs Division (D13), Aircraft Registration, Mortgage and Codification Section.

#### 6.2 Certificates of Airworthiness

*Note.* For the purpose of the procedures described in this section, the term aircraft is intended to include its engines, propellers, instruments and equipment.

##### 6.2.1 Issuance of a Certificate of Airworthiness (EASA Form 25)

REF: [EC 748/2012, Part 21 Subpart H](#)  
[HCAA T.O. 02-12, Rev. 1, 5/10/2007](#)

Procedure for issuance of Certificate of Airworthiness is outlined in detail in recent HCAA T.O. 02-12, which is to be followed.

Sample Certificate of Airworthiness (EASA Form 25) is shown in Appendix B of this Chapter.

##### 6.2.1.1 Update ADMS Database

Aircraft Registration is a prerequisite for the issuance of the Certificate of Airworthiness and it is handled by HCAA Legal Affairs Division (D13), Aircraft Registration, Mortgage and Codification Section. Aircraft Registration data is entered into the ADMS System on line by the Legal Affairs Division's staff and is made available to all FSD ASI Inspectors through HCAA's LAN computer network. When a Certificate of Airworthiness is issued for an aircraft, ADMS System will be updated to include aircraft maintenance data, owner/operator information, etc. according to the relevant procedure described in HCAA Administration Procedures Manual, Chapter 4. This data will be used to generate the recommendation report.

[Additional information of the ADMS System can be found in HCAA Leaflet "Aviation Data Management System – User's Guide", HCAA, Edition 2, May 2004.](#)

##### 6.2.1.2 HCAA Aircraft File (Technical Library)

It is important that the aircraft file should be kept up to date with all required documentation/correspondence inserted in the appropriate sections. Its format and contents are described in detail in accordance with the relevant procedure found in HCAA Administration Procedures Manual, Chapter 4.





## **6.2.2 Renewal of a Certificate of Airworthiness (National Law)**

[REF: National Law 634/70](#)

### **6.2.2.1 General**

Presently, National Law requires the renewal of the Certificate of Airworthiness of an aircraft on an annual basis.

### **6.2.2.2 Responsibility**

Responsibility for issuing Certificates of Airworthiness is assigned to the HCAA Airworthiness Inspector.

### **6.2.2.3 Application**

[REF: T.O./HCAA/2-8, Issue 1, 15-1-1972](#)

The Applicant must submit the application for the renewal of a Certificate of Airworthiness with the appropriate fee and all required aircraft Manuals/Documentation as they are outlined in para. 6.2.2.4 below, to the HCAA Flight Standards Division's Secretariat staff according to the *Incoming Documents* procedure for all incoming documentation as described in the HCAA Administration Procedures Manual, Chapter 4. The application can be found in Appendix A at the end of this Chapter.

### **6.2.2.4 Submission of Aircraft Manuals/Documentation**

[REF: T.O./HCAA/2-8, Issue 1, 15-1-1972](#)  
[National Law 634/70, Article 5.2](#)

The applicant is required to provide the following Manual/Documents for examination by the HCAA:

- a) In the case of a renewal of the Certificate of Airworthiness due to a major repair or a major modification, all applicable drawings, calculation sheets, Flight Manual and Maintenance Manual modifications and a copy of the Weight & Balance report, if required.
- b) Two copies each of HCAA Annual Inspection Forms HCAA/E1/Γ/1 and HCAA/E1/Γ/19 completed as per the instructions included on the back of the Form. These forms are shown in Appendix A at the end of this Chapter..
- c) A compliance list for all aircraft's State of Manufacture Airworthiness Directives (ADs), Mandatory Service Bulletins (MSBs)
- d) The Application should be accompanied by the appropriate fee.

### **6.2.2.5 Aircraft Manuals/Documentation Retained by HCAA**

- a) In the case of the renewal of the Certificate of Airworthiness due to major repair or major modification, all Manuals/Documentation as described in para. 6.2.2.4 (a) above, will be retained.
- b) One copy each of HCAA Annual Inspection Forms HCAA/E1/Γ/1 and HCAA/E1/Γ/19.

### **6.2.2.6 Manual/Documentation Review**

The submitted Manual/Documentation will be reviewed by the assigned ASI Inspectors.



#### **6.2.2.7 Corrective Actions**

If any non-compliance's are found and/or if corrections are needed, the assigned ASI Inspectors will notify in writing the Applicant of the non-compliance's and/or corrections and the affected Manual(s)/Document(s) will be returned to him/her. A copy of this notification letter should also be inserted in the aircraft's file appropriate section (correspondence). It is important that all correspondence with the Applicant should abide by the procedures for Incoming and Outgoing Documents described in HCAA Administration Manual, Chapter 4.

#### **6.2.2.8 Aircraft Airworthiness Inspection**

The applicant should make the aircraft available, at a time and place acceptable to the ASIs (HCAA) Inspectors, for inspection. It is the responsibility of the applicant to provide personnel and equipment so that the inspection may be satisfactorily carried out. It is however important to note that the inspection should always be performed in the presence of the Applicant or his/her appointed representative.

The Aircraft Airworthiness Inspection should be carried out using the corresponding procedure detailed in para. 16.2 of Chapter 16: Inspector Tools and Additional Guidance Material of this Manual.

#### **6.2.2.9 Renewal of the Certificate of Airworthiness**

Upon satisfactory completion of the Aircraft Airworthiness Inspection, the assigned ASI inspector signs the aircraft airframe, engine and propeller (if applicable) Log books and submits a report automatically generated by the ADMS computer system to the FSD Director recommending the renewal of the Certificate of Airworthiness. Two copies of the Certificate of Airworthiness will be signed by the responsible ASI, one copy being returned to the aircraft operator/owner and the other copy along with the ASI inspector's recommendation report will be inserted in the aircraft's file which is maintained in FSD's Technical Library. A sample Certificate of Airworthiness is shown in Appendix B of this Chapter.

**Note:** *The aircraft Certificate of Airworthiness will be issued automatically by the ADMS computer system upon satisfactory completion of the entire procedure detailed above.*

#### **6.2.2.10 Update ADMS Database**

Refer to para. 6.2.1.1 above.

#### **6.2.2.11 Update HCAA Aircraft File (Technical Library)**

Refer to para. 6.2.1.2 above.

### **6.2.3 Transferability and Re-issuance of a Certificate of Airworthiness and ARC within Member States**

REF.: ICAO Doc 9760, Chapter 5.2.6  
EC 2042/03, Annex I, AMC MA 903(a), MA 903(b)  
EC 748/12, Part 21 Subpart H, 21.A.179

Upon the submission to HCAA FSD of a valid Certificate of Airworthiness (EASA Form 25) and ARC (EASA Form 15a) issued by another Member State, HCAA:



Accepts CofA and ARC as issued by the other Member State. In this case, HCAA shall re-issue Certificate of Airworthiness (EASA Form 25) with aircraft's new registration. The ARC (EASA Form 15a) will be validated by the assigned ASI, with the validity period being that stated on the initial ARC issued by the other Member State. The new aircraft registration is entered on the existing ARC, after crossing out the foreign registration marks and the corresponding change is validated, provided that the responsible (assigned) HCAA ASI is satisfied that the aircraft meets all requirements. For this purpose the ASI may perform an investigation taking into consideration the aircraft previous operator's performance, SAFA reports, etc.

#### **6.2.4 Airworthiness Flight Test**

REF.: ICAO, Doc 9760, Chapter 5.2.5  
HCAA/E1/T/22/17503/2114/26-6-1965  
National Law 634/70, Article 5.3.2

During the Aircraft Airworthiness Inspection step in the process of the issuance or renewal of the Certificate of Airworthiness, a flight test may be requested by HCAA's ASI (maintenance) to prove satisfactory performance and handling qualities of the aircraft in flight at this time.

### **6.3 Airworthiness Approvals for Export**

REF.: ICAO, Doc 9760, Chapter 5.3  
FAA AC 21-2E  
T.O./HCAA/21-2, Issue 1, 4-10-1994 (Mandatory)

#### **6.3.1 Issuance of Export Certificate for an Aircraft**

##### **6.3.1.1 General**

This Section provides guidance and sets the procedure to be followed for the issuance of an Export Certificate for an aircraft.

##### **6.3.1.2 Procedure**

- a) The process of issuance of an Export Certificate for an aircraft is initiated upon submission to the HCAA FSD of an application (HCAA Form D2-212) by the aircraft owner/operator. The application is submitted according to the *Incoming Documents* procedure described in the HCAA Administration Manual, Chapter 4. A copy of the Application can be found in Appendix C of this Chapter.
- b) The submitted application should be accompanied by all documentation as listed in T.O./HCAA/21-2, Issue 1, Appendix B, as well as the appropriate fee.
- c) After the application and all supporting documentation have been reviewed by the assigned ASI Inspector and found to be satisfactory, a report is completed and forwarded to the Director of FSD recommending the issuance of the Export Certificate.
- d) All documentation submitted by the aircraft owner/operator and correspondence /reports generated by HCAA along with a copy of the Export Certificate should be filed in the specific aircraft.
- e) With the issuance of the Export Certificate the aircraft owner/operator should return the aircraft's Certificate of Airworthiness to HCAA Flight Standards Division (D2) and the Certificate of Registration to the HCAA Legal Affairs Division, Aircraft Registration, Mortgage and Codification Section (D13).
- f) The aircraft's electronic file maintained in the ADMS Database should be updated to indicate the issuance of an Export Certificate along with all supporting data.
- g) Sample Export Certificate is shown in Appendix C of this Chapter.



#### **6.4 Permit to Fly**

Please refer to Chapter 16, para. 16.23 of this Manual.

**Note:**

***Inspector tools and additional guidance, as appropriate, is provided in Chapter 16 of this Manual.***



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## **APPENDIX A**

- 1. Application for the Issuance of a Certificate of Airworthiness (R.D. 634/70)**
- 2. Application for the Renewal of a Certificate of Airworthiness (R.D. 634/70)**
- 3. Annual Periodic Inspection Forms HCAA/E1/Γ/1 and HCAA/E1/Γ/19**



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## **APPENDIX B**

- 1. Sample Certificate of Airworthiness (EASA Form 25)**
- 2. Sample Certificate of Airworthiness (R.D. 634/70)**





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## **APPENDIX C**

- 1. Application for the Issuance of a Certificate for Export**
- 2. Sample Certificate for Export**



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## CHAPTER 7

### Air Operator Certificate (AOC) – Airworthiness Aspects (Part M)

#### 7.1 General

REF: HCAA Operations Manual, Chapter 2.1  
(EEC) 3922/91 as amended by (EC) 1899/06 and (EC) 8/08

This Chapter describes the sequence of the certification steps leading to the initial issue of all the maintenance / airworthiness aspects - Part M documents, of an A.O.C.

It is issued in accordance with ICAO and JAA requirements and complies with Greek P.D. 211/03, JAR-OPS 3.

It is based on, and supplementary to, the procedures and guidance material contained in H.C.A.A. OPERATION PROCEDURE MANUAL. HCAA Operation Procedure Manual, Chapter 2 should be consulted for details of the particular procedures related to the A.O.C. process.

#### 7.2 Qualification of Postholders EASA-Part M

REF: EC 2042/03, Annex I, Part M Subpart G.

For the qualifications for the relevant Manager and Postholders see guidance provided in 16.33.

#### 7.3 Initial Issue of AOC

##### 7.3.1 Objective

The following procedure is intended to ensure that HCAA carries out the approval process in a consistent and standard manner ensuring that the process is in accordance with all applicable EASA and EU OPS requirements.

##### 7.3.2 Initial Contact and Pre-Application Meeting

REF: HCAA Operations Procedures Manual

Once an applicant's Letter of Intent has been submitted to HCAA, according to the "Incoming Documents" procedure detailed in HCAA's Administration Procedures Manual, Chapter 5, a pre-application meeting will be scheduled. This meeting will take place at HCAA's premises and the applicant will be given the «AOC Application Package Documents» in electronic form (floppy disk/Cd-rom) which includes the following:

- ◆ Application Forms
- ◆ Conformance Documents and guidance lists
- ◆ Certification Schedule Milestones (Blank)
- ◆ Required Approvals List
- ◆ Required Acceptance List
- ◆ Management Acceptance Form
- ◆ A list of the required Manuals/Documents for submission (see also para. 7.3.3)

A briefing is also given to the applicant during this meeting on the A.O.C. certification process, including guidance on the completion of the application forms and documents. The Head of the Airworthiness Section, or his delegates, is the personnel responsible to conduct and offer guidance at this pre-application meeting. The applicant should be represented (at a minimum), by the Post Holders of Maintenance, the Accountable Manager and the Quality



Manager. It should 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 AOC certification process. This designated person 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 HCAA are directed to, and properly addressed by the appropriate personnel within the company. 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 company coordinator will be to arrange the on-site visits and ensure that the appropriate company personnel will be present and available.

**Guidance on the completion of the Conformance Documents, will be provided to the applicant during the Pre-Application meeting.**

The following documents/guidance lists will be given:

- ◆ HCAA Application Form 2 – Appendix A
- ◆ HCAA Application Form 4 – Appendix B
- ◆ Conformance Subparts K & L guidance list– Appendix C/D

**Important Note:** In the pre application meeting the Commercial Licence requirements in accordance with HCAA/D1 Dept. should be made aware to the potential AOC applicant.

### 7.3.3 Application and Application Meeting

[REF: HCAA Operations Procedures Manual](#)  
[EU OPS 1.185 / JAR-OPS 3.185 as appropriate](#)

HCAA receives application as described below and determines if it is for Initial, Variation or Renewal of AOC.

For the initial issue of an OPS 1 or JAR-OPS 3, the applicant must submit the completed *HCAA Form 2 (shown in Appendix A)* and *HCAA Form 4 (Appendix B)* in accordance with the *Incoming Documents* procedure described in the HCAA Administration Procedures Manual, Chapter 4.

Upon receipt of the application documentation, and prior to the Application Meeting, a “Certification Team” is assigned to oversee the AOC certification process of the new applicant by the Flight Standard Division (FSD/D2) Director.

The composition of the team will be tailored to the size and the complexity of the company, but will include at least:

**One** Flight Operations Inspector (FOI)

**One** Cabin Safety Inspector (CSI)

**Two** Airworthiness Inspectors (AWI) (one Maintenance & one Avionics)

The knowledge, experience and background of the persons assigned will be considered in the appointment of the team and matched to the type of aircraft and complexity of the intended operation.

In order for the Application to be considered officially submitted, the above HCAA Forms must be submitted along with **all required Manuals/Documentation** as described in detail in paragraph 7.3.4 of this Manual. If complete, the application will be attempted to be processed within 90 days. The 90 day period will not commence until all the documentation has been submitted. The quality of the documentation submitted will also have an effect on the 90 day period.



**The Application Meeting, which officially starts the AOC certification process, should not be held unless it is assured that all the documents required with the application will be completed and ready to be officially submitted at least three days prior to the Application Meeting.**

The Application Meeting should be cancelled and rescheduled if the application documentation is not complete as stated.

The Application Meeting is only held if the appropriate personnel are present. As mentioned above the operator's management personnel in attendance should include at least the Accountable Manager, Post Holders and Quality Manager. The HCAA's personnel in attendance will be the Heads of Operations and Airworthiness Sections and the assigned Certification Team. It is also desirable for the Flight Standards Director to attend if available.

The main objectives of the Application Meeting are to:

- ◆ Introduce the Operator's Management personnel to the HCAA Maintenance Certification Team.
- ◆ Assure that the applicant's maintenance team understands the AOC certification process.
- ◆ Answer any questions the Applicant may have.
- ◆ Distribute the documents/manuals to the appropriate maintenance members of the Certification Team.
- ◆ Discuss and agree upon the target dates for the various phases outlined in the Certification Schedule.

#### **7.3.4 Submission of Required Manuals/Documentation**

[REF: EU OPS 1.185 or JAR-OPS 3.185 as appropriate](#)

The potential operator's management personnel should submit the following:

- Completed HCAA Form 2
- Completed HCAA Form 4
- Continuous Airworthiness Management Exposition (CAME) Manual - (Ref. EC 2042/03, Annex I, Part M).
- Customized Maintenance Program (CMP) – (Ref. EC 2042/03, M.A. 302).
- Operator's Minimum Equipment List (MEL) – (Ref. OPS 1.030 and OPS TGL 26).
- Technical Log System (if not included in the CAME) – (Ref. EC 2042/03, M.A. 306).
- Conformance Document, Subparts K & L
- Conformance Document, EASA Part M
- Maintenance Contracts (if applicable)
- Reliability Program (if applicable) – {Ref. EC 2042/03, M.A. 302 (6.5) }
- Quality System Manual (if not contained in CAME)
- Any other appropriate documentation

#### **7.3.5 Manual(s) and Documentation Review**

[REF: HCAA Operations Procedures Manual](#)

The review of the submitted Manual(s)/Documentation is carried out by the Airworthiness Certification Team to assess the Part M requirements.

This is conducted by a general review of the Part M documents/manuals submitted by the applicant with the application. This review provides the applicant with timely initial feedback and assesses the applicants understanding of the requirements.



#### **7.3.5.1 Conformance Document in accordance with EASA Part M**

The Certification Team will evaluate the Conformance Document in accordance with procedures described in Chapter 10, para. 10.3.6 of this Manual.

#### **7.3.5.2 Conformance Documents in accordance with EU OPS 1 or JAR OPS 3, Subparts K & L**

The Conformance Document Subparts K and L will be evaluated by the Certification Team (Avionics and Operations). If the Conformance Document needs further work, it should be returned to the operator together with the comments summary as an attachment to an Audit Finding Form, shown in *Chapter 7, Appendix F*. The EU OPS Subparts K and L Conformance Document, is shown *Appendix C* and JAR OPS 3 Subparts K and L Conformance Document, is shown in *Appendix D* of this Chapter. When the evaluation is completed successfully, the EU OPS 1/JAR OPS 3, Subpart K & L evaluation form is completed and signed by the appropriate inspectors (evaluators) for both initial or revised K & Ls. This form is also shown in Appendix C of this Chapter.

#### **7.3.5.3 Operator's CAME Manual**

The Certification Team will evaluate the CAME Manual in accordance with procedures described in Chapter 10, para. 10.3.6 of this Manual.

#### **7.3.5.4 Operator's Quality Manual - System**

A separate Quality Manual must be submitted if it is not included in the CAME.

If the Quality Manual needs further work, it should be returned to the organization together with the comments summary as an attachment to an Audit Finding Form, shown in Appendix F of Chapter 7.

#### **7.3.5.5 Customized Maintenance Program (CMP)**

The CMP is evaluated by the Certification Team to ensure compliance with EC 2042/03, Appendix I to AMC M.A. 302. The inspector's evaluation of the CMP document is accomplished by reference to the GL-MPE-001 Guidance List, shown in Appendix M of this Chapter. During this review it will be necessary to make reference to the Manufacturer's Review Board Report and Maintenance Planning Document (MPD). If the CMP(s) needs further work, it should be returned to the operator together with the comments summary as an attachment to an Audit Finding Form, shown in Appendix F of Chapter 7.

#### **7.3.5.6 Operator's Minimum Equipment List (MEL)**

The Operator's MEL is evaluated by the Certification Team to ensure compliance with EU OPS 1.030 or JAR-OPS 3.030, OPS TGL 26 and AMCs. The inspector's evaluation of the MEL document is accomplished by reference to the HCAA-MEL-002 Guidance List, shown in *Appendix L*. If the MEL needs further work, it should be returned to the operator together with the comments summary as an attachment to an Audit Finding Form, shown in Appendix F of Chapter 7.

#### **7.3.5.7 Maintenance Contracts**

The Contract(s) are evaluated by the Certification Team to ensure compliance with EC 2042/03 Subpart B, M.A. 201, Subpart G, M.A. 708 and/or Appendix XI to AMC 708 (c), whichever is applicable. The evaluation should be conducted using the HCAA Guidance List GL-MCE-002, shown in *Appendix G*. If the Contract(s) needs further work it should be returned to the organization together with the comments summary as an attachment to an Audit Finding Form, Appendix F of Chapter 7.



#### 7.3.5.8 Reliability Program

Where a Reliability Program is necessary, this should be reviewed by the Certification Team to ensure compliance with Appendix I to AMC M.A. 302 (6.5), in conjunction with the review of the CMP. The evaluation should be conducted using the HCAA Guidance List GL-RPI-001, shown in Appendix N of this Chapter. If the Reliability Program needs further work, it should be returned to the organization together with the comments summary as an attachment to an Audit Finding Form, shown in Appendix F of Chapter 7.

#### 7.3.5.9 Technical Log System (TLS)

The TLS is evaluated by the Certification Team to ensure that it complies with EC 2042/03, M.A. 306. Reference should also be made to the Operations Manual Part A to ensure that the same TLS philosophy and procedures are quoted in the CAME. If the TLS needs further work it should be returned to the organization together with the comments summary as an attachment to an Audit Finding Form, shown in Appendix F of Chapter 7.

#### 7.3.5.10 Corrective Actions

Manuals/Documentation submitted by the applicant are checked by reviewing the completed Conformance Reports that have been submitted, against the manuals. If any non-compliance's are found and/or if corrections are needed, the assigned ASI Inspectors will notify in writing the Applicant of the non-compliance's and/or corrections needed. A copy of this notification letter should also be inserted in the Operator's file appropriate section (correspondence). It is important that all correspondence with the Applicant should abide by the procedures for Incoming and Outgoing Documents described in HCAA Administration Manual, Chapter 13. On the basis of the findings against the Manuals, the Operator is responsible for the relevant corrective actions / modifications required by the HCAA. The certification team members must properly track each item in order to ensure its rectification. ***Any findings raised will be processed in accordance with para. 16.20 of this Manual. A specific acceptance letter will be issued to accept both the structure and the content of the MME Manual, TLS, MEL, Maintenance Contracts as described in para. 7.3.8 later in this Chapter.***

#### 7.3.6 On-Site Inspection(s)

[REF: Operations Procedures Manual](#)

During the on-site inspection phase the facilities, services, procedures, aircraft(s) and equipment proposed for use by the applicant are assessed for acceptability.

The following steps can be used as a general guideline:

- ◆ Determine the areas to be audited and who will do what.
- ◆ From the Conformance Report and CAME pick specific items and subjects for the audit schedule, the provisional number of days, plan travel arrangements (if applicable), etc.
- ◆ Notify the applicant of the start of the audit and request an opening meeting with the attendance of the Accountable Manager.

##### 7.3.6.1 Opening Meeting

The purpose of the opening meeting is to:

- ◆ Introduce the HCAA Certification Team to the applicant's Management
- ◆ Briefly explain the purpose of the certification procedure - to comply with EASA current regulations.





- ◆ Describe the process to be followed
- ◆ Explain the Audit Finding Forms and the Level of Findings
- ◆ Clearly explain that the level of the finding is provisional until endorsed by the Audit Manager
- ◆ Explain that all Level 1 & 2 findings must be closed before the approval can be granted
- ◆ Request the Closing Meeting - This will either be a debrief at the end of the on-site audit or a specific meeting set for a few days later when the report has been produced and can be handed to the Operator.

#### 7.3.6.2 On-Site Audit

During the on-site Audit:

- ◆ Each member of Team to be accompanied by representative of the CAMO.
- ◆ Follow the Audit Plan and audit against the Requirement/AMC.
- ◆ Follow-up on any Audit Findings that have been issued against the TLS, CMP(s), Contract(s).
- ◆ Progressively complete the HCAA/EASA Form 13, Part 2 recording any findings against the sub-paragraph of the requirement and the applicable area of the audit. Draft any Finding Forms and provide provisional copy to CAMO.
- ◆ Team Leader to monitor progress of audit against the plan and time-scale what was projected.
- ◆ Confirm time and date for Closing Meeting.

### 7.3.7 Inspection Results and Closing of Findings

[REF: Operations Procedures Manual](#)

#### 7.3.7.1 Team Report

- To be produced in the standard format identifying both positive and negative features of the organization.
- Comments in the report can be subjective but any finding of non-compliance with the requirement must be objective and supported by an audit finding attached as an appendix to the report.
- The report must be signed by the Team and endorsed by the Airworthiness Section Manager.

**Note: A comprehensive Team Report is required to be submitted only during the initial certification of an operator.**

#### 7.3.7.2 Closing Meeting (Held at HCAA or the Company)

- Thank organization for co-operation during the audit.
- Review the content of the report highlighting both positive and negative aspects.
- Review the specific findings that must be resolved and closed before approval.
- Provide the opportunity for queries and clarification.
- Confirm the process of follow-up and closure of the findings

#### 7.3.7.3 Assemble Certification File

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

- Conformance Reports - See *Appendices C and D*
- Completed EASA Form 13 Parts 1,2,3 and 4 with the closure date endorsed as "Before Approval" - see *Appendix J*
- HCAA/EASA Form 4s.



#### **7.3.7.4 Audit Follow-up (if applicable)**

The operator responds to findings (if applicable) and resubmits the Audit Finding Form 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 close the findings.

#### **7.3.8 Preparation for Issue of the Approval**

[REF: HCAA Operations Procedures Manual](#)

Once the Certification Team is satisfied that all findings are closed for the applicable items, as described above, it will prepare the Certification folder to be presented to the DFS Director,

The following is a list of the Certification folder contents :

- ◆ Completion of the Documentation Check Sheet
- ◆ Applicant's Letter of Intent
- ◆ Completed HCAA/EASA Form 2
- ◆ Conformance Documents (EU OPS 1 or JAR OPS-3, Subparts K, L, EASA Part M)
- ◆ All appropriate Guidance Lists used for Document evaluation
- ◆ Appointment of Certification Team
- ◆ Audit Finding Closure documents
- ◆ CAME approval letter and file record
- ◆ CMP(s) approval letter and file record
- ◆ TLS approval letter and file record
- ◆ Contract(s) acceptance letter and file record
- ◆ Endorsement of HCAA/EASA Form 4s and copy of acceptance letter
- ◆ Draft of HCAA/EASA Form 14 Certificate
- ◆ Draft of letter to Operator forwarding the EASA Form 14
- ◆ Draft of letter to EASA/JAA recording the issue of the approval.
- ◆ Updated HCAA/EASA Form 13, Part 4
- ◆ HCAA/EASA Form 13, Part 5

##### **7.3.8.1 Quality Check**

The Team Leader will present the Certification File to the Airworthiness Section Head, or in his absence to the Director of Flight Standards, who will carry out the 'quality check'. This must include a review of all documents and HCAA/EASA Forms from the initial application through to the drafted HCAA/EASA Form 14. A sample HCAA/EASA Form 14 is shown in *Appendix K*.

At this time the annual provisional monitoring plan for the Operator is reviewed and approved. Provided the quality check is satisfactory the Airworthiness Section Head or the DFS Director will endorse the HCAA/EASA Form 13, Part 5.

##### **7.3.8.2 Issue of the Approval**

Following the Quality Check, the DFS Director will sign and stamp the approval certificates and associated letters (see *Appendix O*) and pass them back to the Team Leader for processing. The original copy of the signed and stamped Maintenance System Approval Statement (*Appendix K* – HCAA/EASA Form 14) is sent to the Operator with a cover letter, whereas one copy remains in the operator's certification file and another copy is transmitted internally to FSD's Section C (Operations) where the operator's AOC Certificate is issued according to HCAA Operations Procedures Manual.



#### **7.3.8.3 Annual Monitoring Provisions**

The DFS Director will appoint the Primary Maintenance Inspector (PMI) for the Operator and issue a Protocol for the annual monitoring requirements.

#### **7.3.8.4 HCAA Certification File**

The completed Certification File is then placed in the allocated space in the library.

### **7.4 Variation of AOC**

*REF: Appendix 1 to EU OPS 1.175 or JAR OPS 3.175  
HCAA Operations Procedures Manual*

The holder of an AOC, issued in accordance with EU OPS 1 or JAR-OPS 3 who wishes to alter any of the elements listed below on his AOC, must submit a letter of intent to the FSD Director.

An AOC Variation application, received from the operator, is required for any of the following reasons:

- ◆ Name or address of the principal place of business of the operator has changed.
- ◆ Expiration date for AOC period of validity, if one exists, is approaching.
- ◆ New Type aircraft is added.
- ◆ Same Type or variant aircraft is added or removed.
- ◆ Special Limitations are added or removed (e.g. RVSM, AWO, etc.)

#### **7.4.1 Adding Same Type of Aircraft**

For this purpose use HCAA Guidance List, shown in *Appendix H* and refer to the applicable steps as described in the initial AOC approval procedure. For example, for the CAME Section of the HCAA Guidance List, refer to para. 7.3.5.3 of this Manual.

#### **7.4.2 Adding New Type of Aircraft**

For this purpose use HCAA Guidance List, shown in *Appendix I* and refer to the applicable steps as described in the initial AOC approval procedure. For example, for the CAME Section of the HCAA Guidance List, refer to para. 7.3.5.3 of this Manual.

#### **7.4.3 Special Operations**

For this purpose refer to Chapter 11 of this Manual. For example, for a variation to an operator's AOC to include All Weather Operations (AWO), refer to para. 11.4.1 of Chapter 11.



## 7.5 Update ADMS Database

Certain information received by the AOC applicant in support of his/her application shall be entered in the ADMS System during the appropriate certification procedure steps. This information includes, but is not limited to, AOC Operator's address, phone numbers, base location, Post Holders names, Geographical areas of operation, special authorizations/approvals, aircraft fleet, etc. Upon successful completion of the certification process the AOC Certificate can be issued automatically by the ADMS system.

Additional information of the ADMS System can be found in HCAA Leaflet "[Aviation Data Management System – User's Guide](#)", HCAA, Edition 2, May 2004.

**Note:**

***Inspector Tools and additional guidance, as appropriate, is provided in Chapter 16 of this Manual.***



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## **APPENDIX A**

HCAA/EASA Form 2



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## **APPENDIX B**

HCAA/EASA Form 4





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## **APPENDIX C**

Sample Conformance Document EU OPS 1, Subparts K and L



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## **APPENDIX D**

Sample Conformance Document JAR OPS 3, Subparts K and L



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## **APPENDIX E**

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## **APPENDIX F**

HCAA Audit Finding Form





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## **APPENDIX G**

Guidance List

GL-MCE-002



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## **APPENDIX H**

Guidance List

GL-AST(AOC)-001



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## **APPENDIX I**

Guidance List

GL-ANT(AOC)-001

To be developed



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## **APPENDIX J**

HCAA/EASA Form 13





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## **APPENDIX K**

HCAA/EASA Form 14



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## **APPENDIX L**

MEL HCAA Approval Sheet (Aeroplanes)

MEL HCAA Approval Sheet (Helicopters)

Guidance List GL-MEL-003



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## **APPENDIX M**

Guidance List

GL-MPE-001



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## **APPENDIX N**

Guidance List

GL-RP-001





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## CHAPTER 8

### Aircraft Maintenance Organization Approval (Part –145)

*REF: EU Commission Regulation EC 2042/2003 Annex II (Part-145) as amended  
EASA ED Decision 2003/19/RM/28-11-2003 as amended*

#### 8.1 General

The certification of maintenance organizations in accordance with EASA Part-145 regulation involves monitoring of maintenance activities and inspection of maintenance facilities throughout the EU Member States in a consistent manner. It is essential the processes provide for quick and efficient response to requests emanating from the AMOs for purposes of variations to their approvals and from EASA and HCAA for purposes of resolution of open issues or possible problems.

As a EU member state, Greece applies the maintenance approval procedure policy as it is described herein. This policy is based on and satisfies the conditions and provisions of the Part-145 regulation. Furthermore, the intents of this policy are to assure standardization of procedures and methods employed within the HCAA system.

The procedures have been compiled according to the requirements of the regulation EC 2042/2003 Section B of Annex II (Part-145) as well as the EASA ED Decision 2003/19/RM/28-11-2003, as amended.

#### 8.2 Competent Authority

Hellenic Republic has designated the Hellenic Civil Aviation Authority as the competent Authority for the above-mentioned tasks. According to the P.D. 56/89 (as it has been amended) the Flight Standards Division – Airworthiness Section is responsible for the Maintenance Organization approvals.

#### 8.3 Initial Issue of a Part-145 Approval

##### 8.3.1 Objective

The following procedure is intended to ensure that HCAA carries out the approval process in a consistent and standard manner ensuring that the process is in accordance with the Part-145 and related AMC & GM.

##### 8.3.2 Pre-Application Meeting

Once an applicant's letter of intent has been submitted to HCAA, the latter will schedule a pre - application meeting. This meeting will take place at HCAA's premises and the applicant will be given the «AMO Application Package Documents» in electronic form (floppy disk /CD-ROM), that includes the following:

- ◆ Application Form (HCAA / EASA Form 2)
- ◆ Part-145 Conformance Document
- ◆ Management Acceptance Form (HCAA /EASA Form 4)
- ◆ A list of the required Manuals/Documents for submission (see also para. 8.3.4)

A briefing is also given to the applicant during this meeting on the AMO certification process, applicable regulation, including guidance on the completion of the application form and conformance document. The Head 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 (at a minimum), by the Accountable Manager and the Quality Manager. It should 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 HCAA are directed to, and properly addressed by the appropriate personnel within the company. 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 company coordinator will be to arrange the on-site visits and ensure that the appropriate company personnel will be present and available.

The following documents/guidance lists will be given:

- ◆ HCAA / EASA Application Form 2 – *Appendix A of Chapter 7*
- ◆ HCAA / EASA Application Form 4 – *Appendix B of Chapter 7*
- ◆ Conformance Document Part-145 – *Appendix A*
- ◆ MOE Conformance Document – *Appendix B*

**Note I:** *The AMO Manual/Documentation list will also be available in electronic format (floppy disk or CD-ROM) for applicant's convenience. Once the Flight Standards Division's Web page airs on the Internet, the above Manual/Documentation list will be available on-line to all interested applicants.*

**Note II:** *During any meeting with the applicant minutes should be kept and recorded to relevant files.*

To summarize, during this meeting the following should be accomplished:

- ◆ specify the regulation and the applicable procedures
- ◆ clarify the requirements bound in the MOE
- ◆ clarify the associated requirements (data, tool, staff, training)
- ◆ determine if the applicant's business activities justify the grant of Part-145 Approval
- ◆ Appoint a date for the Application & Application Meeting (see para. 8.3.3)

### 8.3.3 Application & Application Meeting

*REF : HCAA Administration Procedures Manual, Chapter 4*

HCAA receives application as described below and determines if it is for Initial approval or Variation of AMO Certificate.

For the initial issue of a Part-145 AMO Certificate, the applicant must submit the completed HCAA /EASA Form 2 (shown in Appendix A of Chapter 7) and HCAA /EASA Form 4s (Appendix B of Chapter 7) in accordance with the Incoming Documents procedure described in the HCAA Administration Procedures Manual, Chapter 4.

Upon receipt of the application documentation, and prior to the Application Meeting, a "Certification Team" is assigned to oversee the AMO certification process of the new applicant by the Flight Standard Division (FSD/D2) Director.

The composition of the team will be two Airworthiness Inspectors (one Maintenance and one Avionic) if the scope of work of the AMO Organization includes Base and/or Line Maintenance. If the scope of work of the AMO is limited to airframe and/or powerplants only, the certification team will consist of up to two Airworthiness Inspectors (Maintenance), whereas if the scope of work of the AMO is limited only to Avionics equipment, the Certification team will consist of up to two Airworthiness Inspectors (Avionics). In any case,



the knowledge, experience and background of the persons assigned will be considered in the appointment of the team and matched to the complexity of the AMO activity.

In order for the Application to be considered officially submitted, the above HCAA / EASA Forms must be submitted along with all required Manuals/Documentation as described in detail in paragraph 8.3.4 of this Manual. If complete, the application will be attempted to be processed within 90 days. The 90 day period will not commence until all the documentation has been submitted. The quality of the documentation submitted will also have an effect on the 90 day period.

The Application Meeting, which officially starts the AMO certification process, should not be held unless it is assured that all the documents required with the application will be completed and ready to be officially submitted at least three days prior to the Application Meeting.

The Application Meeting should be cancelled and rescheduled if the application documentation is not complete as stated.

The Application Meeting is only held if the appropriate personnel, as mentioned above, are present. The HCAA's personnel in attendance will be the Head of the Airworthiness Section and the assigned Certification Team. It is also desirable for the Flight Standards Director to attend if available.

The main objectives of the Application Meeting are to:

- ◆ Introduce the Organization's Management personnel to the HCAA Maintenance Certification Team.
- ◆ Assure that the applicant's maintenance team understands the AMO certification process.
- ◆ Answer any questions the Applicant may have.
- ◆ Distribute the documents/manuals to the appropriate members of the Certification Team.
- ◆ Discuss and agree upon the target dates for the various phases outlined in the Certification Schedule, shown in Appendix F at the end of this Chapter.

#### **8.3.4 Submission of Required Manual(s)/Documentation**

[REF: 145.A.15, 145.A.30, 145.A.70 & AMC 145.A.15, 145.A.30, 145.A.70](#)

The potential AMO Organization's management personnel should submit the following:

- ◆ Completed HCAA /EASA Form 2
- ◆ Completed HCAA /EASA Form 4s
- ◆ Maintenance Organization Exposition Manual (MOE)
- ◆ Part-145 Conformance Document
- ◆ Quality Manual if not included entirely in MOE
- ◆ MOE Conformance Document

**Note:** Combined manuals CAME/MOE are also acceptable

#### **8.3.5 Management personnel qualification - review**

Guidance on the qualifications of the Accountable Manager and the other Managers is provided in 16.33.

#### **8.3.6 Manual(s)/Documentation Review**

The review of the submitted Manual(s)/Documentation is carried out by the Airworthiness Certification Team to assess the Part-145, AMC requirements. This is conducted by a general review of the Part-145 documents/manual(s) submitted by the applicant with the application. This review provides the applicant with timely initial feedback and assesses the applicants understanding of the requirements.



#### 8.3.6.1 Part-145 Conformance Document

The Certification Team will evaluate the Part-145 Conformance Document. If the Conformance Document needs further work, it should be returned to the AMO together with the comments summary as an attachment to an Audit Finding Form, shown in Appendix F of Chapter 7. The Part-145 Conformance Document is shown in *Appendix E* at the end of this Chapter.

#### 8.3.6.2 Organization's MOE Manual (Initial)

The Certification Team will evaluate the AMO Organization's MOE Manual in order to establish that it complies with 145.A.70. The evaluation will be conducted using the HCAA Guidance List (MOE Conformance Document), shown in *Appendix B*. The Guidance List must be used in conjunction with Part-145 Conformance Document to record queries, topics to be checked on audit and unsatisfactory items. If the MOE Manual needs further work, it should be returned to the AMO together with the comments summary as an attachment to an Audit Finding Form, shown in *Appendix F* of Chapter 7. The MOE must include the subject headings listed in AMC 145.A.70 (a) and reflect the preferred procedures. The HCAA Inspector(s) is required to establish that the procedures specified in the exposition are in compliance with the intent of Part-145 and then to establish if these procedures are, actually, intended for use.

Exposition approval will be accomplished when all items identified in the HCAA / EASA Form 6 Part 3, have been identified and evaluated as satisfactory. **A specific approval letter will be issued for the MOE Manual, as described in para. 8.3.10 later in this Chapter.**

MOE Approval and Revision Record forms are shown in *Appendix C* at the end of this Chapter.

#### 8.3.6.3 MOE Revisions

*REF: 145.A.70 (c)*

Subsequent MOE revisions will follow the steps of the initial Part-145 MOE approval, as described above, if related to the issuance of an EASA Form 6.

For minor changes, i.e. changes not related to the issuance of an EASA Form 6, will be approved following the evaluation of the affected specific MOE items, unless the AMO has been granted the privilege of MOE indirect approval for such minor changes, i.a.w. para. 16.27 of this Manual. The submission of a MOE Conformance Document and the completion of an EASA Form 6 for such minor changes, are not required.

#### 8.3.7 Corrective Actions

Manuals/Documentation submitted by the AMO applicant are checked by reviewing the completed Part-145 Conformance Document that has been submitted. If any non-compliance's are found and/or if corrections are needed, the assigned ASI Inspectors 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). It is important that all correspondence with the Applicant should abide by the procedures for Incoming and Outgoing Documents described in HCAA Administration Manual, Chapter 13. On the basis of the findings against the MOE, the AMO is responsible for the relevant corrective actions / modifications required by the HCAA. The certification team members must properly track each item in order to ensure its rectification.

#### 8.3.8 On-Site Inspection(s)

During the on-site inspection phase the facilities, services, procedures, tools and equipment of the AMO organization are assessed for acceptability.



The following steps can be used as a general guideline:

- ◆ Determine the areas to be audited and who will do what.
- ◆ From the Conformance Document and MOE pick specific items and subjects for the audit – schedule, the provisional number of days, plan travel arrangements (if applicable), etc.
- ◆ Notify the applicant of the start of the audit and request an opening meeting with the attendance of the Accountable Manager.

#### **8.3.8.1 Opening Meeting**

The purpose of the opening meeting is to:

- ◆ Introduce the HCAA Certification Team to the AMO's Management
- ◆ Briefly explain the purpose of the certification procedure - to comply with HCAA/ EASA requirements.
- ◆ Describe the process to be followed
- ◆ Explain the Audit Finding Forms and the Leveling of Findings
- ◆ Clearly explain that the level of the finding is provisional until endorsed by the Head of the HCAA Airworthiness Section
- ◆ Explain that all Level 1 & 2 findings must be closed before the approval can be granted (Initial issue only)
- ◆ Request the Closing Meeting - This will either be a debrief at the end of the on-site audit or a specific meeting set for a few days later when the report has been produced and can be handed to the AMO.

#### **8.3.8.2 On-Site Audit**

During the on-site Audit:

- ◆ Each member of Team to be accompanied by a senior technical member, preferably the Quality Manager of the AMO.
- ◆ Follow the Audit Plan and audit against the Part-145 requirements.
- ◆ Follow-up on any Audit Findings that have been issued against the MOE Manual.
- ◆ Progressively complete the **revised** HCAA / EASA Form 6, Part 2 & 4 recording any findings against the sub-paragraph of the requirement and the applicable area of the audit, following the completion instructions. Draft any Finding Forms and provide provisional copy to AMO.
- ◆ Team Leader to monitor progress of audit against the plan and time-scale what was projected.
- ◆ Confirm time and date for Closing Meeting.

### **8.3.9 Inspection Results & Closing of Findings**

#### **8.3.9.1 Team Report**

- ◆ To be produced in the standard format identifying both positive and negative features of the organization.
- ◆ Comments in the report can be subjective but any finding of non-compliance with the requirement must be objective and supported by an audit finding attached as an appendix to the report.
- ◆ The report must be signed by the Team and endorsed by the HCAA Head of Airworthiness Section.

#### **8.3.9.2 Closing Meeting**

- ◆ Thank organization for co-operation during the audit.
- ◆ Review the content of the report highlighting both positive and negative aspects.



- ◆ Review the specific findings that must be resolved and closed before approval.
- ◆ Provide the opportunity for queries and clarification.
- ◆ Confirm the process of follow-up and closure of the findings.

#### 8.3.9.3 Assemble HCAA Certification File

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

- ◆ Part-145 Conformance Document - *Appendix A*.
- ◆ Completed HCAA / EASA Form 6, Parts 2, 3 and 4 with the closure date endorsed as "Before Approval" - *Appendix E*.

**NOTE:** *Appendix E shows revised HCAA/EASA Form 6 with detailed completion instructions*

- ◆ HCAA / EASA Form 2
- ◆ HCAA /EASA Form 4s

#### 8.3.9.4 Audit Follow-up (if Applicable)

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 HCAA /EASA Form 6, Part 4

#### 8.3.10 Preparation for Issue of the Approval (Part-145)

Once the Certification Team is satisfied that all findings are closed for the applicable items, as described above, it will prepare the Certification folder to be presented to the FSD Director. The Certification file contents and relevant forms can be found in *Appendix C*.

The following is a minimum list of the Certification folder contents [see also para. 16.21 (2)]:

- ◆ Completion of the Documentation Check Sheet
- ◆ HCAA / EASA Form 2
- ◆ HCAA / EASA Form 4s and copy of acceptance letter
- ◆ MOE approval letter and file record
- ◆ HCAA / EASA Form 6, Parts 1, 2, 3, 4, 5 – *see Appendix E*
- ◆ Team Report and Audit Finding Closure documents
- ◆ Draft HCAA/EASA Form 3 – *see Appendix D*
- ◆ Draft of letter to AMO forwarding the HCAA / EASA Form 3

##### 8.3.10.1 Quality Check

The Team Leader will present the Certification File to the Head of Airworthiness Section, or in his absence to the Director of Flight Standards, who will carry out the 'quality check'. This must include a review of all documents and HCAA / EASA Forms from the initial application through to the drafted HCAA / EASA Form 6.

At this time the annual provisional monitoring plan for the AMO is reviewed and approved. Provided the quality check is satisfactory the Airworthiness Section Manager or the DFS Director will endorse the HCAA/ EASA Form 6.

##### 8.3.10.2 Issue of the Approval

Following the Quality Check, the DFS Director will sign and stamp the approval certificate and associated letters and pass them back to the Team Leader for processing.





#### **8.3.10.3 Annual Monitoring Provisions**

The DFS Director will appoint the Primary Maintenance Inspector (PMI) for the AMO organization and issue a Protocol for the annual monitoring requirements.

#### **8.3.10.4 HCAA Certification File**

The completed Certification File is then placed in the allocated space in the library. For Certification File contents and structure refer to *Appendix C*.

### **8.4 Type rating training Course Approval**

#### **8.4.1 Introduction**

The purpose of this procedure is to outline the requirements for approval of type training courses other than those conducted by a Part-147 approved maintenance training organisation. According to EC 2042/03 regulation, Appendix III, Part-66.A.45 (b) specifies that Part-66 Category B1, B2 and C certifying staff are required to hold an appropriate aircraft type rated Part-66 aircraft maintenance license prior to the grant of a Part-145 certification authorization on a specific type.

Part-66.A.45 (c) additionally specifies that ratings will be granted following satisfactory completion of the relevant category B1, B2 or C aircraft type training approved by the competent authority or by an appropriately approved Part-147 maintenance training organisation.

All aircraft type training courses, **other than those** carried out by a Part-147 training organisation approved to conduct type training, must be approved by HCAA and the approval application will be processed in accordance with this procedural guide lines.

The approved type-training course includes theoretical course elements/examinations acceptable to HCAA.

However the type rating endorsement on the Part-66 license also requires the performance of practical training/assessment elements acceptable to the HCAA as well. The practical training/assessment element may either be part of the approved type training course or be performed directly by the Part-145 approved maintenance organisation. Type training courses will be approved in accordance with Part-66 Appendix III.

#### **8.4.2 Application**

Applications for approval of aircraft type training courses, other than those to be conducted by a Part-147 approved training school, should be made to the Airworthiness Standards Section (D2/A), Hellinicon building 220, Ex-American Air Force Base. A copy of the course syllabus should accompany the application form.

The processing of an application, including auditing of the course although a timely process takes effort and time to complete and consequently organisations requiring approval of type training courses should make the application well in advance of the anticipated start-up date.

#### **8.4.3 Training Provisions and Environment**

The experience and qualifications of the person in charge of the training course and his/her deputy shall be such as to ensure that the training will be conducted in a satisfactory manner.

The number, qualifications and experience of the course instructors, examiners and practical assessors, shall be appropriate to the intended course.

Facilities provided are to be adequate to ensure protection from the prevailing weather and of overall size to cope with all planned training and examinations on any particular day.

They should be fully enclosed and isolated from other facilities for theory and examinations purposes.

They should be maintained at a light, noise and temperature/humidity level such that students are able to concentrate on their studies or examinations without undue distraction or discomfort.

Access should be provided to appropriate facilities containing examples of the aircraft and/or engine type.





Adequate office accommodation should be provided for the instructor(s), examiner(s) and practical assessor(s).

Adequate storage facilities should be available for examination papers and training records. The students should have access to a library containing all current technical material appropriate to the training course.

#### **8.4.4 Course Syllabus**

The course will normally be divided into a mechanical course for airframe and engine and an avionics course. Limited avionics training will be included in the mechanical course. The electrical system will be included in both categories.

The type training will include and fully justify training corresponding to the levels specified in Part-66 Appendix III.

The training should give adequate detailed theoretical knowledge of the aircraft, its main parts, systems (all existing systems in accordance Part-66 Appendix III paragraph 2.1 where applicable) equipment, interior and applicable components. Relevant in-service problems, service bulletins and instructions should also be covered, including training in the systems in use for technical manuals and maintenance procedures. Knowledge is also required of relevant inspections and limitations as applicable to the effects of environmental factors such as cold and hot climates, wind moisture etc.

#### **8.4.5 Theoretical Knowledge Examinations**

Knowledge examinations may be conducted at the end of each distinct phase of training or at the end of the entire course. The examinations must be conducted using multi-choice questions as outlined in Part-66 Appendix III paragraph 3.

On completion of the course the student should be able to:

A. Demonstrate by knowledge examination a detailed understanding of applicable systems (in accordance with ATA 100), their operation and maintenance.

B. Ensure safe certification of line maintenance, inspections and routine work according to the maintenance manuals and other relevant instructions and tasks as appropriate for the type of aircraft, for example trouble-shooting, repairs, adjustments, replacements, rigging and functional checks such as engine runs, etc, if required.

C. Correctly use all technical literature and documentation for the aircraft.

Examination questions in use shall be sufficient to give full coverage of the phase or section of the syllabus and shall be appropriate to the end of course standard.

The number of questions is determined by the duration of the course and must comprise as a rule, a minimum of one question for each hour of instruction, subject to a minimum of two questions Syllabus subject.

The course provider must compile three question papers for each examination. One paper will be chosen on the day of the examination by the examiner, other than the course instructor. Where the course provider does not provide an examiner the examination papers must be selected on the day of the examination by the contracting Part-145 organization's Quality Manager or his/her nominated deputy.

#### **8.4.6 Practical Training**

Practical training should be performed in accordance with Part-66 Appendix III paragraph 2.2 and shall include hands on training in maintenance of the aircraft, rigging, adjustments, replacement of line replaceable units, trouble-shooting, rectification of minor defects and functional tests of systems.

The practical training should comprise of a period of 4 months for certifying staff with no recent recorded previous practical experience of aircraft of comparable construction and systems, including the engines, but this can be reduced to a minimum of two weeks for certifying staff with such previous experience.



A program of structured on-the-job training (OJT) may be prepared to satisfy this practical training requirement.

Practical training may be carried out at any Part-145 approved maintenance organisation or at the manufacturers or a combination of both but such training will form part of the particular aircraft type training either approved directly by HCAA or approved via the Part-147 requirement.

The training shall include practical hands-on training and theoretical training as appropriate for each task nominated. Satisfactory completion may be demonstrated by an examination and/or workplace assessment.

An authorised instructor must conduct the training and an authorised practical assessor must conduct the practical assessment. Qualifications and experience standards for the instructors and practical assessors must be established.

#### **8.4.7 Practical Assessment**

Practical assessments should be conducted in accordance with AMC 66.A.45(d) paragraph 6. An assessed pass for each student should be granted when the practical assessor is satisfied that the student has demonstrated the capability to use the relevant tools/equipment/test equipment as specified by the tool/equipment/test equipment manufacturer and the use of maintenance manuals as specified by the Type Certificate holder in that the student can carry out the required maintenance/inspection/testing without missing any defects, can readily identify the location of components and is capable of correct removal/fitment/adjustment of such components, as applicable.

The student should also show an appreciation of the need to ensure clean working conditions and the observance of safety precautions for the student and the product. In addition the student should demonstrate a responsible attitude in respect of flight safety and airworthiness of the aircraft.

#### **8.4.8 Conduct of Course**

Lecture notes, diagrams and other instructional material shall be substantially accurate at the time they are handed out. Where an amendment service is not provided a written warning must be given to this effect.

#### **8.4.9 Organization Quality Control Integration**

The contracting Part-145 approved maintenance organisation must conduct adequate audits of the training course and the examinations to ensure that the course is conducted in accordance with the requirements of Part-66. Any findings that affect the standards of the training course must be notified to the Authority. Adequate records of the audits must be maintained.

#### **8.4.10 Course Records**

Records of course attendance and examination results shall be kept in a safe location for at least five years following completion of the course.

#### **8.4.11 Course Certificates**

Certificates should be awarded to the successful students on completion of the course. The certificate details must be agreed by the Authority and should include the following;

- Certificate number
- Name plus the location and date of birth of the student.
- Name of the course provider (Organisation or other contracted provider under Organization's Quality System).
- The airframe/engine combination, whether the engine is included in the course or not (this is important for Part-66 type rating purposes as the type rating refers to an airframe/engine combination).
- Part-66 Category, i.e. A, B1 or B2, if applicable.
- Subjects i.e. airframe/engine/electrical /avionic.
- Clear indication of the standard and level of the course i.e. in accordance with Part-66.Appendix III.
- Duration of the course including the start and end dates.



- Specific elements of the course to which the certificate relates i.e. knowledge only, practical training only or knowledge and practical training,
- Other relevant details particular to the course such as APU type(s).

#### 8.4.12 Approval

The Authority will approve the course by letter that will contain any specific conditions or additional provisions if necessary.

### 8.5 Variation of Part-145 Approval

[REF: 145.A.85](#)

An AMO organization, issued an approval in accordance with Part-145 wishing to alter any of the elements listed below, must submit a HCAA/EASA Form 2.

- ◆ Change in the name of the Organisation
- ◆ Change of the address of the principal place of business of the AMO and/or of any additional locations.
- ◆ The Accountable Manager of the Organisation
- ◆ Any of the persons nominated under 145.A.30(b)
- ◆ The facilities, equipment, tools, material, procedures, work scope or certifying staff that could affect the approval.
- ◆ Any change(s) to the scope of work of the AMO organization.

EASA Part-145 approval variation process, follows the steps of the initial Part-145 approval as described in para. 8.3.3, earlier in this Chapter.

For this purpose the AMO organization should submit the affected manual(s)/Documentation for evaluation by HCAA in accordance with the provisions of para. 8.3.6.3.

### 8.6 Update ADMS Database

Certain information received by the AMO applicant in support of his/her application shall be entered in the ADMS System during the appropriate certification procedure steps. This information includes, but is not limited to, AMO organization's address, phone numbers, base location, Senior Managers names, Part-145 approval validity period, AMO scope of work, etc. In addition, all findings from the various certification steps will also be entered into the computerized system for tracking and historical record purposes. This information will be kept up to date by including all subsequent changes (if any) to the Part-145 Approval according to para. 8.3 and 8.4 of this Chapter.

[Additional information of the ADMS System can be found in HCAA Leaflet "\*Aviation Data Management System – User's Guide\*", HCAA, Edition 2, May 2004.](#)

**Note:**

***Inspector tools and additional guidance, as appropriate, is provided in Chapter 16 of this Manual.***



## **APPENDIX A**

Conformance Document EASA Part-145



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## **APPENDIX B**

Conformance Document MOE



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## **APPENDIX C**

MOE Approval & Revision Record

Audit Monitoring Plan

Certification Folder Contents





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## **APPENDIX D**

HCAA/EASA Form 3



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## **APPENDIX E**

HCAA/EASA Form 6



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## **APPENDIX F**

Certification Schedule – To be developed



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## CHAPTER 9

### Approved Maintenance Training Organization (Part 147)

REF: [EU Commission Regulation EC 2042/2003 Annex IV \(Part 147\)](#)  
[EASA ED Decision 2003/19/RM/28-11-2004](#)

#### 9.1 General

The certification of Approved Maintenance Training Organizations in accordance with Part-147 regulations involves monitoring of maintenance training activities and inspection of training organization facilities throughout the EU Member States in a consistent manner. It is essential the processes provide for quick and efficient response to requests emanating from the MTOs for purposes of variations to their approvals and from EASA and HCAA for purposes of resolution of open issues or possible problems.

As a EU member state, Greece has applies the maintenance training organization approval procedure policy as it is described herein. This policy is based on and satisfies the conditions and provisions of the Part-147 regulation. Furthermore, the intents of this policy are to assure standardization of procedures and methods employed within the HCAA system.

The procedures have been compiled according to the requirements of the regulation EC 2042/2003 Section B of Annex IV (Part 147) as well as to the EASA ED Decision 2003/19/RM/28-11-2003, as amended.

#### 9.2 Competent Authority

Hellenic Republic has designated the Hellenic Civil Aviation Authority as the competent Authority for the above mentioned tasks. According to the P.D. 56/89 (as it has been amended) the Flight Standards Division – Airworthiness Section is responsible for the Maintenance Training Organization approvals.

#### 9.3 Initial Issue of a Part -147 Approval

##### 9.3.1 Objective

The following procedure is intended to ensure that HCAA carries out the approval process in a consistent and standard manner ensuring that the process is in accordance with the EASA regulations and related AMC & GM.

##### 9.3.2 Pre-Application Meeting

Once an applicant's letter of intent has been submitted to HCAA, the latter will schedule a pre - application meeting. This meeting will take place at HCAA's premises and the applicant will be given the «MTO Application Package Documents» in electronic form (floppy disk / CD-ROM) which includes the following:

- ◆ Application Form (HCAA/EASA Form 12)
- ◆ Part-147 Conformance Document
- ◆ Management Personnel Acceptance Form (HCAA / EASA Form 4)
- ◆ A list of the required Manuals/Documents for submission (see also para. 9.3.4)

A briefing is also given to the applicant during this meeting on the MTO certification process, applicable regulation, including guidance on the completion of the application form and conformance document. The Head 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 (at a minimum), by the Accountable Manager and the Training Manager. It should 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 MTO certification process.





One of the functions of this person will be to assure that all the findings issued by the HCAA are directed to, and properly addressed by the appropriate personnel within the company. 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 company coordinator will be to arrange the on-site visits and ensure that the appropriate company personnel will be present and available.

The following documents/guidance lists will be given:

- ◆ HCAA/EASA Application Form 12 – *Appendix A*.
- ◆ HCAA/EASA Application Form 4 – *Appendix B*
- ◆ Conformance Document Part-147– *Appendix D*

**Note I:** *The MTO Manual/Documentation list will also be available in electronic format (floppy disk or CD ROM) for applicant's convenience. Once the Flight Standards Division's Web page airs on the Internet, the above Manual/Documentation list will be available on-line to all interested applicants.*

**Note II:** During any meeting with the applicant minutes should be kept and recorded to the relevant files.

To summarize, during this meeting the following should be accomplished:

- ◆ specify the regulation(s) and the applicable procedures
- ◆ clarify the requirements bound in the MTOE
- ◆ clarify the associated requirements (data, tool, training material, staff)
- ◆ determine if the applicant's business activities justify the grant of Part-147 Approval
- ◆ Appoint a date for the Application & Application Meeting (see para. 9.3.3)

### 9.3.3 Application & Application Meeting

*REF : HCAA Administration Procedures Manual, Chapter 4*

HCAA receives application as described below and determines if it is for Initial or Variation Renewal of MTO Certificate.

For the initial issue of a Part-147 MTO Certificate, the applicant must submit the completed *HCAA/EASA Form 12 (shown in Appendix A)* and *HCAA/EASA Form 4 (Appendix B)* in accordance with the *Incoming Documents* procedure described in the HCAA Administration Procedures Manual, Chapter 5.

Upon receipt of the application documentation, and prior to the Application Meeting, a "Certification Team" is assigned to oversee the MTO certification process of the applicant by the Flight Standard Division (FSD/D2) Director.

The composition of the team will be two Airworthiness Inspectors (one Maintenance and one Avionic). In any case, the knowledge, experience and background of the persons assigned will be considered in the appointment of the team and matched to the complexity of the MTO activity.

In order for the Application to be considered officially submitted, the above HCAA Forms must be submitted along with all required Manuals/Documentation as described in detail in paragraph 9.3.4 of this Manual. If complete, the application will be attempted to be processed within 90 days. The 90 day period will not commence until all the documentation has been submitted. The quality of the documentation submitted will also have an effect on the 90 day period.

The Application Meeting, which officially starts the MTO certification process, should not be held unless it is assured that all the documents required with the application will be completed and ready to be officially submitted at least three days prior to the Application Meeting.



The Application Meeting should be cancelled and rescheduled if the application documentation is not complete as stated.

The Application Meeting is only held if the appropriate personnel, as mentioned above, are present. The HCAA's personnel in attendance will be the Head of the Airworthiness Section and the assigned Certification Team. It is also desirable for the Flight Standards Director to attend if available.

The main objectives of the Application Meeting are to:

- ◆ Introduce the Organization's Management personnel to the HCAA MTO Certification Team.
- ◆ Assure that the applicant's maintenance team understands the MTO certification process.
- ◆ Answer any questions the Applicant may have.
- ◆ Distribute the documents/manuals to the appropriate maintenance members of the Certification Team.
- ◆ Discuss and agree upon the target dates for the various phases outlined in the Certification Schedule, shown in Appendix C at the end of this Chapter.

#### **9.3.4 Submission of Required Manual(s)/Documentation**

[REF: 147.A.140, AMC 147.A.140 and Appendix A to AMC 147](#)

The potential MTO Organization's management personnel should submit the following:

- ◆ Completed HCAA/EASA Form 12
- ◆ Completed HCAA/EASA Form 4
- ◆ Maintenance Training Organization Exposition (MTOE)(Ref. Appendix A AMC 147)
- ◆ Part-147 Conformance Document – Appendix D

#### **9.3.5 Management personnel qualification - review**

Guidance on the qualifications of the Accountable Manager and the other Managers is provided in 16.33.

#### **9.3.6 Manual(s)/Documentation Review**

The review of the submitted Manual(s)/Documentation is carried out by the Airworthiness Certification Team to assess the Part-147 & AMC requirements.

This is conducted by a general review of the Part-147 documents/manual(s) submitted by the applicant with the application. This review provides the applicant with timely initial feedback and assesses the applicants understanding of the requirements.

##### **9.3.6.1 Part-147 Conformance Document**

The Certification Team will evaluate the Part-147 Conformance Document. If the Conformance Document needs further work, it should be returned to the MTO together with the comments summary as an attachment to an Audit Finding Form, shown in Appendix F of Chapter 7. The Part-147 Conformance Document is shown in Appendix D at the end of this Chapter.

##### **9.3.6.2 Organization's MTOE**

The Certification Team will evaluate the MTO Organization's MTOE in order to establish that it complies with Part-147.A.140. The evaluation will be conducted using the HCAA Guidance List shown in *Appendix E*. The Guidance List must be used in conjunction with the Part-147 Conformance Document to record queries, topics to be checked on audit and unsatisfactory items. If the MTOE needs further work, it should be returned to the MTO together with the comments summary as an attachment to an Audit Finding Form, shown in Chapter 7, Appendix F.



The MTOE must include the subject headings (as applicable) listed in Appendix A of the AMC and reflect the preferred procedures. The HCAA Inspector(s) is required to establish that the procedures specified in the exposition are in compliance with the intent of Part-147 and then to establish if these procedures are, actually, intended for use.

Exposition approval will be accomplished when all items identified in the EASA Form 22 (shown in Appendix F of this Chapter), Part 3, have been identified and evaluated as satisfactory.

MTO Approval and Revision Record forms are shown in *Appendix G*.

### 9.3.7 Corrective Actions

Manuals/Documentation submitted by the MTO applicant are checked by reviewing the completed Part-147 Conformance Document that has been submitted. If any non-compliance's are found and/or if corrections are needed, the assigned Inspectors 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 MTO's Certification file appropriate section (correspondence). It is important that all correspondence with the Applicant should abide by the procedures for Incoming and Outgoing Documents described in HCAA Administration Manual, Chapter 4. On the basis of the findings against the MTOE, the MTO is responsible for the relevant corrective actions / modifications required by the HCAA. The certification team members must properly track each item in order to ensure its rectification. ***Any findings raised will be processed in accordance with para. 16.20 of this Manual. A specific approval letter will be issued for the MTOE Manual, as described in para. 9.3.10 later in this Chapter.***

### 9.3.8 On-Site Inspection(s)

During the on-site inspection phase the facilities, personnel, training and examinations procedures, instructional equipment of the MTO organization are assessed for acceptability.

The following steps can be used as a general guideline:

- ◆ Determine the areas to be audited and who will do what.
- ◆ From the Conformance Document and MTOE pick specific items and subjects for the audit – schedule, the provisional number of days, plan travel arrangements (if applicable), etc.
- ◆ Notify the applicant of the start of the audit and request an opening meeting with the attendance of the Accountable Manager.

#### 9.3.8.1 Opening Meeting

The purpose of the opening meeting is to:

- ◆ Introduce the HCAA Certification Team to the MTO's Management
- ◆ Briefly explain the purpose of the certification procedure - to comply with EASA/HCAA requirements.
- ◆ Describe the process to be followed
- ◆ Explain the Audit Finding Forms and the Leveling of Findings
- ◆ Clearly explain that the level of the finding is provisional until endorsed by the HCAA Airworthiness Section Manager
- ◆ Explain that all Level 1 & 2 findings must be closed before the approval can be granted (Initial approval)
- ◆ Request the Closing Meeting - This will either be a debrief at the end of the on-site audit or a specific meeting set for a few days later when the report has been produced and can be handed to the MTO.



### 9.3.8.2 On-Site Audit

During the on-site Audit:

- ◆ Each member of Team to be accompanied by a MTO representative.
- ◆ Follow the Audit Plan and audit issue findings the Part-147 requirements.
- ◆ Follow-up on any Audit Findings that have been issued against the MTOE.
- ◆ Progressively complete the EASA / HCAA Form 22, Parts 2&4 recording any findings against the sub-paragraph of the requirement and the applicable area of the audit. Draft any Finding Forms and provide provisional copy to the MTO.
- ◆ Team Leader to monitor progress of audit against the plan and time-scale what was projected.
- ◆ Confirm place, time and date for Closing Meeting.

## 9.3.9 Inspection Results & Closing of Findings

### 9.3.9.1 Team Report

- ◆ To be produced in the standard format identifying both positive and negative features of the organization.
- ◆ Comments in the report can be subjective but any finding of non-compliance with the requirement must be objective and supported by an audit finding attached as an appendix to the report.
- ◆ The report must be signed by the Team and endorsed by the HCAA Airworthiness Section Manager.

**Note:** A comprehensive Team Report is required to be submitted only during the initial certification of an MTO.

### 9.3.9.2 Closing Meeting

- ◆ Thank organization for co-operation during the audit.
- ◆ Review the content of the report highlighting both positive and negative aspects.
- ◆ Review the specific findings that must be resolved and closed before the approval.
- ◆ Provide the opportunity for queries and clarification.
- ◆ Confirm the process of follow-up and closure of the findings.

### 9.3.9.3 Assemble HCAA Certification File

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

- ◆ Part-147 Conformance Document - See *Appendix D*.
- ◆ Completed HCAA / EASA Form 22, Parts 2, 3 and 4 with the closure date endorsed as "Before Approval" - see *Appendix F*.
- ◆ HCAA /EASA Form 12
- ◆ HCAA /EASA Form 4s

### 9.3.9.4 Audit Follow-up (if Applicable)

The MTO 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 HCAA /EASA Form 22, Part 4.



### **9.3.10 Preparation for Issue of the Approval (Part-147)**

Once the Certification Team is satisfied that all findings are closed for the applicable items, as described above, it will prepare the Certification folder to be presented to the FSD Director. The Certification file contents and relevant forms can be found in Appendix H of this Chapter.

The following is a list of the Certification folder contents :

- ◆ Completion of the Documentation Check Sheet
- ◆ HCAA / EASA Form 12
- ◆ HCAA / EASA Form 4s and copy of acceptance letter
- ◆ MTOE approval letter and file record
- ◆ HCAA / EASA Form 22, Parts 1, 2, 3, 4, 5
- ◆ Team Report and Audit Finding Closure documents
- ◆ Draft HCAA/EASA Form 11 (see Appendix H)
- ◆ Draft of letter to MTO forwarding the HCAA /EASA Form 11

#### **9.3.10.1 Quality Check**

The Team Leader will present the Certification File to the Head of the Airworthiness Section, or in his absence to the Director of Flight Standards, who will carry out the 'quality check'. This must include a review of all documents and HCAA/EASA Forms from the initial application through to the drafted HCAA/EASA Form 22.

At this time the biennial provisional monitoring plan for the MTO is reviewed and approved. Provided the quality check is satisfactory the Head of the Airworthiness Section or the DFS Director will endorse the HCAA Form 22.

#### **9.3.10.2 Issue of the Approval**

Following the Quality Check, the DFS Director will sign and stamp the approval certificate and associated letters and pass them back to the Team Leader for processing. The approval certificate (HCAA/EASA Form 11) is shown in *Appendix H*.

#### **9.3.10.3 Biennial Monitoring Provisions**

The DFS Director will appoint the Primary Maintenance Inspector (PMI) for the MTO organization and issue a Protocol Number for the annual monitoring requirements.

#### **9.3.10.4 HCAA Certification File**

The completed Certification File is then placed in the allocated space in the library. For Certification File contents and structure refer to *Appendix G*.



## 9.5 Variation of –Part-147 Approval

[REF: 147.B.105](#)

An MTO organization, issued an approval in accordance with Part-147 wishing to alter any of the elements listed below, must submit a HCAA Form 12 or an application in the form of a letter to the FSD Director.

A Part-147 approval variation application, received from the MTO, is required for any of the following reasons:

- ◆ Name or address (location) of the principal place of business of the MTO has changed.

The organisation submits a new application as a matter of urgency stating that only the name of the organisation has changed including a copy of the organisation exposition with the new name. On receipt of the application and the organisation exposition, HCAA will reissue the approval certificate valid only up to the current expiry date.

- ◆ Any change(s) to the scope of approval ( training / examination approval schedule) of the MTO.
- ◆ A change of accountable manager requires the maintenance training organisation to submit such fact to HCAA as a matter of urgency together with the amendment to the Accountable Manager exposition statement.
- ◆ A change of any of the senior personnel specified in 147.A.105(b) or the examination staff in 147.A.105 (e) requires the maintenance training organisation to submit a Form 4 in respect of the particular person to HCAA. If satisfied that the qualifications and experience meet the standard required by Part-147, HCAA will indicate acceptance in writing to the maintenance training organisation.
- ◆ A change in the maintenance training organisation's exposition requires HCAA to establish that the procedures specified in the exposition are in compliance with the intent of Part-147 and then to establish if these are the same procedures intended for use within the training facility.

◆ Any additional basic or aircraft type training courses requires the maintenance training organisation to make a new application to HCAA together with the submission of an amended exposition. For basic training extensions, an additional sample of new examination questions relevant to the modules associated with the extension being sought will be required to be submitted. HCAA will follow the procedure of paragraph 9.3.4 in so far as the change affects such procedures unless it is satisfied that the maintenance training organisation has a well-controlled procedure to qualify such change when it is not necessary to conduct a full audit.

### **NOTES:**

A name change alone does not require HCAA to audit the organisation, unless there is evidence that other aspects of the maintenance training organisation have changed

The complete or partial re-organisation of a training organisation will require the re-audit of those elements that have changed.

For this purpose the MTO should submit the affected manual(s)/Documentation for evaluation by HCAA. The Part-147 approval variation process follows the steps of the initial Part-147 approval as described in para. 8.3.3



## 9.6 Update ADMS Database

Certain information received by the MTO applicant in support of his/her application shall be entered in the ADMS System during the appropriate certification procedure steps. This information includes, but is not limited to, MTO organization's address, phone numbers, base location, Senior Managers names, MTO scope of work, etc. In addition, all findings from the various certification steps 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 Part-147 Approval according to para. 8.4 and 8.5 of this Chapter.

[Additional information of the ADMS System can be found in HCAA Leaflet "Aviation Data Management System – User's Guide", HCAA, Edition 2, May 2004.](#)

**Note:**

***Inspector tools and additional guidance, as appropriate, is provided in Chapter 16 of this Manual.***



## **APPENDIX A**

HCAA/EASA Form 12





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## **APPENDIX B**

HCAA/EASA Form 4



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## **APPENDIX C**

Certification Schedule – To be developed



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## **APPENDIX D**

Conformance Document EASA Part-147



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## **APPENDIX E**

Conformance Document MTOE





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## **APPENDIX F**

HCAA/EASA Form 22



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## **APPENDIX G**

MTO Approval & Revision Record

Audit Monitoring Plan

Certification Folder Contents



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## **APPENDIX H**

HCAA/EASA Form 11



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## CHAPTER 10

### Continuing Airworthiness Management Organization

**REF:** [EU Commission Regulation EC 2042/2003 Part M Subpart G](#)  
[EASA ED Decision 2003/19/RM/28-11-2004](#)

**For Part M, Subpart G aspects for CAT operations, refer to Chapter 7.**

#### 10.1 General

The certification of Continuing Airworthiness Management Organizations in accordance with Part-M Subpart G regulations involves monitoring of maintenance management activities and inspection of continuing airworthiness management organization throughout the EU Member States in a consistent manner. It is essential the processes provide for quick and efficient response to requests emanating from the CAMOs for purposes of variations to their approvals and from EASA and HCAA for purposes of resolution of open issues or possible problems.

As a EU member state, Greece has applies the Continuing airworthiness management organization approval procedure policy as it is described herein. This policy is based on and satisfies the conditions and provisions of the Part-M Subpart G regulation. Furthermore, the intents of this policy are to assure standardization of procedures and methods employed within the HCAA system.

The procedures have been compiled according to the requirements of the regulation EC 2042/2003 Section B as well as to the EASA ED Decision 2003/19/RM/28-11-2003, as amended.

#### 10.2 Competent Authority

Hellenic Republic has designated the Hellenic Civil Aviation Authority as the competent Authority for the above mentioned tasks. According to the P.D. 56/89 (as it has been amended) the Flight Standards Division – Airworthiness Section is responsible for the Continuing Airworthiness Management Organization approvals.

#### 10.3 Initial Issue of a CAMO Approval

##### 10.3.1 Objective

The following procedure is intended to ensure that HCAA carries out the approval process in a consistent and standard manner ensuring that the process is in accordance with the EASA regulations and related AMC & GM.

##### 10.3.2 Pre-Application Meeting

Once an applicant's letter of intent has been submitted to HCAA, the latter will schedule a pre - application meeting. This meeting will take place at HCAA's premises and the applicant will be given the «CAMO Application Package Documents» in electronic form (floppy disk / CD-ROM) which includes the following:

- ◆ Application Form (HCAA/EASA Form 2)
- ◆ CAMO Conformance Document
- ◆ Management Personnel Acceptance Form (HCAA / EASA Form 4)
- ◆ A list of the required Manuals/Documents for submission (see also para. 10.3.4)

A briefing is also given to the applicant during this meeting on the CAMO certification process, applicable regulation, including guidance on the completion of the application form and conformance document. The Head 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 (at a minimum), by the Accountable Manager and the Maintenance Manager (PHM).





It should 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. One of the functions of this person will be to assure that all the findings issued by the HCAA are directed to, and properly addressed by the appropriate personnel within the company. 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 company coordinator will be to arrange the on-site visits and ensure that the appropriate company personnel will be present and available.

The following documents/guidance lists will be given:

- ◆ HCAA/EASA Application Form 2 – *Appendix A of Chapter 7*
- ◆ HCAA/EASA Application Form 4 – *Appendix B of Chapter 7*
- ◆ Conformance Document CAMO– *Appendix A*

**Note I:** *The CAMO Manual/Documentation list will also be available in electronic format (floppy disk or CD ROM) for applicant's convenience. Once the Flight Standards Division's Web page airs on the Internet, the above Manual/Documentation list will be available on-line to all interested applicants.*

**Note II:** During any meeting with the applicant minutes should be kept and recorded to the relevant files.

To summarize, during this meeting the following should be accomplished:

- ◆ specify the regulation(s) and the applicable procedures
- ◆ clarify the requirements bound in the CAME
- ◆ clarify the associated requirements (data, tool, training material, staff)
- ◆ determine if the applicant's business activities justify the grant of CAME Approval
- ◆ Appoint a date for the Application & Application Meeting (see para. 10.3.3)

### 10.3.3 Application & Application Meeting

*REF : HCAA Administration Procedures Manual, Chapter 4*

HCAA receives application as described below and determines if it is for Initial or Variation Renewal of CAMO Certificate.

For the initial issue of a CAMO Certificate, the applicant must submit the completed *HCAA/EASA Form 2 (shown in Appendix A of Chapter 7)* and *HCAA/EASA Form 4 (shown in Appendix B of Chapter 7)* in accordance with the *Incoming Documents* procedure described in the HCAA Administration Procedures Manual, Chapter 4.

Upon receipt of the application documentation, and prior to the Application Meeting, a "Certification Team" is assigned to oversee the CAMO certification process of the applicant by the Flight Standard Division (FSD/D2) Director.

The composition of the team will be up to two Airworthiness Inspectors. In any case, the knowledge, experience and background of the persons assigned will be considered in the appointment of the team and matched to the complexity of the CAMO activity.

In order for the Application to be considered officially submitted, the above HCAA Forms must be submitted along with all required Manuals/Documentation as described in detail in paragraph 10.3.4 of this Manual. If complete, the application will be attempted to be processed within 90 days. The 90 day period will not commence until all the documentation has been



submitted. The quality of the documentation submitted will also have an effect on the 90 day period.

The Application Meeting, which officially starts the CAMO certification process, should not be held unless it is assured that all the documents required with the application will be completed and ready to be officially submitted at least three days prior to the Application Meeting.

The Application Meeting should be cancelled and rescheduled if the application documentation is not complete as stated.

The Application Meeting is only held if the appropriate personnel, as mentioned above, are present. The HCAA's personnel in attendance will be the Head of the Airworthiness Section and the assigned Certification Team. It is also desirable for the Flight Standards Director to attend if available.

The main objectives of the Application Meeting are to:

- ◆ Introduce the Organization's Management personnel to the HCAA CAMO Certification Team.
- ◆ Assure that the applicant's team understands the CAMO certification process.
- ◆ Answer any questions the Applicant may have.
- ◆ Distribute the documents/manuals to the appropriate members of the Certification Team.
- ◆ Discuss and agree upon the target dates for the various phases outlined in the Certification Schedule, shown in Appendix F at the end of this Chapter.

#### 10.3.4 Submission of Required Manual(s)/Documentation

[REF: M.A.702, M.A.704](#)

The potential CAMO Organization's management personnel should submit the following:

- ◆ Completed HCAA/EASA Form 2
- ◆ Completed HCAA/EASA Form 4
- ◆ Continuing Airworthiness Management Organization Exposition (CAME)
- ◆ CAMO Conformance Document – Appendix A
- ◆ Aircraft Maintenance Program (basic/generic applicable to requested capability)
- ◆ Maintenance Contracts (if applicable)

#### 10.3.5 Management personnel qualification - review

Guidance on the qualifications of the Accountable Manager and the other Managers is provided in detail in 16.24 and 16.33.

#### 10.3.6 Manual(s)/Documentation Review

The review of the submitted Manual(s)/Documentation is carried out by the Airworthiness Certification Team to assess the Part-M Subpart G & AMC requirements.

This is conducted by a general review of the CAMO documents/manual(s) submitted by the applicant with the application. This review provides the applicant with timely initial feedback and assesses the applicants understanding of the requirements.

##### 10.3.6.1 CAMO Conformance Document

The Certification Team will evaluate the CAMO Conformance Document. If the Conformance Document needs further work, it should be returned to the CAMO together with the comments summary as an attachment to an Audit Finding Form, shown in Chapter 7, Appendix F. The CAMO Conformance Document is shown in *Appendix A*.



#### 10.3.6.2 Organization's CAME (Initial)

The Certification Team will evaluate the CAMO's CAME in order to establish that it complies with M.A. 704 and AMC M.A. 704. The evaluation will be conducted using the HCAA Guidance List shown in Appendix B of this Chapter. The Guidance List must be used in conjunction with the CAMO Conformance Document to record queries, topics to be checked on audit and unsatisfactory items. If the CAME needs further work, it should be returned to the CAMO together with the comments summary as an attachment to an Audit Finding Form, shown in Chapter 7, Appendix F.

The CAME must include the subject headings (as applicable) listed in Appendix A of the AMC and reflect the preferred procedures. The HCAA Inspector(s) is required to establish that the procedures specified in the exposition are in compliance with the intent of Part-M Subpart G and then to establish if these procedures are, actually, intended for use.

Exposition approval will be accomplished when all items identified in the EASA Form 13 Part 3, have been identified and evaluated as satisfactory.

CAME Approval and Revision Record forms are shown in *Appendix C*.

#### 10.3.6.3 CAME Revisions

Subsequent CAME revisions will follow the steps of the initial Part-M CAME approval, as described above, if related to the issuance of an EASA Form 13.

For minor changes, i.e. changes not related to the issuance of an EASA Form 13, will be approved following the evaluation of the affected specific CAME items, unless the CAMO has been granted the privilege of CAME indirect approval for such minor changes, i.a.w. para. 16.27 of this Manual. The submission of a CAME Conformance Document and the completion of an EASA Form 13 for such minor changes, are not required.

#### 10.3.7 Corrective Actions

Manuals/Documentation submitted by the CAMO applicant are checked by reviewing the completed CAMO Conformance Document that has been submitted. If any non-compliances are found and/or if corrections are needed, the assigned Inspectors 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). It is important that all correspondence with the Applicant should abide by the procedures for Incoming and Outgoing Documents described in HCAA Administration Manual, Chapter 13. On the basis of the findings against the CAME, the CAMO is responsible for the relevant corrective actions / modifications required by the HCAA. The certification team members must properly track each item in order to ensure its rectification. **A specific approval letter will be issued for the CAME Manual, as described in para. 10.3.10 later in this Chapter.**

#### 10.3.8 On-Site Inspection(s)

During the on-site inspection phase the facilities, personnel, training and examinations procedures, instructional equipment of the CAMO organization are assessed for acceptability.

The following steps can be used as a general guideline:

- ◆ Determine the areas to be audited and who will do what.
- ◆ From the Conformance Document and CAME pick specific items and subjects for the audit – schedule, the provisional number of days, plan travel arrangements (if applicable), etc.
- ◆ Notify the applicant of the start of the audit and request an opening meeting with the attendance of the Accountable Manager.



#### 10.3.8.1 Opening Meeting

The purpose of the opening meeting is to:

- ◆ Introduce the HCAA Certification Team to the CAMO's Management
- ◆ Briefly explain the purpose of the certification procedure - to comply with EASA/HCAA requirements.
- ◆ Describe the process to be followed
- ◆ Explain the Audit Finding Forms and the Leveling of Findings
- ◆ Clearly explain that the level of the finding is provisional until endorsed by the HCAA Airworthiness Section Manager
- ◆ Explain that all Level 1 & 2 findings must be closed before the approval can be granted (Initial approval)
- ◆ Request the Closing Meeting - This will either be a debrief at the end of the on-site audit or a specific meeting set for a few days later when the report has been produced and can be handed to the CAMO.

#### 10.3.8.2 On-Site Audit

During the on-site Audit:

- ◆ Each member of Team to be accompanied by a CAMO representative.
- ◆ Follow the Audit Plan and audit issue findings the Part-M Subpart G requirements.
- ◆ Follow-up on any Audit Findings that have been issued against the CAME.
- ◆ Progressively complete the EASA / HCAA Form 13, Parts 2&4 recording any findings against the sub-paragraph of the requirement and the applicable area of the audit. Draft any Finding Forms and provide provisional copy to the CAMO.
- ◆ Team Leader to monitor progress of audit against the plan and time-scale what was projected.
- ◆ Confirm place, time and date for Closing Meeting.

### 10.3.9 Inspection Results & Closing of Findings

#### 10.3.9.1 Team Report

- ◆ To be produced in the standard format identifying both positive and negative features of the organization.
- ◆ Comments in the report can be subjective but any finding of non-compliance with the requirement must be objective and supported by an audit finding attached as an appendix to the report.
- ◆ The report must be signed by the Team and endorsed by the HCAA Airworthiness Section Manager.

**Note:** A comprehensive Team Report is required to be submitted only during the initial certification of an CAMO.

#### 10.3.9.2 Closing Meeting

- ◆ Thank organization for co-operation during the audit.
- ◆ Review the content of the report highlighting both positive and negative aspects.
- ◆ Review the specific findings that must be resolved and closed before the approval.
- ◆ Provide the opportunity for queries and clarification.
- ◆ Confirm the process of follow-up and closure of the findings.



#### 10.3.9.3 Assemble HCAA Certification File

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

- ◆ CAMO Conformance Document - See *Appendix E*.
- ◆ Completed HCAA / EASA Form 13, Parts 2, 3 and 4 with the closure date endorsed as 'Before Approval' - see *Appendix D*.
- ◆ HCAA /EASA Form 2.
- ◆ HCAA /EASA Form 4s.

#### 10.3.9.4 Audit Follow-up (if Applicable)

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, completing also HCAA /EASA Form 13, Part 4

#### 10.3.10 Preparation for Issue of the Approval (CAMO)

Once the Certification Team is satisfied that all findings are closed for the applicable items, as described above, it will prepare the Certification folder to be presented to the FSD Director. The following is a minimum list of the Certification folder contents {see also 16.21(1)} :

- ◆ Completion of the Documentation Check Sheet
- ◆ HCAA / EASA Form 2
- ◆ HCAA / EASA Form 4s and copy of acceptance letter
- ◆ CAME approval letter and file record
- ◆ HCAA / EASA Form 13, Parts 1, 2, 3, 4, 5
- ◆ Team Report and Audit Finding Closure documents
- ◆ Draft of letter to CAMO forwarding the HCAA /EASA Form 14

##### 10.3.10.1 Quality Check

The Team Leader will present the Certification File to the Head of the Airworthiness Section, or in his absence to the Director of Flight Standards, who will carry out the 'quality check'. This must include a review of all documents and HCAA/EASA Forms from the initial application through to the drafted HCAA/EASA Form 13 Sample HCAA Forms are shown in *Appendices A through D*.

At this time the biennial provisional monitoring plan for the CAMO is reviewed and approved. Provided the quality check is satisfactory the Head of the Airworthiness Section or the DFS Director will endorse the HCAA Form 13.

##### 10.3.10.2 Issue of the Approval

Following the Quality Check, the DFS Director will sign and stamp the approval certificate (see *Appendix B*) and associated letters and pass them back to the Team Leader for processing.

##### 10.3.10.3 Biennial Monitoring Provisions

The DFS Director will appoint the Primary Inspector (PMI) for the CAMO and issue a Protocol Number for the annual monitoring requirements.

##### 10.3.10.4 HCAA Certification File

The completed Certification File is then placed in the allocated space in the library. For Certification File contents and structure refer to *Appendix C*.



## 10.4 Part M Subcontractors Approval and Oversight

REF.: (EC) 2042/03 Annex I MA 201 h, MB 702c, AMC MB 704 (b)(5), Appendix II to MA201(b)1, HCAA/APM Chapter 10

In addition to HCAA's approved Airworthiness Procedures manual Chapter 10, during the progress of documentations and applicable procedures review, when the applicant or Operator subcontracts certain continuing airworthiness management tasks, the following procedures must be applied.

1. The contract must be in compliance with Appendix II to MA 201 (b)1 and should be acceptable to HCAA/C2.
2. Since the Operator is responsible and accountable for the airworthiness of its aircraft and this activity is considered as an integral element of its organisation, the Authority must be assured that the specific operator has the active control by:
  - Endorsing in its exposition the list of the airworthiness management tasks, which will be performed by the subcontractor and the related procedures. Attention should be given to the contracted tasks which should be limited to the following activities:
    - Airworthiness directives evaluation and planning
    - Service Bulletins analysis
    - Planning of Maintenance
    - Reliability monitoring as applicable and engine trend monitoring
    - Maintenance Program development and amendments of it.
    - Any other activities which do not limit the operators responsibilities as agreed by HCAA/D2.
  - Operator should conduct a pre-contact audit to verify that the subcontracting organization can achieve the standards required by MA Subpart G in connection with those activities to be sub-contracted.

### AUTHORITY OVERSIGHT

Sub-contracted Organisations should be audited by HCAA/D2 at intervals not exceeding 24 months to ensure full compliance with MA Subpart G and appropriate Guidance List, GL-SC/CAMO-001 (shown in *Appendix D*) must be completed.

At the time of the sub-contractor's audit, the HCAA surveyor must be accompanied by Operator's senior technical member.

### FINDINGS

All findings shall be raised to the Operator (and not the subcontractor), will be processed in accordance with paragraphs 16.20 and 10.3.9.2 of this Manual.



## 10.5 Variation of the CAMO Approval

REF: EC 2042/2003, Annex I, M.A. 713

An CAMO organization, issued an approval in accordance with Part-M Subpart G wishing to alter any of the elements listed below, must submit a HCAA Form 2 or an application in the form of a letter to the FSD Director.

A CAMO approval variation application, received from the CAMO, is required for any of the following reasons:

- ◆ Change in the name of the Organisation
- ◆ Change of the address of the principal place of business of the CAMO and/or of any additional locations.
- ◆ The Accountable Manager of the Organisation
- ◆ Any of the persons nominated under M.A.706 (c)
- ◆ The facilities, equipment, tools, material, procedures, work scope or certifying staff that could affect the approval.
- ◆ Any change(s) to the scope of work of the CAMO organization.

For this purpose, the CAMO should submit the affected manual(s)/Documentation for evaluation by HCAA. The CAMO approval variation process follows the steps of the initial CAMO approval as described in para. 10.3.3

## 10.6 Update ADMS Database

Certain information received by the CAMO applicant in support of his/her application shall be entered in the ADMS System during the appropriate certification procedure steps. This information includes, but is not limited to, CAMO organization's address, phone numbers, base location, Senior Managers names, CAMO scope of work, etc. In addition, all findings from the various certification steps 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 CAMO Approval according to para. 10.4 and 10.5 of this Chapter.

Additional information of the ADMS System can be found in HCAA Leaflet "[Aviation Data Management System – User's Guide](#)", HCAA, Edition 2, May 2004.

**Note:**

***Inspector tools and additional guidance, as appropriate, is provided in Chapter 16 of this Manual.***



## **APPENDIX A**

Conformance Document CAMO





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## **APPENDIX B**

Conformance Document CAME



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## **APPENDIX C**

CAME Approval & Revision Record

Audit Monitoring Plan

Certification Folder Contents



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## CHAPTER 11

### Avionics & Special Operations Approvals

#### 11.1 Historical

For decades the only aircraft electrical equipment was the engine magneto to fire the spark plugs. Cockpit instruments were vacuum-operated from the engine's intake manifold or by air pressure from a pitot tube. Early radios were heavy, expensive and unreliable, hence installed only if absolutely necessary. Electronics systems (vacuum tubes) emerged during WWII for communications, navigation and fire control. Then came the invention of the transistor. Complex autopilot functions, waypoint steering and electronic displays became commonplace in the 1980s; on-board processing became universal in the 1990s. Recently, fly-by-wire (FBW) control systems have replaced the traditional mechanical methods for moving the airplane's control surfaces. Furthermore, FBW has evolved to full digital control. The Airbus A-320 was the first commercial aircraft to implement FBW; The Boeing 777 has since integrated it with their flight management system. Recent trends in electronics are toward widespread use of GPS, and extensive electronic passenger entertainment suites.

#### 11.2 General

International regulations prohibit aircraft from entering high-density airspace and heavily trafficked over-ocean airways without suitable avionics. The wide-spread use of GPS navigation and increasing complexity of passenger entertainment systems have become the latest electronic trends on large commercial aircraft.

#### 11.3 Responsibilities

Aviation Safety Inspectors (Avionics) have the primary responsibility for airworthiness program functions that involve avionics equipment and systems. The duties listed below are functions that require the specific expertise and experience related to the avionics specialty (see also HCAA Administration Procedures Manual)

The primary avionics duties, responsibilities, and functions, based on the applicable Air Transport Association (ATA) chapter coding system, include the evaluation, the monitoring and the inspection of the following equipment and systems:

Autopilots, Communications, Electrical power, Instruments, Lights, Navigation, Engine indicating

whereas the secondary avionics duties, responsibilities, and functions include the evaluation, the monitoring and the inspection of the following equipment and systems:

Fire protection/detection, Flight control logic system – indicating, Fuel/Fuel system – indicating, Ice and rain protection: Pitot - static, Antennas -radome, Landing gear: Position and warning, Anti skid -electronics, Airborne aux power indicating, Door warnings, Rotors indicating, Powerplant electrical harness, Engine fuel and control indicating, Ignition electrical power supply, Air indicating, Oil indicating.



## 11.4 All Weather Operations (AWO)

REF: EU-OPS 1, Subpart E

EASA CS-AWO-Decision 2003/06/RM

ICAO Manual of AWO, 2<sup>nd</sup> Edition, 1991 (Doc 9365)

Additional Ref.: ICAO Airworthiness Technical Manual (Doc 9051)

FAA AC120-28D, AC120-29A

FAA Order 8300.10, Volume 2, Chapter 3

### 11.4.1 Terminology

**Low visibility** as used in this context is taken to mean landing with minima less than Cat I or take-off with visibility less than 800 m

**Cat I** means a precision approach with a decision height (DH) not lower than 200 ft and a visibility of not less than 800 m or RVR not less than 500 m.

**Cat II** means a precision approach with a DH between 100 ft and 200 ft, and RVR not less than 350 m.

**Cat IIIA** means a precision approach with a DH below 100 ft or no DH, and RVR not less than 200 m.

**Cat IIIB** means a precision approach with a DH lower than 50 ft or with no DH, and RVR between 200 m and 50 m.

**Cat IIIC** means a precision approach with no DH and no RVR limitations.

### 11.4.2 Initial Contact and Pre-Application Meeting

At the initial contact with the applicant, usually by telephone, fax or a letter of intent, HCAA will schedule a pre-application meeting. This meeting will take place at HCAA's premises and the applicant will be given the «AWO Application Package Documents» in electronic form (floppy disk/Cd-rom) which includes the following:

- ◆ AWO Application Form and Compliance Statement (Appendix A)
- ◆ AWO Conformance Document (Appendix B)
- ◆ AWO Process Flow Chart (Appendix C)
- ◆ A list of the required Manuals/Documents for submission (see also para. 11.4.4)

A briefing is also given to the applicant during this meeting on the AWO certification process, including guidance on the completion of the application form and conformance document. The Head of the Airworthiness Section, or his delegates, is the personnel responsible to conduct and offer guidance at this pre-application meeting. The applicant should be represented (at a minimum), by the Post Holders of Maintenance and Training. It should 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 AWO certification process. This designated person 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 HCAA are directed to, and properly addressed by the appropriate personnel within the company. 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 company coordinator will be to arrange the on-site visits and ensure that the appropriate company personnel will be present and available.

**Guidance on the completion of the AWO Conformance Document, will be provided to the applicant during the Pre-Application meeting.**



### 11.4.3 Application and Application Meeting

HCAA receives application as described below and determines what type of AWO approval the applicant is requesting (Cat II / IIIa / IIIb / Low Visibility Take-Off).

The applicant must submit the completed *HCAA AWO Application Form and Compliance Statement (shown in Appendix A)* and *HCAA AWO Conformance Document (Appendix B)* in accordance with the *Incoming Documents* procedure described in the HCAA Administration Procedures Manual, Chapter 5.

Upon receipt of the application documentation, and prior to the Application Meeting, a "Certification Team" is assigned to oversee the AWO certification process of the new applicant by the Flight Standard Division (FSD/D2) Director.

The composition of the team will be tailored to the size and the complexity of the company, but will include at least:

One Flight Operations Inspector (FOI)  
One Airworthiness Inspector (Avionics)

The knowledge, experience and background of the persons assigned will be considered in the appointment of the team and matched to the type of aircraft and the requested AWO approval. Additional ASI inspectors of another specialty (e.g. Maintenance) will also be assigned to the Certification Team if deemed necessary.

The Flight Operations Inspector has the primary responsibility to grant the operator approval for lower minimums. The Airworthiness Inspector's (Avionics) responsibility is to evaluate and approve the avionics requirements and support programs. Final approval of all initial Cat. II / III operations should therefore be coordinated between HCAA Operations and Airworthiness Sections.

In order for the Application to be considered officially submitted, the above HCAA AWO Application Form must be submitted along with **all required Manuals/Documentation** as described in detail in paragraph 11.4.4 of this Chapter. If complete, the application will be attempted to be processed within 30 days. The 30 day period will not commence until all the documentation has been submitted. The quality of the documentation submitted will also have an effect on the 30 day period.

**The Application Meeting, which officially starts the AWO certification process, should not be held unless it is assured that all the documents required with the application will be completed and ready to be officially submitted at least three days prior to the Application Meeting.**

The Application Meeting should be cancelled and rescheduled if the application documentation is not complete as stated.

The Application Meeting is only held if the appropriate personnel are present. As mentioned above the operator's management personnel in attendance should include at least the Post Holders of Maintenance and Training.

The main objectives of the Application Meeting are to:

- ◆ Introduce the Operator's Management personnel to the HCAA Maintenance Certification Team.
- ◆ Assure that the applicant's maintenance team understands the AWO certification process.
- ◆ Answer any questions the Applicant may have.
- ◆ Distribute the documents/manuals to the appropriate maintenance members of the Certification Team.
- ◆ Discuss and agree upon the target dates for the various phases of the certification process.





#### 11.4.4 Required Manual(s)/Documentation

The operator's management personnel should submit the following:

- ◆ Completed HCAA AWO Application Form and Compliance Statement
- ◆ Completed HCAA AWO Conformance Document
- ◆ Sections of the AFM Manual that document AWO approval (if required)
- ◆ AWO maintenance practices and procedures
- ◆ Aircraft Minimum Equipment List (MEL)
- ◆ Maintenance Program that includes items pertinent to AWO equipment
- ◆ Downgrading/Upgrading Procedures/Internal Reporting Procedures
- ◆ Maintenance training syllabi
- ◆ List of Test Equipment used
- ◆ Service Bulletin – STC – or Major modification approval (if required)
- ◆ Any additional document requested by the Certification Team (if required)

#### 11.4.5 Manual(s)/Documentation Review

The review of the submitted Manual(s)/Documentation is carried out by the Airworthiness Certification Team to assess the JAR-AWO requirements.

This is conducted by a general review of the documents/manuals submitted by the applicant with the application. This review provides the applicant with timely initial feedback and assesses the applicants understanding of the requirements.

##### 11.4.5.1 AWO Conformance Document

The Certification Team will evaluate the AWO Conformance Document. If the Conformance Document needs further work, it should be returned to the operator together with the comments summary as an attachment to an Audit Finding Form, shown in Appendix F of Chapter 7. The Conformance Document is shown in Appendix B at the end of this Chapter.

##### 11.4.5.2 Aircraft Flight Manual (AFM)

The Aircraft Flight Manual will be reviewed by the Certification Team only to the extent of its sections that document AWO approval.

##### 11.4.5.3 Minimum Equipment List (MEL)

*[REF: JAR-AWO, Subpart 2, 221 for Cat. II minimum required equipment installed](#)  
[JAR-AWO, Subpart 3, 321 for Cat. III minimum required equipment installed](#)  
[ICAO Doc 9365, 2<sup>nd</sup> Edition, 1991, para. 4.2.3, 4.2.4 and 5.5.7](#)*

The Operator's MEL is evaluated by the Certification Team to ensure that the appropriate sections are revised to identify Category II / III required systems and special procedures, if applicable. The inspector's evaluation of the MEL document is accomplished by reference to the HCAA-MEL-003 Guidance List, shown in Appendix L of Chapter 7. If the MEL needs further work, it should be returned to the operator together with the comments summary as an attachment to an Audit Finding Form, shown in Appendix F of Chapter 7.

##### 11.4.5.4 Aircraft Maintenance Program

The aircraft maintenance program should identify all special techniques, maintenance/inspection frequencies, and test equipment requirements to support the program and specify the method of controlling the operational status of the aircraft. The aircraft maintenance program established by the operator must ensure that the airborne equipment continues to operate in service to the required performance level and it



should be capable of detecting any deterioration in the over-all level of equipment performance.

In reviewing the aircraft maintenance program, the airworthiness inspector (Avionics) must emphasize the importance of maintenance in the following areas:

- ◆ Maintenance procedures
- ◆ Maintenance and calibration of test equipment

As a general guideline, the Avionics Inspector must review the applicant's Maintenance/Inspection Program to ensure that it contains control and accountability of the following:

- ◆ All maintenance accomplished on lower minimum required systems and equipment
- ◆ All alterations to systems and equipment
- ◆ Approach status of each aircraft at all times
- ◆ Evaluations of self-test, Built-In Test Equipment (BITE), or Automated Test Equipment (ATE) to ensure suitability
- ◆ Spare equipment
- ◆ Maintenance calibration, use of test equipment, records/reporting requirements
- ◆ Repetitive and chronic discrepancies to ensure the affected aircraft remains out of lower minimums approach status until positive corrective actions is made
- ◆ All aircraft in the fleet that have not been evaluated for lower minimums approaches

#### 11.4.5.5 Training Programs (if applicable)

The Certification Team should review the personnel training requirements to ensure that procedures are established for the following:

- ◆ Ensuring personnel contracted to perform Category II / III related maintenance are qualified and the program requirements are made available to these persons
- ◆ Initial and/or recurrent training for the operator's maintenance personnel. Personnel not qualified to perform maintenance on Category II / III systems and equipment, including flight crew and dispatch, should be trained in the airworthiness release requirements of the lower minimums program.

#### 11.4.5.6 Internal Reporting System

REF: EU-OPS 1.440

ICAO AWO Manual (Doc 9365), para. 5.5.4 – 5.5.6

A suitable system for recording approach and/or landing success and failure must have been established by the operator and maintained to monitor the overall safety of the operation. The reporting system will enable continual checks and periodic reviews to be made during the operational evaluation period before the operator is authorized to conduct Category II and III operations. Furthermore, it should continue to be used to ensure that the required standard is maintained in service.

The operator's internal reporting system should cover all successful and unsuccessful approaches, with reasons for the latter, and include a record of system component failures. In general, this is accomplished by the operator initiating a system of "pilot reporting" where the crew fills out an appropriate form after each auto-land.

This provides assistance in fault rectification for unsuccessful auto-lands and is a means of providing trend information for the maintenance system.



#### 11.4.6 Corrective Actions

Manuals/Documentation submitted by the applicant are checked by reviewing the completed AWO Conformance Report that has been submitted, against the manuals/documents. If any non-compliance's are found and/or if corrections are needed, the assigned ASI Inspectors will notify in writing the applicant of the non-compliance's and/or corrections needed. A copy of this notification letter should also be inserted in the Operator's file appropriate section (correspondence). It is important that all correspondence with the Applicant should abide by the procedures for Incoming and Outgoing Documents described in HCAA Administration Manual, Chapter 13. On the basis of the findings against the Manuals, the Operator is responsible for the relevant corrective actions / modifications required by HCAA. Furthermore, the certification team members must properly track each item in order to ensure its rectification. ***Any findings raised will be processed in accordance with para. 16.20 of this Manual.***

#### 11.4.7 On-Site Inspections

During the on-site inspection phase the facilities, services, maintenance procedures, aircraft(s) and equipment proposed for the operation are assessed for acceptability.

The following steps can be used as a general guideline:

- ◆ Determine the areas to be audited and who will do what.
- ◆ From the AWO Conformance Report and Maintenance Program pick specific items/tasks and subjects for the audit – schedule, the provisional number of days, plan travel arrangements (if applicable), etc.
- ◆ Notify the applicant of the start of the audit and request an opening meeting with the attendance of the Postholder of Maintenance.

##### 11.4.7.1 Opening Meeting

The purpose of the opening meeting is to:

- ◆ Introduce the HCAA Certification Team to the applicant's Management
- ◆ Briefly explain the purpose of the approval procedure - to comply with JAA requirements.
- ◆ Describe the process to be followed
- ◆ Explain the Audit Finding Forms and the Level of Findings
- ◆ Clearly explain that the level of the finding is provisional until endorsed by the Audit Manager
- ◆ Explain that all Level 1 & 2 findings must be closed before the approval can be granted
- ◆ Request the Closing Meeting - This will either be a debrief at the end of the on-site audit or a specific meeting set for a few days later when the report has been produced and can be handed to the Operator.

##### 11.4.7.2 On-Site Audit

During the on-site Audit:

- ◆ Each member of Team to be accompanied by representative of the Operator.
- ◆ Follow the Audit Plan and audit against the Requirement/JAR-AWO.
- ◆ Follow-up on any Audit Findings that have been issued during the Manual(s)/Documentation Review phase of the Approval.
- ◆ Record any findings in Audit Finding Form(s) shown in Appendix F of Chapter 7.
- ◆ Draft any Finding Forms and provide provisional copy to the operator.
- ◆ Team Leader to monitor progress of audit against the plan and time-scale what was projected.
- ◆ Confirm time and date for Closing Meeting.



#### **11.4.8 Validation Flight**

The Airworthiness Inspector(s) may request to participate in a validation flight where auto-land procedures and accuracy can be demonstrated.

#### **11.4.9 Inspection Results and Closing of Findings**

[REF: HCAA Administrative Procedures Manual](#)  
[HCAA OPS Procedures Manual](#)

##### **11.4.9.1 Team Report**

- ◆ To be produced in the standard format identifying both positive and negative features of the organization.
- ◆ Comments in the report can be subjective but any finding of non-compliance with the requirement must be objective and supported by an audit finding attached as an appendix to the report.
- ◆ The report must be signed by the Team and endorsed by the Airworthiness Section Manager.

##### **11.4.9.2 Closing Meeting (Held at HCAA or the Company)**

- ◆ Thank organization for co-operation during the audit.
- ◆ Review the content of the report highlighting both positive and negative aspects.
- ◆ Review the specific findings that must be resolved and closed before approval.
- ◆ Provide the opportunity for queries and clarification.
- ◆ Confirm the process of follow-up and closure of the findings

##### **11.4.9.3 Assemble Certification File**

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

- ◆ AWO Conformance Report - See Appendix B
- ◆ Completed AWO Application Form & Compliance Statement - see Appendix A
- ◆ Any correspondence with the operator (in the appropriate Section)

##### **11.4.9.4 Audit Follow-up (if applicable)**

The operator responds to findings (if applicable) and resubmits the Audit Finding Form 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 close the findings.

#### **11.4.10 Preparation for Issue of the Approval**

[REF: HCAA Administrative Procedures Manual](#)  
[HCAA OPS Procedures Manual](#)

Once the Certification Team is satisfied that all the relevant findings are closed for the applicable items, as described above, it will prepare the Certification folder to be presented to the DFS Director,



The following is a list of the Certification folder contents :

- ◆ Applicant's Letter of Intent (if applicable)
- ◆ Appointment of Certification Team/Team Leader
- ◆ Completed HCAA AWO Application Form and Compliance Statement
- ◆ Completed HCAA AWO Conformance Document
- ◆ Sections of the AFM Manual that document AWO approval
- ◆ AWO maintenance practices and procedures Manual
- ◆ Aircraft Minimum Equipment List (MEL)
- ◆ Maintenance Program that includes items pertinent to AWO equipment
- ◆ Maintenance training syllabi
- ◆ List of Test Equipment used
- ◆ Service Bulletin – STC – or Major modification approval
- ◆ AWO Letter of Approval
- ◆ Operator's approach and/or landing success/failure recording system (EU-OPS 1.440)
- ◆ Any additional document requested by the Certification Team (if applicable)

#### **11.4.10.1 Quality Check**

The Team Leader will present the Certification File to the Airworthiness Section Manager, or in his absence to the Director of Flight Standards, who will carry out the 'quality check'. This must include a review of all documents from the initial application through to the drafted AWO Letter of Approval.

At this time the annual provisional monitoring plan for the Operator is reviewed and approved. Provided the quality check is satisfactory the Airworthiness Section Manager or the DFS Director will endorse the drafted AWO Letter of Approval.

#### **11.4.10.2 Issue of the Approval**

Following the Quality Check, the DFS Director will sign and stamp the AWO Letter of Approval and pass them back to the Team Leader for processing. The original signed and stamped AWO Letter of Approval is sent to the Operator with a cover letter, whereas one copy remains in the operator's certification file and another copy is transmitted internally to FSD's Section C (Operations) where the operator's AOC Certificate is issued/updated according to HCAA Operations Procedures Manual.

#### **11.4.10.3 Annual Monitoring Provisions**

The DFS Director will appoint the Principal Avionics Inspector (PMI) for the Operator and issue a Protocol for the annual monitoring requirements.

#### **11.4.10.4 HCAA Certification File**

The completed Certification File is then placed in the allocated space in the library.

#### **11.4.11 Update ADMS System**

All findings recorded on the Audit Finding forms during the on-site inspection's phase of the approval process will be entered into the ADMS system for tracking purposes.

Upon satisfactory completion of the approval process all relevant data is also be entered into the ADMS System (AWO Category, Aircraft Type(s), etc.) so that the AOC can be issued/updated by the FSD Operations (C) Department, according to HCAA Operations Procedures Manual.



## 11.5 RVSM Approval

REF: JAA Leaflet 6  
ICAO Doc. 9574  
FAA 91-RVSM

### 11.5.1 Terminology

**Aberrant aircraft.** Those aircraft which exhibit measured height-keeping performance that is significantly different from the core height-keeping performance measured for the whole population of aircraft operating in RVSM airspace.

**Aircraft type groupings.** Aircraft are considered to belong to the same group if they are designed and assembled by one manufacturer and are of nominally identical design and build with respect to all details which could influence the accuracy of height-keeping performance.

**Airworthiness approval.** The process of assuring the State authority that aircraft meet RVSM MASPS. Typically, this would involve an operator meeting the requirements of the aircraft manufacturer service bulletin for that aircraft and having the State authority verify the successful completion of that work.

**Altimetry system error (ASE).** The difference between the altitude indicated by the altimeter display, assuming a correct altimeter barometric setting, and the pressure altitude corresponding to the undisturbed ambient pressure.

**Altimetry system error stability.** Altimetry system error for an individual aircraft is considered to be stable if the statistical distribution of altimetry system error is within agreed limits over an agreed period of time.

**Altitude-keeping device.** Any equipment which is designed to automatically control the aircraft to a referenced pressure altitude.

**Assigned altitude deviation (AAD).** The difference between the transponded Mode C altitude and the assigned altitude/flight level.

**Automatic altitude-keeping device.** Any equipment which is designed to automatically control the aircraft to a referenced pressure-altitude.

**Collision risk.** The expected number of mid-air aircraft accidents in a prescribed volume of airspace for a specific number of flight hours due to loss of planned separation.

*Note.— One collision is considered to produce two accidents.*

**Flight technical error (FTE).** The difference between the altitude indicated by the altimeter display being used to control the aircraft and the assigned altitude/flight level.

**Height-keeping capability.** The aircraft height-keeping performance that can be expected under nominal environmental operating conditions with proper aircraft operating practices and maintenance.

**Height-keeping performance.** The observed performance of an aircraft with respect to adherence to cleared flight level.

**Non-compliant aircraft.** An aircraft configured to comply with the requirements of RVSM MASPS which, through height monitoring, is found to have a total vertical error (TVE) or an assigned altitude deviation (AAD) of 90 m (300 ft) or greater or an altimetry system error (ASE) of 75 m (245 ft) or more.

**NOTAM.** A notice distributed by means of telecommunication containing information concerning the establishment, condition or change in any aeronautical facility, service, procedure or hazard, the timely knowledge of which is essential to personnel concerned with flight operations.

**Occupancy.** A parameter of the collision risk model which is twice the count of aircraft proximate pairs in a single dimension divided by the total number of aircraft flying the candidate paths in the same time interval.





**Operational error.** Any vertical deviation of an aircraft from the correct flight level as a result of incorrect action by ATC or the aircraft crew.

**Overall risk.** The risk of collision due to all causes, which includes the technical risk (see definition) and all risk due to operational errors and in-flight contingencies.

**Passing frequency.** The frequency of events in which two aircraft are in longitudinal overlap when travelling in the opposite or same direction on the same route at adjacent flight levels and at the planned vertical separation.

**RVSM approval.** The term used to describe the successful completion of airworthiness approval and operational approval (if required).

**Target level of safety (TLS).** A generic term representing the level of risk which is considered acceptable in particular circumstances.

**Technical risk.** The risk of collision associated with aircraft height-keeping performance.

**Total vertical error (TVE).** The vertical geometric difference between the actual pressure altitude flown by an aircraft and its assigned pressure altitude (flight level).

**Track.** The projection on the earth's surface of the path of an aircraft, the direction of which path at any point is usually expressed in degrees from North (true, magnetic or grid).

**Vertical separation.** The spacing provided between aircraft in the vertical plane to avoid collision.

**Vertical separation minimum (VSM).** VSM is documented in the *Procedures for Air Navigation Services — Air Traffic Management* (PANS-ATM, Doc 4444) as being a nominal 300 m (1 000 ft) below FL 290 and 600 m (2 000 ft) above FL 290 except where, on the basis of regional agreement, a value of less than 600 m (2 000 ft) but not less than 300 m (1 000 ft) is prescribed for use by aircraft operating above FL 290 within designated portions of the airspace.

### 11.5.2 Initial Contact and Pre-Application Meeting

At the initial contact with the applicant, usually by telephone, fax or a letter of intent, HCAA will schedule a pre-application meeting. This meeting will take place at HCAA's premises and the applicant will be given the «RVSM Application Package Documents» in electronic form (floppy disk/Cd-rom) which includes the following:

- ◆ RVSM Application Form and Compliance Statement (Appendix A)
- ◆ RVSM Conformance Document (Appendix B)
- ◆ RVSM Process Flow Chart (Appendix C)
- ◆ A list of the required Manuals/Documents for submission (see also para. 11.5.4)

A briefing is also given to the applicant during this meeting on the RVSM certification process, including guidance on the completion of the application form and conformance document. The Head of the Airworthiness Section, or his delegates, is the personnel responsible to conduct and offer guidance at this pre-application meeting. The applicant should be represented (at a minimum), by the Post Holders of Maintenance and Training. It should 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 RVSM certification process. This designated person 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 HCAA are directed to, and properly addressed by the appropriate personnel within the company. 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 company coordinator will be to arrange the on-site visits and ensure that the appropriate company personnel will be present and available.



**Guidance on the completion of the RVSM Conformance Document, will be provided to the applicant during the Pre-Application meeting.**

### **11.5.3 Application and Application Meeting**

The applicant must submit the completed *HCAA RVSM Application Form and Compliance Statement (shown in Appendix A)* and *HCAA RVSM Conformance Document (Appendix B)* in accordance with the *Incoming Documents* procedure described in the HCAA Administration Procedures Manual, Chapter 5.

Upon receipt of the application documentation, and prior to the Application Meeting, a "Certification Team" is assigned to oversee the RVSM certification process of the new applicant by the Flight Standard Division (FSD/D2) Director.

The composition of the team will be tailored to the size and the complexity of the company, but will include at least:

**One** Flight Operations Inspector (FOI)

**One** Airworthiness Inspector (Avionics)

The knowledge, experience and background of the persons assigned will be considered in the appointment of the team and matched to the type of aircraft and the requested RVSM approval. Additional ASI inspectors of another specialty (e.g. Maintenance) will also be assigned to the Certification Team if deemed necessary.

The Flight Operations Inspector has the primary responsibility to grant the operator RVSM operation approval. The Airworthiness Inspector's (Avionics) responsibility is to evaluate and approve the avionics requirements and support programs. Final approval of all initial RVSM operations should therefore be coordinated between HCAA Operations and Airworthiness Sections.

In order for the Application to be considered officially submitted, the above HCAA RVSM Application Form must be submitted along with **all required Manuals/Documentation** as described in detail in paragraph 11.4.4 of this Chapter. If complete, the application will be attempted to be processed within 30 days. The 30 day period will not commence until all the documentation has been submitted. The quality of the documentation submitted will also have an effect on the 30 day period.

**The Application Meeting, which officially starts the RVSM certification process, should not be held unless it is assured that all the documents required with the application will be completed and ready to be officially submitted at least three days prior to the Application Meeting.**

The Application Meeting should be cancelled and rescheduled if the application documentation is not complete as stated.

The Application Meeting is only held if the appropriate personnel are present. As mentioned above the operator's management personnel in attendance should include at least the Post Holders of Maintenance and Training.

The main objectives of the Application Meeting are to:

- ◆ Introduce the Operator's Management personnel to the HCAA Maintenance Certification Team.
- ◆ Assure that the applicant's maintenance team understands the RVSM certification process.
- ◆ Answer any questions the Applicant may have.
- ◆ Distribute the documents/manuals to the appropriate maintenance members of the Certification Team.
- ◆ Discuss and agree upon the target dates for the various phases of the certification process.





#### **11.5.4 Required Manual(s)/Documentation**

The operator's management personnel should submit the following:

- ◆ Completed HCAA RVSM Application Form and Compliance Statement
- ◆ Completed HCAA RVSM Conformance Document
- ◆ Sections of the AFM Manual that document RVSM approval
- ◆ RVSM maintenance practices and procedures
- ◆ Aircraft Minimum Equipment List (MEL)
- ◆ Maintenance Program that includes items pertinent to RVSM equipment
- ◆ Downgrading/Upgrading Procedures
- ◆ Height Monitoring Test Result
- ◆ Maintenance training syllabi
- ◆ List of Test Equipment used
- ◆ Service Bulletin – STC – or Major modification approval
- ◆ Any additional document requested by the Certification Team (if required)

#### **11.5.5 Manual(s)/Documentation Review**

The review of the submitted Manual(s)/Documentation is carried out by the Airworthiness Certification Team to assess the JAA requirements.

This is conducted by a general review of the documents/manuals submitted by the applicant with the application. This review provides the applicant with timely initial feedback and assesses the applicants understanding of the requirements.

##### **11.5.5.1 RVSM Conformance Document**

The Certification Team will evaluate the RVSM Conformance Document. If the Conformance Document needs further work, it should be returned to the operator together with the comments summary as an attachment to an Audit Finding Form, shown in Appendix F of Chapter 7. The Conformance Document is shown in Appendix B at the end of this Chapter.

##### **11.5.5.2 Aircraft Flight Manual (AFM)**

The Aircraft Flight Manual will be reviewed by the Certification Team only to the extent of its sections that document RVSM approval.

##### **11.5.5.3 Minimum Equipment List (MEL)**

The Operator's MEL is evaluated by the Certification Team to ensure that the appropriate sections are revised to identify RVSM-required systems and special procedures, if applicable. The inspector's evaluation of the MEL document is accomplished by reference to the HCAA-MEL-003 Guidance List, shown in Appendix L of Chapter 7. If the MEL needs further work, it should be returned to the operator together with the comments summary as an attachment to an Audit Finding Form, shown in Appendix F of Chapter 7.

##### **11.5.5.4 Aircraft Maintenance Program**

The aircraft maintenance program should identify all special techniques, maintenance/inspection frequencies, and test equipment requirements to support the program and specify the method of controlling the operational status of the aircraft. The aircraft maintenance program established by the operator must ensure that the airborne equipment continues to operate in service to the required performance level and it should be capable of detecting any deterioration in the over-all level of equipment performance.

In reviewing the aircraft maintenance program, the airworthiness inspector (Avionics) must emphasize the importance of maintenance in the following areas:



- ◆ Maintenance procedures
- ◆ Maintenance and calibration of test equipment

As a general guideline, the Avionics Inspector must review the applicant's Maintenance/Inspection Program to ensure that it contains control and accountability of the following:

- ◆ All maintenance accomplished on lower minimum required systems and equipment
- ◆ All alterations to systems and equipment
- ◆ Approach status of each aircraft at all times
- ◆ Evaluations of self-test, Built-In Test Equipment (BITE), or Automated Test Equipment (ATE) to ensure suitability
- ◆ Spare equipment
- ◆ Maintenance calibration, use of test equipment, records/reporting requirements
- ◆ Repetitive and chronic discrepancies to ensure the affected aircraft remains out of lower minimums approach status until positive corrective actions is made
- ◆ All aircraft in the fleet that have not been evaluated for lower minimums approaches

#### **11.5.5.5 Training Programs (if applicable)**

The Certification Team should review the personnel training requirements to ensure that procedures are established for the following:

- ◆ Ensuring personnel contracted to perform RVSM-related maintenance are qualified and the program requirements are made available to these persons
- ◆ Initial and/or recurrent training for the operator's maintenance personnel. Personnel performing maintenance on RVSM-related systems and equipment should be appropriately trained in the airworthiness release requirements.

#### **11.5.5.6 Aircraft Downgrade/Upgrade Procedure**

A suitable system for monitoring and recording the aircraft status with regard to RVSM operational capability must be established by the operator. The system should include an acceptable method for monitoring RVSM capability of the aircraft at all times, as well as detailed procedures to downgrade/upgrade the aircraft's RVSM operational capability. Authorized technical personnel performing RVSM-related maintenance must be identified as well as specific initial/recurrent training requirements.

#### **11.5.6 Corrective Actions**

Manuals/Documentation submitted by the applicant are checked by reviewing the completed RVSM Conformance Report that has been submitted, against the manuals/documents. If any non-compliance's are found and/or if corrections are needed, the assigned ASI Inspectors will notify in writing the applicant of the non-compliance's and/or corrections needed. A copy of this notification letter should also be inserted in the Operator's file appropriate section (correspondence). It is important that all correspondence with the Applicant should abide by the procedures for Incoming and Outgoing Documents described in HCAA Administration Manual, Chapter 13. On the basis of the findings against the Manuals, the Operator is responsible for the relevant corrective actions / modifications required by HCAA. Furthermore, the certification team members must properly track each item in order to ensure its rectification. ***Any findings raised will be processed in accordance with para. 16.20 of this Manual.***

#### **11.5.7 On-Site Inspections**

During the on-site inspection phase the facilities, services, maintenance procedures, aircraft(s) and equipment proposed for the operation are assessed for acceptability.



The following steps can be used as a general guideline:

- ◆ Determine the areas to be audited and who will do what.
- ◆ From the RVSM Conformance Report and Maintenance Program pick specific items/tasks and subjects for the audit – schedule, the provisional number of days, plan travel arrangements (if applicable), etc.
- ◆ Notify the applicant of the start of the audit and request an opening meeting with the attendance of the Postholder of Maintenance.

#### **11.5.7.1 Opening Meeting**

The purpose of the opening meeting is to:

- ◆ Introduce the HCAA Certification Team to the applicant's Management
- ◆ Briefly explain the purpose of the approval procedure - to comply with JAA requirements.
- ◆ Describe the process to be followed
- ◆ Explain the Audit Finding Forms and the Level of Findings
- ◆ Clearly explain that the level of the finding is provisional until endorsed by the Audit Manager
- ◆ Explain that all Level 1 & 2 findings must be closed before the approval can be granted
- ◆ Request the Closing Meeting - This will either be a debrief at the end of the on-site audit or a specific meeting set for a few days later when the report has been produced and can be handed to the Operator.

#### **11.5.7.2 On-Site Audit**

During the on-site Audit:

- ◆ Each member of Team to be accompanied by representative of the Operator.
- ◆ Follow the Audit Plan and audit against the JAA/ICAO Requirement.
- ◆ Follow-up on any Audit Findings that have been issued during the Manual(s)/Documentation Review phase of the Approval.
- ◆ Record any findings in Audit Finding Form(s) shown in Appendix F of Chapter 7.
- ◆ Draft any Finding Forms and provide provisional copy to the operator.
- ◆ Team Leader to monitor progress of audit against the plan and time-scale what was projected.
- ◆ Confirm time and date for Closing Meeting.

#### **11.5.8 Validation Flight**

The Airworthiness Inspector(s) may request to participate in a Validation Flight (if required) where RVSM operation accuracy can be demonstrated.

#### **11.5.9 Inspection Results and Closing of Findings**

##### **11.5.9.1 Team Report**

- ◆ To be produced in the standard format identifying both positive and negative features of the organization.
- ◆ Comments in the report can be subjective but any finding of non-compliance with the requirement must be objective and supported by an audit finding attached as an appendix to the report.
- ◆ The report must be signed by the Team and endorsed by the Airworthiness Section Manager.



#### **11.5.9.2 Closing Meeting (Held at HCAA or the Company)**

- ◆ Thank organization for co-operation during the audit.
- ◆ Review the content of the report highlighting both positive and negative aspects.
- ◆ Review the specific findings that must be resolved and closed before approval.
- ◆ Provide the opportunity for queries and clarification.
- ◆ Confirm the process of follow-up and closure of the findings

#### **11.5.9.3 Assemble Certification File**

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

- ◆ RVSM Conformance Report - See Appendix B
- ◆ Completed RVSM Application Form & Compliance Statement - see Appendix A
- ◆ Any correspondence with the operator (in the appropriate Section)

#### **11.5.9.4 Audit Follow-up (if applicable)**

The operator responds to findings (if applicable) and resubmits the Audit Finding Form 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 close the findings.

#### **11.5.10 Preparation for Issue of the Approval**

Once the Certification Team is satisfied that all the relevant findings are closed for the applicable items, as described above, it will prepare the Certification folder to be presented to the DFS Director.

The following is a list of the Certification folder contents :

- ◆ Applicant's Letter of Intent (if applicable)
- ◆ Appointment of Certification Team/Team Leader
- ◆ Completed HCAA RVSM Application Form and Compliance Statement
- ◆ Completed HCAA RVSM Conformance Document
- ◆ Sections of the AFM Manual that document RVSM approval
- ◆ RVSM maintenance practices and procedures
- ◆ Aircraft Minimum Equipment List (MEL)
- ◆ Maintenance Program that includes items pertinent to RVSM equipment
- ◆ Maintenance training syllabi
- ◆ List of Test Equipment used
- ◆ Service Bulletin – STC – or Major modification approval
- ◆ RVSM Letter of Approval
- ◆ Height monitoring test result
- ◆ Aircraft downgrade/upgrade procedure
- ◆ Any additional document requested by the Certification Team (if required)

#### **11.5.10.1 Quality Check**

The Team Leader will present the Certification File to the Airworthiness Section Manager, or in his absence to the Director of Flight Standards, who will carry out the



'quality check'. This must include a review of all documents from the initial application through to the drafted RVSM Letter of Approval.

At this time the annual provisional monitoring plan for the Operator is reviewed and approved. Provided the quality check is satisfactory the Airworthiness Section Manager or the DFS Director will endorse the drafted RVSM Letter of Approval.

#### **11.5.10.2 Issue of the Approval**

Following the Quality Check, the DFS Director will sign and stamp the RVSM Letter of Approval and pass them back to the Team Leader for processing. The original signed and stamped RVSM Letter of Approval is sent to the Operator with a cover letter, whereas one copy remains in the operator's certification file and another copy is transmitted internally to FSD's Section C (Operations) where the operator's AOC Certificate is issued/updated according to HCAA Operations Procedures Manual, in order to include the RVSM approval and limitations (if any).

#### **11.5.10.3 Annual Monitoring Provisions**

The DFS Director will appoint the Principal Avionics Inspector (PMI) for the Operator and issue a Protocol for the annual monitoring requirements.

#### **11.5.10.4 HCAA Certification File**

The completed Certification File is then placed in the allocated space in the library.

#### **11.5.11 Update ADMS System**

All findings recorded on the Audit Finding forms during the on-site inspection's phase of the approval process will be entered into the ADMS system for tracking purposes.

Upon satisfactory completion of the approval process all relevant data is also be entered into the ADMS System [RVSM, Aircraft Type(s), Limitations (if any), etc.] so that the AOC can be issued/updated by the FSD Operations (C) Department, according to HCAA Operations Procedures Manual.



## 11.6 BRNAV / PRNAV Approval

REF: EASA AMC 20-4 (Annex to ED Decision No. 2003/12/RM)

EUROCONTROL Doc 003-93 (Ed. 2.2)  
ICAO Doc 7030, 4<sup>th</sup> Edition, Amendment 209  
ICAO EUR Doc 001 (RNAV/5)  
AIC A6/05 (AIP GREECE)

Additional Ref: FAA AC20-130A, AC20-138

### 11.6.1 Terminology

**Class-I Navigation.** Class-I navigation is any en-route flight operation or portion of a flight operation conducted in an area entirely within the officially designated operational service volumes of ICAO standard airways navigation facilities.

**Basic RNAV (BRNAV).** Aircraft navigation that meets a track keeping accuracy equal to or better than +/- 5 NM for 95% of the flight time (RNP-5). This value includes signal source error, airborne receiver error, display system error, and flight technical error. This navigation performance assumes the necessary coverage provided by satellite or ground-based navigation aids is available for the intended route to be flown.

**Global Positioning System (GPS).** A U.S. space-based positioning, velocity and time system composed of space, control, and user elements. The space element, nominally is composed of 24 satellites in six orbital planes. The control element consists of five monitor stations, three ground antennas and a master control station. The user element consists of antennas and receiver processors that provide positioning, velocity, and precise timing to the user.

**Pseudorange.** The distance from the user to a satellite plus an unknown user clock offset distance. With four satellite signals it is possible to compute position and offset distance. If the user clock offset is known, three satellite signals would suffice to compute a position.

**Receiver Autonomous Integrity Monitoring (RAIM).** A technique whereby a GPS receiver/processor monitors the GPS. This integrity determination is achieved by a consistency check among redundant measurements.

**Required Navigation Performance (RNP).** This is a statement of the navigation performance necessary for operation within a defined airspace.

**Required Navigation Performance Type (RNP Type).** RNP types are established according to navigational performance accuracy in the horizontal plane, that is, lateral and longitudinal position fixing. The type is identified as an accuracy value expressed in nautical miles (e.g. RNP-5).

### 11.6.2 Initial Contact and Pre-Application Meeting

At the initial contact with the applicant, usually by telephone, fax or a letter of intent, HCAA will schedule a pre-application meeting. This meeting will take place at HCAA's premises and the applicant will be given the «BRNAV Application Package Documents» in electronic form (floppy disk/Cd-rom) which includes the following:

- ◆ BRNAV/PRNAV Application Form and Compliance Statement (Appendix A)
- ◆ BRNAV/PRNAV Conformance Document (Appendix B)
- ◆ BRNAV/PRNAV Process Flow Chart (Appendix C)
- ◆ A list of the required Manuals/Documents for submission (see also para. 11.6.4)



A briefing is also given to the applicant during this meeting on the BRNAV/PRNAV certification process, including guidance on the completion of the application form and conformance document. The Head of the Airworthiness Section, or his delegates, is the personnel responsible to conduct and offer guidance at this pre-application meeting. The applicant should be represented (at a minimum), by the Post Holders of Maintenance and Training. It should 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 BRNAV/PRNAV certification process. This designated person 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 HCAA are directed to, and properly addressed by the appropriate personnel within the company. 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 company coordinator will be to arrange the on-site visits and ensure that the appropriate company personnel will be present and available.

**Guidance on the completion of the BRNAV/PRNAV Conformance Document, will be provided to the applicant during the Pre-Application meeting.**

### 11.6.3 Application and Application Meeting

The applicant must submit the completed *HCAA BRNAV/PRNAV Application Form and Compliance Statement (shown in Appendix A)* and *HCAA BRNAV/PRNAV Conformance Document (Appendix B)* in accordance with the *Incoming Documents* procedure described in the HCAA Administration Procedures Manual, Chapter 5.

Upon receipt of the application documentation, and prior to the Application Meeting, a "Certification Team" is assigned to oversee the BRNAV/PRNAV certification process of the new applicant by the Flight Standard Division (FSD/D2) Director.

The composition of the team will be tailored to the size and the complexity of the company, but will include at least:

- One** Flight Operations Inspector (FOI)
- One** Airworthiness Inspector (Avionics)

The knowledge, experience and background of the persons assigned will be considered in the appointment of the team and matched to the type of aircraft and the requested BRNAV approval. Additional ASI inspectors of another specialty (e.g. Maintenance) will also be assigned to the Certification Team if deemed necessary.

The Flight Operations Inspector has the primary responsibility to grant the operator BRNAV/PRNAV operation approval. The Airworthiness Inspector's (Avionics) responsibility is to evaluate and approve the avionics requirements and support programs. Final approval of all initial BRNAV/PRNAV operations should therefore be coordinated between HCAA Operations and Airworthiness Sections.

In order for the Application to be considered officially submitted, the above HCAA BRNAV/PRNAV Application Form must be submitted along with **all required Manuals/Documentation** as described in detail in paragraph 11.4.4 of this Chapter. If complete, the application will be attempted to be processed within 30 days. The 30 day period will not commence until all the documentation has been submitted. The quality of the documentation submitted will also have an effect on the 30 day period.

**The Application Meeting, which officially starts the BRNAV/PRNAV certification process, should not be held unless it is assured that all the documents required with the application will be completed and ready to be officially submitted at least three days prior to the Application Meeting.**

The Application Meeting should be cancelled and rescheduled if the application documentation is not complete as stated.





The Application Meeting is only held if the appropriate personnel are present. As mentioned above the operator's management personnel in attendance should include at least the Post Holders of Maintenance and Training.

The main objectives of the Application Meeting are to:

- ◆ Introduce the Operator's Management personnel to the HCAA Maintenance Certification Team.
- ◆ Assure that the applicant's maintenance team understands the BRNAV/PRNAV certification process.
- ◆ Answer any questions the Applicant may have.
- ◆ Distribute the documents/manuals to the appropriate maintenance members of the Certification Team.
- ◆ Discuss and agree upon the target dates for the various phases of the certification process.

#### **11.6.4 Required Manual(s)/Documentation**

The operator's management personnel should submit the following:

- ◆ Completed HCAA BRNAV/PRNAV Application Form and Compliance Statement
- ◆ Completed HCAA BRNAV/PRNAV Conformance Document
- ◆ Sections of the AFM Manual that document BRNAV/PRNAV approval
- ◆ BRNAV maintenance practices and procedures
- ◆ Aircraft Minimum Equipment List (MEL)
- ◆ Maintenance Program that includes items pertinent to BRNAV/PRNAV equipment
- ◆ Downgrading/Upgrading Procedures
- ◆ Height Monitoring Test Result
- ◆ Maintenance training syllabi
- ◆ List of Test Equipment used
- ◆ Service Bulletin – STC – or Major modification approval
- ◆ Any additional document requested by the Certification Team (if required)

#### **11.6.5 Manual(s)/Documentation Review**

The review of the submitted Manual(s)/Documentation is carried out by the Airworthiness Certification Team to assess the JAA requirements.

This is conducted by a general review of the documents/manuals submitted by the applicant with the application. This review provides the applicant with timely initial feedback and assesses the applicants understanding of the requirements.

##### **11.6.5.1 BRNAV Conformance Document**

The Certification Team will evaluate the BRNAV/PRNAV Conformance Document. If the Conformance Document needs further work, it should be returned to the operator together with the comments summary as an attachment to an Audit Finding Form, shown in Appendix F of Chapter 7. The Conformance Document is shown in *Appendix B* at the end of this Chapter.

##### **11.6.5.2 Aircraft Flight Manual (AFM)**

The Aircraft Flight Manual will be reviewed by the Certification Team only to the extent of its sections that document BRNAV/PRNAV approval.





#### **11.6.5.3 Minimum Equipment List (MEL)**

The Operator's MEL is evaluated by the Certification Team to ensure that the appropriate sections are revised to identify BRNAV/PRNAV -required systems and special procedures, if applicable. The inspector's evaluation of the MEL document is accomplished by reference to the HCAA-MEL-003 Guidance List, shown in Appendix L of Chapter 7. If the MEL needs further work, it should be returned to the operator together with the comments summary as an attachment to an Audit Finding Form, shown in Appendix F of Chapter 7.

#### **11.6.5.4 Aircraft Maintenance Program**

The aircraft maintenance program should identify all special techniques, maintenance/inspection frequencies, and test equipment requirements to support the program and specify the method of controlling the operational status of the aircraft. The aircraft maintenance program established by the operator must ensure that the airborne equipment continues to operate in service to the required performance level and it should be capable of detecting any deterioration in the over-all level of equipment performance.

In reviewing the aircraft maintenance program, the airworthiness inspector (Avionics) must emphasize the importance of maintenance in the following areas:

- ◆ Maintenance procedures
- ◆ Maintenance and calibration of test equipment

As a general guideline, the Avionics Inspector must review the applicant's Maintenance/Inspection Program to ensure that it contains control and accountability of the following:

- ◆ All maintenance accomplished on lower minimum required systems and equipment
- ◆ All alterations to systems and equipment
- ◆ Approach status of each aircraft at all times
- ◆ Evaluations of self-test, Built-In Test Equipment (BITE), or Automated Test Equipment (ATE) to ensure suitability
- ◆ Spare equipment
- ◆ Maintenance calibration, use of test equipment, records/reporting requirements
- ◆ Repetitive and chronic discrepancies to ensure the affected aircraft remains out of lower minimums approach status until positive corrective actions is made
- ◆ All aircraft in the fleet that have not been evaluated for lower minimums approaches

#### **11.6.5.5 Training Programs (if applicable)**

The Certification Team should review the personnel training requirements to ensure that procedures are established for the following:

- ◆ Ensuring personnel contracted to perform BRNAV/PRNAV -related maintenance are qualified and the program requirements are made available to these persons
- ◆ Initial and/or recurrent training for the operator's maintenance personnel. Personnel performing maintenance on BRNAV/PRNAV systems and equipment should be appropriately trained in the airworthiness release requirements.



#### 11.6.5.6 Aircraft Downgrade/Upgrade Procedure

A suitable system for monitoring and recording the aircraft status with regard to BRNAV/PRNAV operational capability must be established by the operator. The system should include an acceptable method for monitoring BRNAV/PRNAV capability of the aircraft at all times, as well as detailed procedures to downgrade/upgrade the aircraft's BRNAV operational capability. Authorized technical personnel performing BRNAV/PRNAV -related maintenance must be identified as well as specific initial/recurrent training requirements.

#### 11.6.6 Corrective Actions

Manuals/Documentation submitted by the applicant are checked by reviewing the completed BRNAV/PRNAV Conformance Report that has been submitted, against the manuals/documents. If any non-compliance's are found and/or if corrections are needed, the assigned ASI Inspectors will notify in writing the applicant of the non-compliance's and/or corrections needed. A copy of this notification letter should also be inserted in the Operator's file appropriate section (correspondence). It is important that all correspondence with the Applicant should abide by the procedures for Incoming and Outgoing Documents described in HCAA Administration Manual, Chapter 13. On the basis of the findings against the Manuals, the Operator is responsible for the relevant corrective actions / modifications required by HCAA. Furthermore, the certification team members must properly track each item in order to ensure its rectification. ***Any findings raised will be processed in accordance with para. 16.20 of this Manual.***

#### 11.6.7 On-Site Inspections

During the on-site inspection phase the facilities, services, maintenance procedures, aircraft(s) and equipment proposed for the operation are assessed for acceptability.

The following steps can be used as a general guideline:

- ◆ Determine the areas to be audited and who will do what.
- ◆ From the BRNAV/PRNAV Conformance Report and Maintenance Program pick specific items/tasks and subjects for the audit – schedule, the provisional number of days, plan travel arrangements (if applicable), etc.
- ◆ Notify the applicant of the start of the audit and request an opening meeting with the attendance of the Postholder of Maintenance.

##### 11.6.7.1 Opening Meeting

The purpose of the opening meeting is to:

- ◆ Introduce the HCAA Certification Team to the applicant's Management
- ◆ Briefly explain the purpose of the approval procedure - to comply with JAA requirements.
- ◆ Describe the process to be followed
- ◆ Explain the Audit Finding Forms and the Level of Findings
- ◆ Clearly explain that the level of the finding is provisional until endorsed by the Audit Manager
- ◆ Explain that all Level 1 & 2 findings must be closed before the approval can be granted
- ◆ Request the Closing Meeting - This will either be a debrief at the end of the on-site audit or a specific meeting set for a few days later when the report has been produced and can be handed to the Operator.

##### 11.6.7.2 On-Site Audit

During the on-site Audit:

- ◆ Each member of Team to be accompanied by representative of the Operator.
- ◆ Follow the Audit Plan and audit against the JAA/ICAO Requirement.



- ◆ Follow-up on any Audit Findings that have been issued during the Manual(s)/Documentation Review phase of the Approval.
- ◆ Record any findings in Audit Finding Form(s) shown in Appendix F of Chapter 7.
- ◆ Draft any Finding Forms and provide provisional copy to the operator.
- ◆ Team Leader to monitor progress of audit against the plan and time-scale what was projected.
- ◆ Confirm time and date for Closing Meeting.

#### **11.6.8 Validation Flight**

The Airworthiness Inspector(s) may request to participate in a Validation Flight where BRNAV/PRNAV - required accuracy can be demonstrated.

#### **11.6.9 Inspection Results and Closing of Findings**

##### **11.6.9.1 Team Report**

- ◆ To be produced in the standard format identifying both positive and negative features of the organization.
- ◆ Comments in the report can be subjective but any finding of non-compliance with the requirement must be objective and supported by an audit finding attached as an appendix to the report.
- ◆ The report must be signed by the Team and endorsed by the Airworthiness Section Manager.

##### **11.6.9.2 Closing Meeting (Held at HCAA or the Company)**

- ◆ Thank organization for co-operation during the audit.
- ◆ Review the content of the report highlighting both positive and negative aspects.
- ◆ Review the specific findings that must be resolved and closed before approval.
- ◆ Provide the opportunity for queries and clarification.
- ◆ Confirm the process of follow-up and closure of the findings

##### **11.6.9.3 Assemble Certification File**

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

- ◆ BRNAV/PRNAV Conformance Report - See Appendix B
- ◆ Completed BRNAV/PRNAV Application Form & Compliance Statement - see Appendix A
- ◆ Any correspondence with the operator (in the appropriate Section)

##### **11.6.9.4 Audit Follow-up (if applicable)**

The operator responds to findings (if applicable) and resubmits the Audit Finding Form 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 close the findings.



#### **11.6.10 Preparation for Issue of the Approval**

Once the Certification Team is satisfied that all the relevant findings are closed for the applicable items, as described above, it will prepare the Certification folder to be presented to the DFS Director,

The following is a list of the Certification folder contents :

- ◆ Applicant's Letter of Intent (if applicable)
- ◆ Appointment of Certification Team/Team Leader
- ◆ Completed HCAA BRNAV/PRNAV Application Form and Compliance Statement
- ◆ Completed HCAA BRNAV/PRNAV Conformance Document
- ◆ Sections of the AFM Manual that document BRNAV/PRNAV approval
- ◆ BRNAV maintenance practices and procedures
- ◆ Aircraft Minimum Equipment List (MEL)
- ◆ Maintenance Program that includes items pertinent to BRNAV/PRNAV equipment
- ◆ Maintenance training syllabi
- ◆ List of Test Equipment used
- ◆ Service Bulletin – STC – or Major modification approval
- ◆ BRNAV/PRNAV Letter of Approval
- ◆ Height monitoring test result
- ◆ Aircraft downgrade/upgrade procedure
- ◆ Any additional document requested by the Certification Team (if required)

##### **11.6.10.1 Quality Check**

The Team Leader will present the Certification File to the Airworthiness Section Manager, or in his absence to the Director of Flight Standards, who will carry out the 'quality check'. This must include a review of all documents from the initial application through to the drafted BRNAV/PRNAV Letter of Approval.

At this time the annual provisional monitoring plan for the Operator is reviewed and approved. Provided the quality check is satisfactory the Airworthiness Section Manager or the DFS Director will endorse the drafted BRNAV/PRNAV Letter of Approval.

##### **11.6.10.2 Issue of the Approval**

Following the Quality Check, the DFS Director will sign and stamp the BRNAV/PRNAV Letter of Approval and pass them back to the Team Leader for processing. The original signed and stamped BRNAV/PRNAV Letter of Approval is sent to the Operator with a cover letter, whereas one copy remains in the operator's certification file and another copy is transmitted internally to FSD's Section C (Operations) where the operator's AOC Certificate is issued/updated according to HCAA Operations Procedures Manual.

##### **11.6.10.3 Annual Monitoring Provisions**

The DFS Director will appoint the Principal Avionics Inspector (PMI) for the Operator and issue a Protocol for the annual monitoring requirements.

##### **11.6.10.4 HCAA Certification File**

The completed Certification File is then placed in the allocated space in the library.



#### **11.6.11 Update ADMS System**

All findings recorded on the Audit Finding forms during the on-site inspection's phase of the approval process will be entered into the ADMS system for tracking purposes. Upon satisfactory completion of the approval process all relevant data is also be entered into the ADMS System [BRNAV/PRNAV, Aircraft Type(s), Limitations (if any), etc.] so that the AOC can be issued/updated by the FSD Operations (C) Department, according to HCAA Operations Procedures Manual.



## 11.7 ETOPS OPERATIONS

REF: EU-OPS 1.245

GAI-20 (ACJ 20X6)

Additional Ref.: CAP 513

### 11.7.1 Terminology

Extended range operations are those operations intended to be, or actually, conducted over a route that contains a point further than one hour's flying time (in still air) at the normal one-engine-inoperative cruise speed from an **adequate** aerodrome. When, alternatively, a Threshold Distance has been agreed with the Authority, all non-ETOPS flights shall remain within the Threshold Distance of an **adequate** aerodrome.

### 11.7.2 Initial Contact and Pre-Application Meeting

At the initial contact with the applicant, usually by telephone, fax or a letter of intent, HCAA will schedule a pre-application meeting. This meeting will take place at HCAA's premises and the applicant will be given the «ETOPS Application Package Documents» in electronic form (floppy disk/Cd-rom) which includes the following:

- ◆ ETOPS Application Form and Compliance Statement (Appendix A)
- ◆ ETOPS Process Flow Chart (Appendix C)
- ◆ A list of the required Manuals/Documents for submission (see para. 11.7.4)

A briefing is also given to the applicant during this meeting on the ETOPS certification process, including guidance on the completion of the application form and conformance document. The Head of the Airworthiness Section, or his delegates, is the personnel responsible to conduct and offer guidance at this pre-application meeting. The applicant should be represented (at a minimum), by the Post Holders of Maintenance and Training. It should 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 ETOPS certification process. This designated person 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 HCAA are directed to, and properly addressed by the appropriate personnel within the company. 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 company coordinator will be to arrange the on-site visits and ensure that the appropriate company personnel will be present and available.

**Guidance on the completion of the ETOPS Conformance Document, will be provided to the applicant during the Pre-Application meeting.**

### 11.7.3 Application and Application Meeting

HCAA receives application as described below and determines what type of ETOPS approval the applicant is requesting. The applicant must submit the completed *HCAA ETOPS Application Form and Compliance Statement (shown in Appendix A)* in accordance with the *Incoming Documents* procedure described in the HCAA Administration Procedures Manual, Chapter 5.

Upon receipt of the application documentation, and prior to the Application Meeting, a "Certification Team" is assigned to oversee the ETOPS certification process of the new applicant by the Flight Standard Division (FSD/D2) Director.



The composition of the team will be tailored to the size and the complexity of the company, but will include at least:

**One** Flight Operations Inspector (FOI)

**Two** Airworthiness Inspectors (Maintenance and Avionics)

The knowledge, experience and background of the persons assigned will be considered in the appointment of the team and matched to the type of aircraft and the requested ETOPS approval. Additional ASI inspectors of another specialty (e.g. Maintenance) will also be assigned to the Certification Team if deemed necessary.

The Flight Operations Inspector has the primary responsibility to grant the operator approval. The Airworthiness Inspector's responsibility is to evaluate and approve the avionics requirements and support programs. Final approval of all initial ETOPS operations should therefore be coordinated between HCAA Operations and Airworthiness Sections.

In order for the Application to be considered officially submitted, the above HCAA ETOPS Application Form must be submitted along with **all required Manuals/Documentation** as described in detail in ETOPS APPLICATION form Par 12 (Docs to be submitted) and para. 11.7.4 below. If complete, the application will be attempted to be processed within 30 days. The 30 day period will not commence until all the documentation has been submitted. The quality of the documentation submitted will also have an effect on the 30 day period.

**The Application Meeting, which officially starts the ETOPS certification process, should not be held unless it is assured that all the documents required with the application will be completed and ready to be officially submitted at least three days prior to the Application Meeting.**

The Application Meeting should be cancelled and rescheduled if the application documentation is not complete as stated.

The Application Meeting is only held if the appropriate personnel are present. As mentioned above the operator's management personnel in attendance should include at least the Post Holders of Maintenance and Training.

The main objectives of the Application Meeting are to:

- ◆ Introduce the Operator's Management personnel to the HCAA Maintenance Certification Team.
- ◆ Assure that the applicant's maintenance team understands the ETOPS certification process.
- ◆ Answer any questions the Applicant may have.
- ◆ Distribute the documents/manuals to the appropriate maintenance members of the Certification Team.
- ◆ Discuss and agree upon the target dates for the various phases of the certification process.

#### **11.7.4 Required Manual(s)/Documentation**

The operator's management personnel should submit the following:

- ◆ Completed HCAA ETOPS Application Form and Compliance Statement
- ◆ ETOPS aircraft configuration
- ◆ ETOPS Manual
- ◆ Sections of the AFM Manual that document ETOPS approval
- ◆ ETOPS maintenance practices and procedures
- ◆ Aircraft Minimum Equipment List (MEL)
- ◆ Maintenance Program that includes items pertinent to ETOPS equipment
- ◆ Downgrading/Upgrading Procedures/Internal Reporting Procedures
- ◆ Maintenance training syllabi
- ◆ List of Test Equipment used





- ◆ Service Bulletin – STC – or Major modification approval (if required)
- ◆ Reliability program
- ◆ Procedures for critical tasks
- ◆ ETOPS training
- ◆ Parts control program
- ◆ Any additional document requested by the Certification Team (if required)

#### **11.7.5 Manual(s)/Documentation Review**

The review of the submitted Manual(s)/Documentation is carried out by the Airworthiness Certification Team to assess the ETOPS requirements.

This is conducted by a general review of the documents/manuals submitted by the applicant with the application. This review provides the applicant with timely initial feedback and assesses the applicants understanding of the requirements.

##### **11.7.5.1 Aircraft Flight Manual (AFM)**

The Aircraft Flight Manual will be reviewed by the Certification Team only to the extent of its sections that document ETOPS approval.

##### **11.7.5.2 Minimum Equipment List (MEL)**

The Operator's MEL is evaluated by the Certification Team to ensure that the appropriate sections are revised to identify Category ETOPS required systems and special procedures, if applicable. The inspector's evaluation of the MEL document is accomplished by reference to the HCAA-MEL-01 Guidance List, shown in Appendix L of Chapter 7. If the MEL needs further work, it should be returned to the operator together with the comments summary as an attachment to an Audit Finding Form, shown in Appendix F of Chapter 7.

##### **11.7.5.3 Aircraft Maintenance Program**

The aircraft maintenance program should identify all special techniques, maintenance/inspection frequencies, and test equipment requirements to support the program and specify the method of controlling the operational status of the aircraft. The aircraft maintenance program established by the operator must ensure that the airborne equipment continues to operate in service to the required performance level and it should be capable of detecting any deterioration in the over-all level of equipment performance.

In reviewing the aircraft maintenance program, the airworthiness inspector (Avionics) must emphasize the importance of maintenance in the following areas:

- ◆ Maintenance procedures
- ◆ Maintenance and calibration of test equipment

As a general guideline, the Avionics Inspector must review the applicant's Maintenance/Inspection Program to ensure that it contains control and accountability of the following:

- ◆ All maintenance accomplished on lower minimum required systems and equipment
- ◆ All alterations to systems and equipment
- ◆ Approach status of each aircraft at all times
- ◆ Evaluations of self-test, Built-In Test Equipment (BITE), or Automated Test Equipment (ATE) to ensure suitability
- ◆ Spare equipment
- ◆ Maintenance calibration, use of test equipment, records/reporting requirements
- ◆ Repetitive and chronic discrepancies to ensure the affected aircraft remains out of lower minimums approach status until positive corrective actions is made
- ◆ All aircraft in the fleet that have not been evaluated for lower minimums





approaches

#### **11.7.5.4 Training Programs (if applicable)**

The Certification Team should review the personnel training requirements to ensure that procedures are established for the following:

- ◆ Ensuring personnel contracted to perform ETOPS related maintenance are qualified and the program requirements are made available to these persons
- ◆ Initial and/or recurrent training for the operator's maintenance personnel. Personnel not qualified to perform maintenance on ETOPS systems and equipment, including flight crew and dispatch, should be trained in the airworthiness release requirements of the lower minimums program.

#### **11.7.6 Corrective Actions**

Manuals/Documentation submitted by the applicant are checked by reviewing the completed ETOPS Conformance Report that has been submitted, against the manuals/documents. If any non-compliance's are found and/or if corrections are needed, the assigned ASI Inspectors will notify in writing the applicant of the non-compliance's and/or corrections needed. A copy of this notification letter should also be inserted in the Operator's file appropriate section (correspondence). It is important that all correspondence with the Applicant should abide by the procedures for Incoming and Outgoing Documents described in HCAA Administration Manual, Chapter 5. On the basis of the findings against the Manuals, the Operator is responsible for the relevant corrective actions / modifications required by HCAA. Furthermore, the certification team members must properly track each item in order to ensure its rectification.

#### **11.7.7 On-Site Inspections**

During the on-site inspection phase the facilities, services, maintenance procedures, aircraft(s) and equipment proposed for the operation are assessed for acceptability.

The following steps can be used as a general guideline:

- ◆ Determine the areas to be audited and who will do what.
- ◆ From the ETOPS Conformance Report and Maintenance Program pick specific items/tasks and subjects for the audit – schedule, the provisional number of days, plan travel arrangements (if applicable), etc.
- ◆ Notify the applicant of the start of the audit and request an opening meeting with the attendance of the Postholder of Maintenance.

##### **11.7.7.1 Opening Meeting**

The purpose of the opening meeting is to:

- ◆ Introduce the HCAA Certification Team to the applicant's Management
- ◆ Briefly explain the purpose of the approval procedure - to comply with JAA requirements.
- ◆ Describe the process to be followed
- ◆ Explain the Audit Finding Forms and the Level of Findings
- ◆ Clearly explain that the level of the finding is provisional until endorsed by the Audit Manager
- ◆ Explain that all Level 1 & 2 findings must be closed before the approval can be granted
- ◆ Request the Closing Meeting - This will either be a debrief at the end of the on-site audit or a specific meeting set for a few days later when the report has been produced and can be handed to the Operator.



#### **11.7.7.2 On-Site Audit**

During the on-site Audit:

- ◆ Each member of Team to be accompanied by representative of the Operator.
- ◆ Follow the Audit Plan and audit against the Requirement/JAR-ETOPS.
- ◆ Follow-up on any Audit Findings that have been issued during the Manual(s)/Documentation Review phase of the Approval.
- ◆ Record any findings in Audit Finding Form(s) shown in Appendix F of Chapter 7.
- ◆ Draft any Finding Forms and provide provisional copy to the operator.
- ◆ Team Leader to monitor progress of audit against the plan and time-scale what was projected.
- ◆ Confirm time and date for Closing Meeting.

#### **11.7.8 Validation Flight**

The Airworthiness Inspector(s) may request to participate in a validation flight where auto-land procedures and accuracy can be demonstrated.

#### **11.7.9 Inspection Results and Closing of Findings**

[REF: HCAA Admin. Manual](#)  
[HCAA Ops Manual](#)

##### **11.7.9.1 Team Report**

- ◆ To be produced in the standard format identifying both positive and negative features of the organization.
- ◆ Comments in the report can be subjective but any finding of non-compliance with the requirement must be objective and supported by an audit finding attached as an appendix to the report.
- ◆ The report must be signed by the Team and endorsed by the Airworthiness Section Manager.

##### **11.7.9.2 Closing Meeting (Held at HCAA or the Company)**

- ◆ Thank organization for co-operation during the audit.
- ◆ Review the content of the report highlighting both positive and negative aspects.
- ◆ Review the specific findings that must be resolved and closed before approval.
- ◆ Provide the opportunity for queries and clarification.
- ◆ Confirm the process of follow-up and closure of the findings

##### **11.7.9.3 Assemble Certification File**

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

- ◆ ETOPS Conformance Report - See Appendix B
- ◆ Completed ETOPS Application Form & Compliance Statement - see Appendix A
- ◆ Any correspondence with the operator (in the appropriate Section)

##### **11.7.9.4 Audit Follow-up (if applicable)**

The operator responds to findings (if applicable) and resubmits the Audit Finding Form 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 close the findings.

#### **11.7.10 Preparation for Issue of the Approval**

REF: [HCAA Admin. Manual](#)  
[HCAA Ops Manual](#)

Once the Certification Team is satisfied that all the relevant findings are closed for the applicable items, as described above, it will prepare the Certification folder to be presented to the DFS Director,

The following is a list of the Certification folder contents :

- ◆ Applicant's Letter of Intent (if applicable)
- ◆ Appointment of Certification Team/Team Leader
- ◆ Completed HCAA ETOPS Application Form and Compliance Statement
- ◆ Sections of the AFM Manual that document ETOPS approval
- ◆ ETOPS maintenance practices and procedures Manual
- ◆ Aircraft Minimum Equipment List (MEL)
- ◆ Maintenance Program that includes items pertinent to ETOPS equipment
- ◆ Maintenance training syllabi
- ◆ List of Test Equipment used
- ◆ Service Bulletin – STC – or Major modification approval
- ◆ ETOPS Letter of Approval
- ◆ Any additional document requested by the Certification Team (if applicable)

##### **11.7.10.1 Quality Check**

The Team Leader will present the Certification File to the Airworthiness Section Manager, or in his absence to the Director of Flight Standards, who will carry out the 'quality check'. This must include a review of all documents from the initial application through to the drafted ETOPS Letter of Approval.

At this time the annual provisional monitoring plan for the Operator is reviewed and approved. Provided the quality check is satisfactory the Airworthiness Section Manager or the DFS Director will endorse the drafted ETOPS Letter of Approval.

##### **11.7.10.2 Issue of the Approval**

Following the Quality Check, the DFS Director will sign and stamp the ETOPS Letter of Approval and pass them back to the Team Leader for processing. The original signed and stamped ETOPS Letter of Approval is sent to the Operator with a cover letter, whereas one copy remains in the operator's certification file and another copy is transmitted internally to FSD's Section C (Operations) where the operator's AOC Certificate is issued/updated according to HCAA Operations Procedures Manual.

##### **11.7.10.3 Annual Monitoring Provisions**

The DFS Director will appoint the Principal Inspector (PMI) for the Operator and issue a Protocol for the annual monitoring requirements.

##### **11.7.10.4 HCAA Certification File**

The completed Certification File is then placed in the allocated space in the library.



#### **11.7.11 Update ADMS System**

All findings recorded on the Audit Finding forms during the on-site inspection's phase of the approval process will be entered into the ADMS system for tracking purposes. Upon satisfactory completion of the approval process all relevant data is also entered into the ADMS System (Special OPS Authorization Approval, Aircraft Type(s), etc.) so that the AOC can be issued/updated by the FSD Operations (C) Department, according to HCAA Operations Procedures Manual.



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## 11.8 Required Navigation Performance RNP-10 / MNPS

REF: For MNPS – ICAO Doc 7030, 1<sup>st</sup> Edition, 2008, ICAO NAT SPG Doc 007, 2010

### 11.8.1 Historical

**Required Navigation Performance (RNP)** is a type of [performance-based navigation \(PBN\)](#) that allows an aircraft to fly a specific path between two 3-dimensionally defined points in space. RNAV and RNP systems are fundamentally similar. The key difference between them is the requirement for on-board



performance monitoring and alerting. A navigation specification that includes a requirement for on-board navigation performance monitoring and alerting is referred to as an RNP specification. One not having such a requirement is referred to as an RNAV specification.

RNP also refers to the level of performance required for a specific procedure or a specific block of airspace. An RNP of 10 means that a navigation system must be able to calculate its position to within a circle with a radius of 10 nautical miles. An RNP of .3 means the aircraft navigation system must be able to calculate its position to within a circle with a radius of 3 tenths of a nautical mile. A related term is ANP which stands for "actual navigation performance". ANP refers to the current performance of a navigation

system while "RNP" refers to the accuracy required for a given block of airspace or a specific instrument procedure.

**Above:** *Qantas Boeing 737-800 flying RNP departure from Queenstown, New Zealand*

Some oceanic airspace has an RNP of 4 or 10. The level of RNP an aircraft is capable of determines the separation required between aircraft.

RNP approaches with RNP values currently down to .1 allow aircraft to follow precise 3 dimensional curved flight paths through congested airspace, around noise sensitive areas, or through difficult terrain.

In 1996, Alaska Airlines became the first airline in the world to utilize an RNP approach with its approach down the Gastineau Channel into Juneau, Alaska. Alaska Airlines Captain Steve Fulton and Captain Hal Anderson developed more than 30 RNP approaches for the airline's Alaska operations. In 2003 they founded Naverus which is the world leader in helping deploy RNP and other PBN systems worldwide. In 2005, Alaska Airlines became the first airline to utilize RNP approaches into Reagan National Airport to avoid congestion. In April 2009, Alaska Airlines became the first airline to gain approval from the FAA to validate their own RNP approaches. On April 6, 2010, Southwest Airlines converted to RNP. In October 2011 Boeing, Lion Air and the Indonesian Directorate General of Civil Aviation, performed validation flights to test tailor-made Required Navigation Performance Authorization Required (RNP AR) procedures at 2 terrain challenged airports, Ambon and Manado, Indonesia as pioneering the use of RNP precision navigation technology in South Asia.

### 11.8.2 Description

The current specific requirements of an RNP system include:

- capability to follow a desired ground track with reliability, repeatability and predictability, including curved paths; and
- where vertical profiles are included for vertical guidance, use of vertical angles or specific altitude constraints to define a desired vertical path.

The performance monitoring and alerting capabilities may be provided in different forms depending on the system installation, architecture and configurations, including:



- display and indication of both the required and the estimated navigation system performance;
- monitoring of the system performance and alerting the crew when RNP requirements are not met; and
- cross track deviation displays scaled to RNP, in conjunction with separate monitoring and alerting for navigation integrity.

An RNP system utilises its navigation sensors, system architecture and modes of operation to satisfy the RNP navigation specification requirements. It must perform the integrity and reasonableness checks of the sensors and data, and may provide a means to deselect specific types of navigation aids to prevent reversion to an inadequate sensor. RNP requirements may limit the modes of operation of the aircraft, e.g. for low RNP, where flight technical error (FTE) is a significant factor, manual flight by the crew may not be allowed. Dual system/sensor installations may also be required depending on the intended operation or need.

An RNAV system capable of achieving the performance requirements of an RNP specification is referred to as an RNP system. Because specific performance requirements are defined for each navigation specification, an aircraft approved for a RNP specification is not automatically approved for all RNAV specifications. Similarly, an aircraft approved for an RNP or RNAV specification having stringent accuracy requirements is not automatically approved for a navigation specification having a less stringent accuracy requirement.

### 11.8.3 Background

RNP procedures were introduced in the PANS-OPS (ICAO Doc 8168), which became applicable in 1998. These RNP procedures were the predecessor of the current PBN concept, whereby the performance for operation on the route is defined, in lieu of flight elements such as flyover procedures, variability in flight paths, and added airspace buffer resulted in no significant advantages being achieved in designs. As a result, there was a lack of benefits to the user community and little or no implementation.

### 11.8.4 Designation

For oceanic, remote, en-route and terminal operations, an RNP specification is designated as RNP X, e.g. RNP 4.

Approach navigation specifications cover all segments of the instrument approach. RNP specifications are designated using RNP as a prefix and an abbreviated textual suffix, e.g. RNP APCH (for RNP approach) or RNP AR APCH (for RNP authorisation required approach).

### 11.8.5 Performance Monitoring and Alerting Requirements

The performance monitoring and alerting requirements for RNP 4, Basic-RNP 1 and RNP APCH have common terminology and application. Each of these specifications includes requirements for the following characteristics:

- **Accuracy:** The accuracy requirement defines the 95% Total System Error (TSE) for those dimensions where an accuracy requirement is specified. The accuracy requirement is harmonised with the RNAV navigation specifications and is always equal to the accuracy value. A unique aspect of the RNP navigation specifications is that the accuracy is one of the performance characteristics that is monitored.
- **Performance monitoring:** The aircraft, or aircraft and pilot combination, is required to monitor the TSE, and to provide an alert if the accuracy requirement is not met or if the probability that the TSE exceeds two-times the accuracy value is larger than  $10^{-5}$ . To the extent operational procedures are used to satisfy this requirement, the crew procedure, equipment characteristics, and installation are evaluated for their effectiveness and equivalence.
- **Aircraft failures:** Failure of the aircraft equipment is considered within airworthiness regulations. Failures are categorised by the severity of the aircraft level effect, and the system must be designed to reduce the likelihood of the failure or mitigate its effects. Both malfunction (equipment operating but not providing appropriate output) and loss of function (equipment ceases to function) are addressed. Dual system requirements are determined based on operational continuity (e.g. oceanic and remote operations). The requirements on aircraft failure characteristics are not unique to RNP navigation specifications.
- **Signal-in-space failures:** Signal-in-space characteristics of navigation signals are the responsibility of the ANSP.





The net effect of RNP navigation specifications is to provide bounding of the TSE distribution. Since path definition error is assumed to be negligible, the monitoring requirement is reduced to the other two components of TSE, i.e. flight technical error (FTE) and navigation system error (NSE). It is assumed that FTE is an ergodic stochastic process within a given flight control mode. As a result, the FTE distribution is constant over time within a given flight control mode. However, in contrast, the NSE distribution varies over time due to a number of changing characteristics, most notably:

- selected navigation sensors: the navigation sensors which are being used to estimate position, such as Global Navigation Satellite System (GNSS) or DME/DME;
- the relative geometry of the aircraft position to the supporting navigation aids: all radio navaids have this basic variability, although the specific characteristics change. GNSS performance is affected by the relative geometry of the satellites compared to the aircraft. DME/DME navigation solutions are affected by the inclusion angle between the two DMEs at the aircraft (90° being optimal) and the distance to the DMEs, since the aircraft DME transponder can have increasing range errors with increasing distance;
- inertial reference units: errors increase over time since last updated.

#### 11.8.6 Application of performance monitoring and alerting to aircraft

Although the TSE can change significantly over time for a number of reasons, including those above, the RNP navigation specifications provide assurance that the TSE distribution remains suitable to the operation. This results from two requirements associated with the TSE distribution, namely:

- the requirement that the TSE remains equal to or better than the required accuracy for 95% of the flight time; and
- the probability that the TSE of each aircraft exceeds the specified TSE limit (equal to two times the accuracy value) without annunciation is less than  $10^{-5}$ .

Typically, the  $10^{-5}$  TSE requirement provides a greater restriction on performance. For example, with any system that has TSE with a normal distribution of cross-track error, the  $10^{-5}$  monitoring requirement constrains the standard deviation to be  $2 \times (\text{accuracy value})/4.45 = \text{accuracy value}/2.23$ , while the 95% requirement would have allowed the standard deviation to be as large as the accuracy value/1.96.

It is important to understand that while these characteristics define minimum requirements that must be met, they do not define the actual TSE distribution. The actual TSE distribution may be expected to be typically better than the requirement, but there must be evidence on the actual performance if a lower TSE value is to be used.

In applying the performance monitoring requirement to aircraft, there can be significant variability in how individual errors are managed:

- some systems monitor the actual cross-track and along-track errors individually, whereas others monitor the radial NSE to simplify the monitoring and eliminate dependency on the aircraft track, e.g. based on typical elliptical 2-D error distributions.
- some systems include the FTE in the monitor by taking the current value of FTE as a bias on the TSE distribution.
- for basic GNSS systems, the accuracy and  $10^{-5}$  requirements are met as a by-product of the ABAS requirements that have been defined in equipment standards and the FTE distribution for standardised course deviation indicator (CDI) displays.

It is important that performance monitoring is not regarded as error monitoring. A performance monitoring alert will be issued when the system cannot guarantee, with sufficient integrity, that the position meets the accuracy requirement. When such an alert is issued, the probable reason is the loss of capability to validate the position data (insufficient satellites being a potential reason). For such a situation, the most likely position of the aircraft at that time is exactly the same position indicated on the pilot display. Assuming the desired track has been flown correctly, the FTE would be within the required limits and therefore the likelihood of the TSE exceeding twice the accuracy value just prior to the alert is approximately  $10^{-5}$ . However, it cannot be assumed that simply because there is no alert the TSE is less





than twice the accuracy value: the TSE can be larger. An example is for those aircraft that account for the FTE based on a fixed error distribution: for such systems, if the FTE grows large, no alert is issued by the system even when the TSE is many times larger than the accuracy value. For this reason, the operational procedures to monitor the FTE are important.

## **11.8.7 Areas of Operation**

### **11.8.7.1 Oceanic and remote continental**

Oceanic and remote continental airspace is currently served by two navigation applications, RNAV 10 and RNP 4. Both rely primarily on GNSS to support the navigation element of the airspace. In the case of RNAV 10, no form of ATS surveillance is required. In the case of RNP 4, ADS contract (ADS-C) is used.

### **11.8.7.2 Continental en-route**

Continental en-route airspace is currently supported by RNAV applications. RNAV 5 is used in the Middle East (MID) and European (EUR) regions, but as of 2008, it is designated as B-RNAV (Basic RNAV in Europe and RNP 5 in the Middle East). In the United States, RNAV 2 supports en-route continental airspace. At present, continental RNAV applications support airspace specifications which include radar surveillance and direct controller-to-pilot voice communications.

### **11.8.7.3 Terminal airspace: arrival and departure**

Existing terminal airspace concepts, which include arrival and departure, are supported by RNAV applications. These are currently used in the European (EUR) Region and the United States. The European terminal airspace RNAV application is known as P-RNAV (Precision RNAV). Although the RNAV 1 specification shares a common navigation accuracy with P-RNAV, this regional navigation specification does not satisfy the full requirements of the RNAV 1 specification. As of 2008, the United States terminal airspace application formerly known as US RNAV Type B has been aligned with the PBN concept and is now called RNAV 1. Basic RNP 1 has been developed primarily for application in non-radar, low density terminal airspace. In future, more RNP applications are expected to be developed for both en-route and terminal airspace.

### **11.8.7.4 Approach**

Approach concepts cover all segments of the instrument approach, i.e. initial, intermediate final and missed approach. They will increasingly call for RNP specifications requiring a navigation accuracy of 0.3 NM to 0.1 NM or lower. Typically, three sorts of RNP applications are characteristic of this phase of flight: new procedures to runways never served by an instrument procedure, procedures either replacing or serving as backup to existing instrument procedures based on different technologies, and procedures developed to enhance airport access in demanding environments (RNP APCH and RNP AR APCH).

RNP approaches to 0.3 NM and 0.1 NM at Queenstown Airport in New Zealand are the primary approaches used by Qantas and Air New Zealand for both international and domestic services. Due to terrain restrictions, ILS approaches are not possible, and conventional VOR/DME approaches have descent restrictions more than 2,000 ft above the airport level. The RNP approaches and departures follow curved paths below terrain level.

### **11.8.7.5 Special Aircraft and Aircrew Authorization Required approach**

RNP instrument approach procedures with Special Aircraft and Aircrew Authorization Required (SAAAR) approach procedures build upon the performance based NAS concept. The performance requirements to conduct an approach are defined, and aircraft are qualified against these performance requirements. Conventional obstacle evaluation areas for ground-based navigation aids are based on a predefined aircraft capability and navigation system. RNP SAAAR criteria for obstacle evaluation are flexible and designed to adapt to unique operational environments. This allows approach specific performance requirements as necessary for an approach procedure. The operational requirement can include avoiding terrain and obstacles, de-conflicting airspace or resolving environmental constraints.



RNP approaches include capabilities that require special aircraft and aircrew authorization similar to category II/III ILS operations. All RNP SAAAR approaches have reduced lateral obstacle evaluation areas and vertical obstacle clearance surfaces predicated on the aircraft and aircrew performance requirements. In addition, there are two characteristics used for selected procedures as necessary, where operators can be authorized for any subset of these characteristics:

- ability to fly a published arc (also referred to as an RF leg);
- reduced lateral obstacle evaluation area on the missed approach (also referred to as a missed approach requiring RNP less than 1.0 NM).

When conducting an RNP SAAAR approach using a line of minima less than RNP 0.3, no single-point-of-failure can cause the loss of guidance compliant with the RNP value associated with the approach. Typically, the aircraft must have at least dual GNSS sensors, dual flight management systems, dual air data systems, dual autopilots, and a single inertial reference unit.

When conducting an RNP SAAAR approach with a missed approach less than RNP 1.0, no single-point-of-failure can cause the loss of guidance compliant with the RNP value associated with a missed approach procedure. Typically, the aircraft must have at least dual GNSS sensors, dual flight management systems, dual air data systems, dual autopilots, and a single inertial reference unit.

### 11.8.8 Flight planning

Manual or automated notification of an aircraft's qualification to operate along an air traffic services (ATS) route, on a procedure or in an airspace is provided to ATC via the flight plan.

### 11.8.9 Procedure

#### 11.8.9.1 Initial Contact and Pre-Application Meeting

At the initial contact with the applicant, usually by telephone, fax or a letter of intent, HCAA will schedule a pre-application meeting. This meeting will take place at HCAA's premises and the applicant will be given the «RNP-10 Application Package Documents» in electronic (floppy disk/Cd-rom) or hardcopy form which includes the following:

- ◆ RNP-10 Application Form and Compliance Statement (Appendix A)
- ◆ RNP-10 Conformance Document (included in the Application Form)

A briefing is also given to the applicant during this meeting on the RNP-10 certification process, including guidance on the completion of the application form and conformance document. The appointed certification inspectors' team is responsible to conduct and offer guidance at this pre-application meeting. The applicant should be represented (at a minimum), by the Post Holders of Maintenance, Training and Flight Operations. It should 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 RNP-10 certification process. This designated person 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 HCAA are directed to, and properly addressed by the appropriate personnel within the company.

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 company coordinator will be to arrange the on-site visits and ensure that the appropriate company personnel will be present and available.

**Guidance on the completion of the RNP-10 Application and Conformance Document, will be provided to the applicant during the Pre-Application meeting.**

#### 11.8.9.2 Application and Application Meeting

The applicant must submit the completed *HCAA RNP-10 Application Form and Compliance Statement (shown in Appendix A)* which includes also the *HCAA RNP-10 Conformance*



*Document* in accordance with the *Incoming Documents* procedure described in the HCAA Administration Procedures Manual, Chapter 5.

Upon receipt of the application documentation, and prior to the Application Meeting, a "Certification Team" is assigned to oversee the RNP-10 certification process of the new applicant by the Flight Standard Division (FSD/D2) Director.

The composition of the team will be tailored to the size and the complexity of the company, but will include at least:

- **One** Flight Operations Inspector (FOI)
- **One** Airworthiness Inspector (Avionics)

The knowledge, experience and background of the persons assigned will be considered in the appointment of the team and matched to the type of aircraft and the requested RNP approval. Additional ASI inspectors of another specialty (e.g. Maintenance) will also be assigned to the Certification Team if deemed necessary.

The Flight Operations Inspector has the primary responsibility to grant the operator RNP operation approval. The Airworthiness Inspector's (Avionics) responsibility is to evaluate and approve the avionics requirements and support programs. Final approval of all initial RNP operations should therefore be coordinated between HCAA Operations and Airworthiness Sections.

In order for the Application to be considered officially submitted, the above HCAA RNP Application Form must be submitted along with **all required Manuals/Documentation** as described in detail in the RNP Application Form. If complete, the application will be attempted to be processed within 30 days. The 30 day period will not commence until all the documentation has been submitted. The quality of the documentation submitted will also have an effect on the 30 day period.

**The Application Meeting, which officially starts the RNP certification process, should not be held unless it is assured that all the documents required with the application will be completed and ready to be officially submitted at least three days prior to the Application Meeting.**

The Application Meeting should be cancelled and rescheduled if the application documentation is not complete as stated.

The Application Meeting is only held if the appropriate personnel are present. As mentioned above the operator's management personnel in attendance should include at least the Post Holders of Maintenance, Training and Flight Ops.

The main objectives of the Application Meeting are to:

- ◆ Introduce the Operator's Management personnel to the HCAA Maintenance Certification Team.
- ◆ Assure that the applicant's maintenance team understands the RNP certification process.
- ◆ Answer any questions the Applicant may have.
- ◆ Distribute the documents/manuals to the appropriate maintenance members of the Certification Team.
- ◆ Discuss and agree upon the target dates for the various phases of the certification process.

#### **11.8.9.3 Required Manual(s)/Documentation**

See RNP Application Form

#### **11.8.9.4 Manual(s)/Documentation Review**



The review of the submitted Manual(s)/Documentation is carried out by the Certification Team to assess the requirements.

This is conducted by a general review of the documents/manuals submitted by the applicant with the application. This review provides the applicant with timely initial feedback and assesses the applicants understanding of the requirements.

#### **11.8.9.5 RNP Conformance Document**

The Certification Team will evaluate the RNP Conformance Document. If the Conformance Document needs further work, it should be returned to the operator together with the comments summary as an attachment to an Audit Finding Form, shown in Appendix F of Chapter 7. The Conformance Document is included in the RNP Application Form (shown in Appendix A at the end of this Chapter).

#### **11.8.9.6 Minimum Equipment List (MEL)**

The Operator's MEL is evaluated by the Certification Team to ensure that the appropriate sections are revised to identify RNP-required systems and special procedures, if applicable. The inspector's evaluation of the MEL document is accomplished by reference to the GL-MEL-003 Guidance List, shown in Appendix L of Chapter 7. If the MEL needs further work, it should be returned to the operator together with the comments summary as an attachment to an Audit Finding Form, shown in Appendix F of Chapter 7.

#### **11.8.9.7 Aircraft Maintenance Program**

The aircraft maintenance program should identify all special techniques, maintenance/inspection frequencies, and test equipment requirements to support the program and specify the method of controlling the operational status of the aircraft. The aircraft maintenance program established by the operator must ensure that the airborne equipment continues to operate in service to the required performance level and it should be capable of detecting any deterioration in the over-all level of equipment performance.

In reviewing the aircraft maintenance program, the airworthiness inspector (Avionics) must emphasize the importance of maintenance in the following areas:

- ◆ Maintenance procedures
- ◆ Maintenance and calibration of test equipment

As a general guideline, the Avionics Inspector must review the applicant's Maintenance/Inspection Program to ensure that it contains control and accountability of the following:

- ◆ All maintenance accomplished on RNP-required systems and equipment
- ◆ All alterations to systems and equipment
- ◆ Evaluations of self-test, Built-In Test Equipment (BITE), or Automated Test Equipment (ATE) to ensure suitability
- ◆ Spare equipment
- ◆ Maintenance calibration, use of test equipment, records/reporting requirements

#### **11.8.9.8 Training Programs**

(See Appendix 1 of RNP Application Form)

The Certification Team should review the personnel training requirements to ensure that procedures are established for the following:

- ◆ Ensuring personnel contracted to perform RNP-related maintenance are qualified and the program requirements are made available to these persons
- ◆ Initial and/or recurrent training for the operator's maintenance personnel. Personnel performing maintenance on RNP-related systems and equipment should be appropriately trained in the airworthiness release requirements.



#### 11.8.9.9 Corrective Actions

Manuals/Documentation submitted by the applicant are checked by reviewing the completed RNP Conformance Report that has been submitted, against the manuals/documents. If any non-compliance's are found and/or if corrections are needed, the assigned ASI Inspectors will notify in writing the applicant of the non-compliance's and/or corrections needed. A copy of this notification letter should also be inserted in the Operator's file appropriate section (correspondence). It is important that all correspondence with the Applicant should abide by the procedures for Incoming and Outgoing Documents described in HCAA Administration Manual, Chapter 5. On the basis of the findings against the Manuals, the Operator is responsible for the relevant corrective actions / modifications required by HCAA. Furthermore, the certification team members must properly track each item in order to ensure its rectification. ***Any findings raised during the certification process shall be closed before granting the approval. Audit Findings will be processed in accordance with para. 16.20 of this Manual.***

#### 11.8.9.10 On-Site Inspections

During the on-site inspection phase the facilities, services, maintenance procedures, aircraft(s) and equipment proposed for the operation are assessed for acceptability.

The following steps can be used as a general guideline:

- Determine the areas to be audited and who will do what.
- From the RNP Conformance Report and Maintenance Program pick specific items/tasks and subjects for the audit – schedule, the provisional number of days, plan travel arrangements (if applicable), etc.
- Notify the applicant of the start of the audit and request an opening meeting with the attendance of the Postholder of Maintenance.

#### 11.8.9.11 Opening Meeting

The purpose of the opening meeting is to:

- Introduce the HCAA Certification Team to the applicant's Management
- Briefly explain the purpose of the approval procedure - to comply with all applicable requirements.
- Describe the process to be followed
- Explain the Audit Finding Forms and the Level of Findings
- Clearly explain that the level of the finding is provisional until endorsed by the Audit Manager
- Explain that all Level 1 & 2 findings must be closed before the approval can be granted
- Request the Closing Meeting - This will either be a debrief at the end of the on-site audit or a specific meeting set for a few days later when the report has been produced and can be handed to the Operator.

#### 11.8.9.12 On-Site Audit

During the on-site Audit:

- ◆ Each member of Team to be accompanied by representative of the Operator.
- ◆ Follow the Audit Plan and audit against the applicable (EASA/ICAO/FAA Requirement.
- ◆ Follow-up on any Audit Findings that have been issued during the Manual(s)/Documentation Review phase of the Approval.
- ◆ Record any findings in Audit Finding Form(s) shown in Appendix F of Chapter 7.
- ◆ Draft any Finding Forms and provide provisional copy to the operator.
- ◆ Team Leader to monitor progress of audit against the plan and time-scale what was projected.
- ◆ Confirm time and date for Closing Meeting.



## **11.8.10 Inspection Results and Closing of Findings**

### **11.8.10.1 Team Report**

- To be produced in the standard format identifying both positive and negative features of the organization.
- Comments in the report can be subjective but any finding of non-compliance with the requirement must be objective and supported by an audit finding attached as an appendix to the report.
- The report must be signed by the Team and endorsed by the Airworthiness Section Manager.

### **11.8.10.2 Closing Meeting (Held at HCAA or the Company)**

- ◆ Thank organization for co-operation during the audit.
- ◆ Review the content of the report highlighting both positive and negative aspects.
- ◆ Review the specific findings that must be resolved and closed before approval.
- ◆ Provide the opportunity for queries and clarification.
- ◆ Confirm the process of follow-up and closure of the findings

### **11.8.10.3 Assemble Certification File**

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

- ◆ RNP Conformance Report - see Appendix A
- ◆ Completed RNP Application Form & Compliance Statement - see Appendix A
- ◆ Any correspondence with the operator (in the appropriate Section)

### **11.8.10.4 Audit Follow-up (if applicable)**

The operator responds to findings (if applicable) and resubmits the Audit Finding Form 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 close the findings.

## **11.8.11 Preparation for Issue of the Approval**

Once the Certification Team is satisfied that all findings are closed for the applicable items, as described above, it will prepare the Certification folder to be presented to the FS Director, The following is a list of the Certification folder contents :

- ◆ Applicant's Letter of Intent (if applicable)
- ◆ Appointment of Certification Team/Team Leader
- ◆ Completed HCAA RNP Application Form and Compliance Statement
- ◆ Completed HCAA RNP Conformance Document
- ◆ Sections of the AFM Manual that document RNP approval (if applicable)
- ◆ RNP maintenance practices and procedures
- ◆ Aircraft Minimum Equipment List (MEL)
- ◆ Maintenance Program that includes items pertinent to RNP equipment
- ◆ Maintenance training syllabi
- ◆ List of Test Equipment used
- ◆ Service Bulletin – STC – or Major modification approval (if applicable)
- ◆ RNP Letter of Authorization
- ◆ Any additional document requested by the Certification Team (if required)





#### **11.8.11.1 Quality Check**

The Team Leader will present the Certification File to the AW and Flight OPS Technical Advisors and to the Airworthiness and Flight Ops Section Managers, who will carry out the 'quality check'. This must include a review of all documents from the initial application through to the drafted RNP Letter of Approval.

At this time the annual provisional monitoring plan for the Operator is reviewed and approved. Provided the quality check is satisfactory the Airworthiness Section Manager or the DFS Director will endorse the drafted RNP Letter of Authorization.

#### **11.8.11.2 Issue of the Approval**

Following the Quality Check, the DFS Director will sign and stamp the RNP Letter of Authorization and pass them back to the Team Leader for processing. The original signed and stamped RNP Letter of Authorization is sent to the Operator with a cover letter, whereas one copy remains in the operator's certification file and another copy is transmitted internally to FSD's Section C (Operations) where the operator's AOC Certificate is issued/updated according to HCAA Operations Procedures Manual to include the RNP approval and limitations (if any).

#### **11.8.11.3 Annual Monitoring Provisions**

Annual monitoring is provided through the FSD Division's Annual Inspection Plan (AIP).

#### **11.8.11.4 HCAA Certification File**

The completed Certification File is then placed in the allocated space in the library and monitored through LIMAS.

#### **11.8.12 Update ADMS System**

All findings recorded on the Audit Finding forms during the on-site inspection's phase of the approval process will be entered into the ADMS system for tracking purposes.

Upon satisfactory completion of the approval process all relevant data is also entered into the ADMS System [RNP, Aircraft Type(s), Limitations (if any), etc.] so that the AOC can be issued/updated by the FSD Operations (C) Department, according to HCAA Operations Procedures Manual.



## **APPENDIX A**

AWO Application & Compliance Statement  
RVSM Application & Compliance Statement  
BRNAV/PRNAV Application & Compliance Statement  
ETOPS Application & Compliance Statement  
RNP-10 Application, Compliance Statement and Conformance Report  
RNP-10 Additional Guidance





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## **APPENDIX B**

AWO Conformance Document  
RVSM Conformance Document  
BRNAV/PRNAV Conformance Document



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## **APPENDIX C**

AWO Process Flow Chart: TBD  
RVSM Process Flow Chart: TBD  
BRNAV/PRNAV Process Flow Chart: TBD  
ETOPS Process Flow Chart: TBD



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## **CHAPTER 12**

### **Agricultural Aircraft Operations**

#### **12.1 General**

While the first issue of JAR-OPS Part 4 – General Aviation (including Aerial Work) (Helicopters) is currently being prepared by the JAA Helicopter Sub Committee (HSC), HCAA is already working on establishing the procedures for the approval of Agricultural Aircraft Operations. The approval procedures will be incorporated herein after thorough examination to ensure compliance with JAR-OPS Part 4 and before any such approvals are granted, as soon as JAR-OPS Part 4 is issued.



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## CHAPTER 13

### Continuous Surveillance

REF: EC 2042/2003

ICAO Doc. 8335, Chapter 8

ICAO Doc. 9760, Chapter 7.9

Additional Ref.: FAA Order 8300.10

#### 13.1 General

One of the most significant duties of the HCAA is to conduct surveillance in all areas of air transportation safety. Surveillance is a continuing duty and responsibility of all aviation safety inspectors in HCAA's Flight Standards Division (FSD). The term "*Continuous Surveillance*," as used in this Chapter, relates to this ongoing duty and responsibility and related programs. Surveillance programs provide the HCAA with a method for a continual evaluation of operator compliance with JAA/National Regulations and safe operating practices. Information generated from the surveillance programs permits the HCAA 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 Chapter contains information and provides direction and guidance on the planning and conduct of specific types of inspections in support of an overall surveillance program.

#### 13.2 Objective of Surveillance Programs

The primary objective of surveillance is to provide the HCAA, 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 operator'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





### 13.3 Planning and Executing of Surveillance Programs

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 the HCAA FSD Director, Airworthiness/Operations Section Manager, 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.

HCAA Flight Standards Division produces an Annual Inspection Plan (AIP) for the surveillance of operators/organizations based on :

- ◆ Previous inspections results
- ◆ Compliance history
- ◆ Complaints
- ◆ Accident/incident information

The AIP is produced in December of every year and accounts for all Continuous Surveillance (denoted by 'CS' in the AIP) inspections for the new year. The primary responsibility for the final development of the AIP rests with the FSD's Airworthiness Section and Operations Section Managers. The completed AIP is then forwarded to the FSD Director for annotation and then distributed to all ASI inspectors of the FSD. An electronic copy of the AIP is also made available on the LAN for immediate access by FSD Division's personnel.

As a general guideline the following inspection types and frequency will be included in the AIP:

#### A. Continuous Surveillance Inspections (EASA)

- ◆ EC 2042/03 Part MG CAMO – 1 full scale audit per 2 years
- ◆ Meeting with the Organization's Accountable Manager – At least once every 24 mo
- ◆ EC 2042/03 Part MF Maintenance Organization – 1 full scale audit per 2 years
- ◆ EC 2042/03 Part 145 Maintenance Organization – 1 full scale audit per 2 years
- ◆ EC 2042/03 Part 147 Maintenance Training Organization – 1 full scale audit per 2 years
- ◆ EC 2042/03 Part MG CAMO with Airworthiness Review capability – to verify that at least one airworthiness review has been carried out in a 12 mo. period.

#### B. 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) – 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
- ◆ Maintenance In-Progress inspections – 2 per year per Part-145 or Part MF organizations
- ◆ Airworthiness En-route Inspection – 1 each a/c type per year



- ◆ Avionics Test Equipment inspection – 1 each facility (if applicable)
- ◆ Monitor FDRs & CVRs – 1 each facility (if applicable)
- ◆ Monitor Avionics Approved Software changes – 1 each aircraft type/per year (if applicable)

B. Phase Two: Conducting Surveillance Plan Inspections.

During the conduct of the surveillance plan inspections by the ASI, accurate and qualitative inspection reporting is essential.

C. Phase Three: Analyzing Surveillance Data.

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

- ◆ Non-compliance with regulations or safe operating practices
- ◆ Possible trends (positive or negative)
- ◆ Isolated deficiencies or incidents

D. Phase Four: Determining Appropriate Course of Action.

HCAA ASI Inspectors must use good judgement 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 HCAA approval of a program, manual, or document, 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 the HCAA 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 AIP rest with the Airworthiness/Operations Section Managers and the FSD Director.

### 13.3.1 Entering Audit Finding Data into ADMS Tracking System

A new software module supplements the existing Continuous Airworthiness Monitoring (CAM) module of ADMS and allows the user greater flexibility in entering the audit findings. It has been developed with a built-in safety feature which is used to alert the user during audit finding response data entry if the "Long term action" section of the Audit Finding Form is not completed by the operator. Hence, the software module will not allow the user to successfully close an audit finding response from an operator/organization, unless the above-mentioned "Long Term Action" field is completed. The software module also provides for short term actions which are entered by the user in the system in the normal way and monitored by a tracking date. Appropriate alerts are issued seven days prior to the expiration date for appropriate actions by HCAA. However, such audit findings with only short term action responses, are not considered closed unless a new audit finding form has been submitted to HCAA with "Long Term Action" field completed by the Operator/Organization and accepted by the Aviation Safety Inspector in charge of that Operator/Organization.

Although additional instructions have been provided to all Operators/Organizations regarding the correct use of an Audit Finding Form used for their responses, upon submission of an Audit Finding Form with the required fields being incorrectly or partially filled, will be returned to the operator/organization for appropriate action, according to procedure 16.20.6 of Chapter 16. However, Operators/Organizations are allowed to respond to an audit finding with a short term action plan which is entered in the ADMS system and monitored as mentioned above by HCAA but the specific finding cannot be closed unless a long term action plan has been submitted to and accepted by HCAA.



### 13.3.2 Data Entry in ADMS using CAM Module

Upon completion of any audit, the associated Audit Finding Form(s) shall be appropriately completed by the corresponding ASI inspector and will be turned in to the HCAA personnel responsible for data entry into the ADMS (CAM) Module. ADMS number (corresponding to Annual Inspection Plan), Audit areas, dates, finding description, finding level, expiration date, etc. are entered into the ADMS system through the CAM module into the appropriate fields provided by the software, using the above Form(s). From that point on, the software module monitors all audit finding(s) associated with the specific audit(s) and controls expiration dates by means of a built-in feature which automatically alerts the user of the nearing of a vital date, such as the expiration date of the finding, at a predetermined time (usually set by system administrator) –presently this time is set to 7 days prior to finding expiration date.

Although provisions exist in the ADMS system to allow Operators/Organizations to respond to an audit finding by a short term action, however the corresponding item shall not be closed unless a long term action has been submitted to HCAA and accepted by the responsible ASI. This short term action is monitored through the built-in alerting system of ADMS and prior to expiration (7 days) if no

action has been submitted, a formal reminder letter will be sent to the Operator/Organization, asking for finding clearance within the next 7 working dates. Beyond that period, if the findings are not closed by submitting a long term action, the ASI inspector will recommend suspension or limitation of the certificate to the FSD Management.

## 13.4 Reporting on Surveillance

The Aviation Data Management System (ADMS) designed and developed in-house by HCAA Flight Standards Division's personnel is an On-Line (LAN) powerful management and analysis computer system used in many FSD's functions. It provides the means for the collection, storage, retrieval, and analysis of data resulting from the many different job functions performed by inspectors in the field, the regions, and headquarters. It provides ASI inspectors and managers with current data on operators/organizations, aircraft registration information, and other facets of the air transportation system. The various retrieval and reporting features of this system permit the FSD Director and Airworthiness/Operations Section Managers to effectively plan work programs, prioritize activities and specific job tasks, and to analyze the safety and compliance status of various elements throughout the air transportation industry. In addition, since the ADMS system is developed in-house by HCAA personnel, it is highly customizable and continuously adapted to include more elements and functions of the Division as required.

[Additional information of the ADMS System can be found in HCAA Leaflet "Aviation Data Management System – User's Guide", HCAA, Edition 2, May 2004.](#)

### 13.4.1 ADMS Continuous Airworthiness Monitoring (CAM) Software Module

ADMS database was upgraded in the past to include audit findings which arise not only from continuous surveillance but also from any certification process such as issuance of new AOC, adding same/new type of aircraft, adding special operations capability, etc. This provision was made by means of an additional field named "phase" which is selected to indicate "continuous surveillance" if findings are found from such an activity (planned inspections according to the Division's Annual Inspection Plan), "Certification" for findings related to certification process, "Document evaluation" for findings raised during document evaluation, etc.

A new software module (CAM) which is now integrated and operational in HCAA's ADMS monitoring system has been developed in order to augment the functions of the ADMS system providing now –in addition- effective control and greater flexibility in tracking/monitoring audit results relating to EC 2042/03, Annexes I, II and IV inspections. Audit periods for continuation recommendation are clearly defined and monitored for each individual Organization. Audit results are entered into the system by means of Forms 13 and 6 and can be grouped in any category for future statistical analysis. This constitutes a useful analysis tool for ACAM, as well. For example, the ADMS user could use the system today to retrieve information such as (for example)-all Organizations findings in (say) EC 2042/03,



Annex II, 145.A.25 (facilities). A new feature integrated in the updated software module provides for reports and print-outs which are generated by the system upon user request allowing the distribution of information among FSD personnel and FSD Management, as well as the export of data for statistical analysis.

The two-year audit periods for each Organization are now entered into the system through the updated software module and are tracked by ADMS monitoring system. On a pre-determined time period (usually set by the system administrator), the system alerts the user for the nearing of a vital date, such as the completion of the two-year period. Reports are also generated by the system upon user request to show in a concise manner all Organizations planned audit dates and status. With this built-in safety feature the updated software module ensures that all requirements are audited by the responsible inspector at intervals not exceeding the required 24 month period.

#### **13.4.2 Data Entry in ADMS CAM Module**

Upon completion of any continuation recommendation audit, the associated Form (13 or 6) shall be appropriately completed by the corresponding ASI inspector and will be turned in to the HCAA personnel responsible for data entry into the ADMS (CAM) Module. Audit period dates, areas audited and related results are entered into the ADMS system through the CAM module into the appropriate fields provided by the software, using the above Forms. From that point on, the software module monitors all audit finding(s) associated with the specific audit(s) and controls continuation recommendation period by means of a built-in feature which automatically alerts the user of the nearing of a vital date, such as the completion of the two-year period.

#### **13.4.3 Printouts, Reports and Alerting**

A new feature integrated in the updated software module provides for **reports and print-outs** which are generated by the system upon user request allowing the distribution of information among FSD personnel and FSD Management, as well as the export of data for statistical analysis. Printouts/Reports may contain a number of parameters such as (but not limited to) audit findings for all or a specific Organization, audit period dates, next audit due dates (dates exceeding 24-month period are not allowed by the system), audited areas, etc. grouped in almost any desired combination. This is accomplished by means of user-friendly queries that are extensively used to retrieve information from the system. Such printouts/reports are generated by the responsible ADMS user on a weekly basis and communicated to FSD Management, as well as to all related ASIs.

**Alerts** are automatically produced by the system by means of a central warning used to attract the user's attention, if a vital date, such as the completion of the two-year period, is nearing for any monitored Organization. If such a condition exists, the software built-in alerting system will notify the user on a pre-determined time period (usually set by the system administrator) which is -today- set at a month before the audit becomes overdue. With this built-in safety feature the updated software module ensures that all requirements are audited by the responsible inspector at intervals not exceeding the required 24 month period.

### **13.5 General Inspection Practices and Procedures**

This Section contains information and general guidelines for the conduct of inspections by ASI inspectors.

#### **13.5.1 Objective of an Inspection**

The primary objective of any inspection is to determine that a person, an item, or a certain segment of an operation associated with air transportation meets at least the same standards that were required for initial certification or approval by the HCAA. For inspectors to make these determinations, inspections must be conducted in an orderly and standardized manner. To accomplish this, each type of inspection must have individual objectives and be conducted each time in generally the same manner, according to the direction and guidance in this Manual and with appropriate inspector tools/additional guidance material.



### 13.5.2 Characteristics of an Inspection

Each type of inspection is a specific work activity which has the following characteristics:

- A specific work activity title
- A definite beginning and a definite end
- Specific objectives to be met
- General procedures to be followed
- A report of findings

*A. Each type of inspection is identified with a specific title.*

Each type of inspection is assigned a specific ADMS code for the purpose of computer automation and for reference in the planning and tracking of inspection activity.

*B. Inspections have a definite beginning and end.*

They may be scheduled by an inspector for the observation and evaluation of a specific activity, such as a proficiency check, or they may be scheduled for the evaluation of operator/organization documents, manuals, or approved programs. A specific inspection activity may be initiated and completed in a short time or it may be initiated on one day and completed several days later with other types of work activity conducted during that time. In any case, an inspection begins when an inspector initiates the inspection task and ends when the inspector has completed the inspection report.

*C. Inspection general procedures.*

Inspections have general procedures that ASI inspectors should follow for standardization purposes. These general procedures are outlined in the following sections of this chapter. In most cases, there is a specific HCAA Guidance List for each type of inspection which contains specific items or areas which should be observed and evaluated, when applicable, during the inspection. Examples of these Guidance Lists are included in Chapter 16 – Inspector Tools and Guidance Material of this Manual.

*D. Primary Objective.*

The primary objective of any inspection is to determine that a person, item, or segment of an operation complies or continues to comply with regulations, safe operating practices, and other established standards. Each inspection type, however, has specific objectives, which are discussed in Chapter 16 – Inspector Tools and Guidance Material of this Manual.

*E. Inspection Report*

An inspection is not complete until a report on the results of the inspection has been recorded. Inspection results are recorded on Audit Finding Forms and then entered into the ADMS System for tracking purpose as described below. This inspection report is the key element of any inspection and therefore, ASI inspectors must be concise, factual, and objective in reporting inspection results.

### 13.5.3 Conducting an Inspection

Due to the complexity of the air transportation industry there are various types of inspections, each type with specific objectives. When deciding which type of inspection to conduct, the objectives of each type of inspection should be considered so that the type most appropriate and effective for a particular situation may be determined. Although an ASI may suggest the type/frequency of specific inspection(s) to be included in the AIP based on the specific operator's/organization's compliance history, known trends, public complaints, etc., in most situations, the types of inspections that need to be conducted are determined by the Airworthiness/Operations Section Managers during the development of the surveillance program (AIP). These determinations are based on the analyses of previously collected surveillance data and other related information.





#### **13.5.3.1 Inspection Preparation**

Before conducting an inspection, ASI inspectors should to the extent possible, familiarize themselves with an operator's/organization's systems, methods, and procedures. To obtain this familiarization, ASI inspectors can review those sections of the operator's/organization's manuals pertinent to the type of inspection to be conducted. Additional familiarization can be obtained by an inspector questioning and discussing the operator's/organization's systems, methods and procedures with other inspectors already acquainted with the operator/organization. Previous inspection results and analyses pertinent to the type of inspection to be conducted can be obtained by the ADMS system for the specific operator/organization and reviewed for any previous deficiencies or negative trends. Inspectors must also be acquainted with the applicable direction and guidance in this Manual for the type of inspection to be conducted.

#### **13.5.3.2 Inspection Advance Notice**

Most inspections will cause some disruptions to routine operations. Responsible operators/organizations engaged in air transportation/maintenance understand the legal basis for HCAA surveillance and are generally cooperative in responding to the needs of ASI inspectors during the conduct of inspections. Operators/organizations are required to afford inspectors the opportunity to conduct inspections in a manner that effectively accomplishes the objectives of the inspections. Inspectors should, however, arrange their inspection activities so they will result in a minimum amount of disruption to routine operations. In general, it is appropriate and helpful to both the operator and ASI inspectors to provide advance notice that an inspection is to be conducted. Advance notice should be given for inspections which take operator personnel away from their normal duties, such as Aircraft Records inspections. Such advance notice is usually unnecessary for those inspections which result in only a minimal involvement of operator personnel. Examples of inspections in which advance notice serves little purpose include ramp inspections.

#### **13.5.3.3 Limiting the Scope of an Inspection**

Each type of inspection has a set of items or areas, as shown in the specific type inspection corresponding HCAA Guidance List, that inspectors should observe and evaluate during the inspection. Sufficient time should be allotted for effective evaluation of all the items or areas. The circumstances under which inspections are conducted however, vary considerably. Often inspectors will not be able to evaluate all the specified items or areas listed in the Guidance List. The more important consideration is to thoroughly and qualitatively evaluate those items or areas in which the inspector has the time and opportunity to observe. In some circumstances, it may be preferable for an inspector to limit the scope of a particular inspection type to ensure the quality of the inspection. When an inspection is limited in scope, the inspector should provide a comment on how it was limited, and indicate it by either recording the number and type of records or manuals evaluated, recording the general areas evaluated, or by recording the general areas not evaluated. In general, it is better to schedule sufficient time to evaluate all the items or areas specified for an inspection type. Inspections that are limited in scope, however, do serve a useful purpose and can still provide valuable information.

#### **13.5.3.4 ASI Inspector Conduct**

The actions and conduct of an aviation safety inspector (ASI) are subject to close scrutiny by the personnel they encounter during the performance of an inspection. Inspectors must conduct themselves as aviation professionals at all times when conducting inspections. When initiating an inspection, inspectors shall properly identify themselves and ensure that the appropriate operator/organization personnel are fully aware of the type and purpose of the inspection being conducted. Inspectors shall wear name tags or other appropriate identification in plain view during the conduct of the inspections, such as the ASI identification card. When observing or evaluating operator personnel during the performance of their assigned duties, inspectors shall not intervene



in a manner that could adversely hinder or preclude them from effectively performing their duties. If, however, an inspector observes a condition that is obviously unsafe or that could potentially become unsafe, the inspector shall immediately inform the appropriate operator personnel of the condition.

#### **13.5.3.5 Concluding an Inspection**

At the conclusion of an inspection, inspectors should usually debrief appropriate operator/organization personnel of the inspection results. When appropriate to the type of inspection conducted, the debriefing should include a summary of the area inspected and the inspector's opinion concerning the compliance status of each area. Persons, items, or areas that were found to meet or exceed standards should also be commented on during the debriefing. Post-inspection debriefing must include an explanation of any deficiencies that were found during the inspection. Appropriate operator personnel must be informed of any areas that will require some form of follow-up action. If any non-compliance is found, inspectors must inform responsible operator/organization personnel of the non-compliance(s) and complete Audit Finding Form(s) (see Appendix F-Chapter 7), one for each non-compliance found. The Audit Finding Form(s) shall also be presented to and signed for acknowledgement by the responsible operator/organization personnel. The Audit Finding Form(s) produced will be used to enter surveillance data to the ADMS System for tracking purposes. Isolated types of deficiencies found during an inspection can often be corrected by operator personnel while the inspection is being conducted. Such deficiencies can be adequately resolved and closed out during the post-inspection debriefing. In these cases, however, inspectors should record information about the deficiency and how it was corrected on the Audit Finding Form(s) as described above because such information is useful for trend evaluations. These findings will be closed by the ASI at this step and no further action will be required by the operator/organization.

#### **13.5.3.6 Reporting the Results of an Inspection**

Reporting the results of an inspection is a two-step procedure:

##### **A. Update ADMS System**

Non-compliances of the Operator/Organization found and recorded on Audit Finding Forms, as described above, are entered into the ADMS System for tracking purposes and are marked as "Open" (refer also to the appropriate section in HCAA Administration Procedures Manual).

##### **B. Preparation of an Inspection Report**

The preparation of the inspection report is the final action that must be taken by ASI inspectors to conclude an inspection. All reports on specific types of inspections shall consist of all relevant Audit Finding Forms and the HCAA Guidance List of the specific type inspection carried out.

### **13.6 Guidance for the Conduct of Specific Types of Inspections**

Direction and guidance for the conduct of a specific type of inspection is provided in Chapter 16 – Inspector Tools and Additional Guidance.



## CHAPTER 14

### Occurrence Reporting

#### The FSD Mandatory Occurrence Reporting Scheme

##### 14.1 General

The Accident investigation Section of FSD collects and analyzes the irregularity and occurrence reports. The incoming reports are evaluated by qualified personnel, able to understand the contents of the reports and to decide if further actions are necessary.

The following actions shall be performed on a case by case basis:

- Minor irregularities reports are registered and filed without further actions.

It may be necessary to contact the Operator/CAMO/AMO in order to follow up an irregularity/occurrence report, to acquire additional information, or ascertain any related corrective actions.

- According to the nature of the irregularities/occurrences, or based on statistical results, it may be necessary to alert the other FSD Sections, such as Airworthiness, Operations, or General Aviation Sections, in order to carry out additional inspections based on a specific occurrence reports analysis.





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## CHAPTER 15

### Safety Assessment of Foreign Aircraft (SAFA)

#### 15.1 Introduction

SAFA inspections are part of a European Community safety programme, which has become mandatory for all Member States of the European Union. This programme, coordinated by EASA, is implemented in a harmonised and standardised way in all EU Member States and in all States with which EASA signed a working arrangement on SAFA. It is increasingly becoming a vanguard in European and international aviation safety by its contribution to identify negative safety trends at an early stage and is considered as one of the key criteria in the formulation of the EC list of banned air carriers.

#### 15.2 Background

The Safety Assessment of Foreign Aircraft (SAFA) programme was launched in 1996 by the European Civil Aviation Conference (ECAC) with the scope to assess the compliance of foreign aircraft landing in ECAC States with the applicable safety standards set by ICAO. Based on a bottom-up approach, which starts with ramp inspections to aircraft and progresses through further steps to the involvement of states of registry or operator if so required, SAFA was in compliment to a programme of assessments of national authorities launched at the same time by ICAO, which was replaced in 1998 by the Universal Safety Oversight Audit Programme (USOAP). The scope of the inspections relating to 'foreign' aircraft implied those aircraft not used or operated under the control of the competent authority of the state where the inspection was taking place, giving a pointer of the safety oversight provided by other states.

#### 15.3 Legal basis

The Directive 2004/36/EC of the European Parliament and of the Council on the safety of third-country aircraft using Community airports (the so-called 'SAFA Directive') was published on 30 April 2004, creating a legal obligation upon EU Member States to perform ramp inspections as of April 2006 upon third country aircraft landing at their airports. A 'third country aircraft' implied an aircraft that is not used or operated under control of a competent authority of an EU Member State; this Directive does not prohibit however EU Member States from inspecting aircraft from other EU Member States. It applies to all aircraft involved in commercial operations, all aircraft over 5700 Kg involved in non-commercial operations and helicopter operations. It does not apply to State aircraft and aircraft below 5700 Kg involved in non-commercial air transport.

By Commission Regulation (EC) 768/2006, implementing Directive 2004/36/CE, the SAFA Programme was transferred to the European Commission assisted by the European Aviation Safety Agency (EASA). EASA has undertaken the responsibility for the coordination for implementation of the programme, the management and development of the centralised database, as well as the collection, analysis and exchange of the relative information.

By the Commission Directive 2008/49/EC that was published on 16 April 2008 the Annex II to the "SAFA Directive" has been amended, setting the core elements of the ramp inspection procedures which include: follow-up actions, mandatory reporting timeframe (15 working days) and the mandatory communication of the results of the inspection to the inspected operators through the delivery of a Proof of Inspection according to a common format.

By the Commission Regulation 351/2008 a structured, pan-European approach to the prioritisation of SAFA ramp inspections was implemented, targeting on potentially unsafe subjects and aiming to achieve a better utilisation of the available inspecting resources. The prioritisation list is



compiled by the European Commission and updated whenever the need arises according to the set of criteria established under the said Regulation, namely:

- information transmitted by EASA following the analysis of SAFA database;
- information stemming from the meetings of the Air Safety Committee;
- information received by the Commission from the Member States.

## **15.4 General Overview of the SAFA Programme**

### **15.4.1 Integration of the Programme in the overall aviation safety chain**

Based upon the SAFA inspections performed over the last few years, experience shows that these give a general indication of the safety of foreign operators. However, this indication is limited in the sense that no full picture is obtained about the safety of any particular aircraft or operator. This is due to the fact that certain aspects are difficult to assess during an inspection (e.g. crew resource management, full airworthiness status ... etc.) owing to the limited time available to perform an inspection and consequently the limited level of detail possible during such an inspection. The value of those indicators will be further enhanced by increasing also the level of harmonisation across the participating States in the performance of SAFA inspections.

It has to be stressed that SAFA inspections are limited to on-the-spot assessments, therefore do not substitute proper regulatory oversight; they cannot guarantee the airworthiness of a particular aircraft. A full assessment of a particular aircraft or operator can only be obtained through the continuous oversight by the responsible national civil aviation authority (State of Operator or State of Registry).

### **15.4.2 Areas of inspection**

The areas of a ramp inspection chiefly concerns the aircraft documents and manuals, flight crew licenses, the apparent condition of the aircraft and the presence and condition of mandatory cabin safety equipment. The references for these inspections are contained in the Standards and Recommended Practices (SARPs) of the International Civil Aviation Organisation (ICAO), mainly in Annexes 1 (Personnel Licensing), 6 (Operations of Aircraft) and 8 (Airworthiness of Aircraft) as well as in Annex 2 (Rules of the Air), Annex 7 (Registration Marks), Annex 10 (Aeronautical Telecommunications), Annex 16 (Environmental Protection), Annex 18 (Dangerous Goods) and in Doc 7030 (Regional Supplementary Procedures). In addition, the technical condition of an aircraft should be checked against the aircraft certification and manufacturer's standards.

The inspections carried out by the Participating States follow a common procedure using a checklist containing 54 inspection items to be potentially checked, subject to the time and inspectors available. Checks may include:

- licences of the pilots;
- procedures and manuals that should be carried in the cockpit;
- compliance with these procedures by flight and cabin crew;
- safety equipment in cockpit and cabin;
- cargo carried in the aircraft (including the transport of dangerous goods); and
- the technical condition of the aircraft.

According to the Annex to the Commission Directive 2008/49 the Member States give to the cockpit crew (or alternatively other representatives of the operator) a so-called "proof of inspection" form (POI) when the inspection has been finalised; this form shows the contact details of the Participating State, the operational details of the flight, the checked inspection items and possible findings. The information on the Proof of Inspection form may be subject to change when entered into the database as a result of quality checks on the findings, and may lead to an amendment, deletion or re-categorisation of findings.

In the case of significant irregularities, the operator and the appropriate Aviation Authority (State of Operator or Registry) are contacted in order to arrive at corrective measures to be taken not only with regard to the aircraft inspected but also with regard to other aircraft which could be concerned in the case of an irregularity (finding) which is of a generic nature. All



reported data is stored centrally in a computerised database set up and managed by EASA. The database also holds supplementary information, such as lists of actions carried out after an inspection which revealed non-compliances.

The information held within this database is reviewed and analyzed by EASA on a regular basis. The European Commission and Participating States are informed about the results of the analysis and are advised on any potentially safety hazards identified.

#### **15.4.3 Categorisation of findings**

Findings determined during an inspection are categorised according to the magnitude of the deviation of the requirements and to the influence on safety of the non compliance. Minor deviations (category 1) are reported to the pilot in command. If an inspection identifies one or more significant deviations from the safety standards

(category 2 findings), these will also be reported to the operator and its competent authority. Where non-compliances have a major impact on safety (category 3), the flight crew is in addition expected to correct such non-compliances before the aircraft departs.

#### **15.4.4 Follow-up process**

The Stakeholders involved in the SAFA process are the State of Inspection, the Operator, the State of Operator and the State of Registry (if different from the State of Operator). These organisations play a key role in the follow-up process after an inspection is conducted:

1. The SAFA inspector debriefs the Pilot in Command and hands over the Proof of Inspection.
2. The inspector requests the Pilot in Command to sign a copy of the Proof of Inspection form.
3. The State of Inspection validates the findings and timely (within 15 days) inputs the report of inspection to the centralised database.
4. In case of category 2 and/or 3 findings, a written communication will be sent to the operator and to the competent authority overseeing the operator.
5. The operator is requested to reply to the written communication with an action plan which addresses the deficiencies.
6. The competent authority ensuring the oversight of the operator (and/or the airworthiness of the aircraft) may be asked to confirm their agreement on the corrective actions taken.
7. Findings are considered closed by the State of Inspection when the deficiencies have been satisfactorily addressed.
8. Subsequent inspections by any participating State may occur to verify rectification of the deficiencies.
9. The competent authority ensuring the oversight of the operator (and/or the airworthiness of the aircraft) sends to EASA a monthly report on the follow-up actions with regard to findings made by the State of Inspection (SINAPS).

#### **15.4.5 Database analysis**

The reports entered by participating States in the SAFA database are subject to a quality review and analysis. Conducted on a four monthly basis this analysis attempts to identify as early as possible potentially negative safety concerns and trends in order that they may be addressed in a timely manner before indeed becoming a threat to international aviation safety.

#### **15.4.6 Additional information**

General information on the SAFA programme can be found on the website of the EASA ([http://www.easa.europa.eu/ws\\_prod/s/s\\_safa.php](http://www.easa.europa.eu/ws_prod/s/s_safa.php)).

### **15.5 Management of SAFA findings against aircraft of Greek Registry**

The SAFA findings raised against aircraft of the Greek registry are taken into account to identify potential negative safety trends and structural weaknesses with regard to the quality control management of the operator and to arrive at corrective measures applicable not only to the aircraft inspected but also with regard to other aircraft which could be concerned in the case of deficiencies of a generic nature.



The HCAA shall use these SAFA inspection results in addition to other sources of information (SANA – Safety Assessment of National Aircraft, occurrence reports, ACAM, accident investigations) during the continuous oversight of the aircraft under Greek registry.

All Greek operators subjected to a SAFA inspection by a State of inspection, have been requested by ref D/D2/4114/30.03.2009, to timely send a copy of the Proof of Inspection form (POI) through their Quality System to the attention of HCAA National SAFA coordinator, FSD SAFA Office.

Under normal circumstances, upon receiving the POI, the Office is alerted and monitors the SAFA database to verify the relevant entry of the specific finding. When this is accomplished, the SAFA National coordinator sends the report to the attention of the responsible operator requesting appropriate actions to address the finding. The report is also reviewed by the SAFA National coordinator in cooperation with the D2, Section A (airworthiness) designee and if it relates to airworthiness, it is also communicated to the Airworthiness ASI responsible for that particular operator.

The same process applies in the occasion that -due to the severity of the SAFA finding- a direct communication is received from the State of inspection (usually in the form of a fax) imposing or requesting immediate corrective actions. In addition, the SAFA National coordinator will notify the FSD Director.

Upon receiving the SAFA report from HCAA SAFA Office, the operator has to provide information to the HCAA SAFA Office about the corrective actions taken or proposed on the deficiencies. These actions should include a root cause analysis and may consist of any actions taken and/or planned to correct the deficiencies, and any actions to prevent/limit reoccurrence in the future. Operator's actions are reviewed by the Airworthiness ASI inspector responsible for the particular operator and –if acceptable- they are communicated to the State of inspection for acceptance and copied to EASA through the HCAA SAFA Office. In the case where operator responses are not acceptable, the Operator is requested to take further actions as necessary before they are communicated to the State of inspection.

Proper implementation of the relative corrective actions shall be insured by the ASI responsible for the operator.

SAFA inspection reports are also kept in folders organized by Operator in the HCAA Tech Library of the FSD Division and are available to all ASI inspectors. This information shall be used as necessary for monitoring and future trend analysis in compliment to the relative analysis and statistics made by EASA, discussed at the EASA/SAFA IDEA Group and is available to the HCAA through the HCAA SAFA Office.

The SAFA inspection results are also considered as input to the ACAM, as well as for tailoring the continuous surveillance annual inspection plan.



## CHAPTER 16

### Inspector Tools and Additional Guidance

REF: *EC 2042/2003 Part-M, Part-145, Part-147, as amended*  
*ICAO Doc.8335, Chapter 8, as amended*

Additional Ref: *FAA Order 8300 as amended*

#### 16.1 General

This Chapter contains information on specific types of inspections. It also provides the ASI inspector with tools and additional guidance material in the form of Guidance Lists to assist him/her in conducting those inspections, in support of an overall surveillance program (refer to Chapter 13).

The appropriate Guidance List(s) for the specific type inspection being conducted should be used since it contains a list of items ("reminders") that should be observed and evaluated by the ASI inspector during the inspection. There may be items evaluated during a specific type inspection that are not listed on the Guidance List. In such cases, these items should be included in the inspector's Guidance List by means of a note ("other") at the end of the list. Furthermore, the Guidance List can be used to help describe how the inspection was limited in scope (see Chapter 13.5.3.3 of this Manual).

It is important that aviation safety inspectors (ASI) are familiar with the type of aircraft or equipment/task to be inspected before performing the inspection. Airworthiness Maintenance and Avionics ASIs possess various degrees and types of expertise and experience. An ASI who needs additional information or guidance on a given subject should coordinate with personnel experienced in that particular specialty.

#### 16.2 Aircraft Airworthiness Ramp Inspection: General Guidelines

The following constitute general guidelines for performing Aircraft Airworthiness Ramp Inspections. These guidelines are to be utilized when time permits and must be adapted to the aircraft type being inspected. This requires a basic knowledge and familiarity of the type operation being inspected.

The primary objective of an aircraft airworthiness ramp inspection is to provide inspectors with the opportunity to evaluate an Operator's aircraft general airworthiness, MEL compliance, Logbook entries, deferred items procedures, etc. and/or any ongoing maintenance while the crewmembers and aircraft are on the ground.

##### 16.2.1 General Practices and Procedures

Ramp inspections may be conducted before a particular flight, at en route stops, or at the termination of a flight. A ramp inspection may be conducted any time an aircraft is at a gate or a fixed ramp location, provided the crew and ground personnel are performing the necessary preparations for a flight or when they are performing post-flight tasks and procedures.

The operator does not have to be given advance notice that a ramp inspection is going to be conducted (this does not apply for Ramp inspections that are part of an Airworthiness En-route inspection). Inspectors must, however, conduct inspections in a manner that does not unnecessarily delay crewmembers and/or ground personnel in the performance of their duties.

The following areas of conduct should be observed by inspectors during ramp inspection activities:



- ◆ Inspectors should not interrupt crew or ground personnel when they are performing a particular phase of their duties.
- ◆ When inspection activities require inspectors to interact directly with the crew or ground personnel, the activities should be timed to be accomplished when the crew or ground personnel are waiting to begin another phase of their duties or after they have completed one phase of their duties and before they begin another phase.
- ◆ Inspection activities must be timed so that they do not delay or interfere with passenger enplaning or deplaning.
- ◆ Inspection activities should not adversely impede aircraft servicing or catering.

### **Aircraft Interior**

1. Examine airworthiness and registration certificates. Ensure the following:
  - ◆ Airworthiness and registration certificates are current and valid
  - ◆ Both certificates contain the same model, serial, and registration numbers
  - ◆ Required documents are on board (Special approvals, Noise certificate, etc.)
  - ◆ Signatures are in permanent-type ink
2. Flight deck inspection. Inspect the following:
  - ◆ Instrument security and range markings
  - ◆ Windows (de-lamination, scratches, crazing, and general visibility)
  - ◆ Emergency equipment installation (if applicable)
  - ◆ Seat belts and shoulder harnesses (TSO or JTSA marking, metal to metal latching, and general condition)

### **Aircraft Exterior**

Accompany a flight crewmember during the exterior inspection, if possible, and inspect the following, as applicable:

1. *Landing gear and wheel well areas.* Check for the following:
  - ◆ Any indication of wear, chafing lines, chafing wires, cracks, dents, or other damage
  - ◆ Structural integrity of gear and doors (cracks, dents, or other damage)
  - ◆ Hydraulic leaks (gear struts, actuators, steering valves, etc.)
  - ◆ Tire condition
  - ◆ Tire pressure (if pressure indicators are installed)
  - ◆ Wheel installation and safety locking devices
  - ◆ Wear, line security, leaks, and installation of brakes
  - ◆ Corrosion
2. *Fuselage and pylons.* Inspect the following:
  - ◆ Structure for cracks, corrosion, dents, or other damage
  - ◆ Fasteners (loose, improper, missing)
  - ◆ Condition of radome (look for cracks, bubbles, etc.)
  - ◆ Condition of pitot tubes
  - ◆ Static ports (cleanliness and obstructions)
  - ◆ Stall warning devices and other sensors
  - ◆ Antennas (security and indications of corrosion)
  - ◆ Stains or other indications of leaks
  - ◆ Lavatory servicing areas (evidence of fresh blue water streaks)
  - ◆ Cargo compartments for integrity of fire-protective liners (no holes or unapproved tape used for repairs)
  - ◆ Emergency exit identification/markings
  - ◆ Registration marking (legibility)
  - ◆ All lights (general condition, broken lenses, etc.)





3. *Wings and pylons.* Inspect the following:

- ◆ Structure for cracks, corrosion, dents, or other damage
- ◆ Leading edge (dents and/or damage in line with engine inlets)
- ◆ Leading edge devices (when open, actuator leaks, general condition of lines, wires, and plumbing)
- ◆ Evidence of fuel leaks (operator must prove leak is within established limits)
- ◆ All lights (general condition, broken lenses, etc.)
- ◆ Flaps (cracks, corrosion, dents, and delamination)
- ◆ Flap wells (general condition of lines, wires, and plumbing)
- ◆ Static eliminators (number missing)
- ◆ Ailerons and aileron tabs (cracks, corrosion, dents, delamination)
- ◆ Missing, loose, or improperly secured access door/inspection panels and blowout panels

4. *Engines.* Inspect the following:

- ◆ Intake for fan blade damage and oil leaks
- ◆ Ring cowl for missing or loose fasteners
- ◆ Cowling doors for security and proper fit
- ◆ Lower cowling for evidence of fluid leaks
- ◆ Exhaust for turbine and tailpipe damage and evidence of fluids
- ◆ Reverser doors for stowage and security, and evidence of leaks
- ◆ Access doors for security

5. *Propellers (If applicable).* Inspect the following:

- ◆ Leading edge of propeller for cracks, dents, and other damage
- ◆ De-icer boots for signs of deterioration and security
- ◆ Spinners for security, cracks, and evidence of fluid leaks

6. *Empennage.* Inspect the following:

- ◆ Leading edge for dents
- ◆ All lights (general condition, broken lenses, etc.)
- ◆ Missing static discharge eliminators
- ◆ Elevator, rudder, and tabs (cracks, corrosion, dents, and de-lamination)
- ◆ Evidence of elevator and rudder power unit hydraulic leaks

7. *Ground safety.* Inspect the following:

- (a) Positioning of support vehicles
- (b) Fueling of aircraft to include the following:
  - ◆ Refueling pressure
  - ◆ Condition of refueling unit (leaks, filter change dates, exhaust system, etc.)
  - ◆ Grounding
  - ◆ Fire protection
  - ◆ General fueling procedures
- (c) General condition of ramp to include the following:
  - ◆ Provisions for grounding
  - ◆ Foreign objects on ramp
  - ◆ Fuel spills
  - ◆ General housekeeping/cleanliness
  - ◆ Passenger control
  - ◆ Fire protection

8. *Baggage.* Observe loading and unloading of baggage compartments to include the following:

- ◆ Baggage restraining system
- ◆ Load distribution





The specific type inspections that follow form an integral part of HCAA Flight Standards Division's overall Continuous Surveillance program:

## 16.3 Aircraft Airworthiness Ramp Inspection

### 16.3.1 Objective

This chapter provides guidance for sampling the quality of maintenance and the degree of compliance with the operator's maintenance procedures on in-service aircraft operated under JAR-OPS 1 or 3.

### 16.3.2 General

Due to the fact that many aircraft have less than one hour ground time, in order to ensure that the inspection is performed adequately, the HCAA recommends that two inspectors (Maintenance & Avionics) perform this task in exterior and interior phases.

### 16.3.3 Procedure

#### 1. *Prior to the Inspection.*

Review the operator's schedule, select the flight to be inspected, and determine the type of equipment and ground time needed.

Determine recent problem areas that were identified for that type of aircraft, if any.

Determine if recent regulatory changes and AD requirements affect the aircraft to be inspected.

#### 2. *Begin the Inspection*

For this inspection *HCAA Guidance List GL-AARI-001* (Appendix B) should be used.

#### 3. *Perform the Exterior Inspection, as Applicable.*

Introduce yourself and describe the purpose and scope of the inspection.  
Perform the aircraft exterior inspection with the general guidance provided in Section 16.2.

Record any non-compliance found during the inspection in the Audit Finding Form, identifying the area of inspection with code CS-AARI. (Aircraft Airworthiness Ramp Inspection). Consult Appendix A at the end of this Chapter for an explanation of the Specific Type Inspection Coding System. **For each non-compliance a separate Audit Finding form should be completed.** Refer to Appendix F of Chapter 7 for instructions on how to fill out an Audit Finding form.

#### 4. *Inspect the Aircraft Tech Logbook.*

- Prior to departure of the aircraft, ensure that all open discrepancies from the previous flight are resolved in accordance with the operator's manual.
- Review the Technical Log to determine if repetitive maintenance problems exist, which might indicate a trend.
- Ensure that all MEL items are deferred in accordance with the provisions of the operator's HCAA-approved MEL.
- Review the operator's HCAA-approved MEL to determine if conditions, procedures, and placarding requirements were accomplished to defer specific items correctly.



- Note the date when an item was first deferred to determine if the maximum allowed length of deferral was exceeded. Accomplish this by examining the Technical Log pages, the deferred maintenance list, or deferred maintenance placards or stickers.
- Ensure that an airworthiness release, Tech Logbook entry, or appropriate approval for return to service was made after the completion of maintenance.

5. *Ensure that the Tech Logbook contains the following for each discrepancy:*

- Description of the work performed or a reference to acceptable data
- Name or other positive identification of the person approving the work
- Name of the person performing work, if outside the organization

6. *Perform the Interior Inspection, as Applicable.*

- Perform the aircraft interior inspection with the general guidance provided in 16.2
- Record any non-compliance found during the inspection in the Audit Finding Form, identifying the area of inspection with code CS-AAIRI. (Aircraft Airworthiness Ramp Inspection), Consult Appendix A at the end of this Chapter for an explanation of the Specific Type Inspection Coding System. **For each non-compliance a separate Audit Finding form should be completed.** Refer to Appendix C for instructions on how to fill out an Audit Finding form.

7. *Debrief the Operator.*

- Inform the flight crew or appropriate operator's personnel that the inspection has been completed.
- Discuss the discrepancies brought to the operator's attention during the inspection.
- Present the operator's appropriate personnel the drafted Audit Finding forms and have them signed for acknowledgement of the findings.

8. *Report Inspection Results.*

- Ensure that all Audit Findings are entered into the ADMS system and a copy has been forwarded to the Operator for corrective action .
- Analyze each finding to determine if the discrepancies are the result of improper maintenance and/or missing or inadequate maintenance/inspection procedures.
- Submit the completed HCAA GL-AAIRI-001 Guidance List with any Audit Finding forms attached to the FSD Secretariat office (incoming document) according to "Incoming Documents" procedure of the HCAA Administration Procedures Manual, Chapter 4.



## 16.4 Airworthiness En-Route Inspection

### 16.4.1 Objective

This Section provides guidance in conducting an Airworthiness En-Route Inspection.

### 16.4.2 General

The Airworthiness En-Route Inspection is carried out by one ASI inspector (Maintenance or Avionics) as part of HCAA Flight Standards Division's Annual Inspection Plan (AIP).

### 16.4.3 Procedure

#### 1. *Initiate the Airworthiness En-Route Inspection according to AIP*

A letter addressed to the Operator and signed by the FSD Director notifies the operator of the forthcoming en-route inspection on a specific route identified in the letter within a limited time frame. As soon as the letter has been forwarded to the operator, it is the ASI's responsibility to select a specific date and flight within this time frame to conduct the inspection.

#### 2. *Prior to the Inspection*

The ASI inspector should:  
Coordinate with Operator's Flight Operations Center at least one hour prior to flight.  
Have a copy of the notification letter send to the operator and his/her ASI identification card.  
Proceed to the aircraft as soon as possible  
Follow the operator's procedures for boarding the aircraft  
Identify himself/herself to the pilot-in-command and the flight crew and state the purpose of the inspection

#### 3. *Begin the Inspection*

Use HCAA GL-AERI-001 Guidance List (Appendix B)

#### 4. *Inspect the Aircraft Technical Logbook*

Ensure the following:

- Maintenance/Airworthiness releases are current
- No open items exist
- All discrepancies are corrected or properly deferred
- Minimum Equipment List items were deferred per the procedural and placarding requirements of the operator's HCAA-approved maintenance program

Ensure the length of deferrals are not exceeded, by reviewing the following:

- Tech Logbook pages
- Deferred maintenance list
- Deferred maintenance placards/stickers

Ensure that the Tech Logbook records contain the following for each discrepancy:

- A description of work performed or reference to acceptable data
- Proper sign-off of the person performing the work
- The name or other positive identification of the person approving the work

Determine if repetitive problems indicate a trend.



5. *Perform the Interior Inspection (as applicable) according to the general guidance given in Section 16.2.*

Record any non-compliance found during the inspection in the Audit Finding Form, identifying the area of inspection with code CS-AERI. (Airworthiness En-Route Inspection). Consult Appendix A at the end of this Chapter for an explanation of the Specific Type Inspection Coding System. **For each non-compliance a separate Audit Finding form should be completed.** Refer to Appendix C for instructions on how to fill out an Audit Finding form.

6. *Conduct the Exterior Inspection of the Aircraft (as applicable) according to Section 16.2*

Record any non-compliance found during the inspection in the Audit Finding Form, identifying the area of inspection with code CS-AERI. (Airworthiness En-Route Inspection), Consult Appendix A at the end of this Chapter for an explanation of the Specific Type Inspection Coding System. **For each non-compliance a separate Audit Finding form should be completed.** Refer to Appendix C for instructions on how to fill out an Audit Finding form.

7. *Prior to Pushback, Accomplish the Following:*

- Ensure all of the non-compliances noted during pre-departure were corrected
- Request and review the pilot and medical certificates of all flight crewmembers.
- Ensure the load sheet contains the following information:
  - The number of passengers
  - The total weight of the loaded aircraft
  - The maximum allowable takeoff weight for that flight
  - The center of gravity limits
  - The actual center of gravity of the loaded aircraft, unless the aircraft is loaded according to an approved loading schedule
  - The registration number of the aircraft or the flight number
  - The origin and destination of the flight
  - The identification of the flight crewmembers and their respective position assignments
- Ensure the proper fuel load is on-board by comparing fuel gages to the minimum fuel required for dispatch. This fuel requirement is normally found on the dispatch release.

8. *Monitor In-flight Operations*

- Ensure the flight crew is using and following the operator's approved checklists for all activities.
- Exercise good cockpit discipline and ensure the flight crew does the same, to include the following:
  - Sterile cockpit rule compliance
  - Proper use of cockpit/personal lighting
  - Compliance with the pilot-in-command's requests
- Monitor instruments/gages during flight for normal operation.
- Monitor communications for crew compliance with ATC control.
- Ensure that left and right-seat crewmembers are in compliance with the oxygen requirements.
- Note and record all non-compliances on separate Audit Finding forms.

9. *Concluding the Inspection - Debrief Flight Crew.*

- At the termination of the flight, state whether the operations were satisfactory or unsatisfactory.
- If irregularities were noted in the performance of any aircraft system, discuss them with the pilot-in-command.
- Ensure that discrepancies are entered in the aircraft's Tech Logbook.
- Unsatisfactory operational findings should be brought to the attention of the operator's assigned Principal Operations Inspector.



*10. Report Inspection Results.*

- Ensure that all Audit Findings are entered into the ADMS system and a copy has been forwarded to the Operator for corrective action, if applicable.
- Analyze each finding to determine if the discrepancies are the result of improper maintenance and/or missing or inadequate maintenance/inspection procedures.
- Submit the completed inspection report No. 35-200/E1/Γ (Appendix B) and HCAA GL-AERI-001 Guidance List with any Audit Finding forms attached to the FSD Secretariat office (incoming document) according to “*Incoming Documents*” procedure of the HCAA Administration Procedures Manual, Chapter 4.



## 16.5 Maintenance In-Progress Inspection

### 16.5.1 Objective

This Section provides guidance for observing and analyzing maintenance in-progress operations for compliance with specific methods, techniques, and safe operating practices in the operator's inspection and maintenance program.

### 16.5.2 General

Maintenance In-Progress inspections are performed by ASI inspectors (Maintenance or Avionics) as part of HCAA Flight Standards Division's Annual Inspection Plan (AIP). Spot inspections can be scheduled as part of the work program, but may be initiated whenever a problem is noted, including deficiencies noted during other types of inspections.

### 16.5.3 Procedure

#### 1. *Initiate Spot Inspection (as Applicable).*

Use HCAA Guidance List GL-MIP-001 (Appendix B)

#### 2. *Select Appropriate Aircraft For Inspection.*

Determine the following from the operator's maintenance schedules:

- Aircraft availability
- Aircraft type
- Type of maintenance being performed

#### 3. *Prepare for the Inspection.*

Review the following:

- ◆ Maintenance manual procedures for maintenance being performed (if available)
- ◆ Operations specifications time limitations, when applicable to the maintenance task
- ◆ Previous inspection findings
- ◆ Applicable maintenance alert bulletins
- ◆ Service Difficulty Report (SDR) Summary
- ◆ Any new regulation and/or AD requirements affecting the aircraft to be inspected

#### 4. *Perform the Inspection.*

- ◆ Identify yourself to the maintenance supervisor and discuss the nature of your inspection.
- ◆ Discuss with the maintenance supervisor/person in charge the status of the selected maintenance task.
- ◆ Select a particular maintenance task. If possible, include a maintenance task that has been designated by the operator as a "required inspection item".
- ◆ For any non-compliance found complete an Audit Finding form.
- ◆ Ensure that current maintenance procedures are available to the person(s) performing the work by accomplishing the following:
  - Asking maintenance personnel for the maintenance procedures used to accomplish the work
  - Recording the date of the maintenance procedures being used to perform the maintenance task for future comparison with the maintenance manual master copy
- ◆ Ensure that the maintenance is performed according to established procedures by comparing actual performance to the operator's approved maintenance/inspection manual procedures.
- ◆ Ensure that the exact status of all phases of the Maintenance In-Progress is accurately transferred between arriving and departing maintenance shifts by means of appropriate changeover procedures.
- ◆ Ensure that the proper tools are being used by accomplishing the following:



- Observing that special tools referenced in the maintenance manual are being used
- Checking calibration due dates on precision tools, measuring devices, and testing equipment requiring calibration
- ◆ Ensure that the operator has the facilities to properly perform the maintenance task.
- ◆ Ensure that systems being maintained are not exposed to environmental conditions that could contaminate or damage components.
- ◆ Ensure that maintenance recording is accomplished according to the operator's records system.
- ◆ Note any maintenance task deficiencies and include any copies of the documents that revealed the deficiencies.
- ◆ For those maintenance tasks involving "required inspection item" functions, determine that the persons observed performing these functions are appropriately certificated, authorized, and qualified.

**5. Debrief Operator's Appropriate Personnel**

- Inform the Maintenance Manager or Supervisor that the inspection has been completed.
- Discuss the discrepancies brought to the operator's attention during the inspection.
- Present the operator's appropriate personnel the drafted Audit Finding forms and have them signed for acknowledgement of the findings.

**6. Report Inspection Results.**

- ◆ Ensure that all Audit Findings are entered into the ADMS system and a copy has been forwarded to the Operator for corrective action.
- ◆ Analyze each finding to determine if the discrepancies are the result of improper maintenance and/or missing or inadequate maintenance/inspection procedures.
- ◆ Submit the completed HCAA GL-MIP-001 Guidance List with any Audit Finding forms attached to the FSD Secretariat office (incoming document) according to "Incoming Documents" procedure of the HCAA Administration Procedures Manual, Chapter 4.

**EASA Part-145 Inspections**

**REF: (EC) 2042/03, 145.B.30**

PART-145 AMO Organizations are audited by HCAA/FSD at periods not exceeding 24 months to ensure compliance with Part-145 requirements, as per 145.B.30. Any findings during the inspection are processed in accordance with para. 16.20 of this Chapter.

**EASA Part-MG/MF Inspections**

**REF: (EC) 2042/03, Annex I, M.B. 704, M.B. 604**

PART-MG Organizations are audited by HCAA/FSD at periods not exceeding 24 months to ensure compliance with Part-MG/MF requirements, as per M.B. 704/604. Any findings during the inspection are processed in accordance with para. 16.20 of this Chapter.



## **16.6 Reserved**





## 16.7 Inspect Avionics Test Equipment

REF: EASA EC 2042/2003, Annex II, 145.A.40(b) & AMC 145.A.40(b)  
FAA 8300.10 CHG9, Vol. 3, Chapter 144

### 16.7.1 Objective

This Section provides guidance for inspecting test equipment used during the calibration, repair and overhaul of avionics equipment.

### 16.7.2 General

A repair facility certified to maintain airborne avionics equipment must have test equipment suitable to perform that maintenance. Regardless of the type of equipment being used, the minimum test equipment necessary to perform the maintenance, as required by the manufacturer, is acceptable.

*Test Equipment Equivalency:* Normally, test equipment which is equivalent to that recommended by the appliance or aircraft manufacturer will be accepted.

*Test Equipment Updating:* State-of-the-art advances often affect the modes and parameters of avionics equipment. Therefore, previously accepted test equipment may need to be modified to ensure compatibility with any new equipment used.

*Test Equipment Calibration:* 145.A.40 (b) requires that “maintenance facilities tools, equipment and particularly test equipment must be controlled and calibrated to standards acceptable to the EASA full member Authority at a frequency to ensure serviceability and accuracy. Records of such calibrations and the standard used must be kept by the approved maintenance organization”. The calibration intervals for test equipment will vary with the type of equipment, environment, and use. The accepted industry practice for calibration intervals is usually one year.

### 16.7.3 Procedure

#### A. Perform the Inspection

The Avionics ASI should perform the inspection using the guidance list (GL-IATE-001, shown in Appendix B at the end of this Chapter). The following should be observed:

- (1) Determine what test equipment is required by reviewing the operator and/or manufacturer's maintenance manuals.
- (2) Ensure that the operator/agency has full control of the test equipment, i.e. ownership, lease, etc. and that the test equipment is located on the premises.
- (3) Ensure that the following is accomplished according to the operator/agency's accepted manual procedures:
  - Identification of equipment
  - Recording of the date and person/organization calibrating each piece of test equipment
- (4) Ensure that inspection and calibration of the precision tools and test equipment is done in accordance with the operator/agency's manual procedures.

#### B. Inspect Automated Test Equipment (ATE)

- (1) Ensure that the ATE testing program provides an in-depth analysis that ensures the aircraft components and testing standards are functionally tested within the --prescribed manufacturer's limits.



(2) Verify that management control is accomplished in accordance with the operator/agency's accepted manual and includes procedures for the following:

- ◆ The setting of limits and standards
- ◆ The performance of evaluation checks and tests
- ◆ The updating of a listing that identifies each ATE test by number and a reference to the applicable section of the component manual
- ◆ Controlling and identifying the revision status of software programs

(3) Ensure that the operator/agency's purchasing maintenance service (if applicable), including ATE programs, is accomplished in accordance with the operator/agency's approved maintenance program.

*C. Debrief Organization's Appropriate Personnel*

- Inform the Maintenance Manager or Supervisor that the inspection has been completed.
- Discuss the discrepancies brought to the organization's personnel attention during the inspection.
- Present the organization's appropriate personnel the drafted Audit Finding forms and have them signed for acknowledgement of the findings.

*D. Report Inspection Results.*

- ◆ Ensure that all Audit Findings are entered into the ADMS system and a copy has been forwarded to the organization (Maintenance Manager) for corrective action.
- ◆ Analyze each finding to determine if the discrepancies are the result of improper maintenance and/or missing or inadequate maintenance/inspection procedures.
- ◆ Submit the completed HCAA GL-IATE-001 Guidance List with any Audit Finding forms attached to the FSD Secretariat office (incoming document) according to "Incoming Documents" procedure of the HCAA Administration Procedures Manual, Chapter 4.



## **16.8 Monitor Flight Data Recorders (FDR)**

REF: [EU-OPS 1, Subpart K, 1.715/1.720/1.725 & Appendix 1](#)  
[ICAO Annex 6, Part I, 6.3 as amended](#)  
[FAA 8300.10 CH10, Vol. 3, Chapter 142](#)

### **16.8.1 Objective**

This section provides guidance for monitoring flight data recorders (FDR), to ensure that performance levels are maintained.

### **16.8.2 General**

A review of data extracted from FDR's has shown a significant loss of data during takeoffs, touchdowns, flights through turbulence, and unusual vibration situations. Due to these data losses, Avionics Aviation Safety Inspectors (ASI) need to ensure that an air carrier's monitoring procedures and inspection schedules will maintain the required FDR performance levels. Furthermore, State-of-the-art advancements in certain digital FDR's incorporate the use of continuous self-monitoring and fault condition alert capabilities. These types of digital FDR's are being accepted by airlines as new or direct replacements for foil recorders.

In order to ensure the timely activation of underwater acoustic beacons associated with FDR's, Avionics ASI's should evaluate their certificate holder's maintenance and inspection programs to ensure that procedures for testing beacons, conducted concurrently with battery replacement, provide for functionally testing the beacons prior to replacing the old battery.

Operators' maintenance programs should also be evaluated to ensure that operational testing is being accomplished, consistent with the recorder or beacon manufacturer's recommended procedures, at specified intervals and when possible, in conjunction with a numbered or phase inspection, e.g., "A," "B," or "C," check.

These requirements must be reflected on work cards or other inspection cards to ensure system-wide compliance.

### **16.8.3 Procedure**

The Avionics ASI should perform the inspection using the guidance list (GL-MFDR-001, shown in Appendix B at the end of this Chapter). The following should be observed:

#### **A. Perform the Inspection.**

(1) Determine the type of FDR currently in operation.

(2) Evaluate the operator's maintenance program.

Accomplish the following:

(a) Ensure that the FDR system test program is accomplished in accordance with the manufacturer's recommendations or an approved equivalent method

(b) Verify that the continuous self-monitoring and fault condition alert capabilities (digital FDR's) will detect the loss or deterioration of input signals before periodic readouts are allowed to be waived

(c) Ensure that the performance levels for ranges, accuracies, and recording intervals are maintained by periodic FDR bench checks and detailed analysis of recording tapes

(d) Review the operator's FDR, computer readouts, ramp test set readouts, and compare for the following:

- Missing parameters
- Data loss



- Deterioration of signals

**NOTE: Periodic readouts can be waived if not required by the maintenance review board.**

(e) Review the certificate holder's maintenance procedures for acoustic underwater locator beacons. The manufacturer's recommendations must be closely followed, including the procedures for the battery check.

(f) Ensure that the digital FDR ramp equipment, if used, can detect the loss or deterioration of input signal from sensors or transducers before periodic readouts are allowed to be waived

(g) Ensure that the manual includes procedures that prevent the operator from destroying recorded data from the removed unit until the aircraft has accumulated the appropriate amount of operating time for that type of aircraft

(h) Ensure that the performance levels for ranges, accuracies, and recording intervals are maintained

(3) Inspect the operator's/ organization's record-keeping system.

Accomplish the following:

(a) Ensure that the most recent instrument calibration and recorder correlation is being retained by either the air carrier or another agency keeping the records on their premises, to include the recording medium from which this calibration is derived

(b) Review the operator's FDR readouts and calibration records for the following:

- Missing parameters
- Data loss
- Deterioration of signals

(c) Examine the FDR readouts to ensure that the actual data is within the ranges, accuracies, and recording intervals as specified in EU-OPS 1, Subpart K, 1.715-1.725, Appendix 1 (Table 1)

#### **B. Debrief Operator's/Organization's Appropriate Personnel**

- Inform appropriate personnel (Maintenance Manager or Supervisor) that the inspection has been completed.
- Discuss the discrepancies brought to the operator's/organization's personnel attention during the inspection.
- Present the operator's/organization's appropriate personnel the drafted Audit Finding forms and have them signed for acknowledgement of the findings.

#### **C. Report Inspection Results.**

- ◆ Ensure that all Audit Findings are entered into the ADMS system and a copy has been forwarded to the organization (Maintenance Manager) for corrective action.
- ◆ Analyze each finding to determine if the discrepancies are the result of improper maintenance and/or missing or inadequate maintenance/inspection procedures.
- ◆ Submit the completed HCAA GL-MFDR-001 Guidance List with any Audit Finding forms attached to the FSD Secretariat office (incoming document) according to "Incoming Documents" procedure of the HCAA Administration Procedures Manual, Chapter 4.



## 16.9 Monitor Cockpit Voice Recorders (CVR)

REF: EU-OPS 1, Subpart K, 1.700-1.710 & AMC 1.700-1.710

EUROCAE Doc. ED56 and ED56A

ICAO Annex 6, Part I, 6.3 as amended

FAA 8300.10 CH10, Vol. 3, Chapter 143

### 16.9.1 Objective

This chapter provides guidance in monitoring cockpit voice recorders (CVR) to ensure that performance levels are maintained.

### 16.9.2 General

EU-OPS 1, Subpart K, 1.700/1.705/1.710 regulation requires that certain aircraft be equipped with a CVR that meets approved design and installation criteria.

The Avionics ASI is responsible for determining that the maintenance procedures ensure that tests are conducted according to procedures provided by the CVR manufacturer and shall include, at a minimum, listening to the recorded signals on each channel to verify that the audio is being recorded properly, is intelligible, and is free from electrical noise or other interference.

#### *Monitoring the CVR*

There are no restrictions in the regulations that prevent periodic monitoring of the CVR as a method of surveillance. However,

- (1) ASIs are cautioned against monitoring CVR tapes for any purpose other than determining the quality of the recording.
- (2) Monitoring should be done only to the extent necessary to determine that the quality of reproduction and maintenance of the CVR is adequate.

#### *Acoustic Underwater Locator Beacon (ULB) Maintenance.*

To ensure the timely activation of underwater acoustic beacons associated with CVRs, Avionics ASIs should evaluate their certificate holder's maintenance and inspection programs to ensure that procedures for testing beacons, conducted concurrently with battery replacement, provide for functionally testing the beacons before replacing the old battery.

Operators' maintenance or inspection programs should also be evaluated to ensure that operational testing is being accomplished, consistent with the recorder or beacon manufacturer's recommended procedures, at specified intervals and, when possible, in conjunction with a numbered or phase inspection (e.g., "A," "B," or "C" check).

These requirements must be reflected on work cards or other inspection cards to ensure system-wide compliance.

### 16.9.3 Procedure

The Avionics ASI should perform the inspection using the guidance list (GL-MCVR-001, shown in Appendix B at the end of this Chapter). The following should be observed:

#### *A. Perform the Inspection*

If this task is being done as part of a spot or ramp inspection, accomplish the following:

- (a) Coordinate with the maintenance supervisor before conducting the inspection.
- (b) Monitor the in-progress maintenance to ensure that the CVR is being evaluated for performance of its intended function. Check all channels to ensure that the audio is being recorded properly, is intelligible, and is free from electrical noise or other interference.



(c) Monitor the cockpit area microphone (hot mike) to ensure that it satisfactorily picks up all cockpit audio.

**NOTE: Be aware that the quality of reproduction of some CVRs can be affected by ground operation of auxiliary power units and ground power units.**

(d) Review the certificate holder's maintenance procedures for acoustic underwater locator beacons to ensure that the manufacturer's recommendations are closely followed, including the procedures for the battery check.

**B. Debrief Operator's/Organization's Appropriate Personnel**

- Inform appropriate personnel (Maintenance Manager or Supervisor) that the inspection has been completed.
- Discuss the discrepancies brought to the organization's personnel attention during the inspection.
- Present the operator's/organization's appropriate personnel the drafted Audit Finding forms and have them signed for acknowledgement of the findings.

**C. Report Inspection Results.**

- ◆ Ensure that all Audit Findings are entered into the ADMS system and a copy has been forwarded to the organization (Maintenance Manager) for corrective action.
- ◆ Analyze each finding to determine if the discrepancies are the result of improper maintenance and/or missing or inadequate maintenance/inspection procedures.
- ◆ Submit the completed HCAA GL-MCVR-001 Guidance List with any Audit Finding forms attached to the FSD Secretariat office (incoming document) according to "Incoming Documents" procedure of the HCAA Administration Procedures Manual, Chapter 4.



## 16.10 Monitor Approved Avionics Software Changes

REF: UKCAA AN No.43, Issue 2, EUROCAE Doc. ED12B, JAA.NPA.21.15, RTCA DO 178B, FAA AC20-115B

### 16.10.1 Objective

This section provides guidance for the control and monitoring of avionics air carrier software changes to line replaceable units (LRUs).

### 16.10.2 General

Post-certification software changes can be required when the following occurs:

- System functional capability changes
- Design errors are discovered during service

When making a post-certification software change, care must be taken as even the smallest change can lead to “secondary errors” in the software. Secondary errors are errors that were not present or whose effects were not detected when the system was first certificated. Because only changes to safety related software will be treated as a major alteration, it is necessary to predetermine what software will be affected by the change.

The following list contains typical examples for aircraft parts using loadable software. It is recognized that due to the wide range of aircraft configurations, the list is not exhaustive.

Display Electronics Unit (DEU), Flight Management Computer (FMC), Flight Control Computer (FCC), Digital Flight Data Acquisition Unit (DFDAU), Digital Flight Data Acquisition Management Unit (DFDAMU), Auxiliary Power Unit (APU), Electronic Control Unit (ECU), Electronic Engine Control (EEC), etc.

Furthermore, electronic databases are also used in aircraft systems such as Enhanced Ground Proximity Warning System (EGPWS), Flight Control Computer (FCC), and Flight Management Computer (FMC).

Aircraft systems such as Aircraft Communication and Reporting System (ACARS), Aircraft Condition Monitoring System (ACMS), SATCOM, and In-Flight Entertainment System (IFE) use loadable software that can be user-modified.

The Principal Avionics Inspector has responsibility for the approval of the operator’s avionics maintenance program. The maintenance program must provide for the proper maintenance/inspection of all avionics equipment and components, including complete systems.

### 16.10.3 Procedure

The Avionics ASI should perform the inspection using the guidance list (GL-MAASC-001, shown in Appendix B at the end of this Chapter).

#### A. Review the Operator’s Manual.

Review applicable manuals, including the operator’s MME or the organization’s MOE manual, to ensure that:

Operator have appropriate procedures in place such that at any time it is possible to determine the equipment and software configuration of each aircraft in their fleet.

Operators involved in the procurement, modification and embodiment of field loadable software (FLS) have a documented procedure within their Company Procedures, Maintenance Management Exposition (MME) or equivalent that covers the complete cycle from procurement specification, distribution methodology (e.g. Electronic Distribution, media type etc.), receipt inspection/assessment through to embodiment, subsequent testing and release to service. This process should also be included in the internal audit program.



The manufacturer's recommended Automatic Test Equipment (ATE)/approved equivalent/manual test equipment and test data are current and capable of performing the required tests.

Controls exist to prevent unauthorized software changes and that changes are performed in accordance with the procedures described therein.

Any change to software is reflected in an appropriate revision to the identification of the line replaceable unit in accordance with the criteria of EUROCAE Doc. ED 12B (RTCA Document No. DO-178B).

*B. Review the Training Records.*

Ensure that the operator's training records list those persons:

- Trained in the procedures, tools, and testing necessary to incorporate the new software
- Qualified to make the inspections when the work is completed and the units are returned to service design and test of the new software.

*C. Debrief Organization's Appropriate Personnel*

- Inform operator's appropriate personnel that the inspection has been completed.
- Discuss the discrepancies brought to the operator's personnel attention during the inspection.
- Present the operator's appropriate personnel the drafted Audit Finding forms and have them signed for acknowledgement of the findings.

*D. Report Inspection Results.*

- ◆ Ensure that all Audit Findings are entered into the ADMS system and a copy has been forwarded to the Operator for corrective action.
- ◆ Analyze each finding to determine if the discrepancies are the result of improper maintenance and/or missing or inadequate maintenance/inspection procedures.
- ◆ Submit the completed HCAA GL-MAASC-001 Guidance List with any Audit Finding forms attached to the FSD Secretariat office (incoming document) according to "*Incoming Documents*" procedure of the HCAA Administration Procedures Manual, Chapter 4.





## 16.11 Evaluation and Approval of Maintenance Programs (Initial/Amendment)

REF: EC 2042/2003, Annex I, M.A. 302, M.B. 301, AMC M.A. 302, Appendix I to AMC M.A. 302  
ICAO Doc. 9760, Chapter 6.6

### 16.11.1 Objective

This Section provides guidance on the evaluation and approval of a potential operator's Customized Maintenance Program (CMP). The same procedure applies for an amendment to the CMP requested by the operator.

### 16.11.2 General

Every Aircraft shall be maintained in accordance with a maintenance programme approved by the HCAA/D2, which shall be periodically reviewed and amended accordingly.

The maintenance programme should normally be based upon the Maintenance review board (MRB) report where applicable, the Maintenance planning document (MPD), the relevant chapters of the maintenance manual or any other approved data containing information on maintenance scheduling.

In addition to the above, an owner or operator's maintenance programme should also take into account the maintenance data containing information on scheduling for components.

The approved maintenance programme should reflect applicable mandatory regulatory requirements addressed to in documents issued by the TC Holder in order to comply with Part-21.A.61 (707/2006).

HCAA/D2 has the right to issue instructions related to maintenance schedule(s) and/or specific task(s) for certain aircraft types and to recommend maintenance schedules that must be used by the owner/operator directly.

The maintenance programme should contain a preface, which will define:

- MP contents
- The inspection standards to be applied
- Estimated annual utilization
- Permitted variations to task frequencies and where applicable.....
- Environmental conditions should be taken into account
- Specific procedures to manage the evaluation of established check(s) or inspection intervals.

Appendix I to AMC MA 302 provides detailed information on the contents of an approved aircraft maintenance programme.

The Certification Team Aviation Safety Inspectors (Maintenance & Avionics) are responsible for the evaluation and approval of an operator's CMP. In performing this task, the appropriate guidance list GL-CMP-001 shown in Appendix M of Chapter 7, shall be used. Any non-compliances found should be noted on the above guidance list.

### 16.11.3 Procedure

Ensure that the operator's CMP maintenance program contains the following basic information.

#### A. General Requirements

- ◆ The type/model and registration number of the aeroplane, engines and, where applicable, auxiliary power units and propellers.
- ◆ The name and address of the operator.
- ◆ The operator's reference identification of the program document; the date of issue and issue number.
- ◆ A statement signed by the operator to the effect that the specified aeroplanes will be maintained to the program and that the program will be reviewed and updated as required by paragraph 5.
- ◆ Contents/list of effective pages of the document.
- ◆ Check periods which reflect the anticipated utilization of the aeroplane. Such utilization should be stated and include a tolerance of not more than 25%. Where utilization cannot be anticipated, calendar time limits should also be included.
- ◆ Procedures for the escalation of established check periods, where applicable and acceptable to the HCAA.
- ◆ Provision to record date and reference to approved amendments incorporated in the program.
- ◆ Details of pre-flight maintenance tasks which are accomplished by maintenance staff and not included in the Operations Manual for action by flight crew.
- ◆ The tasks and the periods (intervals/frequencies) at which each part of the aeroplane, engines, APU's, propellers, components, accessories, equipment, instruments, electrical and radio apparatus, and associated systems and installations should be inspected, together with the type and degree of inspection.
- ◆ The periods at which items as appropriate, should be checked, cleaned, lubricated, replenished, adjusted and tested.
- ◆ Details of specific structural inspections or sampling programs.



- ◆ Details of the corrosion control program, when applicable.
- ◆ The periods and procedures for the collection of engine health monitoring data.
- ◆ The periods at which overhauls and/or replacements by new or overhauled parts should be made.
- ◆ A cross-reference to other documents approved by the HCAA which contain the details of maintenance tasks related to mandatory life limitations, Certification Maintenance Requirements (CMR's) and Airworthiness Directives (AD's).

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

- ◆ Details of, or cross-reference to, any required Reliability Program or statistical methods of continuous Surveillance.
- ◆ A statement that practices and procedures to satisfy the Program should be to the standards specified in the Type Certificate Holder's Maintenance Instructions. When practices and procedures are included in a customized Operator's Maintenance Manual approved by the HCAA, the statement should refer to this Manual.
- ◆ Each maintenance task quoted should be defined in a definition section of the Program.

#### B. Program Basis

- ◆ Operator's Aeroplane Maintenance programs should normally be based upon the Maintenance Review Board Report, where available, and the Type Certificate holder's Maintenance Planning Document or Chapter 5 of the Maintenance Manual, (i.e. the Manufacturer's recommended Maintenance Program). The structure and format of these maintenance recommendations may be re-written by the operator to better suit his operation and control of the particular maintenance program.
- ◆ For a newly type-certificated aeroplane, where no previously approved Maintenance Program exists, it will be necessary for the operator to comprehensively appraise the manufacturer's recommendations (and the MRB Report where applicable), together with other airworthiness information, in order to produce a realistic Program for approval.
- ◆ For existing aeroplane types it is permissible for the operator to make comparisons with maintenance programs previously approved. It should not be assumed that a Program approved for another operator will automatically be approved for the operator. Evaluation is to be made of aircraft/fleet utilization, landing rate, equipment fit and, in particular, the experience of the maintenance organization must be assessed. Where the HCAA is not satisfied that the proposed maintenance program can be used as is by the Operator, the HCAA should request the Operator to introduce appropriate changes to it, such as additional maintenance tasks or de-escalation of check frequencies, or to develop the aeroplane initial maintenance program based upon the Manufacturer's recommendations.

#### C. Amendments (Revisions)

Amendments (revisions) to the approved Program should be raised by the operator, to reflect changes in the type certificate holder's recommendations, modifications, service experience, or as required by the HCAA. Reliability programs form one important method of updating approved programs.

#### D. Permitted Variations to Maintenance Periods

The Operator may only vary the periods prescribed by the Program with the approval of the HCAA.

#### E. Periodic review of maintenance program contents

(Performed as per procedure described in para. 16.17 later on this Chapter).

Operator's approved aeroplane Maintenance Programs should be subject to periodic review to ensure that they reflect current Type Certificate holder's recommendations, revisions to the Maintenance Review Board Report, mandatory requirements and maintenance needs of the aircraft.

The Operator should review the detailed requirements at least annually for continued validity in the light of operating experience.

### 16.11.4 Approval of AMP

The aircraft maintenance programme and any subsequent amendments shall be approved by HCAA/FSD.

When the continuing airworthiness of the aircraft is managed by a continuing airworthiness management organisation approved in accordance with Section A, Subpart G of EC 2042/2003 Annex I, the aircraft maintenance programme and its amendments may be



approved through an indirect approval procedure, provided the amendments are submitted to HCAA/FSD at least 15 days before their affectivity and the procedure is documented.

In that case, the indirect approval procedure shall be established by the continuing airworthiness management organisation as part of the Continuing Airworthiness Management Exposition and shall be approved by HCAA/FSD through its approval.

The continuing airworthiness management organisation shall not use the indirect approval procedure when this organisation is not under the oversight of the State of Registry, unless an agreement exists in accordance with point M.1, paragraph 4(ii) or 4(iii), as applicable, transferring the responsibility for the approval of the aircraft maintenance programme to HCAA/FSD.

#### **16.11.5 Maintenance Program Approval for NCAT Aircraft**

For aircraft not involved in CAT, the development (of an approved CAMO) baseline and/or “generic” maintenance program may be accepted by the Authority on initial approval following the same procedure for evaluation, as described above, without having the contracts referred to in Appendix I of Annex I (Part M).

However, these “baseline” and/or “generic” maintenance programs do not preclude the need to establish an adequate aircraft maintenance program in compliance with Annex I, M.A. 302 in due time before exercising the privileges referred to M.A. 711.

### **16.12 Evaluation and Approval of Reliability Programs**

*REF: EC2042/2003, Annex I, M.A.302 and Appendix 1 to M.A. 302  
ICAO Doc. 9760, Chapter 6.7 and Appendix A and Doc. 9389, Chapter 7.3*

*Additional Ref.: FAA AC 120-17*

#### **16.12.1 Objective**

This Section provides guidance on the evaluation and approval of a Reliability Program (RP).

#### **16.12.2 General**

AMC-OPS 1&3.910(a)6 specifies that where an aircraft type has been subjected to an MRB process (thus using the MSG-1,-2 or-3 logic), its operator should normally develop the initial aircraft maintenance program based upon the MRB Report. Condition monitored maintenance concepts were fundamental to early Maintenance Steering Group (MSG) derived programs (e.g. MSG 2) and where appropriate, the MSG analysis resulted in a condition monitoring task: such monitoring required a reliability centered maintenance approach. The condition monitor task was not used in later MSG revisions (e.g. MSG 3) but the concept of reliability centered maintenance is however, central to the continuing effectiveness of these later programs where maintenance task selection and frequency are based upon reliability predictions.

A Reliability Program is required in the following cases:

- ◆ The aeroplane maintenance program is based upon MSG-3 logic.
- ◆ The aeroplane maintenance program includes condition monitored components.
- ◆ The aeroplane maintenance program does not contain overhaul time periods for all significant system components.
  - ◆ When specified by the Manufacturer’s maintenance planning document or MRB.

A Reliability Program is not required in the following cases:

- ◆ The maintenance program is based upon the MSG-1 or 2 logic but only contains hard time or on condition items.
  - ◆ The aeroplane Maximum Take off mass is 5700 kg or below.
  - ◆ The aircraft maintenance program provides overhaul time periods for all significant system components.



**Note :** A significant system is a system the failure of which could hazard the aircraft safety.

An operator may however, develop its own reliability monitoring program when it may be deemed beneficial from a maintenance planning point of view.

### 16.12.3 Procedure

In reviewing the operator's Reliability Program (RP), ensure that it contains the following information:

#### A. Objectives Section

◆ A statement summarizing as precisely as possible the prime objectives of the Program. To the minimum it should include the following:

- to recognize the need for corrective action,
- to establish what corrective action is needed and,
- to determine the effectiveness of that action

◆ The extent of the objectives should be directly related to the scope of the Program. Its scope could vary from a component defect monitoring system for a small operator, to an integrated maintenance management program for a big operator. The manufacturer's maintenance planning documents may give guidance on the objectives and should be consulted in every case.

◆ In case of a MSG-3 based Maintenance Program, the reliability program should provide a monitor that all MSG-3 related tasks from the maintenance program are effective and their periodicity is adequate.

#### B. Identification of Items.

◆ The Items controlled by the Program should be stated, e.g. by ATA Chapters. Where some items (e.g. aircraft structure, engines, APU) are controlled by separate programs, the associated procedures (e.g. individual sampling or life development programs, constructor's structure sampling programs) should be cross referenced in the program.

#### C. Terms and Definitions.

◆ The significant terms and definitions applicable to the Program should be clearly identified. Terms are already defined in MSG-3, JAR 1, Part-145 and EU-OPS 1 & JAR OPS 3. Other terms may be found in WATTOG or in work on mathematical statistics. However, their number should be kept to a minimum.

#### D. Information Sources and Collection.

◆ Sources of information should be listed and procedures for the transmission of information from the sources, together with the procedure for collecting and receiving it, should be set out in detail in the CAME or MOE as appropriate.

◆ The type of information to be collected should be related to the objectives of the Program and should be such that it enables both an overall broad based assessment of the information to be made and also allow for assessments to be made as to whether any reaction, both to trends and to individual events, is necessary. The following are examples of the normal prime sources:

- (a) Pilots Reports.
- (b) Technical Logs.
- (c) Aircraft Maintenance Access Terminal / On-board Maintenance System readouts.
- (d) Maintenance Worksheets.
- (e) Workshop Reports.
- (f) Reports on Functional Checks.
- (g) Reports on Special Inspections
- (h) Stores Issues/Reports.



- (i) Air Safety Reports.
- (j) Reports on Technical Delays and Incidents.
- (k) Other sources: ETOPS, RVSM, CAT II/III.

◆ In addition to the normal prime sources of information, due account should be taken of continuing airworthiness and safety information promulgated by airworthiness authorities, constructors and manufacturers.

#### *E. Displays.*

◆ Collected information may be displayed in either graphical or tabular presentations or a combination of both. The rules governing any separation or discard of information prior to incorporation into these displays should be stated. The format of any display should be such that the identification of trends, specific highlights and related arisings would be readily apparent.

◆ Displays should include provisions for “nil returns” to aid the examination of the total information.

◆ Where “standards” or “alert levels” are included in the Program, the display information should be oriented accordingly.

#### *F. Examination, Analysis and Interpretation of Information.*

◆ The method employed for examining, analyzing and interpreting the Program information should be explained.

◆ Examination. Methods of examination of information may be varied according to the content and quantity of information of individual Programs. These can range from examination of the initial indication of performance variations to formalized detailed procedures at specific periods, and the methods should be fully described in the Program documentation.

◆ Analysis and Interpretation. The procedures for analysis and interpretation of information should be such as to enable the performance of the items controlled by the Program to be measured; they should also facilitate recognition, diagnosis and recording of significant problems. The whole process should be such as to enable a critical assessment to be made of the effectiveness of the Program as a total activity. Such a process may involve:

- (a) Comparisons of operational reliability with established or allocated standards (in the initial period these could be obtained from in-service experience of similar equipment of aircraft types).
- (b) Analysis and interpretation of trends.
- (c) The evaluation of repetitive defects.
- (d) Confidence testing of expected and achieved results.
- (e) Studies of life-bands and survival characteristics.
- (f) Reliability predictions.
- (g) Other methods of assessment.

◆ The range and depth of engineering analysis and interpretation should be related to the particular Program and to the facilities available. The following, at least, should be taken into account:

- (a) Flight defects and reductions in operational reliability.
- (b) Defects occurring on-line and at main base.
- (c) Deterioration observed during routine maintenance.
- (d) Workshop and overhaul facility findings.
- (e) Modification evaluations.
- (f) Sampling programmes.
- (g) The adequacy of maintenance equipment and publications.
- (h) The effectiveness of maintenance procedures.
- (i) Staff training.
- (j) Service bulletins, technical instructions, etc.



- ◆ Where the Operator relies upon contracted maintenance and/or overhaul facilities as an information input to the Program, the arrangements for availability and continuity of such information should be established and details should be included.

*F. Corrective Actions.*

- ◆ The procedures and time scales both for implementing corrective actions and for monitoring the effects of corrective actions should be fully described. Corrective actions shall correct any reduction in reliability revealed by the program and could take the form of:

- (a) Changes to maintenance, operational procedures or techniques.
- (b) Maintenance changes involving inspection frequency and content, function checks, overhaul requirements and time limits, which will require amendment of the scheduled maintenance periods or tasks in the approved Maintenance Program. This may include escalation or de-escalation of tasks, addition, modification or deletion of tasks.
- (c) Amendments to Approved manuals (e.g. Maintenance Manual, Crew Manual).
- (d) Initiation of modifications.
- (e) Special inspections of fleet campaigns.
- (f) Spares provisioning.
- (g) Staff training.
- (h) Manpower and equipment planning.

**Note:** Some of the above corrective actions may need HCAA's approval before implementation.

- ◆ The procedures for effecting changes to the Maintenance Program should be described, and the associated documentation should include a planned completion date for each corrective action, where applicable.

*G. Organizational Responsibilities.*

- ◆ The organizational structure and the departmental responsible for the administration of the Program should be stated. The chains of responsibility for individuals and departments (Engineering, Production, Quality, Operations etc.) in respect of the Program, together with the information and functions of any Program control committees (Reliability Group), should be defined. Participation of the HCAA should be stated. This information should be contained in the CAME or MOE as appropriate.

*H. Presentation of information to the HCAA.*

- ◆ The following information should be submitted to the HCAA for approval as part of the Reliability Program:

- (a) The format and content of routine reports.
- (b) The time scales for the production of reports together with their distribution.
- (c) The format and content of reports supporting request for increases in periods between maintenance (escalation) and for amendments to the approved Maintenance Program. These reports should contain sufficient detailed information to enable the HCAA to make its own evaluation where necessary.

*I. Evaluation and Review.*

- ◆ Each Program should describe the procedures and individual responsibilities in respect of continuous monitoring of the effectiveness of the Program as a whole. The time periods and the procedures for both routine and non-routine reviews of maintenance control should be detailed (progressive, monthly, quarterly, or annual reviews, procedures following reliability "standards" or "alert levels" being exceeded, etc.).

- ◆ Each Program should contain procedures for monitoring and, as necessary, revising the reliability "standards" or "alert levels". The organizational responsibilities for monitoring and revising the "standards" should be specified together with associated time scales.

- ◆ Although not exclusive, the following list gives guidance on the criteria to be taken into account during the review.





- (a) Utilization (high/low/seasonal).
- (b) Fleet Commonality.
- (c) Alert Level adjustment criteria.
- (d) Adequacy of data.
- (e) Reliability Procedure audit.
- (f) Staff Training.
- (g) Operational and Maintenance Procedures.

In evaluating the Reliability Program, HCAA Guidance List, GL-RPI-001 should be used, shown in Appendix N of Chapter 7.

## 16.13 Evaluation of a Minimum Equipment List

*REF: TGL 26, JAR-MMEL/MEL*

*ICAO Annex 6, Part I, Chapter 11 and Doc. 9389, Attachment 7-C*

### 16.13.1 Objective

This Section provides guidance on the evaluation and approval of an operator's Minimum Equipment List (MEL) document.

### 16.13.2 General

Aviation Safety Inspectors (Maintenance & Avionics) should use the guidance list GL-MEL-003 shown in Appendix L of Chapter 7 (also in Appendix B of this Chapter).

EU-OPS 1.030 or JAR OPS 3.030 require that an operator shall establish, for each aircraft, a Minimum Equipment List (MEL) approved by the Authority. This shall be based upon, but not less restrictive than, the relevant Master Minimum Equipment List (MMEL), if this exists, accepted by the Authority.

In addition, EU-OPS 1 / JAR OPS 3.630(a)(2) and EU-OPS 1 / JAR OPS 3.845(a)(3) prescribe that a flight shall not commence unless the instruments and equipment required under subparts K and L are in operable condition for the kind of operations being conducted, except as provided in the MEL.

Finally, JAR-MMEL/MEL .050 states that the MEL is a list which allows an aircraft to be operated, under specific conditions, with particular instruments, items of equipment or functions inoperative at the commencement of flights.

### 16.13.3 Procedure

The Certification Team Aviation Safety Inspectors (Maintenance & Avionics) are responsible for the evaluation and approval from the airworthiness point of view, of an operator's MEL document. In performing this task, the appropriate guidance list GL-MEL-003 shown in Appendix L of Chapter 7, shall be used.

In reviewing the operator's Minimum Equipment List (MEL) document, ensure that:

- ◆ It is based upon, but no less restrictive than, the relevant MMEL (if this exists).
- ◆ It indicates the revision status of the MMEL, upon which it is based.
- ◆ It contains a relevant Preamble, Definitions and, if appropriate, clarifying Notes which adequately reflect the scope, extent and purpose of the MEL.
- ◆ The Preamble shall contain procedures for the guidance of flight crews using the MEL.
- ◆ There are appropriate (M) and (O) procedures for every MMEL (M) and (O) references



## 16.14 Aircraft Records Inspection

REF: EC 2042/2003, Annex I

### 16.14.1 Objective

This chapter provides guidance for Continuous Surveillance of an Operator's record keeping system.

### 16.14.2 General

Aviation Safety Inspectors (Maintenance & Avionics) should use the guidance list GL-ARI-001 shown in Appendix B of this Chapter.

The Inspector (Airworthiness or Avionics) in performing this task should use the appropriate guidance list as indicated above and report any non-compliances found in the Audit Finding form (see Appendix F to Chapter 7).

### 16.14.3 Procedure

*A. The Inspector should ensure the following:*

- Check that applicable AD are evaluated for application or not
- All applicable ADs/mandatory SB are applied and AD status listing is correct , identifying recurrency
- Maintenance records (PFI ,A checks etc) kept in correct form
- All records are properly signed
- Records contain a total time/cycles in service , listing the current time in service/cycles, current inspection status of the aircraft and aircraft components
- Records in accordance with the approved maintenance program
- Tech log sheets kept in correct form ,discrepancies and corrective actions written in correct form
- Carry forward defect sheet kept in correct form
- Life limited Parts and O/H records lists are in correct form
- Occurrence reporting forms in correct form
- Retention of records according to EASA Part M requirements (M.A.305)

In addition, the ASI shall ensure compliance with Emergency Conformity Information (ECI) issued by EASA, in compliance with HCAA T.O. 20-122, Issue 1, 26/08/2008.

*B. Debrief Organization's Appropriate Personnel*

- Inform operator's appropriate personnel that the inspection has been completed.
- Discuss the discrepancies brought to the operator's personnel attention during the inspection.
- Present the operator's appropriate personnel the drafted Audit Finding forms and have them signed for acknowledgement of the findings.

*C. Report Inspection Results.*

- Ensure that all Audit Findings are entered into the ADMS system and a copy has been forwarded to the Operator for corrective action.
- Analyze each finding to determine if the discrepancies are the result of improper maintenance and/or missing or inadequate maintenance/inspection procedures.
- Submit the completed HCAA GL-ARI-001 Guidance List with any Audit Finding forms attached to the FSD Secretariat office (incoming document) according to "Incoming Documents" procedure of the HCAA Administration Procedures Manual, Chapter 4.





## 16.15 Aircraft Tech Log System Inspection

REF: EC 2042/2003, Annex I, M.A. 306 and AMC to M.A. 306

### 16.15.1 Objective

This chapter provides guidance for Continuous Surveillance of Operators TLS system

### 16.15.2 General

Aviation Safety Inspectors (Maintenance & Avionics) should use the guidance list GL-ATLSI-001 shown in Appendix B of this Chapter.

The Inspector (Airworthiness or Avionics) in performing this task should use the appropriate guidance list as indicated above and report any non-compliances found in the Audit Finding form (see Appendix F to Chapter 7).

### 16.15.3 Procedure

*A. The Inspector should ensure the following:*

- TLS contains information about each flight
- CRS is valid
- Maintenance statement is correct (next scheduled and out of phase tasks)
- Deferred defects identified and within MEL limitations
- Maintenance support arrangements identified
- Retention of records for 36 months
- Cabin and galley defects identified
- Details of any failure and corrective actions with accurate reference to AMM
- Pre flight inspections carried out and signed
- Quality system involvement in TLS system
- Records retention safe
- Computerized records well reserved with safeguards

*B. Debrief Organization's Appropriate Personnel*

- Inform operator's appropriate personnel that the inspection has been completed.
- Discuss the discrepancies brought to the operator's personnel attention during the inspection.
- Present the operator's appropriate personnel the drafted Audit Finding forms and have them signed for acknowledgement of the findings.

*C. Report Inspection Results.*

- Ensure that all Audit Findings are entered into the ADMS system and a copy has been forwarded to the Operator for corrective action.
- Analyze each finding to determine if the discrepancies are the result of improper maintenance and/or missing or inadequate maintenance/inspection procedures.
- Submit the completed HCAA GL-ATLSI-001 Guidance List with any Audit Finding forms attached to the FSD Secretariat office (incoming document) according to "Incoming Documents" procedure of the HCAA Administration Procedures Manual, Chapter 4.



## 16.16 Training In-Progress Inspection

### Considerations of Training-In-Progress Evaluation

1. Give the notice of your intention to conduct an inspection to training facility manager or **PART 147 AMTO** accountable and Manager.
2. Conduct an entry meeting with the training facility Accountable Manager or **PART 147 AMTO** assigned Quality Manager:
  - ◆ Review the scope of the inspection.
  - ◆ Agree on the allocation of any training facility staff or resources that may be needed for the inspection.
3. Carry out the inspection, in a way that causes a minimum of disruption to the trainees, using the appropriate checklist. Remain tactfully passive in classrooms and training areas.

Do not:

- ◆ Ask questions of the instructors or trainees during training sessions.
  - ◆ Distract instructors or students in any way.
  - ◆ Displace existing students from their allocated seats or positions.
4. Conduct a short exit meeting with the training management:
    - a. Briefly report the findings of the inspection.
    - b. Make arrangements for any follow-up action.
  5. Report Inspection Results.
    - Ensure that all Audit Findings are entered into the ADMS system and a copy has been forwarded to the Operator for corrective action.
    - Analyze each finding to determine if the discrepancies are the result of improper maintenance and/or missing or inadequate maintenance/inspection procedures.
    - Submit the completed HCAA GL-TIPI-001 Guidance List with any Audit Finding forms attached to the FSD Secretariat office (incoming document) according to “*Incoming Documents*” procedure of the HCAA Administration Procedures Manual, Chapter 5.

### EASA Part-147 Inspections

**REF:** EC2042/03, 147.B.120

**PART 147 AMTO** organizations are audited by HCAA at periods not exceeding 24 months to ensure compliance with Part 147 requirements, as per 147.B.120. If there are any findings during the inspection, they are processed in accordance with para. 16.20 of this Manual.

### ARCI Inspections

**REF:** EC2042/03, M.B. 704 (b)

**CAMO** organizations with review capability are audited by HCAA/FSD at periods not exceeding 24 months to ensure compliance with the requirement, as per M.B. 704 (b). Additional inspector guidance is provided by means of HCAA Guidance List, GL-ARCI-001 (see Appendix B of this Chapter), which is to be used by the inspector(s) for this inspection. If there are any findings during the inspection, they are processed in accordance with para. 16.20 of this Manual. ARCI inspections are scheduled regularly every year and are included in the Division's AIP as appropriate.



## 16.17 Maintenance Program Review

### 16.17.1 Objective

Maintenance Program Review (MPR) audits are performed according to the Annual Inspection Plan (AIP) to ensure operators conform to their approved CMP.

### 16.17.2 General

Aviation Safety Inspectors (Maintenance & Avionics) should use the guidance list GL-MPR-001 shown in Appendix B of this Chapter.

The Inspector (Airworthiness or Avionics) in performing this task should use the appropriate guidance list as indicated above and report any non-compliances found in the Audit Finding form (see Appendix F to Chapter 7).

### 16.17.3 Procedure

The assigned airworthiness inspector (AWI) in performing this task is instructed to follow the same procedure detailed in para. 16.11.3 in order to access the operator's CMP.

## 16.18 EASA Part-MG/MF Inspection (EASA-MG/-MF)

*REF.: EC 2042/2003, Annex I, M.B. 704 (b), M.B. 604 (b)*

### 16.18.1 Objective

This chapter provides guidance for EASA Part-M, Subpart G/F inspections under the Division's AIP.

### 16.18.2 General

Aviation Safety Inspectors (Maintenance & Avionics) should use EASA Form 6/6F in performing this type of inspection.

### 16.18.3 Procedure

- A. Inspector performs the inspection according to EASA Form 6/6F so that within 24 mo. a full audit of the Organization has been completed. Limiting the scope of the inspection, Form 6/6F is completed only for items checked during the inspection.
- B. *Debrief Organization's Appropriate Personnel*
  - Inform operator's appropriate personnel that the inspection has been completed.
  - Discuss the discrepancies brought to the operator's personnel attention during the inspection.
  - Present the operator's appropriate personnel the drafted Audit Finding forms and have them signed for acknowledgement of the findings.
- C. *Report Inspection Results.*
  - Ensure that all Audit Findings are entered into the ADMS system and a copy has been forwarded to the Operator for corrective action.
  - Analyze each finding to determine if the discrepancies are the result of improper maintenance and/or missing or inadequate maintenance/inspection procedures.
  - Submit the completed EASA Form 6 along with any Audit Finding forms attached to the FSD Secretariat office (incoming document) according to "Incoming Documents" procedure of the HCAA Administration Procedures Manual, Chapter 4.



## 16.20 Reporting Audit Findings

### 16.20.1 General

Audit Finding forms (see Chapter 7, Appendix F) are used to record audit findings that result during an inspection. It is important that this form is filled out completely and accurately since the information it contains is also entered into the computerized system ADMS for tracking purposes.

### 16.20.2 Procedure

The Audit Finding (AF) form is to be filled out during the inspection so the ASI performing the inspection must have an adequate number of AF forms handy before the inspection begins.

For each finding, a *separate* AF form is filled out. On filling out the form, use the following guidelines:

**ADMS Record No.:** The number of the inspection recorded in the Annual Inspection Plan is entered in this space. It is very important that this number is entered correctly and at all times. For an unscheduled inspection it should be left blank.

**Operator/Organization:** Enter the Operator's or Organization's official Name, eg. AEGEAN AIRLINES, OLYMPIC AIRWAYS, etc.

**Address:** It is the official address of the Operator or Organization but it may be left blank as this will be automatically filled with the official business address when entering the finding into the computerized tracking system (ADMS).

**Audit File Ref.:** Enter the protocol number and date of the Annual Inspection Plan publication. Since each ASI is entitled to follow the FSD's Annual Inspection Plan, this number will be the same for all planned inspection throughout the year. In case of unscheduled inspections, the protocol number of FSD's Director, HCAA dep. Governor's, etc. Decision document providing for the unscheduled inspection, must be entered.

**Audit Finding No.:** The number assigned should be sequential for each Audit area. For example, if there are three non-compliances ("findings") discovered during a flight deck inspection, three separate AF forms must be completed, for this audit area, numbered 01, 02, and 03. Separate forms shall be used for different Audit Areas (Inspections). If there are No Findings, then the AF form shall be completed with a Finding Number 0 (AF-0) and "No Findings" written in the *Finding Detail* area of the form.

**Area of Audit:** Area of audit relates to the actual TYPE of the inspection.

For OPS inspections (refer also to the Operations Manual) you can either write the full name of the inspection performed, eg. DISPATCH, FLIGHT DECK, QUALITY SYSTEM or just the number that relates to the inspection, eg. 04 (for Dispatch), 07 (for Flight Deck), 02 (for Quality System), etc. since the computerized system ADMS will fill out the complete name of the inspection upon entering only the number.

For AW inspections, please refer to Appendix A of this Chapter and use only the STICS terminology to record the type of the AW inspection eg. AARI (for an aircraft Ramp inspection), MIPI (for a Maintenance in Progress inspection), etc.

**Base-Location:** Base/Location name where the inspection took place. The airport code can also be recorded here (eg. LGAV).

**Aircraft Registration:** Enter the aircraft registration number in case of AW/OPS ramp, AERI/Flight Deck/Cabin, MIPI etc. inspections.



**Flight No.:** In case of an AW AERI or OPS Flight Deck (07) or Cabin (08) inspection, enter the flight number eg. OA 263.

**Manufacturer, Aircraft Type:** May be left blank since ADMS will fill out this information automatically upon entering the aircraft registration number.

**Non-conformance with:** Enter the Regulation reference from which the non-compliance was found, eg. EU OPS 1.915, EASA Part 145, 145.A.25, etc.

**Finding Details:** Details of the finding should be written here. It is important that the description be clearly written and directly related to the requirement reference. More than one item could be stated as long as it involves the same requirement and is likely to be resolved by the same department within the operator/organization. If this is not the case then a separate finding should be written.

#### **Signing and Witnessing**

The inspector should print and sign his/her name and insert the date on site at discovering the non-compliance.

It is also important at this time that the inspector(s) have someone from the operator/organization sign as witness in the "Witnessed for the Organization" space provided. It should be explained to this person that their signature does not constitute any obligation or responsibility for the corrective action. During a Flight inspection, a Flight crew member (preferably the Commander) should be the person signing as witness.

#### **Finding Level, Proposed Resolution Date & Entry into Computer System (ADMS)**

Upon returning to the office the inspector should enter the Finding information from the handwritten form into the ADMS system or handle the form to the appropriate person for data entry. At this point the inspector assigns a finding level in the space provided and enters a "Proposed Resolution Date" corresponding to the finding level, in the space provided.

#### **Finding Level Agreement**

The space "Agreed by Audit Manager" is to confirm agreement regarding the level of the finding assigned by the inspector. Normally this agreement is accomplished by the Section Head or his representative.

**Important Note:** Since all information of the AF form described above is absolutely necessary to be entered into the computerized system ADMS for tracking purposes, NO Audit Finding Form will be accepted as completed unless it is filled out completely and accurately as described above. Incomplete or ambiguous AF forms will be returned to the corresponding ASI.



### 16.20.3 More on Finding Levels

The level of the findings must be specified on the finding form related to each performed inspection. Finding levels in compliance with Part 145.A.95 and Part M.A. 619 are classified as follows:

**Level 1:** Any significant non-compliance with Part 145 and/or Part M requirements which lower the safety standard and hazards seriously the flight safety.

**Notes:**

- a) For Level 1 findings the responsible ASI ensures that further maintenance and re-certification of all affected products is accomplished, dependent upon the nature of the finding.
- b) HCAA FSD informs the owner/operator of any potentially affected aircraft in order that corrective action can be taken to ensure that possible unsafe conditions on these aircraft are corrected before further flight.
- c) For Findings showing non-compliance to the specific inspection requirements, HCAA FSD shall take the following actions:

For Level 1 findings, immediate action shall be taken to revoke, limit or suspend in whole or in part, depending upon the extent of Level 1 finding, the maintenance organization approval, until successful corrective action has been taken by the organization.

**Level 2:** Level 2 finding is any non-compliance with Part 145 and/or Part M requirements which could lower the safety standard and possibly hazard the flight safety. For the Level 2 findings, the responsible ASI shall grant a corrective action period appropriate to the nature of the finding that shall not be more than three (3) months. In certain circumstances, at the end of this first period and subject to the nature of the finding, the three month period may be extended, subject to a satisfactory corrective action plan.

### 16.20.4 Audit Findings/Records Standardization

- a) ADMS database has been upgraded to include audit findings which arise not only from continuous surveillance but also from any certification process such as issuance of new AOC, adding same/new type of aircraft, adding special operations capability, etc. This provision has been made by means of an additional field named "phase" which is selected to indicate "continuous surveillance" if findings are found from such an activity (planned inspections according to the Division's Annual Inspection Plan), "Certification" for findings related to certification process, "Document evaluation" for findings raised during document evaluation, etc.
- b) Record standardization is assured by the assignment of a Principal Inspector (PI) to act as an internal quality auditor (see also para. 16.20.5 below). His responsibility is to assure that all records and related documents are in full compliance with current regulations.
- c) The internal quality auditor in addition holds a meeting on a weekly basis during which findings of the quality audit [ see (b) above ] as well as any amendment of the established procedures are discussed and appropriate instructions are given to HCAA AWIs if deemed necessary. The meeting is attended by the FSD.
- d) Audit finding follow up is assured by means of a print-out from ADMS tracking system on a weekly basis, published in the Division's LAN and/or transmitted through email to the individual FSIs by the Division's Technical Library personnel.



#### 16.20.5 Reserved

#### 16.20.6 Partially or incorrectly-filled Audit Finding Response by an operator/organization

When a partially or incorrectly-filled Audit Finding Form is received as a response by an operator/organization, the assigned ASI communicates in writing to the operator/organization that the response(s) is/(are) not accepted. The relevant Audit Finding Forms are returned to the operator/organization for appropriate action(s) which must be within the time frame allocated for the resolution of the original finding.

### 16.21 Organisations' / Operators' Records Standardisation

The organisations'/operators' records/manuals approved by HCAA are held in the Flight Standards Division Technical Library and are standardised as follows:

**Note:** It is noted that organisations'/operators' manual/records shall be approved in accordance with the same procedures outlined below.

#### 16.21.1 Organisation's/Operator's Certification Folder (Annex I, EASA Part-M /Annex II, EASA Part-145)

Each organisation's/operator's folder shall contain the following forms/documents:

##### 1. CAMO Certification Folder Contents (as per attached form)

- A. CAMO audit monitoring plan (as per attached form)
- B. Current EASA Form 14
- C. EASA Form 2 (s)
- D. EASA Form 4s and respective post holder's acceptance.
- E. EASA Form 13 completed as required (**Note:** New form shall be completed in case of either organisation evaluation or additional approval scope and ratings).
- F. CAME approval (initial and revised) with the applicable amendments records status form.
- G. Audit findings closures.
- H. CAMO conformance document (shall be resubmitted for approval in case of additional approval of scope and rating). I. Airworthiness Review Staff and respective records.

##### 2. EASA Part-145 Certification Folder Contents

- A. EASA Part-145 Audit Monitoring Plan
- B. Current EASA Form 3
- C. Letter to JAA/EASA
- D. EASA Form 2s
- E. EASA Form 4s and respective post holder's acceptance.
- F. EASA Form 6 completed as required (**Note:** New form shall be completed in case of either organisation evaluation or any additional capability (ies) authorisation is granted).
- G. MOE approval (initial and revised) with the applicable amendments records status form.
- H. Audit findings closures.
- I. MOE conformance document (shall be resubmitted for approval in case of Additional approval of scope and rating).





### **16.21.2 Manuals - Document Evaluation**

Every Manual shall contain the following:

- Copy of the Guidance List (GL) used for corresponding approval (where applicable).
- Copy of specific approval (initial or revised).
- List of effective pages bearing NCAA's official stamp.
- Form of revision record status.
- Copy of specific conformance document (where applicable).

In compliance with (EC) 2042/03 Annex I, Annex II (145.B.55/M.B. 104b) and Annex IV (Part 147.B.20) in the HCAA/D2's Library copies of the following records (as minimum) shall be kept to allow Authority to issue, continue, change, suspend or revoke any certificate and/or approval.

The retention period of those records shall be at least four (4) years and will be kept in separate files for each Operator/AMO/MTO respectively.

### **16.21.3 List of Records related to Organisation / AMO Approval and Oversight**

- The application for approval.
- Organisation's Approval certificate(s) (EASA Form 14 or 3)
- Copy of annual monitoring audit plan
- Survey programme and related records
- Copies of all relevant correspondence
- Copies of any extension, exemption, and enforcement action
- Any kind of report from other Authorities relating to oversight of the Organisation
- Organisation's exposition (CAME/MOE) and related amendments
- Approved maintenance programme and related amendments
- Approved customized Minimum Equipment List and related amendments
- Copies of all formal correspondence including EASA Form 2 and 4

### **16.21.4 List of Records related to MTOE (Part 147) Approval and Oversight**

- The application for approval.
- EASA Form 11, EASA Form 12, EASA Form 22
- Copy of annual monitoring audit plan
- Survey programme and related records
- Copies of all relevant correspondence including EASA Form 4
- Copies of any extension, exemption, and enforcement action (separate file)
- Any kind of report from other Authorities relating to oversight of the Organisation
- Organisation's exposition (MTOE) and related amendments

Generally, any document directly approved by the Authority (HCAA) should be retained as above.

### **16.21.5 List or records related to Aircraft certification renewal**

- A/C Certificate of Airworthiness
- ARC (initial and amended)
- Recommendation form (ARF)
- As per attached list, shown in Appendix E of this Chapter.

Aircraft certification records shall be retained in Library, until two (2) years after the A/C has been permanently withdrawn from service and will be available upon request by another MS or Agency.

After two (2) years above records will be filed in a separate area. By derogation to the above, in case that an Aircraft is deregistered from the Greek Register, the specific Aircraft records will be kept for four (4) years in HCAA/D2 Library and then in a separate area.





## 16.22 Flexibility Provisions

REF: EC 216/2008, Article 14

The following procedure is established to ensure uniform application of the flexibility provisions established in Basic Regulation Articles 14(1), 14(4) and 14(6):

### 16.22.1 Application of Art. 14 (1)

When applying Article 14(1) of [Regulation \(EC\) No 216/2008](#), the notification provided by the HCAA to the Agency shall include at least :

- a. a description of the safety problem;
- b. the affected requirements of Regulation (EC) No 216/2008 and its implementing rules
- c. the identification of the product, part, appliance, person or organisation concerned;
- d. the identification of the affected activity;
- e. the measure required and its justification;
- f. the time limit for compliance with the measure required; and
- g. the date or period of applicability of the measure.

### 16.22.2 Application of Art. 14 (6)

When applying Article 14(6) of Regulation (EC) No 216/2008, the notification sent by the HCAA to the Agency shall include at least:

- a. the requirements for which the HCAA intends to grant a derogation;
- b. the reason(s) demonstrating the need to derogate;
- c. the identification of the product, part, appliance, person or organisation to which the derogation applies, including a description of the type of operation or activity concerned;
- d. the conditions that the HCAA has put in place to ensure that an equivalent level of protection is achieved; and
- e. an assessment and evidence demonstrating that an equivalent level of protection is ensured.

### 16.22.3 Application of Art. 14(4)

An operator may apply for an exemption under Article 14(4) of Regulation (EC) No 216/2008, using the “Exemption Request Form” (shown in Appendix F of this Chapter). The notification sent by the HCAA to the Agency shall include at least:

- a) the affected requirements of Regulation (EC) No 216/2008 and its implementing rules;
- b) a description of the unforeseen urgent operational circumstances or of the needs being the reason for granting the exemption;
- c) the identification of the product, part, appliance, person or organisation to which the exemption applies, including a description of the type of operation or activity concerned;
- d) the type of operation or the activity concerned;
- e) the date or period of applicability of the exemption;
- f) a reference to previous similar exemptions, if any; and
- g) an assessment and evidence demonstrating that the level of safety is not adversely affected, including, if applicable, a description of the related mitigation measures.



### 16.22.3.1 Operator requesting exemption under (EC) 216/08, Article 14.4 Team Assignment

Once an application has been received by an Operator (see Appendix F of this Chapter) “**Exemption Request form**” ) requesting exemption under (EC) 216/08, Article 14.4, the Flight Standards Division Director assigns a Team consisting of :

One Airworthiness inspector  
One Avionics inspector  
One Flight Operations inspector

(as applicable) to examine the specific request with particular attention to ensure safety standards. The Team will decide accordingly and subject to the specific case will contact appropriate manufacturer or any other reliable source in order to collect any useful information.

In case of STC embodiment or design change repair beyond manufacturer's SRM approvals, the Team will examine such a request and will decide based on the supporting records of the operator reflecting EASA information and delegated DOA or Authority by EASA.

**In case that such an exemption is granted for a period of more than two months or when it becomes repetitive, (see below 16.22.3.2) , the European Commission, the Agency, as well as all other Member States, shall be notified accordingly by “EASA Notification Form”, shown in Appendix F of this Chapter.**

Furthermore, no exemption will be granted until the Team is fully satisfied that the safety standards are maintained.

### 16.22.3.2 Repetitive exemption definition

#### Background

Basic Regulation (BR) 216/2008 article 14.4 on flexibility provisions:

“Member States (MS) may grant exemptions from the substantive requirements laid down in this Regulation and its IR in the event of unforeseen urgent operational circumstances or operational needs of a limited duration, provided the level of safety is not adversely affected. The Agency, the Commission and the other MS shall be notified of any such exemptions as soon as they become repetitive or where they are granted for periods of more than two months.” What is an exemption that becomes repetitive?

In order to ensure a common understanding of the BR by all MS and a harmonized implementation, the Agency has proposed to AGNA members in July 2010 some elements to help defining what a repetitive exemption is. Following some comments received by AGNA members, the original paper was reviewed and following definition is now proposed for NAA/MS. This definition does not constitute an exhaustive list of elements to be considered. The aim of this paper is to cover most of the basic cases. Depending on the circumstances, a case by case approach can still be needed.

1. An exemption can be considered as repetitive only in the context of the relevant MS, meaning that an exemption granted by one MS is not considered as repetitive if another MS has already granted a similar exemption.  
2. For the determination of a repetitive exemption, the unique identity of an exemption shall be governed by:

- the person or organisation it is issued to;
- the products, persons or organisations exempted
- the rule or requirement that is exempted from; and
- the date of issue.

Where an exemption is issued to a person or organisation and the MS/NAA is requested to issue a further exemption to the same person or organisation against the same requirement for the same product, person or organisation, this shall be considered as a repetitive exemption.



This is the case of an extension in time of an existing exemption, or the case of the renewal of an exemption that has already expired. In this case, the “repetitive” exemption is granted against the same requirement, to the same person or organisation for the same product, person or organisation. The reason may be different (the operational need or urgent operational circumstance can evolve).

The safety justifications and mitigating measures can also be different (due to the different timeframe, additional justifications or different measures can be needed).

Furthermore, the duration of the initial exemption is irrelevant: whether it was granted for one day or for two months. As soon as it is renewed it becomes repetitive.



## 16.23 EASA PERMIT TO FLY ISSUANCE PROCEDURES

REF: (EC) No 216/2008  
(EC) No 748/2012  
(EC) No 2042/2003, as amended  
HCAA T.O. 02-13, Edition 5, 24-12-2012

### 16.23.1 Introduction

By derogation of the rules for the issuance of Certificate of Airworthiness as per (EC) 1592 article 5 (3) (a), (EC) 1702/03 Annex (Part 21) Subpart P allows the issuance of a Permit to Fly (PtF) when a Certificate of Airworthiness is temporarily invalid, provided that the flight conditions are approved and the subject Aircraft is capable of performing a safe flight.

Reference to above from 28th March 2007, the flight conditions related to the safety of design must be approved by EASA, while those non-related to safety of design may be approved by National Authority including HCAA.

Actually, flight conditions approval and consequently a Permit to Fly may be issued by:

(i) **Agency:**

Agency approves the flight conditions in cases related to the safety of the design, defined as follows:

1. The Aircraft does not conform to an approved design or
2. The Airworthiness Limitations, a Certification Maintenance requirement or an AD has not been complied with, or
3. The intended flight(s) are outside the approved envelope.

(ii) **HCAA:**

The Agency is not involved when the Approval of flight conditions is not related to the safety of the design, where the Competent Authority of the M.S. or Registry, or of the M.S. prescribing the identification marks approves the flight conditions and issues the Permit to Fly. Examples of such conditions are:

1. Production flight testing for the purpose of conformity establishment.
2. Delivery/export flight of a new A/C the design of which is approved.
3. Demonstrating continuing conformity with the standard previously accepted by the Agency for the A/C or type of A/C to qualify or re-qualify for a (restricted) certificate of Airworthiness.

(iii) **DOA/POA:**

In accordance with new regulations appropriately approved Organizations (DOA/POA) may approve the Flight Conditions and issue a Permit to Fly under certain conditions, related to their privileges as been approved by Agency and/or National Authority, and in the specific form as defined and created by EASA.

**IT IS CONFIRMED THAT THE RULES RELATED TO PERMIT TO FLY (PtF) DO NOT APPLY TO AIRCRAFT REGISTERED OUTSIDE THE MEMBER STATES AND FOR THE AIRCRAFT EXCLUDED BY THE ANNEX II OF THE BASIC REGULATION 216/2008 OR BY ITS ARTICLE 1.2.**

### 16.23.2 Scope (21A.701)

The cases for which a PtF can be issued are the following:

Permits to fly shall be issued to aircraft that do not meet, or have not been shown to meet, applicable airworthiness requirements but are capable of safe flight under defined conditions and for the following purposes:

- development;
- showing compliance with regulations or certification specifications;



- design organizations or production organizations crew training;
- production flight testing of new production aircraft;
- flying aircraft under production between production facilities;
- flying the aircraft for customer acceptance;
- delivering or exporting the new aircraft provided that design is approved (**Issued by HCAA**);
- delivering or exporting a used aircraft (**Issued by HCAA**);
- flying the aircraft for Authority acceptance (**Issued by HCAA**);
- market survey, including customer's crew training;
- exhibition and air show;
- flying the aircraft to a location where maintenance or airworthiness review are to be performed, or to a place of storage (**Issued by HCAA**);
- flying an aircraft at a weight in excess of its maximum certificated takeoff weight for flight beyond the normal range over water, or over land areas where adequate landing facilities or appropriate fuel is not available;
- record breaking, air racing or similar competition;
- flying aircraft meeting the applicable airworthiness requirements before conformity to the environmental requirements has been found;
- for non-commercial flying activity on individual non-complex aircraft or types for which a certificate of airworthiness or restricted certificate of airworthiness is not appropriate.
- flights necessary for the issue or re-validation of a Certificate of Airworthiness of an already approved design (**Issued by HCAA**).

#### 16.23.3 Eligibility (21A.703)

Any natural or legal person shall be eligible as an applicant for a permit to fly except for a permit to fly requested for the purpose of 21A.701(a)(15), where the applicant shall be the Owner.

#### 16.23.4 Application for Permit to Fly (21A.707)

- a) An application for a permit to Fly shall be made to the HCAA/D2 using the EASA Form 21 when approval of flight conditions is not related to safety of design.
- b) Application for a Permit to Fly shall be made by:
  - The owner and/or Operator's nominated post holder for Continuing Airworthiness Management Organization.
- c) Application for Permit to Fly due to aircraft defect(s) or damage(s) during operation shall be made by the owner and/or operator's nominated post holder for Continuing Airworthiness Management.

NOTE: In this case all parts of the form must be completed.

- d) Each application for a permit to fly shall include:
  - The purpose(s) of the flight(s) in accordance with "B" above.
  - The description of the aircraft configuration.
  - The ways in which the aircraft does not comply with the appropriate airworthiness requirements.
  - When available, the conditions under which the flight is requested, as defined in item "E".
- e) When approval of the flight conditions is related to the safety of the design the application shall be made to Agency in a form and manner established by the Agency.



#### 16.23.5 Establishment of Flight Conditions (21A.708)

- The Applicant shall establish and document as appropriate:
- The configuration (s) for which the permit to fly is requested
- Any conditions or restrictions necessary for safe operation of the aircraft, including:
  - The conditions or restrictions put on itineraries or airspace, or both required for the flight.
  - The conditions and restrictions put on the flight crew and its qualification, to fly the aircraft.
  - The restrictions regarding carriage of persons other than cockpit crew.
  - The operating limitations.
  - The test flight form and programme (IF APPLICABLE).
  - The specific continuing airworthiness arrangements including maintenance instructions.
- The substantiation that the aircraft is capable of safe flight under the conditions and restrictions of paragraph (2) above.
- The method used for the control of A/C configuration, in order to remain within the established conditions.

#### 16.23.6 Evaluation Procedure to Issue a Permit to Fly (PtF) (21A.707, 21A.709)

Designated HCAA/D2 Airworthiness inspectors, supported by Flight OPS Inspectors when required may specify additional Inspections and/or tests where considered necessary.

The Inspections and tests, shall include but are not limited to the following:

- (i) All applicable AD's must be complied with or otherwise Authority shall be notified.  
NOTE: In this case the flight conditions must be approved by "AGENCY".
- (ii) Any applicable OPEN Airworthiness item must be notified to Authority.  
NOTE: As above.
- (iii) Aircraft physical inspection, and system(s) test (if required) must be done.
- (iv) Survey of the records may be carried out to verify the maintenance status of the aircraft prior to issue a Permit to Fly.
- (v) Determination and applicable analysis of necessary conditions, restrictions and/or deviation from applicable certification specification under which the permit to fly can be performed safely shall be taken into account.
- (vi) Evaluation of the documentation received with application as required by regulations
- (vii) Evaluation of the eligibility of the applicant.
- (viii) Evaluation of the eligibility of the application.
- (ix) Applicable insurance Certificate must be valid

**THE PERMIT MAY CONTAIN CONDITIONS AND LIMITATIONS UNDER WHICH THE FLIGHT(S) MAY BE MADE.**

#### 16.23.7 Approval of Flight Conditions (21A.709/710)

- The Approval of the flight conditions in relation to item "A" above shall be approved by the Agency or appropriate approved design Organization as per 21A.263(c)(6) when it is related to the safety of the design.
- When the approval of flight conditions is not related to the safety of the design it shall be issued by the HCAA or the appropriately approved Organization that will also issue the Permit to Fly (PtF).
- The application for approval of the flight conditions shall include:
  - Proposed flight conditions.
  - Appropriate Documentation supporting these conditions and
  - A Flight release Certificate" FRC " shall be issued stated that the Aircraft is capable of safe flight under the conditions and/or restrictions of paragraph E(2) (21A.708) above.

The F.R.C. shall be issued only by on of the following:

- a) By appropriate approved EASA Part 145 organization.



- b) By a holder of a valid and appropriate Authorization issued by an Approved Part 145 or Part 21 Organization.
- c) A person Authorized/approved by HCAA/D2.

Reference to item (b) above the person(s) which authorized to issue the FRC must be approved by Part 145 Organisation

In compliance with related procedures which will be established by Organisation and approved by the Authority

- The validity of the FRC shall not exceed 14 days.
- If the Airworthiness Condition of the Aircraft is changed during the period of validity the FRC shall be re-issued.
- Any maintenance performed on subject Aircraft whilst operating under such PtF will require the issue of a CRS in compliance with (EC) 2042 (Part M, Part 145 or Part 21A.163) or appropriate.

#### **16.23.8 Issue of Permit to Fly (21A.711)**

The Competent Authority shall, as applicable, issue or amend a permit to fly (EASA Form 20) without undue delay when it is satisfied that the applicable requirements are met (reference "E", "F") and if they are related to deviations from the Maintenance programme not being part of the Airworthiness Limitations.

The Permit to Fly shall specify the purpose(s) and any condition and/or restrictions approved under 21A.710 item " G "above

NOTE (1): In other cases the conditions shall be approved by the Agency or by a DOA under the privilege granted by the Agency, excluding the cases which can be pre-approved by the Agency, where Competent Authority will be able to issue the PtF without a specific approval of the Flight Conditions by the Agency.

NOTE (2): EASA Forms 20b and 55 shall be used by DOA & POA respectively and must be submitted to HCAA.

#### **16.23.9 Duration and Continued Validity (21A.723)**

A Permit to Fly (EASA Form 20a) issued by HCAA/D2 shall remain valid only for the specific flight and/or series of trips up to the final destination and may be amended accordingly related to FRC validity.

#### **16.23.10 Changes (21A.713)**

Any change related to invalidation of flight conditions or associated substantiation established For the permit to fly shall be approved in accordance with 21A.710 item "G " above.

#### **16.23.11 Revocation of Permit to Fly**

- a) Upon evidence that any of the conditions specified above is not met the Competent Authority shall revoke a permit to fly.
- b) Upon issuance of the notice of revocation of a permit to fly the Competent Authority shall state the reasons for the revocation and inform the holder of the permit on its right to appeal.

#### **16.23.12 Records Keeping**

All records and approvals related to (PtF) issuance must be kept in a separate folder at the disposal of the Agency and HCAA in order to ensure the continued Airworthiness of the Aircraft. A complete set of documentation related to PtF issuance shall be retained by HCAA/D2 Library.





## 16.24 Acceptance of an Air Operator's Accountable Manager

REF: (EC) No 748/2012

(EC) No 2042/2003 as amended

EU OPS

The Accountable Manager is a senior manager within an Organization who is accountable to the HCAA for maintaining safety standards required by regulation and additional standards specified by the AOC holder or applicant (CAMO Organization-Part 145 - MTO-Part-21 etc) . He or she must have corporate authority for ensuring that all operations / maintenance system / or Organization activities can be financed and carried out to the standard required.

The Accountable Manager is required by the applicable regulations to be acceptable to the HCAA.

In the regulation of safety the Accountable Manager is a key figure given that their influence on the standards of an Organization is significant. Therefore the working relationship between the HCAA and the Accountable Manager plays an important part in the regulatory oversight of an Organization. As part of the routine regulatory oversight programme, the HCAA FSD will normally arrange an annual meeting with the Accountable Manager in order to discuss any issues associated with the safety management of the operation.

### 16.24.1 The HCAA Acceptance Process

The HCAA normally invites the nominee for the position of Accountable Manager to a meeting at FSD Office to allow the assigned Flight Operations Inspector and Airworthiness Inspector to make a decision on his or her acceptability for the role.

HCAA acceptance will be based on demonstrated knowledge of the applicable Regulations, an understanding of the role of the Accountable Manager and the standards required by the HCAA and the applicable to the Organization regulations .

The meeting will aim to confirm that the nominee has

- appropriate seniority in the organization;
- adequate input into the determination of operating budgets;
- autonomy in financing operations to the required standards;
- appropriate knowledge and understanding of the documents that prescribe safety standards;
- appropriate knowledge and understanding of the requirements for competence of management personnel;
- appropriate knowledge and understanding of Quality Systems, related principles and practices, and the role of the Accountable Manager in Quality Systems; and
- appropriate knowledge and understanding (if applicable) of Safety Management Systems or Accident Prevention and Flight Safety Programmes, related principles and practices, and the role of the Accountable Manager in such systems.

The nominee should bring their current CV to the acceptance meeting. In smaller organizations the Accountable Manager may also be a nominated post holder and the meeting may cover both sets of requirements if the nominee so wishes. A completed Form 4 will be required for the nominated post holder element, but is not required for Accountable Manager acceptance.

### 16.24.2 Seniority

The Accountable Manager would be at a level in the organization no lower than that which accepts direct reports from the nominated post holder /s .

Though the nominee will often be the Chief Executive, CEO, President, Managing Director, General Manager or similar title.





#### **16.24.3 Budget**

The nominee should be able to satisfy the Inspector that he/she has an operating budget or financial control limit, and that he/she had a meaningful input into determining the size of the budget. The nominee should show evidence that he/she has the funds at their disposal without reference to a higher authority .

#### **16.24.4 Standards**

The nominee will be requested to show he/she has a basic understanding of the standards required by the applicable to his position regulations (AOC-Part 145 etc) and the nominee should have a sound knowledge of the requirements that relate to the Accountable Manager and his/her function .

The HCAA will need to be satisfied that the nominee understands what the regulations require him/her to be responsible for, and can explain how the post holders have been selected and how their continuing competence will be monitored.

#### **16.24.5 Quality System**

The Quality System is a primary management tool for assisting the Accountable Manager to measure compliance with requirements, and to make timely and effective changes, which will improve safety .

The nominee should be able to demonstrate a sound knowledge of quality system principles and practices and how these are applied within his/her own organization including, in particular, knowledge of his/her own role.

The HCAA will need to be satisfied that the nominee:

- is committed to Quality as a means for establishing and maintaining the required standards;
- understands his/her role in the organization's Quality System(s) and the related requirements .
- has established, published and practically endorses a Quality Policy; and
- understands the purpose of the Quality Evaluation meeting and his/her role in it, and carries out (or intends to carry out) effective Evaluation Meetings.

Finally the nominee should be aware of the requirements (if applicable to his position ) for of Safety Management System principles and the Accident Prevention and Flight Safety Programme.

#### **16.24.6 Acceptance of Accountable Manager**

The acceptance of the Organization Accountable Manager is made through the approval of the related AOC or the applicable exposition (CAME-MOE-MTOE etc) .

### **16.25 One-off Certification Authorization**

REF: (EC) 2042/03 (145.A 30(j5))

In order to control the One-Off Certification Authorization granted by EASA Part 145 AMO, HCAA has established the following procedure:

1. AMO Organization shall inform HCAA within 7 days of the issuance of ONE-OFF CERTIFICATION AUTHORIZATION by means of the submission of the form shown in Appendix G of this Chapter.
2. HCAA shall ensure the compliance to the appropriate procedures.

In addition to the above, Organization's QA Manager must clarify the time frame of Specific verification. Upon verification by EASA Appropriate Part 145 AMO Organization he shall communicate to HCAA the results. All relevant copies of the above documents, will be kept in HCAA Technical Library.



## 16.26 MEL Repair Interval Extension Procedures

REF.: (EC) 1899/06 Article 8.2 / (EC) No 8/2008  
(EC) 1899/06 OPS 1.030  
(EC) 2042/02 Annex I  
HCAA/TO 104-01/16-10-08

1. In compliance with applicable regulations and HCAA/TO 104-01/16-10-08, the following procedures have to be applied when an Operator is requesting extension in MEL Repair Interval.
2. The assigned by the Head of Airworthiness team consisting of AW, OPS and Avionic Inspectors, will examine the documented application by the Operator giving emphasis to:
  - Applicable MMEL related procedures.
  - Applicant's type of operation including but not limited to geographical, special operation (RVSM, Cat III, AWO, etc) approvals.
  - Conjunction of the requesting item extension with other related to effective system items.
  - Applicable reliability analysis must be checked.
  - Applicable engine trend must be checked.

When the RIE application is due to "PART STOCK DEPLETED", the assigned Inspectors team will check the frequency and the rate of requesting extensions due to "nil Stock" in order to verify the Operator's supporting stock ability. Subject to results, it will act accordingly.

Provided that the requested extension does not affect the Aircraft safe operation, the related to (EC) 1899/06 Article 8.2 procedures will be followed.

## 16.27 Indirect Approval (Changes)

REF: (EC) 2042/03 as amended (M.B. 606, M.B. 706, M.A. 302, 145.A.70, 147.A.140)

As the approved maintenance organization is obliged to notify HCAA of any changes as described in reference above, the following procedure shall apply:

- If the change(s) is considered that it does not affect the continuous compliance with applicable Part, the Authority will issue (if required) the conditions under which the approved maintenance or continuous airworthiness Organization may operate during such changes, otherwise
- If the nature of the changes are considered significant, the respective approval will be suspended until further restoration and re-evaluation before approval.
- The applicable Organization may approve minor changes through an indirect approval procedure, provided these changes are submitted to HCAA/FSD at least 15 days before their effectivity and the procedure is documented.
- In that case, the indirect approval procedure shall be established by the Organisation as part of the Organisation's Exposition and shall be approved by HCAA/FSD through its approval. The ASI(s) shall ensure that the changes remain minor and that the Organization has adequate control of the changes and they remain in compliance with the requirements of (EC) 2042/03.



## **16.28 Reporting to HCAA of any identified condition endangering flight safety**

REF: (EC) 2042/03 as amended {M.A. 202 (a)}

When HCAA is informed of any condition of aircraft or component which endangers the flight safety, the following procedure shall apply:

The responsible Section of HCAA/FSD will assign appropriate inspector(s) to investigate the report. Subject to results and the importance of the reported condition:

- The Type Design and/or Supplemental Type design holder(s) will be informed immediately.
- The affected aircraft will be grounded upon further investigation and –if required- the Airworthiness Review Certificate will be suspended.
- Upon completion of the investigation, the assigned inspector(s) will report to the Head of the Section with appropriate recommendation.
- The Head of the Section will examine the report and take appropriate action including –but not limited to- further evaluation or revocation of Certificate of Airworthiness and/or revocation of respective Operator's/Organization's approval Certificate.
- The Agency will be notified accordingly.



## **16.29 Training Approval Procedures in Aviation matters not related to Aviation Ratings and/or License Issuance or Renewal**

**REF.** HCAA/TO NO 16.1

### **16.29.1 General**

Following content describes the appropriate procedures for issuing training approvals to other than EASA 147 approved training organizations.

Such training approvals will be restricted in general aviation matters not related to any aviation rating and/or license issuance or renewal.

As the Authority must be assured that the adequate standards are met and the training is provided in a consistent manner. It is essential the procedures, instructors' qualifications, facilities and instructional tools meet minimum performance standards and appropriate procedures as well.

### **16.29.2 Application for Approval**

Applicant shall provide to Authority a letter of intent appropriately documented accompanied by applicable Training procedures exposition (TPE) in compliance with HCAA/To No .....

### **16.29.3 Approval Procedure**

Assigned Certification team will review the training procedures exposition (TPE) endorsed applicable procedures including but not limited to instructors qualifications in compliance with HCAA/TO No .....

If any non-compliance are found, the assigned certification team will notify in writing the applicant of the NCR's which must be corrected prior to respective approval issuance.

Copies of the non-compliance reports (NCR's) and notification letter(s) should be inserted in the applicable Certification folder which will be kept in Authorities library.

Furthermore, the Certification team will inspect the applicant's facilities and instructional tools (as applicable) to verify compliance with acceptable training standards.

Upon completion of inspection and acceptance of T.P.E. and corrective actions on issued NCR's appropriate approval letter will be issued by HCAA/D2.

The respective approval will be limited to that specified in the scope of Training Procedures Exposition (TPE) section.

### **16.29.4 Validity of the Approval**

The training approval as issued by HCAA/D2 shall remain valid for two (2) years, unless has previously been surrendered, suspended or revoked.

### **16.29.5 Approval Renewal**

For the training approval renewal the following procedures shall apply.

- 60 days before the expiration date of the initial approval issuance appropriate request should be submitted to HCAA/Δ2/A-Γ.
- Assigned inspectors shall review the compliance with the approved procedures giving emphasis to:
  - a) Instructors suitable training and appropriate recurrences
  - b) Availability of appropriate instructional equipments in general
  - c) Appropriate training records

Subject to the inspection results the training approval will be re-issued for a time period of two (2) years.

### **16.29.6 Variation of the Approval**

Application for a **variation** approval is required for any of the following reasons:

- Any change of the principal place of business



- Any changes(s) to the scope of approval (capability variation)  
**Variation** certification procedures in any change to the scope of approval follow the steps of the initial approval as described above.

#### **16.29.7 Update ADMS**

Any information related to the certification and/or variation procedures shall be endorsed in the HCAA's ADMS system in compliance with applicable regulations.



## 16.30 JAR 26 Subpart B Compliance

JAR-26 prescribes specific additional airworthiness requirements with which operators must ensure that compliance has been established if operating in accordance with the Part of EU-OPS relevant to the particular type of operation

### References

- ICAO Annex 6 & 8 current issue.
- JAR 26 current issue.
- Aircraft Type Certificate Data Sheet (TCDS)

### 16.30.1 Objective

This Section provides guidance on the evaluation of a potential operator's to comply with the additional requirements as described in the referred JAR 26 requirements.

Aircraft may be imported into Greece, provided it can be demonstrated that the aircraft conforms to JAR-26 Subpart B.

### 16.30.2 General

Equivalent Safety Findings included in the Type Certification basis of an aircraft made and accepted by the national Authority remain valid regarding JAR-26 or equivalent requirements.

*Exemptions:* Airworthiness Exemptions granted, regarding JAR-26 or equivalent requirements, to an aircraft's Type Certification Basis, C of A documentation or operations approval documentation prior to the implementation of this JAR-26 (as appropriate in each State), are to be notified to his Authority by the AOC holder who is adding an aircraft to his fleet, when that aircraft is being moved from one JAA registry to another.

*Airworthiness Exemptions granted after JAR-26 implementation:* After the date of JAR-26 implementation requests for Airworthiness Exemptions regarding JAR-26 requirements, will be made, in accordance with the applicable EU OPSs for verification or operations. In the case of such jointly agreed airworthiness exemptions, there is no additional reporting requirement to the HCAA.

### 16.30.3 Procedure

#### A. General Requirements

The intent of this compliance list is to ensure that an aircraft to be operated under EU -OPS has been examined by the operator and is considered in conformity with the requirements of JAR-26 Subpart B.

Form GL-JAR26-001, shown in Appendix H of this Chapter, will be used as a guidance by the assigned HCAA inspectors for compliance during initial/renewal/or after a modification embodied on JAR 26 referred items.

The assigned inspector/inspectors will use the attached evaluation Form GL-JAR26-001 as a check list in order to assure compliance with JAR 26 requirements. In case of any non compliance Equivalent Safety Findings included in the Type Certification basis (refer to aircraft TCDS) should be consulted.



### **16.31 Aircraft Continuing Airworthiness Monitoring (ACAM)**

REF.: M.B.303 and AMC M.B.303(b), (c) & (d)

Refer to separate HCAA ACAM Program Manual, Issue 1, Revision 0 (September 2011).



### **16.32 Guidance for assessing the qualifications, skills, competency of Part-147 Instructors, Knowledge Examiners and Practical Assessors**

**REF:** HCAA T.O. 147-01, Issue 01, 15-01-2013

The document referenced above details the minimum required qualifications, skills, competency and experience of Instructors, Knowledge Examiners and Practical Assessors of maintenance training organizations and maintenance organizations approved in accordance with (EC) 2042/2003.





## 16.33 The HCAA Form 4s Acceptance Process

### Qualifications and training requirements for the nominated persons

The HCAA invites the nominee (Form 4) for the related position to a meeting at FSD Office to allow the assigned Airworthiness Inspector/s to make a decision on his or her acceptability for the role.

HCAA acceptance will be based on demonstrated knowledge by the nominee (Form 4) of the applicable Regulations, an understanding of the role and the standards required by the EASA / HCAA and the applicable to the Organization regulations.

The meeting will aim to confirm that the nominee has

- appropriate seniority in the organization;
- appropriate knowledge and understanding of the documents that prescribe safety standards;
- appropriate knowledge and understanding of the requirements for competence of management personnel;
- appropriate knowledge and understanding of Quality Systems,

The nominee should bring their current CV to the acceptance meeting. A completed Form 4 will be required for the nominated post holder element.

### 16.33.1 CAMO Post holder Maintenance

The qualifications and the training requirements for the nominated person should be (as a minimum) as follows :

1. Practical experience and expertise in the application of aviation safety standards and safe operating practices;
2. Comprehensive knowledge of:
  - relevant parts of implementing rules, certification specifications and guidance material;
3. Knowledge of Quality Systems;
4. Five years relevant work experience of which at least two years should be from the aeronautical industry in an appropriate position;
5. A relevant engineering degree or an aircraft maintenance technician qualification with additional education acceptable to HCAA.

**Note1** : '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;

**Note 2**: The above recommendation may be replaced by 5 years of experience additional to those already recommended by paragraph 4.4 above. These 5 years should cover an appropriate combination of experience in tasks related to aircraft maintenance and/or continuing airworthiness management (engineering) and/or surveillance of such tasks.

6. Thorough knowledge with the organization's Continuing Airworthiness Management Exposition;
7. Knowledge of a relevant sample of the type(s) of aircraft gained through a formalized training course;
8. Knowledge of maintenance methods.
9. Human Factors training
10. EWIS training (if relevant)
11. Fuel Tank Safety training (if relevant)

### 16.33.2 CAMO Quality Manager

The qualifications and the training requirements for the nominated person in addition to para. 16.33.1, should be (as a minimum) as follows :

1.2.1 Quality management

1.2.2 Audit technique

1.2.3 Thorough knowledge with the organization's Quality Manual



### **16.33.3 Line Maintenance Manager (Part 145 or Subpart F )**

The qualifications and the training requirements for the nominated person should be (as a minimum) as follows :

1. Practical experience and expertise in the application of aviation safety standards and safe operating practices;
- 2 .Comprehensive knowledge of:
  - \_ relevant parts of implementing rules, certification specifications and guidance material;
3. Knowledge of Quality Systems;
4. Five years relevant work experience of which at least two years should be from the aeronautical industry in an appropriate position;
5. A relevant engineering degree or an aircraft maintenance technician qualification with additional education acceptable to HCAA .

**Note 1 :** '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;

**Note 2:** The above recommendation may be replaced by 5 years of experience additional to those already recommended by paragraph 4 above. These 5 years should cover an appropriate combination of experience in tasks related to aircraft maintenance.

6. Thorough knowledge with the organization's Maintenance Organization Exposition;
7. Knowledge of a relevant sample of the type(s) of aircraft gained through a formalized training course;
8. Knowledge of maintenance methods.
9. Human Factors training
10. EWIS training (if relevant)
11. Fuel Tank Safety training (if relevant)

### **16.33.4 Quality Manager (Part 145 or Subpart F )**

The qualifications and the training requirements for the nominated person in addition to **Par. 16.31.3** should be (as a minimum) as follows:

- 1.4.1 Quality management
- 1.4.2 Audit technique
- 1.4.3 Thorough knowledge with the organization's Quality Manual

### **16.33.5 MTO Manager**

The qualifications and the training requirements for the nominated person should be (as a minimum) as follows :

1. Practical experience and expertise in the application of aviation safety standards and safe operating practices;
2. Comprehensive knowledge of relevant parts of implementing rules, certification specifications and guidance material;
3. Quality systems;
4. Five years relevant work experience This may include experience gained during training to obtain the 1.5 qualification;
5. A relevant engineering degree or an aircraft maintenance or training 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;
6. Knowledge of a relevant sample of aircraft types;
7. Knowledge of maintenance training standards.
8. Thorough knowledge with the organization's Exposition;

### **16.33.6 MTO Quality Manager**

The qualifications and the training requirements for the nominated person in addition to **Par. 16.31.5** should be (as a minimum) as follows :

- 1.6.1 Quality management
- 1.6.2 Audit technique
- 1.6.3 Thorough knowledge with the organization's Quality Manual



### 16.33.7 Airworthiness review staff (CAT and above 2.730)

The qualifications and the training requirements for the nominated person should be (as a minimum) as follows :

For all aircraft used in commercial air transport, and aircraft above 2 730 kg MTOM, except balloons, these staff shall have acquired:

- 1.7.1** At least five years' experience in continuing airworthiness; and
- 1.7.2** An appropriate license in compliance with Annex III (Part-66) or an aeronautical degree or a national equivalent; and
- 1.7.3** Formal aeronautical maintenance training; and
- 1.7.4** A position within the approved organisation with appropriate responsibilities.
- 1.7.5** Notwithstanding points 1.7.1 to 1.7.4 , the requirement laid down in point **1.7.2** may be replaced by five years of experience in continuing airworthiness additional to those already required by point **1.7.1**.
- 1.7.6** Knowledge of a relevant sample of the type(s) of aircraft gained through a formalised training course;
- 1.7.7** . Knowledge of maintenance methods.
- 1.7.8** Human Factors training
- 1.7.9** .EWIS training (if relevant)
- 1.7.10** Fuel Tank Safety training (if relevant)
- 1.7.11** Relevant parts of initial and continuing airworthiness regulations. **1.7.12** Relevant parts of operational requirements and procedures, if applicable.
- 1.7.13** The organisation's continuing airworthiness management exposition

### 16.33.8 Airworthiness review staff (non CAT and below 2.730)

For aircraft not used in commercial air transport of 2 730 kg MTOM and below, and balloons, these staff shall have acquired:

- 1.8.1** At least three years' experience in continuing airworthiness, and
- 1.8.2** An appropriate license in compliance with Annex III (Part-66) or an aeronautical degree or a national equivalent; and
- 1.8.3** Appropriate aeronautical maintenance training; and
- 1.8.4** A position within the approved organisation with appropriate responsibilities;
- 1.8.5** Notwithstanding points (1.8.1 to 1.8.4) the requirement laid down in point **1.8.2** may be replaced by four years of experience in continuing airworthiness additional to those already required by point **1.8.1**.
- 1.8.6** Relevant parts of initial and continuing airworthiness regulations.
- 1.8.7** Relevant parts of operational requirements and procedures, if applicable.
- 1.8.8** The organisation's continuing airworthiness management exposition
- 1.8.9** Knowledge of a relevant sample of the type(s) of aircraft gained through training and/or work experience. Such knowledge should be at least at a level equivalent to Part-66 Appendix III Level 1 General Familiarisation and could be imparted by a Part-147 organisation, by the manufacturer, or by any other organisation accepted by HCAA.

### 16.33.9 Production Organization Postholder

The qualifications and the training requirements for the nominated person should be (as a minimum) as follows :

- 1** .Comprehensive knowledge of:
    - relevant parts of implementing rules, certification specifications and
    - guidance material;
  - 2.** Knowledge of Quality Systems;
  - 3.** Five years relevant work experience of which at least two years should be from the aeronautical industry in an appropriate position;
  - 4.** A relevant engineering degree
- Note:** 'relevant engineering degree' means an engineering degree from aeronautical , mechanical, electrical, electronic, avionics or other studies relevant to the position of the nominee;
- 5.** Thorough knowledge with the organization's P.O. Exposition;



#### **16.33.10 Production Organization Quality Manager**

The qualifications and the training requirements for the nominated person in addition to **Par. 16.31.9** should be (as a minimum) as follows :

**1.10.1** Quality management

**1.10.2** Audit technique

**1.10.3** Thorough knowledge with the organization's Quality Manual

#### **16.33.11 Acceptance of Form 4 personnel**

The acceptance of the nominated person is made through the acceptance of the related Form 4 and through the approval of the related exposition (CAME-MOE-MTOE etc) .

A letter from the director of HCAA FSD will be sent to the Organization referring to the acceptance of the nominated person.



## **16.34 Suspected Unapproved Parts**

REF: ICAO Doc 9760 Vol II Part B 9.6.

(EC) 216/2008, (EC) 2042/2003 as amended

Additional Reference: FAA AC 21-29C

### **16.34.1 PURPOSE**

To provide guidance to HCAA/FSD Airworthiness Inspectors and persons involved in the operations and/or maintenance of aircraft on the Greek register, on the identification, control and reporting of suspected unapproved parts to type certificate holders and the Hellenic Civil Aviation Authority.

### **16.34.2 POLICY**

#### **16.34.2.1 Introduction**

ICAO Annex 8 requires that all materials used in those parts of an aircraft which are essential for its safe operation shall conform to approved specifications, and that those specifications shall be such that materials accepted as complying with them shall have the essential properties assumed in the design. The need to ensure that parts installed on an aircraft meet the design specification and are serviceable is self evident. The installation of any part failing to meet the intended design requirements degrades those requirements, leading to a degradation of airworthiness. It is essential that for the purpose of continuing airworthiness a system of control exists which ensures that only parts meeting the approved design data applicable to a particular aircraft are installed on that aircraft. This policy provides guidance on the essential elements to be observed when establishing such a system.

#### **16.34.2.2 Approved Parts**

An approved part is one meeting approved design data applicable to that part and which has been manufactured and subsequently maintained in accordance with the requirements of the State of design, Manufacture or Registry, as applicable.

Standard parts, such as fasteners, are considered as approved parts when in accordance with national or industry accepted standard and when referenced in the type design of the particular aircraft.

#### **16.34.2.3 Unapproved Parts**

Parts not meeting the criteria described above for approved parts are considered to be unapproved parts and shall not be fitted to a Greek registered aircraft.

Unapproved parts also include those parts improperly returned to service, for example:

parts supplied directly to the user by a subcontractor not entitled to do so;  
parts maintained or approved for return to service by a person or organisation not approved to do so;  
parts not maintained in accordance with the requirements of the applicable approved data; and  
parts having reached their life limit, including, if applicable, any shelf-life limit.

#### **16.34.2.4 Suspected unapproved or counterfeit part**

A part, component, or material that is suspected of not meeting the requirements of an "approved part". A part, that for any reason, a person believes is not approved. Reasons may include findings such as different finish, size, colour, improper (or lack of) identification, incomplete or altered paperwork, or any other questionable indication.

#### **16.34.2.5 Supporting documentation for approved parts**

Documentation providing written evidence of the acceptability of a part is an essential element to ensure that only approved parts are installed on an aircraft. Such documentation should provide all relevant information concerning the part to which it refers sufficient to enable the potential installer to readily ascertain its status.

Such documents should contain information relating to:

- the authority under which it is issued;
- reference identification for the purposes of traceability;
- name, address and approval reference of the issuing organisation;
- work order, contract or invoice number;



- quantity, description, part number and , if applicable, serial number of the part;
- relevant information concerning any life limitations, compliance or non-compliance with any airworthiness directives, etc.;
- the signature and approval reference of the person issuing the document; and
- whether the part is new or used.

Any part not accompanied by the appropriate documentation should be considered to be unapproved.

#### **16.34.2.6 Controls to prevent the acceptance of unapproved Parts**

Maintenance organisations and operators should ensure that all those staff who have routine contact with parts, including especially buyers, stores staff, mechanics and certifying staff, are fully aware of the dangers posed by unapproved parts and also the likely sources. Such staff should be warned about accessing any unapproved parts database. Parts suppliers should be fully integrated in their reporting network and staff should be audited at intervals to ensure that all remain vigilant to the problem. Staff involved in the parts ordering and receiving system should be well informed and alert to the danger of unapproved parts being released for fitment to an aircraft and through auditing and reports maintain a satisfactory level of confidence in its parts suppliers and which;

- ensures a continued correlation between parts ordered and parts received;
- is alert to any unauthorised alterations to supporting documentation and to any inability of the supplier to supply the required documentation;
- is aware if a quoted price for the part is significantly lower than that quoted suppliers;
- is aware that delivery times are significantly shorter than those quoted by other suppliers; and
- is aware of parts packaging methods used by approved parts manufacturers, maintenance organisations and distributors, and can detect deviations from these methods.

#### **16.34.2.7 Parts Stockists and Distributors**

HCAA does not issue specific approvals for the stocking and distribution of aircraft parts. In airworthiness terms, the parts supplier is simply that of a holder of a part and its supporting data for a limited period, the part and data being passed in their entirety to the purchaser. The most effective control is exercised by the purchaser of the parts by ensuring that the part is correct and that the documentation truly reflects the status of the part. Further assurance is provided by the installer purchasing only from those suppliers having a known satisfactory record.

#### **16.34.2.8 Reporting of Unapproved Parts**

The purpose of a system for the reporting of unapproved parts to Type certificate holders and Regulatory Authorities is to provide widespread warning of the detection of unapproved parts so that operators of similar equipment can be made aware as soon as possible.

Reports of suspected unapproved parts should be submitted through the appropriate HCAA SUP Reporting Form, shown in Appendix I of this Chapter. The report should be made within 72 hours of the detection of the suspected unapproved part.

Minimum information required will include:

- part description and from where received;
- part and (if applicable) serial numbers;
- particular colours, markings, dimensions and features common to the suspected unapproved part which distinguish it from the genuine item; and
- the nature of any accompanying documentation.

Received HCAA SUP Reporting Forms will be routed to the Airworthiness Section Head, who will ensure that the relevant Type Certificate holder and Regulatory Authority have been notified and that an Inspector has been assigned to investigate.



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## **APPENDIX A**

STICS – Specific Type Inspection Coding System





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## **APPENDIX B**

### Guidance Lists



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## **APPENDIX C**

Application for Exemption under (EC) 216/2008



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## **APPENDIX D**

Reserved



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## **APPENDIX E**

List of Records to be retained





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## **APPENDIX F**

(EC) 216/2006 Article 14.4

1. Exemption Request Form
2. Exemption Notification Form



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## **APPENDIX G**

### One-off Authorization Notification Form



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## **APPENDIX H**

Guidance List

GL-JAR26-001



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## **APPENDIX I**

### **Suspected Unapproved Parts (SUP) Reporting Form**





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## CHAPTER 17

### Aircraft Maintenance Organization Approval (Subpart F)

*REF: EU Commission Regulation EC 2042/2003 Part M Section A & B Subpart F  
EASA ED Decision 2003/19/RM/28-11-2003*

#### 17.1 General

The certification of maintenance organizations in accordance with EASA Part M Subpart F regulation involves monitoring of maintenance activities of non-commercial aircraft and inspection of maintenance facilities throughout the EU Member States in a consistent manner. It is essential the processes provide for quick and efficient response to requests emanating from the AMOs (F) for purposes of variations to their approvals and from EASA and HCAA for purposes of resolution of open issues or possible problems.

As a EU member state, Greece applies the maintenance approval procedure policy as it is described herein. This policy is based on and satisfies the conditions and provisions of the Subpart F regulation. Furthermore, the intents of this policy are to assure standardization of procedures and methods employed within the HCAA system.

The procedures have been compiled according to the requirements of the regulation EC 2042/2003 (Section B), as amended, as well as the EASA ED Decision 2003/19/RM/28-11-2003

#### 17.2 Competent Authority

Hellenic Republic has designated the Hellenic Civil Aviation Authority as the competent Authority for the above-mentioned tasks. According to the P.D. 56/89 (as it has been amended) the Flight Standards Division – Airworthiness Section is responsible for the Maintenance Organization approvals.

#### 17.3 Initial Issue of a Subpart F AMO Approval

##### 17.3.1 Objective

The following procedure is intended to ensure that HCAA carries out the approval process in a consistent and standard manner ensuring that the process is in accordance with the Subpart F and related AMC & GM.

##### 17.3.2 Pre-Application Meeting

Once an applicant's letter of intent has been submitted to HCAA, the latter will schedule a pre - application meeting. This meeting will take place at HCAA's premises and the applicant will be given the «AMO (F) Application Package Documents» in electronic form (floppy disk /CD-ROM), that includes the following:

- ◆ Application Form (HCAA / EASA Form 2)
- ◆ Subpart F Conformance Document
- ◆ Management Acceptance Form (HCAA /EASA Form 4s)
- ◆ A list of the required Manuals/Documents for submission (see also para. 8.3.4)

A briefing is also given to the applicant during this meeting on the AMO (F) certification process, applicable regulation, including guidance on the completion of the application form and conformance document. The Head 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 (at a minimum), by the Accountable Manager and the Quality Manager. It should 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 (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 HCAA are directed to, and properly addressed by the appropriate personnel within the company. 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 company coordinator will be to arrange the on-site visits and ensure that the appropriate company personnel will be present and available.

The following documents/guidance lists will be given:

- ◆ HCAA / EASA Application Form 2 – Appendix A of Chapter 7
- ◆ HCAA / EASA Application Form 4 – Appendix B of Chapter 7
- ◆ Conformance Document Subpart F– Appendix A

**Note I:** *The AMO(F) Manual/Documentation list will also be available in electronic format (floppy disk or CD-ROM) for applicant's convenience. Once the Flight Standards Division's Web page airs on the Internet, the above Manual/Documentation list will be available on-line to all interested applicants.*

**Note II:** *During any meeting with the applicant minutes should be kept and recorded to relevant files.*

To summarize, during this meeting the following should be accomplished:

- ◆ specify the regulation and the applicable procedures
- ◆ clarify the requirements bound in the Maintenance Organization Manual MOM
- ◆ clarify the associated requirements (data, tool, staff, training)
- ◆ determine if the applicant's business activities justify the grant of Subpart F Approval
- ◆ Appoint a date for the Application & Application Meeting (see para. 8.3.3)

### 17.3.3 Application & Application Meeting

*REF : HCAA Administration Procedures Manual, Chapter 4*

HCAA receives application as described below and determines if it is for Initial approval or Variation of AMO (F) Certificate.

For the initial issue of a Subpart F AMO Certificate, the applicant must submit the completed HCAA /EASA Form 2 (shown in Appendix A of Chapter 7) and HCAA /EASA Form 4s (shown in Appendix B of Chapter 7) in accordance with the Incoming Documents procedure described in the HCAA Administration Procedures Manual, Chapter 4.

Upon receipt of the application documentation, and prior to the Application Meeting, a "Certification Team" is assigned to oversee the AMO certification process of the new applicant by the Flight Standard Division (FSD/D2) Director.

The composition of the team will be one or two Airworthiness Inspectors (one Maintenance and one Avionic) if the scope of work of the AMO (F) Organization includes Base and/or Line Maintenance. If the scope of work of the AMO (F) is limited to airframe and/or powerplants only, the certification team will consist of up to two Airworthiness Inspectors (Maintenance), whereas if the scope of work of the AMO (F) is limited only to Avionics equipment, the Certification team will consist of up to two Airworthiness Inspectors (Avionics). In any case, the knowledge, experience and background of the persons assigned will be considered in the appointment of the team and matched to the complexity of the AMO (F) activity.



In order for the Application to be considered officially submitted, the above HCAA / EASA Forms must be submitted along with all required Manuals/Documentation as described in detail in paragraph 8.3.4 of this Manual. If complete, the application will be attempted to be processed within 60 days. The 60 day period will not commence until all the documentation has been submitted. The quality of the documentation submitted will also have an effect on the 60 day period.

The Application Meeting, which officially starts the AMO (F) certification process, should not be held unless it is assured that all the documents required with the application will be completed and ready to be officially submitted at least three days prior to the Application Meeting.

The Application Meeting should be cancelled and rescheduled if the application documentation is not complete as stated.

The Application Meeting is only held if the appropriate personnel, as mentioned above, are present. The HCAA's personnel in attendance will be the Head of the Airworthiness Section and the assigned Certification Team. It is also desirable for the Flight Standards Director to attend if available.

The main objectives of the Application Meeting are to:

- ◆ Introduce the Organization's Management personnel to the HCAA Maintenance Certification Team.
- ◆ Assure that the applicant's maintenance team understands the AMO (F) certification process.
- ◆ Answer any questions the Applicant may have.
- ◆ Distribute the documents/manuals to the appropriate members of the Certification Team.
- ◆ Discuss and agree upon the target dates for the various phases outlined in the Certification Schedule, shown in Appendix F at the end of this Chapter.

#### **17.3.4 Submission of Required Manual(s)/Documentation**

*REF: EC 2042/2003, Annex I, M.A.603, M.A.604 & AMC M.A 603, AMC M.A 604 (and Appendix IV for small organization)*

The potential AMO (F) Organization's management personnel should submit the following:

- ◆ Completed HCAA /EASA Form 2
- ◆ Completed HCAA /EASA Form 4s
- ◆ Maintenance Organization Manual (MOM)
- ◆ Subpart F Conformance Document

#### **17.3.5 Management personnel qualification – review**

Guidance on the qualifications of the Accountable Manager and the other Managers is provided in detail in 16.24 and 16.33.

#### **17.3.6 Manual(s)/Documentation Review**

The review of the submitted Manual(s)/Documentation is carried out by the Airworthiness Certification Team to assess the Subpart F, AMC requirements.

This is conducted by a general review of the Subpart F documents/manual(s) submitted by the applicant with the application. This review provides the applicant with timely initial feedback and assesses the applicants understanding of the requirements.



#### 17.3.6.1 Subpart F Conformance Document

The Certification Team will evaluate the Subpart F Conformance Document. If the Conformance Document needs further work, it should be returned to the AMO (F) together with the comments summary as an attachment to an Audit Finding Form, shown in Appendix F of Chapter 7. The Subpart F Conformance Document is shown in Appendix A at the end of this Chapter.

#### 17.3.6.2 Organization's MOM (Initial)

The Certification Team will evaluate the AMO (F) Organization's MOM in order to establish that it complies with M.A.604. The evaluation will be conducted using the HCAA Guidance List shown in Appendix B of this Chapter. The Guidance List must be used in conjunction with the Subpart F Conformance Document to record queries, topics to be checked on audit and unsatisfactory items. If the MOM needs further work, it should be returned to the AMO (F) together with the comments summary as an attachment to an Audit Finding Form, shown in Appendix F of Chapter 7.

The MOM must include the subject headings listed in AMC M.A. 601 (1) or (2) depending on the size of the organization and reflect the preferred procedures. The HCAA Inspector(s) is required to establish that the procedures specified in the exposition are in compliance with the intent of Subpart F and then to establish if these procedures are, actually, intended for use.

Exposition approval will be accomplished when all items identified in the HCAA / EASA Form 6F Part 3, have been identified and evaluated as satisfactory. **A specific approval letter will be issued for the MOM, as described in para. 17.3.10 later in this Chapter.**

MOM Approval and Revision Record forms are shown in Appendix H at the end of this Chapter. Furthermore, a guidance list for the MOM conformance is provided in Appendix C of this Chapter.

#### 17.3.6.3 Organization's MOM Revisions

Subsequent MOM revisions will follow the steps of the initial Part-M Subpart F approval, as described above, if related to the issuance of an EASA Form 6F.

For minor changes, i.e. changes not related to the issuance of an EASA Form 6F, will be approved following the evaluation of the affected specific MOM items, unless the AMO (F) has been granted the privilege of MOM indirect approval for such minor changes, i.a.w. para. 16.27 of this Manual. The submission of a MOM Conformance Document and the completion of an EASA Form 6F for such minor changes, are not required.

#### 17.3.7 Corrective Actions

Manuals/Documentation submitted by the AMO (F) applicant are checked by reviewing the completed Subpart F Conformance Document that has been submitted. If any non-compliance's are found and/or if corrections are needed, the assigned ASI Inspectors 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 (F) Certification file appropriate section (correspondence). It is important that all correspondence with the Applicant should abide by the procedures for Incoming and Outgoing Documents described in HCAA Administration Manual, Chapter 4. On the basis of the findings against the MOM, the AMO (F) is responsible for the relevant corrective actions / modifications required by the HCAA. The certification team members must properly track each item in order to ensure its rectification.

#### 17.3.8 On-Site Inspection(s)

During the on-site inspection phase the facilities, services, procedures, tools and equipment of the AMO (F) organization are assessed for acceptability.

The following steps can be used as a general guideline:



- ◆ Determine the areas to be audited and who will do what.
- ◆ From the Conformance Document and MOM pick specific items and subjects for the audit – schedule, the provisional number of days, plan travel arrangements (if applicable), etc.
- ◆ Notify the applicant of the start of the audit and request an opening meeting with the attendance of the Accountable Manager.

#### **17.3.8.1 Opening Meeting**

The purpose of the opening meeting is to:

- ◆ Introduce the HCAA Certification Team to the AMO's (F) Management
- ◆ Briefly explain the purpose of the certification procedure - to comply with HCAA/ EASA requirements.
- ◆ Describe the process to be followed
- ◆ Explain the Audit Finding Forms and the Leveling of Findings
- ◆ Clearly explain that the level of the finding is provisional until endorsed by the Head of the HCAA Airworthiness Section
- ◆ Explain that all Level 1 & 2 findings must be closed before the approval can be granted (Initial issue only)
- ◆ Request the Closing Meeting - This will either be a debrief at the end of the on-site audit or a specific meeting set for a few days later when the report has been produced and can be handed to the AMO (F).

#### **17.3.8.2 On-Site Audit**

During the on-site Audit:

- ◆ Each member of Team to be accompanied by a manager or senior technical member of the AMO (F).
- ◆ Follow the Audit Plan and audit against the Subpart F requirements.
- ◆ Follow-up on any Audit Findings that have been issued against the MOM.
- ◆ Progressively complete the HCAA / EASA Form 6F, Part 2 & 4 recording any findings against the sub-paragraph of the requirement and the applicable area of the audit. Draft any Finding Forms and provide provisional copy to AMO (F) .
- ◆ Team Leader to monitor progress of audit against the plan and time-scale what was projected.
- ◆ Confirm time and date for Closing Meeting.

### **17.3.9 Inspection Results & Closing of Findings**

#### **17.3.9.1 Team Report**

- ◆ To be produced in the standard format identifying both positive and negative features of the organization.
- ◆ Comments in the report can be subjective but any finding of non-compliance with the requirement must be objective and supported by an audit finding attached as an appendix to the report.
- ◆ The report must be signed by the Team and endorsed by the HCAA Head of Airworthiness Section.

#### **17.3.9.2 Closing Meeting**

- ◆ Thank organization for co-operation during the audit.
- ◆ Review the content of the report highlighting both positive and negative aspects.



- ◆ Review the specific findings that must be resolved and closed before approval.
- ◆ Provide the opportunity for queries and clarification.
- ◆ Confirm the process of follow-up and closure of the findings.

#### 17.3.9.3 Assemble HCAA Certification File

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

- ◆ Subpart F Conformance Document - See Appendix A.
- ◆ Completed HCAA / EASA Form 6F, Parts 2, 3 and 4 with the closure date endorsed as 'Before Approval' - see Appendix D
- ◆ HCAA / EASA Form 2
- ◆ HCAA / EASA Form 4s

#### 17.3.9.4 Audit Follow-up (if Applicable)

The AMO (F) 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 HCAA / EASA Form 6F, Part 4

### 17.3.10 Preparation for Issue of the Approval (Subpart F)

Once the Certification Team is satisfied that all findings are closed for the applicable items, as described above, it will prepare the Certification folder to be presented to the FSD Director. The Certification file contents and relevant forms can be found in Appendix H of this Chapter.

The following is a list of the Certification folder contents :

- ◆ Completion of the Documentation Check Sheet
- ◆ HCAA / EASA Form 2
- ◆ HCAA / EASA Form 4s and copy of acceptance letter
- ◆ MOM approval letter and file record
- ◆ HCAA / EASA Form 6F, Parts 1, 2, 3, 4, 5
- ◆ Team Report and Audit Finding Closure documents
- ◆ Draft of letter to AMO (F) forwarding the HCAA / EASA Part M Form 3

#### 17.3.10.1 Quality Check

The Team Leader will present the Certification File to the Head of Airworthiness Section, or in his absence to the Director of Flight Standards, who will carry out the 'quality check'. This must include a review of all documents and HCAA / EASA Forms from the initial application through to the drafted HCAA / EASA Form 6F.

At this time the annual provisional monitoring plan for the AMO is reviewed and approved. Provided the quality check is satisfactory the Airworthiness Section Manager or the DFS Director will endorse the HCAA/ EASA Form 6F.

#### 17.3.10.2 Issue of the Approval

Following the Quality Check, the DFS Director will sign and stamp the approval certificate and associated letters and pass them back to the Team Leader for processing. The approval certificate (HCAA/EASA Form 3F) is shown in Appendix E of this Chapter.



#### **17.3.10.3 Annual Monitoring Provisions**

The DFS Director will appoint the Primary Maintenance Inspector (PMI) for the AMO organization and issue a Protocol for the annual monitoring requirements.

#### **17.3.104 HCAA Certification File**

The completed Certification File is then placed in the allocated space in the library. For Certification File contents and structure refer to Appendix C of this Chapter.

### **17.4 Variation of Subpart F Approval**

[REF: EC 2042/2003, Annex I, M.A.617](#)

An AMO (F) organization, issued an approval in accordance with Subpart F wishing to alter any of the elements listed below, must submit a HCAA Form 2.

A Subpart F approval variation application, received from the AMO (F), is required for any of the following reasons:

- the name of the organisation;
- the location of the organisation;
- additional locations of the organisation;
- the accountable manager;
- any of the persons specified in paragraph M.A.606(b);
- the facilities, equipment, tools, material, procedures, work scope and certifying staff that could affect the approval.

In the case of proposed changes in personnel not known to the management beforehand, these changes shall be notified at the earliest opportunity.

For this purpose the AMO (F) organization should submit the affected manual(s)/Documentation for evaluation by HCAA. The Subpart F approval variation process follows the steps of the initial Subpart F approval as described in para. 17.3.3





## 17.5 Update ADMS Database

Certain information received by the AMO (F) applicant in support of his/her application shall be entered in the ADMS System during the appropriate certification procedure steps. This information includes, but is not limited to, AMO (F) organization's address, phone numbers, base location, Senior Managers names, AMO (F) scope of work, etc. In addition, all findings from the various certification steps will also be entered into the computerized system for tracking and historical record purposes. This information will be kept up to date by including all subsequent changes (if any) to the Subpart F Approval according to para. 17.3 and 17.4 of this Chapter.

Additional information of the ADMS System can be found in HCAA Leaflet "[Aviation Data Management System – User's Guide](#)", HCAA, Edition 2, May 2004.

**Note:**

***Inspector tools and additional guidance, as appropriate, is provided in Chapter 16 of this Manual.***



## **APPENDIX A**

Conformance Document – Subpart F



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## **APPENDIX B**

Guidance List:

AMO(F) MOM Conformance Evaluation



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## **APPENDIX C**

MOM Approval and Record of Revisions



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## **APPENDIX D**

HCAA/EASA Form 6F





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## **APPENDIX E**

HCAA/EASA Form 3F



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## CHAPTER 18

### Suspension and revocation of approvals and certificates

#### 18.1 Suspensions and revocations

REF: *National Law 211/47 – The adoption of the Chicago Convention*  
*National Law 1815/88 – National Air Code*  
*EC 216/2008 – Regulation of the European parliament and the council of 15 July 2002 on the common rules in the field of civil aviation and establishing the European Aviation Safety Agency*  
*EC 2042/2003*  
*EU-OPS 1 Commercial airplane operations*  
*JAR-OPS 3 Commercial helicopter operations*

HCAA in accordance with international and national provisions is responsible for airworthiness of any aircraft in its register and for supervision of any organization HCAA has approved. HCAA establishes a programme of continuous surveillance of aircraft and organizations of its responsibility. The HCAA has the right to suspend or revoke any certificate it has issued and to prevent to fly any aircraft considered to be a threat for aviation safety.

#### 18.2 The procedure

##### 18.2.1 General

HCAA establishes a programme of continuous surveillance and inspection of Greek registered aircraft, airlines, maintenance and other organization according to international, European and national law provisions. HCAA also monitors operation of foreign aircraft within its national territory. The surveillance and monitoring is based on a number of audits, inspections, SAFA inspections, spot checks and other input evaluation.

##### 18.2.2 Audit and inspection results

Each audit or inspection result is evaluated and findings levelled. Level 1 findings is considered to have immediate relation to safety of aircraft or air carrier operations.

If inspector (during an audit or inspection) considers that the finding should be levelled 1 (provisional level 1), he or she communicates the finding without delay as “urgent” via FAX or e-mail to the FSD.

##### 18.2.3 Acceptance and evaluation of finding

The provisional level 1 findings are re-evaluated by the Head of airworthiness section within 1 working day. Normally the Head of section during the re-evaluation discusses the findings with the inspector(s), takes in account the legal aspects, contacts senior inspector(s) and advisors.

If the Head of airworthiness section does not accept the finding level i.e. it is degraded to level 2 it is handled through the normal procedure.

If the Head of airworthiness section confirms the finding level 1 he in cooperation with the assigned inspector(s) forwards the corrective action. Suggested time schedule for completion of the corrective action (at least provisional corrective action) are three days. The three-day period can be extended to seven days if the Head of the airworthiness and the inspectors agree.



#### 18.2.4 Flight safety interference

The Head of Airworthiness Section evaluates also the impact to the flight safety. He estimates the relation of the aircraft or organization against which the finding arose to the operation of other aircraft or organization. He suggests to the FSD additional audit(s), inspection(s) or aircraft airworthiness reviews to be able to evaluate correctly all consequences. He contacts aircraft manufacturer, foreign aviation authorities and EASA if necessary.

#### 18.2.5 Communication of findings to the organization

The assigned inspector is responsible to communicate the findings to the involved organization or the owner of the aircraft. The communication is made in written to the Accountable Manager of the organization. The organization is requested to make the corrective action within the agreed period.

#### 18.2.6 Finding closure

Upon organization response (within the time limit) the assigned inspector is responsible for the follow up and finding closure.

#### 18.2.7 No –response or unacceptable response

If there is no response of the organization within the prescribed time limit or if the corrective action is considered inadequate or other reason unacceptable the assigned inspector suggests to the Head of the Airworthiness Section:

- a) Partial or complete suspension of the relevant certificate (approval)
- b) Partial or complete revocation of the relevant certificate (approval)
- c) To prevent the aircraft(s) to fly (see para. 18.3 below)

The Head of Airworthiness Section and the FSD accept the suggestion and issues the relevant decision.

The decision is communicated to the organization (aircraft owner) immediately.

**Note:** *a) The assigned inspector can suggest to prevent an aircraft to fly immediately after the Level 1 finding is discovered if he or she considers that there is a threat for aviation safety.*

- b) Consequence of suspension or revocation of any approval / certificate may automatically suspend other approvals/ certificates.

#### 18.2.8 Approval / certificate recovery

Completion of the corrective action is necessary for recovery of any suspension of approval / certificate. Follow-up by the assigned inspector is required before re-issue of the Approval / Certificate (or it part).

#### 18.2.9 Surveillance

Intensive surveillance programme is established for organizations with significant findings or repetitive findings.



#### 18.2.10 Update ADMS Database

All findings are entered into the ADMS System by FSD ASI Inspectors through HCAA's LAN computer network

[Additional information of the ADMS System can be found in HCAA Leaflet "Aviation Data Management System – User's Guide", HCAA, Edition 2, May 2004.](#)

#### 18.2.11 HCAA Company / Aircraft File (Technical Library)

It is important that the company / aircraft file should be kept up to date with all required documentation/correspondence inserted in the appropriate sections.

### 18.3 Grounding an Aircraft

[REF: National Law 2912/2003](#)

[Additional Ref.: FAA Order 8300.10 CHG 7](#)

#### General

An inspector must be able to substantiate a grounding action with factual justification of an unsafe condition. The grounding notice (HCAA Form 1218) must not be issued unless it is clear to the inspector that, if operated in this condition, the aircraft would be subject to the probable danger of accident and likely to cause injury/damage to persons or property.

**In any case that an HCAA Form 1218 is issued, relevant aircraft ARC is suspended at the same time by the HCAA FSD Inspector.**

#### Procedure

##### *A. Determine Extent of Problem.*

In order to issue a grounding notice, the inspector must come to the following conclusions:

- The aircraft is not in a condition for safe operation (This might also be the result of a level 1 finding against CAMO Organization affecting the flight safety).
- The operator intends to put the aircraft into service in that unsafe condition
- This unsafe condition constitutes a hazard to persons and/or property

##### *B. Consult With Primary Maintenance Inspector/HCAA FSD division, if Time Permits.*

This coordination must not interfere with any immediate action necessary to ground an unsafe aircraft that is expected to operate.

(1) Before notifying an operator that an aircraft is being grounded temporarily, the inspector may, if circumstances permit, consult by phone with FSD Airworthiness section head and/or FSD Director.

(2) If the inspector performing the task is not the Primary Maintenance Inspector assigned to the Operator, the inspector should consult with that individual, time permitting.

##### *C. Notify Appropriate Personnel That the Aircraft is Temporary Grounded*

(1) Immediately after discovering the unsafe condition, verbally notify the pilot in command or other operator personnel who have the authority to keep the aircraft on the ground, of the following:



(a) The aircraft cannot not be operated for a period of 12 hours commencing with the issuance of the aircraft grounding notification (HCAA Form 1218 - see Appendix A to this Chapter). During this period, HCAA shall decide further actions.

(b) The reasons for the grounding action

(c) Time and date when verbal grounding notification was given

(d) Person(s) to whom verbal grounding notification was given

(e) A statement of unsafe condition(s) that caused the temporary grounding action

(f) A statement that Article 32, para. (6) of National Law 2912/2001 was used as authority for the grounding.

*D. Debrief HCAA Head of Airworthiness Section and/or FSD.*

Provide details of the grounding to the Head of Airworthiness section and/or FSD Director.

*E. Ensure That Written Notification is Received by the Appropriate Operator Personnel.*

Complete **HCAA Form 1218** (Appendix A). An Operator representative will have to sign as a receipt of this notification the appropriate fields indicated on the form. Provide a copy of this form to the operator. Attach the relevant aircraft suspended ARC to this form.

Completed HCAA Form 1218 should be forwarded to the FSD Division according to HCAA Administration Procedures Manual, Chapter 4.



## **APPENDIX A**

Aircraft Grounding Notification HCAA Form 1218





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## CHAPTER 19

### Airworthiness Review of an Aircraft and Issue of Airworthiness Review Certificates

#### 19.1 General

*REF: 216/2008 - Regulation of the European parliament and the council -on the common rules in the field of civil aviation and establishing the European Aviation Safety Agency.*

*EC 2042/03 Commission Regulation of 20<sup>th</sup> November 2003 on the continuing airworthiness of aircraft and aeronautical products, parts and appliances, and on the approval of organisations and personnel involved in these tasks.*

*EC 748/2012*

*HCAA T.O. 02-12*

Airworthiness review of the aircraft must be carried periodically by the Authority or by Continuing Airworthiness Management Organization to ensure validity of the aircraft Certificate of Airworthiness (CoA). The Certificate of Airworthiness is valid only if accompanied by current Airworthiness Review Certificate.

In order HCAA to issue the **CoA** and the **ARC** the following applies:

##### 19.1.1 New aircraft from EU Member State :

- 1) A statement of conformity (EASA Form 52) :  
issued under 21A.163(b), or  
issued under 21A.130 and validated by the Competent Authority,
- 2) A weight and balance report with a loading schedule.
- 3) The flight manual, when required by the applicable airworthiness code for the particular aircraft.

##### 19.1.2 New aircraft from Non- EU Member State :

- 1) a statement signed by the exporting authority that the aircraft conforms to a design approved by the Agency

##### 19.1.3 Used aircraft from a Non Member State :

- 1) a statement by the competent authority of the State where the aircraft is, or was, registered, reflecting the airworthiness status of the aircraft on its register at time of transfer.
- 2) a weight and balance report with a loading schedule.
- 3) the flight manual when such material is required by the applicable airworthiness code for the particular aircraft.
- 4) historical records to establish the production, modification, and maintenance standard of the aircraft, including all limitations associated with a restricted certificate of airworthiness
- 5) a recommendation for the issuance of a certificate of airworthiness or restricted certificate of airworthiness and an airworthiness review certificate following an airworthiness review ,in accordance with Part M, by an approved CAMO .

##### 19.1.4 Used aircraft from an EU Member State :

An Airworthiness Review Certificate issued in accordance with Part M issued by a CAMO with the related capability.



### 19.1.5 ADMS Update

Related information & expiration dates for ARC are entered into ADMS database which in turn produces automatically a print-out of all relevant alert dates. This print-out is submitted to the PI for the internal quality audit. In addition, each AWI performing an airworthiness review / renewal, updates the ADMS database within 3 working days since issuance/renewal.

The PI for the internal quality audit tracks on a monthly basis all alert dates which have been cleared. For alert dates which remain in the ADMS database and are overdue, appropriate action is initiated by HCAA/D2.

### 19.1.6 Recording

After the issue of Airworthiness Review Certificate the ASI compiles file of relevant documentation. This file containing copy of the Airworthiness Review Certificate is added to the aircraft file.

Also a copies of Airworthiness Review Certificates issued or renewed (for aircraft registered by Hellenic CAA ) by Continuing Airworthiness Management Organizations are included to aircraft files.

The validity of Airworthiness Review Certificate for each aircraft is registered by the HCAA /D2 computer system

## 19.2 Airworthiness Review Certificate (As referred in 19.1.A ).

Applicant shall submit an Application Form for issuance of the Airworthiness Review Certificate and pay the relevant fee, according to the *Incoming Documents* procedure described in the HCAA Administration Manual, Chapter 4. A copy of the Application can be found in Appendix A at the end of this Chapter. HCAA Airworthiness Review Staff is assigned by the Head of Airworthiness Section.

In order HCAA to issue the CoA and the ARC the following must be submitted :

- 1) A statement of conformity (EASA Form 52) :  
issued under 21A.163(b), or  
issued under 21A.130 and validated by the Competent Authority,
- 2) A weight and balance report with a loading schedule.
- 3) The flight manual, when required by the applicable airworthiness code for the particular aircraft.

The HCAA Airworthiness Review Staff shall complete the process within 10 days from the day the aircraft is presented to HCAA /D2 assigned inspectors .

It is important that the aircraft file should be kept up to date with all required documentation /correspondence inserted in the appropriate sections.

## 19.3 Airworthiness Review Certificate (As referred in 19.1.B ).

Applicant shall submit an Application Form for issuance of the Airworthiness Review Certificate and pay the relevant fee, according to the *Incoming Documents* procedure described in the HCAA Administration Manual, Chapter 4. A copy of the Application can be found in Appendix A at the end of this Chapter.

In order HCAA to issue the CoA and the ARC the following must be submitted :

A statement signed by the exporting authority that the aircraft conforms to a design approved by the Agency.

HCAA Airworthiness Review Staff is assigned by the Head of Airworthiness Section.

The HCAA Airworthiness Review Staff shall complete the process within 10 days from the day the aircraft is presented to HCAA /D2 assigned inspectors .

It is important that the aircraft file should be kept up to date with all required documentation/correspondence inserted in the appropriate sections.



#### **19.4. Airworthiness Review Certificate (As referred in 19.1.C ).**

REF.: EC 2042/2003 Subpart I

##### **19.4.1 General**

This Section provides guidance and sets the procedure to be followed for the issuance of an Airworthiness Review Certificate by Hellenic CAA .

Airworthiness Review Certificate is issued by HCAA to an aircraft upon satisfactory accomplishment of a recommendation by appropriately approved Continuing Airworthiness Management Organization.

##### **19.4.2 Issue of Airworthiness Review Certificate upon CAMO recommendation**

Applicant shall submit an Application Form for issuance of the Airworthiness Review Certificate and pay the relevant fee, according to the *Incoming Documents* procedure described in the HCAA Administration Manual, Chapter 4. A copy of the Application can be found in Appendix A at the end of this Chapter. The Application form is accompanied by Recommendation for Issue for Airworthiness Review Certificate made by approved and appropriately rated Continuing Airworthiness Management Organization.

HCAA Airworthiness Review Staff is assigned by the Head of Airworthiness Section for assessment of the recommendation.

The Airworthiness Review Staff shall complete the verification and the investigation of the recommendation within 10 days.

##### **19.4.3 Submission of CAMO recommendation and Aircraft Manuals / Documentation**

REF: EC 2042/2003 M.A.710

The applicant is required to provide the following Manual / Documents (as applicable) for examination by the assigned Airworthiness Review Staff . The manuals / Documentation will be reviewed either in HCAA or in applicants premises.

- a) Registration papers
- b) Records of airframe, engine(s) and propeller(s) flying hours and associated flight cycles (continuing airworthiness records and technical logs)
- c) The flight manual at latest revision status reflecting aircraft configuration
- d) Maintenance records proving that all maintenance as required by the Approved maintenance programme has been carried out in due time (maintenance data, work packages)
- e) Defects and their rectification records (list of deferred defects)
- f) Records of application of Airworthiness Directives
- g) Modifications records (modification and SB Status, modifications and repairs approval sheets)
- h) Life limited parts records
- i) Maintenance release documentation (EASA Forms 1 or equivalent)
- j) Current mass and balance statement (with equipment list)
- k) Aircraft, engine and propeller TC Data sheets
- l) A statement by the competent authority of the State where the aircraft is, or was, registered, reflecting the airworthiness status of the aircraft on its register at time of transfer
- m) A recommendation for the issuance of a certificate of airworthiness or restricted certificate of airworthiness and an airworthiness review certificate following an airworthiness review ,in accordance with Part M, by an approved CAMO .



#### 19.4.4 Documentation review

Evaluation of the documentation received with the application is made by assigned HCAA Staff

#### 19.4.5 Physical review of the aircraft

The applicant should make the aircraft available, at a time and place acceptable to the Airworthiness Review Staff, for inspection. It is the responsibility of the applicant to provide personnel and equipment so that the inspection may be satisfactorily carried out. It is however important to note that the inspection should always be performed in the presence of the Applicant or his/her appointed representative.

#### 19.4.6 Issuance of the Airworthiness Review Certificate

REF: HCAA T.O. 02-14, Issue 1, 12/08/2008

Upon satisfactory completion of the Documentation and Physical review of the aircraft the assigned Airworthiness Review Staff reports to the FSD recommending the issuance of the Certificate of Airworthiness and issues the Airworthiness Review Certificate.

#### 19.4.7 HCAA Aircraft File (Technical Library)

It is important that the aircraft file should be kept up to date with all required documentation/correspondence inserted in the appropriate sections.

### 19.5 Airworthiness Review Certificate (As referred in 19.1.D ).

Applicant shall submit an Application Form for validation of the of the Airworthiness Review Certificate (as issued by EU Member State) and pay the relevant fee, according to the *Incoming Documents* procedure described in the HCAA Administration Manual, Chapter 4. A copy of the Application can be found in Appendix A at the end of this Chapter. An HCAA Airworthiness Review Staff is assigned by the Head of Airworthiness Section in order to validate the ARC as issued by a Member State by writing the new aircraft registration number in the appropriate section of Form 15a or 15b .

The HCAA Airworthiness Review Staff shall complete the process within 10 days from the day the aircraft is presented to HCAA /D2 assigned inspectors

### 19.6 Airworthiness review in case of potential safety threat

Whenever the circumstances show the existence of potential safety threat the FSD may decide to carry out partial or complete airworthiness review of any aircraft registered by HCAA. Such circumstances namely are:

- a) Aircraft involved in accident or incident
- b) Suspension or revocation of an AOC and/ or associated CAMO (relevant aircraft)
- c) Suspension or revocation of a Maintenance Organization approval (relevant aircraft)
- d) Level 1 Findings in organizations relevant to monitoring or performance of aircraft)
- e) Significant findings during aircraft inspection by HCAA or reported by other Authority
- f) Other reporting of safety threat

The FSD assigns Airworthiness Review Staff for this review

In this case the owner or operator of the aircraft shall provide the Airworthiness Review Staff with:

- The required documentation
- Suitable accommodation at the appropriate location
- Necessary support of personnel appropriately qualified with Part-66



The procedure shall be completed within 10 days except if additional information is requested.

The findings shall be reported to the FSD and communicated to the owner or operator for corrective action.

If the report indicates threat for aircraft safety (Level 1 Findings) the FSD may upon recommendation of the Head of Airworthiness Section suspend or revoke the Airworthiness Review Certificate (See relevant procedure), order further investigation to involved organization(s) or issue mandatory airworthiness / operational directive.

After accomplishment of complete airworthiness review without indication of any safety threat the owner or operator may request issue of Airworthiness Review Certificate.

## **19.7 Further Guidance for approving CAMO's to exercise the privileges of MA 711**

REF: (EC) 2042/03, Annex I, M.B. 701 – 706, M.A. 701 – 715, M.A. 901 – 905

This section establishes additional procedures required for approving CAMO's to exercise the privileges of MA 711.

In addition to the related regulations and procedures as described in (EC) 2042/03 Annex I Subpart G and HCAA's APM Chapter 10, the applicant must comply with the following:

- Airworthiness review staff must be approved by HCAA (Form 4 required) and should have the appropriate qualifications as described in AMC MA 706, and AMC MA 707(a). Additional training in fuel tank safety in compliance with AMC MA 706 (f) and ED Decision 2007/01/R is required, as well.
- The Airworthiness review certificate (ARC) (EASA Form 145b) will be issued by an appropriately approved continuing airworthiness management organisation provided that the subject Aircraft has remained within the controlled environment at least 12 months and maintained by an approved maintenance organisation. Provided the aircraft has remained within a controlled environment, the airworthiness review certificate (EASA Form 15b) validity may be extended twice for a period of one year each time, provided that the aircraft is airworthy.
- Continuing Oversight shall be executed in compliance with AMC MB 704 (b) and HCAA Form GL-ARCI-001. All other procedures must comply with chapter 10 of HCAA's approved Airworthiness Procedures Manual.

The first Airworthiness Review Certificate (EASA Form 15b) for each aircraft can only be issued by the approved continuing airworthiness organisation after satisfactory completion of an airworthiness review under Authority Supervision.



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## **APPENDIX A**

Application for issuing an ARC  
Application for validating an ARC (EU)  
Airworthiness Review Staff qualification/authorization form  
Sample Airworthiness Review Certificate





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## CHAPTER 20

### Part F

## Production Organisations without Production Organisation Approval (Part 21 - Subpart F)

*REF: EU Commission Regulation EC 216/2008 Part 21 – Subpart F  
EASA ED Decision No. 2003/1/RM  
EASA ED Decision No. 2007/012/R*

### 20F.1 General

The production of products without production organizations is governed by rules of the EASA Part 21 – Subpart F regulation and involves the initial investigation process, the issue of a letter of agreement, monitoring the manufacturer activities, issuance and validation of a statement of conformity and inspection of its facilities throughout the EU Member State in a consistent manner. It is essential the processes provide for quick and efficient response to requests emanating from the manufacturers for purposes of variations to their approvals and from EASA and HCAA for purposes of resolution of open issues or possible problems.

As an EU member state, Greece applies policy for the production without organisation approval and procedures as it is described herein. This policy is based on and satisfies the conditions and provisions of the Part 21 – Subpart F regulation. Furthermore, the intents of this policy are to assure standardization of procedures and methods employed within the HCAA and EASA system.

The procedures have been compiled according to the requirements of the regulation EC 748/2012 Section B of Part 21 – Subpart F as well as the EASA Acceptable Means of Compliance and Guidance Material published in relevant ED.

### 20F.2 Competent Authority

Hellenic Republic has designated the Hellenic Civil Aviation Authority as the competent Authority for the above-mentioned tasks. According to the P.D. 56/89 (as it has been amended) the Flight Standards Division – Airworthiness Section is responsible for the Production without Production Organisation approvals.

### 20F.3 Initial Investigation of Part 21–Subpart F Manufacturer

#### 20F.3.1 Objective

*REF: 21.A.121*

The following procedure is intended to ensure that HCAA carries out the investigation process in a consistent and standard manner ensuring that the process is in accordance with the Part 21-Subpart F and related AMC & GM. The procedure is established to enable the manufacturer to demonstrate the conformity with the Part 21 – Subpart F. The HCAA shall be also able to validate the conformity of each individual product with the applicable design data of the product, part and appliance manufactured under the Letter of Agreement and without a production organisation approval under Subpart G of the Regulation.



### 20F.3.2 Letter of Intent & Pre-Application Meeting

Once an applicant's letter of intent has been submitted to HCAA, the latter will schedule a pre-application meeting. This meeting will take place at HCAA's premises and the applicant will be given the «21F Organisation Application Package Documents» in electronic form (floppy disk /CD-ROM), that includes the following:

- ◆ Application Form (Form 60)
- ◆ 21F Conformance Document
- ◆ Management Personnel Acceptance Form (HCAA /EASA Form 4s)
- ◆ A list of the required Manuals/Documents for submission (see also para. 20F.3.4)

A briefing is also given to the applicant during this meeting on the manufacturer's initial approval process, applicable regulations, including guidance on the completion of the application form and conformance document. The HCAA PO Manager is the person responsible to conduct and offer guidance at this pre-application meeting. The applicant should be represented (at a minimum) by the Accountable Manager. It should 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 initial investigation process. It is preferable that this designated person is a manufacturer's manager or a senior technical member and he/she will serve as the coordinator for the applicant during the initial investigation process. One of the functions of this person will be to assure that all the findings issued by the HCAA are directed to, and properly addressed by the appropriate personnel within the company. It will be much more efficient for the HCAA Investigation Team to track the status of findings and comments through this person rather than several persons responsible for specific areas. Another function of this company coordinator will be to arrange the on-site visits and ensure that the appropriate company personnel will be present and available.

**Note I:** *The manufacturer's- Manuals/Documentation list will also be available in electronic format (floppy disk or CD-ROM) for applicant's convenience. Once the Flight Standards Division's Web page airs on the Internet, the above Manual/Documentation list will be available on-line to all interested applicants.*

**Note II:** *During any meeting with the applicant minutes should be kept and recorded to relevant files.*

To summarize, during this meeting the following should be accomplished:

- ◆ specify the regulation and the applicable procedures
- ◆ clarify the requirements bound in the 21F & associated procedures
- ◆ clarify the associated requirements (data, tool, staff, training)
- ◆ determine if the applicant's business activities justify the grant of Letter of Agreement
- ◆ Appoint a date for the Application & Application Meeting

### 20F.3.3 Application & Application Meeting

*REF : 21B.120, AMC 21B.120 (c)(1),  
HCAA Administration Procedures Manual, Chapter 5  
21A.124, GM 21A.124(a), GM 21A.124(b)(1)(i) GM 21A.124(b)(1)(ii) GM 21A.124(b)(2),*

HCAA receives application as described below and determines if it is for Initial investigation or amendment of the Letter of Agreement.

For the initial investigation, the applicant shall submit the completed *HCAA /EASA Form 60 (shown in Appendix), HCAA /EASA Form 4s (Appendix) and the required documents in separate form or included in relevant manuals in accordance with the Incoming Documents* procedure described in the HCAA Administration Procedures Manual, Chapter 5.



An applicant can be an individual applying on his or her own behalf or an organisation (legal person).

#### **20F.3.3.1 Appointment of Investigation Team**

Upon receipt of the application documentation, and prior to the Application Meeting, an Investigation Team is assigned by the Flight Standard Division (FSD/D2) Director to oversee the initial investigation process of the new applicant.

The composition of the team will be two more Airworthiness Inspectors- Production. The Team Leader should satisfy all of the criteria for a team member and will be selected by considering the following additional criteria:

- the capability to lead and manage a team
- the capability to prepare reports and be diplomatic
- experience in approval team investigations (not necessarily only Part 21A Subpart F)
- a knowledge of production and quality systems for aircraft and related products and parts

In any case, the knowledge, experience and background of the persons assigned will be considered in the appointment of the team and matched to the complexity of the manufacturer activity.

The Team Leader should agree with the HCAA PO Manager on the size of the investigation team and the specialisations to be covered taking into account the scope of work and the characteristics of the applicant. Team members should be selected by considering the following criteria:

- training, which is mandatory, for Part 21 Section A, Subpart F and Section B, Subpart F
- education and experience, to cover appropriate aviation knowledge, audit practices
- investigation procedures
- the ability to verify that an applicant's organisation conforms to its own procedures
- that its key personnel are competent
- a specialist shall be appointed for specific activities of the manufacturer (avionics, composite materials, engines, aircraft systems etc.)

#### **20F.3.3.2 Acceptance of the Application**

*REF: AMC 21B.120(c)(1)*

In order for the Application to be considered officially submitted, the above HCAA / EASA Forms must be submitted along with all required Manuals/Documentation as described in detail in paragraph F.3.4 of this Manual. If complete, the application will be processed within 90 days. The 90 day's period will not commence until all the documentation has been submitted. The quality of the documentation submitted will also have an effect on the 90 day's period. The time necessary to establish and run the product line for the scope to prove the organization capability is not counted in the 90 day's period.

Applicable fees are prescribed by a Decision of the Ministry of Economics. It shall be understood that expenses relevant to the initial approval i.e. travel expenses of team members to the facilities of the Applicant, sub-contractors and suppliers are fully covered by the Applicant.

In case the applicant is seeking approval pending the PO approval according to Part 21 – Subpart G, the relevant application should be submitted at the same time and time schedule for the Part 21 G approval process should be agreed.



### 20F.3.3.3 Application Meeting

The Application Meeting, which officially starts the initial investigation process, should not be held unless it is assured that all the documents required with the application will be completed and ready to be officially submitted at least three days prior to the Application Meeting.

The Application Meeting should be cancelled and rescheduled if the application documentation is not complete as stated. In this case the Application is not complete all the documentation is returned to the applicant

The Application Meeting is only held if the appropriate personnel, as mentioned above, are present. The HCAA's personnel in attendance will be the HCAA PO Manager and the assigned Investigation Team. It is also desirable for the Flight Standards Director to attend if available.

The main objectives of the Application Meeting are to:

- ◆ Present the manufacturer to the investigation team
- ◆ Introduce the Organization's Management personnel to the HCAA investigation team.
- ◆ Assure that the applicant's management understands the initial investigation process.
- ◆ Answer any questions the Applicant may have in extent relevant to this meeting
- ◆ Identify the site locations needing investigation
- ◆ Distribute the documents/manuals to the appropriate members of the investigation team
- ◆ Discuss and agree upon the target dates for the various phases outlined in the initial approval Schedule
- ◆ Establish links and coordination with the Design Organisation or other applicable design data holder

### 20F.3.4 Submission of Required Manual(s)/Documentation

[REF: 21.A.125 \(b\)](#)

The applicant should submit the following:

- ◆ Application Form 60
- ◆ Description of items to be manufactured
- ◆ List of proposed (possible) suppliers
- ◆ General description of facilities (may be included in manuals)
- ◆ General description of the means
- ◆ Human resources
- ◆ 21F Conformance Document
- ◆ Management Acceptance Form (HCAA /EASA Form 4)
- ◆ Evidence witch demonstrate(as appropriate)
- a) The issuance of a production organisation approval under Subpart G would be inappropriate, or
- b) the certification of approval of a product, part or appliance under Subpart F is needed pending the issuance of a production organisation approval under Subpart G
- ◆ An outline of information required by 21.A.125 (b) i.e. the required Manuals/Documents describing:
  - a) the production inspection system
  - b) description of the means for making the determinations of the production inspection system
  - c) a description of tests of 21A.127 & 21A.128
  - d) and the names of persons seeking authorisation for the purpose of 21A.130 (a) – signing the Conformance Document
- ◆ Documentation proving that the manufacturer holds or has applied for an approval covering the design of the product, part or appliance or
- ◆ proving that has ensured satisfactory coordination between production and design, through an appropriate arrangement with the applicant for, or holder o, an approval of such design



**Note:** Separate manuals (Quality Manual etc.) are also acceptable. All associated procedures shall be also submitted

### 20F.3.5 Personnel qualification - review

The qualifications of the manufacturers' personnel including but not limited to the managers, senior technical staff, personnel authorised to sign the Conformance Certificate and the other staff involved in the manufacturing activities shall prove the capability of the manufacturer to comply with the applicable requirements. Each person has the theoretical and practical knowledge and skills required for his position. Initial and continuing training shall be provided whereas it is necessary for continuing improvement of the quality of production and safety of the final product. The acceptance of the Managers are made by accepting the Form 4's by specific letter issued by the HCAA / Flight Standards Director. Clear evidence that the Accountable manager has corporate authority for ensuring that all production work is carried out to the required standard is required. The team shall interview all (proposed) managers. Not only the formal prerequisites for the position but also the knowledge and skills requires for the position should be examined including specific expertise where required.

### 20F.3.6 Manual(s) & Documentation Review

*REF: 21A.125 (b), GM No.1 to 21A.125(b), GM No.2 to 21A.125(b)*

The review of the submitted Manual(s)/Documentation is carried out by the investigation team to assess the Part 21F, GM & AMC requirements.

This is conducted by a general review of the Part 21F documents/manual(s) submitted by the applicant with the application. This review provides the applicant with timely initial feedback and assesses the applicants understanding of the requirements.

The review of manuals includes all associated procedures. In case the organizations' scope of work is not limited only to production activities within the scope of (requested) PO approval i.e. there are other production or maintenance – operation activities it shall be clearly distinguished which procedures or procedure changes affects the 21F approval and these procedures shall be controlled in satisfactory manner.

The manuals and the above referenced procedures shall be in full compliance with the arrangement between Design (applicable design data holder) and the manufacturer and shall not allow to exceed the scope of this arrangement or deviate from the scope of the approval.

#### 20F.3.6.1 Part 21F – Manufacturers Conformance Document

The investigation team will evaluate the Part 21F Conformance Document. If the Conformance Document needs further work, it should be returned to the applicant together with the comments summary as an attachment to an Audit Finding Form, shown in Appendix F of Chapter 7. The Part 21F Conformance Document is shown in Appendix at the end of this Chapter.

#### 20F.3.6.2 Production inspection system procedures

*REF: See 21.A.126 GM 21A.126 GM 21A.126(a)(1) GM 21A.126(a)(2) GM No. 1 to 21A.126(a)(3) GM No. 2 to 21A.126(a)(3) GM 21A.126(a)(4) GM 21A.126(b)(1) GM 21A.126(b)(2)*

The investigation team will evaluate the manufacturers' manuals and individual procedures describing the production inspection system in order to establish that it complies with 21.A.126. If the procedures / manuals needs further work, it should be returned to the PO together with the comments summary as an attachment to an Audit Finding Form, shown in Appendix F of Chapter 7.

Investigation of the production inspection system is intended for individuals of organisations seeking long term approval under the Part 21 – Subpart F. For those persons producing under Part 21 Section A Subpart F as a transient phase under 21A.124(b)(1)(ii), compliance with 21A.126 may also be demonstrated to the satisfaction of the Competent Authority by using



the equivalent Part 21 Section A Subpart G AMC/GM. In the second case the system will be investigated according to Chapter 20 P of this Manual.

The manuals shall include the subject headings and reflect the preferred procedures. The HCAA Inspector(s) is required to evaluate whether the procedures specified in the manuals are in compliance with the intent of Part 21F and then estimate whether these procedures are, actually, intended for use. Procedures irrelevant to the scope of the approval, to the size of the organisation or to the activities shall be corrected. Procedures common for the whole organisation should distinguish among different functions.

Manuals and procedures shall be handled in controlled manner agreed with the HCAA. An approval will be granted when all items have been identified and evaluated as satisfactory. **A specific approval letter will be issued, as described in para. X.3.10 later in this Chapter.** It is not recommended to issue a formal approval letter before a verification of the procedures is made by the Audit in the Organisation.

#### 20F.3.6.3 Tests - procedures

*REF: 21A.125(b), 21A.127, 21A.128, GM No.2 to 21A.125(b), GM 21A.127 GM No. 1 to 21A.128 GM No. 2 to 21A.128 GM No. 3 to 21A.128*

The manufacturers' procedures shall be established addressing the required production ground and flight tests of the aircraft and / or functional tests of engines, propellers, appliances etc. These tests shall be performed during various stages of the production process in accordance with the TC or STS holder (DO) or applicable design data holder requirements. Standardised forms shall be used for recording the test results. Procedures shall include actions in both satisfactory and unsatisfactory results of the tests.

#### 20F.3.6.4 Procedures related to the issued of Statement of Conformity

*REF: 21.A.130 AMC No. 1 to 21A.130(b) AMC No. 2 to 21A.130(b) AMC 21A.130(c)*

Procedures related to the issue of Statement of Conformity are essential for the finalising of the production process. The Statement of Conformity shall be issued in EASA Form 52 for complete aircraft and EASA Form1 for other products. The manufacturer shall establish a numbering system for these Forms that shall be closely connected with the manufacturer production system and allows retrieving information from the production when required.

The procedures shall specify the process for presenting the Statement of Conformity to the HCAA for validation, the recording of the documentation and obligations of each side in order to release only safe product.

In some cases coordination with the Design Organisation is required.

#### 20F.3.7 Eligibility

*REF: 21.A.122, GM No.1 to 21A.121, GM No.2 to 21A.121, AMC No.1 to 21A.122, AMC No.2 to 21A.122*

Eligibility of the manufacturer is examined according to 21.A.122 (see also AMC No. 1 to 21A.122 for arrangement content). An appropriate arrangement with the applicant for, or holder of, an approval of that applicable design data, shall assure satisfactory coordination between production and design. Arrangement sample form is exposed in AMC & GM for Part 21. The arrangement shall be in Greek or English otherwise translations shall be submitted to the HCAA.

Remember that the arrangement must be documented irrespective of whether the two organisations are separate legal entities!

The conformity (transfer) of applicable design data shall be shown for each product, part or appliance.

If the product is released before the approval to the applicable TC, STC, repair or minor change or ETSO approval it shall be stated in the Statement of Conformity. The HCAA shall





coordinate with the EASA and the involved airworthiness authorities before validation of the Certificates.

The organization is informed if the applicant is not eligible for the approval and the preferable solution is to be discussed (i.e. Part 21G approval, ETSO approval, sub-contractor etc.)

### **20F.3.8 Coordination with EASA and Airworthiness Authorities**

The HCAA PO Manager coordinates with the EASA Initial Airworthiness Manager the process of approval. In case organisations of other countries are involved in the process of design and production, the HCAA PO Manager contacts the responsible managers / inspectors of the responsible Authorities and / or organisations.

The Team Leader cooperates with the HCAA PO Manager in order to establish and maintain links with EASA, national authorities or other bodies to ensure efficient exchange of information relevant to safety of product, part or appliance.

Liaison with the competent authority of the other Member State shall take place where there is seen to be a need to visit an organisations' facility in that Member State for any reason.

### **20F.3.9 Corrective Actions**

Manuals/Documentation submitted by the Part 21 – Subpart F applicant are checked by reviewing the completed Part 21F submitted Conformance Document. If any non-compliances are found and/or if corrections are needed, the assigned Investigation team leader will notify in writing the Applicant of the non-compliances and/or corrections. A copy of this notification letter should also be inserted in the PO's Certification file appropriate section (correspondence). It is important that all correspondence with the Applicant should abide by the procedures for Incoming and Outgoing Documents described in HCAA Administration Manual, Chapter 13. On the basis of the findings against the Part 21F organisation, the organisation is responsible for the relevant corrective actions / modifications required by the HCAA. The investigation team members must properly track each item in order to ensure its rectification.

### **20F.3.10 On-Site audit(s)**

The on-site audits are performed only if the submitted manuals, documents and associated procedures are acceptable to the HCAA in order to verify that the organization complies with all relevant requirements and the referred company procedures are in place and working.

During the on-site inspection phase the personnel, facilities, services, procedures, tools and equipment of the Part 21F organization are assessed for acceptability.

The following steps can be used as a general guideline:

- ◆ Determine the areas to be audited and who will do what.
- ◆ From the Conformance Document and manuals pick specific items and subjects for the audit – schedule, the provisional number of days, plan travel arrangements (if applicable), etc.
- ◆ Prepare a plan for investigation and coordinate it with the organisation
- ◆ Notify the applicant of the start of the audit and request an opening meeting with the attendance of the Accountable Manager.

#### **20F.3.10.1 Opening Meeting**

The purpose of the opening meeting is to:

- ◆ Introduce the HCAA investigation team to the organization's Management
- ◆ Briefly explain the purpose of the initial approval procedure - to comply with HCAA / EASA requirements.
- ◆ Describe the process to be followed
- ◆ Explain the Audit Finding Forms and the Leveling of Findings





- ◆ Clearly explain that the level of the finding is provisional until endorsed by the Head of the HCAA Airworthiness Section
- ◆ Explain that all Level findings must be closed before the approval can be granted (Initial issue only) It is mentioned that findings are not leveled during initial approval.
- ◆ Request the Closing Meeting - This will either be a debrief at the end of the on-site audit or a specific meeting set for a few days later when the report has been produced and can be handed to the organisation.

The opening meeting takes place within the organization premises and the top management of the organization is invited to participate. The participation of the Accountable manager, the Quality managers and the personnel seeking for which Forms 4 have been submitted is considered necessary. The company Accountable Manager invites personnel that are able to answer questions of the HCAA team. The time schedule is discussed taking in account the working hours and the availability of facilities if limited by objective reasons.

#### **20F.3.10.2 Meeting the Managers**

During the Audit all responsible Managers shall be met either during common or separate meetings. Each Manager shows substantial knowledge of his duties and responsibilities, the company procedures, the respective legal requirements and the organisation and functioning of his / her department. The Accountable Manager is responsible for the whole company and he /she shall show relevant knowledge of the functioning of the company and its management. Each Manager shows detailed knowledge respectively to the size of the company. Cooperation and coordination among managers should be shown without significant discrepancies.

Despite the fact that the regulations do not require certain managerial positions or structure it is clear that the managerial structure of the company shall cover all functions required by the regulations and assures the production of the safe products. Accumulation of functions in small organisation should be expected but the ability of the organisation to produce quality product shall be evaluated in terms of complexity and number of product, parts or appliances.

#### **20F.3.10.3 On-Site Audit**

##### **a) During the on-site Audit:**

- ◆ Each member of Team should be accompanied by a company representative
- ◆ Follow the Audit Plan and audit against the Part 21F requirements.
- ◆ Follow-up on any Audit Findings that have been issued against the regulations and the organisation procedures and manuals
- ◆ Progressively complete the HCAA report, recording any findings against the sub-paragraph of the requirement and the applicable area of the audit. Draft any Finding Forms and provide provisional copy to the organisation.
- ◆ Team Leader to monitor progress of audit against the plan and time-scale what was projected.
- ◆ Confirm time and date for Closing Meeting.

##### **b) Talking to the people - Interviews**

Remember that the employees know much more than anybody else about the work they perform. Interview is very efficient mean of auditing providing it is performed correctly. The people should be asked only on their work in a way they can understand. Their answers should be evaluated and compared to others answers and to the procedures. Extensive discussions on items irrelevant to the audit should be avoided. Take in mind your time schedule!

##### **c) Employees' qualification**

Each employee involved in the production process shall show the relevant qualification to his/her function. He /she shall have the physical and psychical pre-requisites and education. General knowledge of the laws and the legal system as well as of company general and specific procedures shall be demonstrated accordingly to the function(s) performed. General and



specific training followed by examination or practical assessment should be performed. Specific standards are applicable for NDT / NDI, welding and where described by the design.

**The qualification shall be recorded.** These records are kept secure because in many cases includes personal data. The investigation team always requires only a minimum number of the copies of these records and keep them accordingly.

#### **d) Compliance with procedures & standards**

The HCAA investigation team should be familiar not only with the legislation and the HCAA procedures but also with the procedures of the audited organisation well before the on-site audit. The Team Leader organizes meeting with the investigation team members and provides them with the necessary information i.e. the company manuals and procedures relevant to the part of organisation that will be audited by each team member. The HCAA investigation team understands that because of the extent of the procedures in large organisation the preparation phase is necessary and should not be avoid.

The organisation shall comply with the legislation and also with the company procedures. Revision to the company procedures shall be requested when the compliance with them is not effective, they don't comply with the regulations or they are ambiguous, misleading or superseded by implementation of new technologies or practices. In all other cases the company personnel shall comply with the procedures as they are published.

The organisation shall assure that in each moment of time only one revision of the procedures is available. The older revision shall be withdrawn.

The recording system shall show all previous revisions of the approved procedures and data used within production. The system shall provide the revision information for each product, serie or batch produced.

#### **e) Facilities, tools, equipment, raw material, processes**

The facilities, tools, equipment, raw material, processed shall meet the standards prescribed or agreed by the Design organisation and by the current legislation, standards.

#### **f) Safety & security issues**

The safety of the employees and the product are essential for the approval. The investigation team pays special attention to the issues of safety and security and relevant findings are considered as serious.

The inspectors comply with the safety and security regulations implemented by the organisation i.e. they are obliged to wear the personal protective devices and avoid any hazardous situations. The organisation is kindly requested to provide the inspectors with the necessary means and to inform them accordingly.

In case there are dangerous areas or areas of restricted access for safety or security reasons the organisation assure access to these areas when required.

Restriction of access to facilities or airfields due to security reasons are not acceptable and can lead to deny of approval.

#### **d) Collecting evidence**

The basic evidence of the audit is correctly fulfilled Form and attached Finding Forms.

The manuals and procedures are kept by the inspectors and transferred to the D2 Library for future evidence.

The above evidence is not considered enough even in areas with no findings. The inspectors should keep written remarks of the audit that includes:

- names and function of the personnel, information of their training and qualification
- procedures audited (revisions)
- documents
- numbers of tools and equipment
- data of material
- observations made



In case a non - conformity is discovered and finding is issued the above information is attached to the finding form. The finding form is signed by the company representative as “witnessed by”. This signature doesn’t mean that the company accept or not the finding it just verifies the information described in the finding.

Each finding shall be identified as non-compliance with the certain paragraph(s) of the Regulation itself.

#### **20F.3.10.4 On Site Audit – Subcontractors & Suppliers**

Audits of the subcontractors and suppliers are performed in the extent necessary for verification of the system of the audited production organisation. We should understand that these audits are not independent audit to an organisation but a part of the Part 21F organisations initial approval process. The audit is actually part of the audit to the Part 21F organisation and the findings are aroused against this organisation not against the supplier. The presence of the Part 21F organisation representative is inevitable during the audit.

The audit itself is performed according to the procedures described above. Not all team members usually participate in the audit but only those required by subject and extent of the supplier activities relative to the approval.

*Remark: When the HCAA team during the identification of locations needing investigation identifies location in other State than the HCAA PO Manager liase with the competent authority of another Member State (or EASA as applicable) where there is seen to be a need to visit a production facility in that Member State for one of the following reason:*

- *Where a manufacturer (applicant for letter of agreement) has contracted part of the production to another organisation holding a production organisation approval and a need arises to ensure the contract has the same meaning for all parties to the contract, and the local competent authority of the local competent authority of the Member State agrees.*
- *To inspect a product (or part or appliance) under production where the subcontractor is not holding POA*

*Similar procedure is applicable for third countries where the EASA and the local airworthiness authority shall be contacted. See also para 20P.3.8 - Coordination with EASA and Airworthiness Authorities.*

#### **20F.3.10.5 Product line audit**

The investigation team shall audit all the elements of the product line to verify the correct incorporation of the company procedures and use of applicable design data. In case of new product either test run or other equivalent means will be used to determine that the work is performed up to the desired standard before the first certified product is released.

### **20F.3.11 Inspection Results & Findings**

#### **20F.3.11.1 Team meetings**

The Team Leader organises meetings with the team at the end of each working day or more often if deemed necessary to solve problems and questions. The Team meeting takes place before any finding is presented to the organisation. Common findings are summarised to one.

#### **20F.3.11.2 Team Report**

- ♦ Is produced in the standard format – Form F6 identifying all findings against the requirements.
- ♦ Subjective comments can be attached to the report but any finding of non-compliance with the requirement must be objective and supported by an audit finding attached as an appendix to the report.
- ♦ The report must be signed by the Team members and endorsed by the HCAA PO Manager.



#### **20F.3.11.3 Closing Meeting**

During the meeting the Team Leader

- ◆ Thanks organization for co-operation during the audit.
- ◆ Review the content of the report highlighting both positive and negative aspects.
- ◆ Review the specific findings that must be resolved and closed before approval.
- ◆ Provide the opportunity for queries and clarification.
- ◆ Confirm the process of follow-up and closure of the findings.

#### **20F.3.11.4 Notification of findings**

Findings are notified to the applicant for Part 21F organisation by letter or facsimile without undue delay.

#### **20F.3.11.5 Audit Follow-up**

The applicant for Part 21F responds to findings (as applicable) and resubmits the Audit Finding Form(s) with either the full corrective action described on the form or cross referenced as an attachment. The investigation team evaluates the corrective actions and accepts them or, where necessary, carries out a follow-up audit and closes the findings, completing also HCAA /EASA Form F6. Although there is no specific time schedule required for the findings closure the finding's period shall not exceed three months, otherwise new full scale audit is required.

In case the applicant for Part 21F does not respond within three months the initial approval process is considered inconclusive.

#### **20F.3.11.6 Assembling the HCAA Certification File**

At this stage the following documents should be placed in the Part 21F production organisation Certification File:

- ◆ Part 21F - Conformance Document
- ◆ Completed HCAA / EASA Form F6 with the closure date endorsed as Before Approval
- ◆ HCAA / EASA Form 60
- ◆ HCAA /EASA Form 4s (as applicable)
- ◆ Relevant approvals
- ◆ Finding forms and the correspondence

#### **20F.3.12 Preparation for Issue of the Letter of Agreement**

Once the investigation team is satisfied that all the relevant findings are closed for the applicable items, as described above, it will prepare the Certification folder to be presented to the FSD Director.

The investigation team through his report certifies that:

- the applicant has established a production inspection system acceptable to the HCAA that ensures that each product, part or appliance conforms to the applicable design data and is in condition for safe operation
- the applicant has provided manuals in compliance with Part 21F and these manuals have been approved
- the applicant is able to provide assistance in accordance with 21A.3 and 21A.129(d) (occurrence reporting)

The Certification file contents and relevant forms can be found in Appendix of this Chapter.

The following is a list of the Certification folder contents:

- ◆ Completion of the Documentation Check Sheet
- ◆ HCAA / EASA Form 60



- ◆ Agreement with the design data holder
- ◆ HCAA / EASA Form 4s and copy of acceptance letter
- ◆ approval letters and file record
- ◆ HCAA / EASA Form F6
- ◆ Team Report and Audit Finding Closure documents
- ◆ Draft Letter of Agreement

#### 20F.3.12.1 Quality Check

The Team Leader will present the Certification File to the HCAA PO Manager, or in his absence to the Director of Flight Standards, who will carry out the 'quality check'. This must include a review of all documents and HCAA / EASA Forms from the initial application through to the drafted Letter of agreement. Sample HCAA Forms are shown in Appendices at the end of this Chapter.

#### 20F.3.12.2 Issue of the Letter of Agreement

[REF: 21B.130, AMC 21B.130, GM 21B.130\(b\)](#)

The Letter of Agreement shall be issued when the investigation team verifies by his report that the Part 21F applicant (manufacturer) is in compliance with the applicable requirements of Section A Subpart F.

The Letter of Agreement shall be issued in HCAA / EASA Form 65.

The letter of agreement shall contain the scope of the agreement, a termination date and, where applicable, the appropriate limitations relating to the authorization. More specifically the agreement should include or reference a pre-defined plan of inspection points established as part of the production inspection system and agreed with the Competent Authority to be used as a basis for the inspections described in 21A.129 and 21B.120(c)(5) and its associated CS and GM. The plan should clearly identify inspection point, places, inspection subjects (materials, process, tooling documentation, human resources, etc.), as well as the focal points and the method of communication between the manufacturer and the Competent Authority.

Any conditions under which the agreement will expire (such as termination date and/or number of units to produce), should be clearly stated in the letter of agreement.

The Letter of Agreement is issued for **individual products, parts or appliances**.

The duration of the Letter of Agreement shall not exceed **one year**.

Following the Quality Check, the FSD Director will sign and stamp the Letter of Agreement and associated letters and pass them back to the Team Leader for processing.

Each Letter of Agreement has a unique reference number in format EL.F.XXX recorded by HCAA FSD monitoring system.

#### 20F.3.12.4 HCAA Certification File

The completed Certification File is then placed in the allocated space in the library. For Certification File contents and structure refer to Appendix of this Chapter.

#### 20F.3.12.5 Inconclusive approval process

The initial approval process is considered inconclusive in the following cases

- the organisation fails to comply with the requirements of the Part 21F
- the organisation or its -contractors suppliers deny access to any facility that shall be audited for the scope of the approval
- the finding are not closed in satisfactory and timely manner
- changes to the organisation take place during the initial approval period and invalidates the process



- links to the design organisation are lost  
In case the initial approval is considered inconclusive the HCAA / EASA Form F6 and associated team report are completed accordingly. The FSD Director accepts the report and the organisation is informed by letter without undue delay.

## **20F.4 Amendment of the Letter of Agreement**

[REF: 21B.140, AMC 21B.140](#)

### **20F.4.1 Amendment**

Any amendment to the products, parts and appliances for which the Letter of Agreement has been issued, is subjected to this procedure.

A Part 21F Letter of Agreement holder wishing to alter any of its elements shall submit a HCAA Form 60 accompanied with the affected manuals and documentation for evaluation by the HCAA except for:

- For Changes to the Accountable manager and other managerial staff the Form 60 is not required but Form 4 is mandatory. Relevant changes to the manuals and company procedures shall take place in the time of approval. These changes are subjected to HCAA approval to. The responsible surveyor interviews the proposed managers before the approval
- Changes of procedures can be submitted without Form 60 if the approval schedule is not affected. These changes may require on site audit before approval and implementation

Changes to the location usually require special arrangements with the Authority. These arrangements shall be made well in advance and continuous surveillance of the company quality system and the HCAA is mandatory.

### **20F.4.2 Other changes**

The other changes even if considered insignificant shall be evaluated by the HCAA except if agreed differently. The agreement shall be shown in the agreement where the procedure clearly distinguish among:

- Changes requiring HCAA approval – see above
- Changes not requiring such approval but communicated to the HCAA – minor changes to production capacity, normal changes of employees etc.
- Changes for which no approval is required – changes to the organisation elements that do not have impact to the approval such as administration and logistics changes.

The responsible surveyor pays a special attention to the changes because in some cases it is difficult to estimate the impact to the Letter of Agreement.

### **20F.4.3 Application for change**

The Part 21F organisation (applicant for amendment) should submit the following in extent relevant to the amendment:

- ◆ Application Form 60
- ◆ Description of amended items to be manufactured
- ◆ List of proposed new suppliers
- ◆ General description of new facilities or facilities with changed use (may be included in manuals)
  - ◆ General description of the means
  - ◆ Human resources
  - ◆ 21F Conformance Document
  - ◆ Management Acceptance Form (HCAA /EASA Form 4)
  - ◆ Evidence which demonstrate (as appropriate)
- c) The issuance of a production organisation approval under Subpart G would be inappropriate, or





- d) the certification of approval of a product, part or appliance under Subpart F is needed pending the issuance of a production organisation approval under Subpart G
- ◆ An outline of information required by 21.A.125 (b) i.e. the required Manuals/Documents describing:
  - e) the production inspection system
  - f) description of the means for making the determinations of the production inspection system
  - g) a description of tests of 21A.127 & 21A.128
  - h) and the names of persons seeking authorisation for the purpose of 21A.130 (a) – signing the Conformance Document
- ◆ Documentation proving that the manufacturer holds or has applied for an approval covering the design of the product, part or appliance or
- ◆ proving that has ensured satisfactory coordination between production and design, through an appropriate arrangement with the applicant for, or holder of, an approval of such design

**Note:** *Separate manuals (Quality Manual etc.) are also acceptable. All associated procedures shall be also submitted, Manual or documents already submitted should not be submitted if not changed).*

#### **20F.4.4 Evaluation of changes**

The responsible HCAA Team Leader evaluates the application according to the following criteria:  
Eligibility – the proposed changes shall comply with the eligibility criteria. The situation in which the changes invalidate the initial eligibility shall be avoided. The changes shall be supported by the required arrangement with the design data holder and the relevant arrangement shall be amended when required.

Significance – the HCAA Team Leader evaluates the changes. He may require additional information and upgrade or degrade the change

Submitted application – the HCAA Team Leader receives the application, check the data for completeness and informs the organisation if the documentation is insufficient. He returns the complete application to the organisation when it is not complete or it includes significant mistakes.

#### **20F.4.5 Review of procedures & submitted documentation**

The review of the submitted Manual(s)/Documentation is carried out by the Team to assess the Part 21F, GM & AMC requirements.

This is conducted by a general review of the Part 21F documents/manual(s) submitted by the applicant with the application. This review provides the applicant with timely initial feedback and assesses the applicants understanding of the requirements.

The review of manuals includes all associated procedures. The investigation team shall review not only changes to the procedures but the whole procedures because the unchanged procedures can invalidate the proposed changes.

Remind to check cross references to current status.

The Part 21F organisation and the above referenced procedures shall be in full compliance with the arrangement between the design data holder and the production organization as amended (as applicable) and shall not allow to exceed the scope of this arrangement or deviate from the scope of the approval.

##### **20F.4.5.1 Part 21F – Organisation Conformance Document**

The organisation is requested to fulfill the Conformance Document for significant changes of the organisation. Unchanged fields can be remarked accordingly.

The investigation team will evaluate the Part 21F Conformance Document. If the Conformance Document needs further work, it should be returned to the organisation



together with the comments summary as an attachment to an Audit Finding Form, shown in Appendix. The Part 21F Conformance Document is shown in Appendix at the end of this Chapter.

#### **20F.4.6 Changes to Eligibility**

*REF: 21.A.122, GM No.1 to 21A.121, GM No.2 to 21A.121, AMC No.1 to 21A.122, AMC No.2 to 21A.122*

Eligibility of the applicant for amendment of the Letter of Agreement is examined according to 21.A.122. An appropriate arrangement with the applicant for, or holder of, an approval of that specific design, shall assure satisfactory coordination between production and design. Any change to these arrangements shall be evaluated within the process of approval of changes without exemption. The organization is informed if the amendment of the Letter of Approval is not eligible for the approval and the preferable solution is to be discussed (i.e. Part 21G approval, ETSO approval, sub-contractor etc.)

#### **20F.4.7 Coordination with EASA and Airworthiness Authorities**

The Team Leader coordinates with the EASA and involved Airworthiness Authorities with process similar to the para. 20F.3.8 if it is required.

#### **20F.4.8 Corrective Actions**

Changes to Manuals/Documentation submitted by the applicant for amendment are checked by reviewing the completed Part 21F submitted Conformance Document. If any non-compliance is found and/or if corrections are needed, the assigned Inspectors 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 Certification file appropriate section (correspondence). It is important that all correspondence with the Applicant should abide by the procedures for Incoming and Outgoing Documents described in HCAA Administration Manual, Chapter 13. On the basis of the findings against the manuals and documents, the organisation is responsible for the relevant corrective actions / modifications required by the HCAA. The investigation team members must properly track each item in order to ensure its rectification.

#### **20F.4.9 On-Site audit(s)**

The On-site audits are performed only if changes to the manuals, procedures and other documents are acceptable to the HCAA in order to verify that the organisation complies with all relevant requirements and the referred company procedures are in place and working. During the on-site inspection phase the personnel, facilities, services, procedures, processes, tools and equipment of the PO organization are assessed for acceptability.

The 20F.3.10.3 On-Site Audit procedure shall be followed

#### **20F.4.10 Inspection Results & Findings**

##### **20FP.4.10.1 Team meetings**

The Team Leader organises meetings with the team at the end of each working day or more often if deemed necessary to solve problems and questions. The Team meeting takes place before any finding is presented to the organisation. Common findings are summarised to one.

##### **20F.4.10.2 Team Report**

- ◆ Is produced in the standard format – Form F6 identifying all findings against the requirements.





- ◆ Subjective comments can be attached to the report but any finding of non-compliance with the requirement must be objective and supported by an audit finding attached as an appendix to the report.
- ◆ The report must be signed by the Team members and endorsed by the HCAA PO Manager.

#### 20F.4.10.3 Classification of findings

The findings issued during process of approval of changes to the PO the findings are or two major groups:

**Findings related to new activities** that should be handled as the findings made in initial approval of the organisation  
and

**Continuing surveillance findings** that are classified in three levels:

**A level one finding** is any non-compliance with this Part which could lead to uncontrolled non-compliances with applicable design data and which could affect the safety of the aircraft.

**A level two finding** is any non-compliance with this Part which is not classified as level one.

**A level three finding** is any item where it has been identified, by objective evidence, to contain potential problems that could lead to a non-compliance under paragraphs above.

#### 20F.4.10.4 Closing Meeting

During the meeting the Team Leader

- ◆ Thanks organization for co-operation during the audit.
- ◆ Review the content of the report highlighting both positive and negative aspects.
- ◆ Review the specific findings that must be resolved and closed before approval.
- ◆ Provide the opportunity for queries and clarification.
- ◆ Confirm the process of follow-up and closure of the findings.

#### 20F.4.10.5 Notification of findings

Findings are notified to the organisation by letter or facsimile without delay.

Level one findings shall not be notified later than three working days after determination of the finding

Level two findings shall not be notified later than two weeks after determination of the finding

Level three finding are notified to the organisation without undue delay

Normally all level findings are notified to the organisation at the same time.

#### 20F.4.10.6 Periods required for rectification

Level one findings shall be rectified within 21 working days after written confirmation of the finding

Level two findings shall be rectified within 6 months. In some cases this period could be extended due the nature of the finding. It is HCAA policy to request rectification within less than 3 months initially. If the period of 6 or more months is requested by the organisation it shall be notified to the Accountable manager. Short term corrective action is expected in this case pending long term action in continuation.

Level three finding do not have certain limit for rectification but they are monitored during continuing surveillance to avoid discrepancies that can lead to level one or two findings

Findings related to amendment of the approval or to changes within the PO shall be rectified before the amendment of the approval or the approval of changes

#### 20F.4.10.7 Audit Follow-up (if Applicable)

The Part 21F organisation 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. The investigation team evaluates the closures, where necessary, carrying out a follow-up audit and closes the findings, completing also HCAA /EASA Form F6.



It is not necessary to close all findings before the amendment of the Letter of Agreement is granted but only those affecting the amendment. Also all level one findings shall be closed. For level two findings a corrective action plan can be submitted to the HCAA and agreed. In case the applicant for the amendment does not respond within three months to the findings relevant to amendment of the approval the procedure for approval of changes is considered inconclusive.

#### **20F.4.10.8 Amending the HCAA Certification File**

At this stage the following documents should be re-placed or amended in the Certification File:

- ◆ Part 21F Conformance Document
- ◆ Completed HCAA / EASA Form F6 with the closure date endorsed as Before Approval and the plan for closure for the rest of findings
- ◆ HCAA / EASA Form 60
- ◆ HCAA / EASA Form 4s
- ◆ Draft of the amended Letter of Agreement
- ◆ Relevant approvals
- ◆ Finding forms and the correspondence

The original documentations are kept in the certification file for reference marked as superseded

#### **20F.4.11 Preparation for Amendment of the Letter of Agreement**

Once the investigation team is satisfied that all the relevant findings are closed for the applicable items, as described above, it will prepare the Certification folder to be presented to the FSD Director.

The investigation team through his report certifies that:

- the organisation has amended the production inspection system acceptable to the HCAA that ensures that each product, part or appliance conforms to the applicable design data and is in condition for safe operation
- the applicant has amended manuals in compliance with Part 21F and these manuals have been approved
- the applicant is able to provide assistance in accordance with 21A.3 and 21A.129(d) (occurrence reporting)

The Certification file contents and relevant forms can be found in Appendix of this Chapter.

The following is a list of the Certification folder contents:

- ◆ Completion of the Documentation Check Sheet
- ◆ HCAA / EASA Form 60
- ◆ Agreement with the design data holder
- ◆ HCAA / EASA Form 4s and copy of acceptance letter
- ◆ approval letters and file record
- ◆ HCAA / EASA Form F6
- ◆ Team Report and Audit Finding Closure documents
- ◆ Draft Letter of Agreement

##### **20F.4.11.1 Quality Check**

The Team Leader will present the Certification File to the HCAA PO Manager, or in his absence to the Director of Flight Standards, who will carry out the 'quality check'. This must include a review of all documents and HCAA / EASA Forms from the initial application through to the drafted Letter of agreement. Sample HCAA Forms are shown in Appendices at the end of this Chapter.



#### 20F.4.11.2 Issue of the Letter of Agreement

REF: 21B.140, AMC 21B.140

The Letter of Agreement shall be amended when the investigation team verifies by his report that the Part 21F applicant (manufacturer) is in compliance with the applicable requirements of Section A Subpart F.

The Letter of Agreement (as amended) shall be issued in HCAA / EASA Form 65.

The letter of agreement shall contain the scope of the agreement, a termination date and, where applicable, the appropriate limitations relating to the authorization. More specifically the agreement should include or reference a pre-defined plan of inspection points established as part of the production inspection system and agreed with the Competent Authority to be used as a basis for the inspections described in 21A.129 and 21B.120(c)(5) and its associated CS and GM. The plan should clearly identify inspection point, places, inspection subjects (materials, process, tooling documentation, human resources, etc.), as well as the focal points and the method of communication between the manufacturer and the Competent Authority.

Any conditions under which the agreement will expire (such as termination date and/or number of units to produce), should be clearly stated in the letter of agreement.

The Letter of Agreement is issued for **individual products, parts or appliances**.

The duration of the Letter of Agreement shall not exceed **one year**. The amended Letter of Agreement shall be issued for the whole period when complete audit to the organisation has been performed or for the rest of the period of the original Letter of Agreement if only the amended elements have been audited as shown in the relevant report.

Following the Quality Check, the FSD Director will sign and stamp the Letter of Agreement and associated letters and pass them back to the Team Leader for processing.

Each Letter of Agreement has a unique reference number in format EL.F.XXX recorded by HCAA FSD monitoring system.

#### 20F.4.11.3 HCAA Certification File

The completed Certification File is then placed in the allocated space in the library. For Certification File contents and structure refer to Appendix of this Chapter.

#### 20F.4.11.4 Inconclusive approval process

The initial approval process is considered inconclusive in the following cases

- the organisation fails to comply with the requirements of the Part 21F
- the organisation or its -contractors suppliers deny access to any facility that shall be audited for the scope of the approval
- the finding are not closed in satisfactory and timely manner
- changes to the organisation take place during the initial approval period and invalidates the process
- links to the design organisation are lost

In case the initial approval is considered inconclusive the HCAA / EASA Form F6 and associated team report are completed accordingly. The FSD Director accepts the report and the organisation is informed by letter without undue delay.



## **20F.5 Continuing surveillance**

See also Chapter 13 for HCAA / FSD Procedures for Continuing Surveillance Administration and General Procedures

### **20F.5.1 Annual Monitoring Provisions**

The FSD Director will appoint a Team Leader and Team members for continuing surveillance of each Part 21F production organization approved by HCAA. The HCAA PO Manager prepares an Annual Audit plan of production organisations. The scope of the plan is to verify compliance of the organisation with Part 21F, Section requirements. Besides the plan the HCAA inspectors that validate the products, parts and appliances and inspect the production in various stages of it shall report to the FSD any non-compliance discovered during the process of inspection. The annual audit plan is communicated to the organisations.

### **20F.5.2 Ad-hoc audit (unplanned audit)**

The FSD Director will order ad-hoc audit to the organisation each time there is an evidence or suspicion for non-compliance with the safety standards by the manufacturer.

### **20F.5.3 Preparation of audit**

The Team Leader prepares the audit with the team members. Standard check lists prepared by the Airworthiness Section are used for specific audits.

The complete team can audit the organisation or some of inspectors if the task doesn't require the presence of the whole team. Each team member should be familiar with the applicable legislation, regulation and procedures. He prepares his own check lists in cooperation with the Team Leader and other members of the team.

The organisation is informed by FAX on the date of the audit.

### **20F.5.4 Performing the audit**

#### **20F.5.4.1 Opening Meeting**

The purpose of the opening meeting is to:

- ◆ Introduce the HCAA team to the Management
- ◆ Briefly explain the purpose of the audit.
- ◆ Describe the process to be followed
- ◆ Explain the Audit Finding Forms and the Leveling of Findings
- ◆ Clearly explain that the level of the finding is provisional until endorsed by the Head of the HCAA Airworthiness Section
- ◆ Explain that all findings shall be closed before the required date i.e. the action shall be completed not only scheduled
- ◆ Request the Closing Meeting - This will either be a debrief at the end of the on-site audit or a specific meeting set for a few days later when the report has been produced and can be handed to the PO.

The opening meeting takes place within the organization premises and the top management of the organization is invited to participate. The participation of the Quality managers and the personnel having responsibility for functions audited is considered necessary. The time schedule is discussed taking in account the working hours and the availability of facilities if limited by objective reasons.

#### **20F.5.4.2 On-Site Audit**

The 20F.3.10.3 On-Site Audit procedure shall be followed



### 20F.5.4.3 Inspection Results & Findings

#### 20F.5.4.3.1 Classification of findings

The findings issued during continuing surveillance audits can be classified in three levels.

**A level one finding** is any non-compliance with this Part which could lead to uncontrolled non-compliances with applicable design data and which could affect the safety of the aircraft.

**A level two finding** is any non-compliance with this Part which is not classified as level one.

**A level three finding** is any item where it has been identified, by objective evidence, to contain potential problems that could lead to a non-compliance under paragraphs above.

#### 20F.5.4.3.2 Team meetings

The Team Leader organises meetings with the team at the end of each working day or more often if deemed necessary to solve problems and questions. The Team meeting takes place before any finding is presented to the organisation. Common findings are summarised to one.

#### 20F.5.4.3.3 Team Report

- ◆ Is produced in the standard format – Form 56 identifying all findings against the requirements.
- ◆ Objective evidence in form of copies of documents and manuals, notes from examination of product, tools and equipment or information collected from interviews is attached
- ◆ Subjective comments can be attached to the report but any finding of non-compliance with the requirement must be objective and supported by an audit finding attached as an appendix to the report.
- ◆ The report must be signed by the Team members and endorsed by the HCAA Head of Airworthiness Section.

#### 20 F.5.4.3.4 Closing meeting

- ◆ Thank organization for co-operation during the audit.
- ◆ Review the content of the report highlighting both positive and negative aspects.
- ◆ Review the specific findings that must be resolved and closed before approval.
- ◆ Provide the opportunity for queries and clarification.
- ◆ Confirm the process of follow-up and closure of the findings.

#### 20F.5.4.3.5 Notification of findings

Findings are notified to the organisation by letter or facsimile without delay.

Level one findings shall not be notified later than three working days after determination of the finding

Level two findings shall not be notified later than two weeks after determination of the finding

Level three finding are notified to the organisation without undue delay

Normally all findings are notified to the organisation together

#### 20F.5.4.3.6 Periods required for rectification

Level one findings shall be rectified within 21 working after written confirmation of the finding

Level two findings shall be rectified within 6 months. In some cases this period could be extended due the nature of the finding. It is HCAA policy to request rectification within less than 3 months initially. If the period of 6 or more months is requested by the organisation it shall be notified to the Accountable manager. Short term corrective action is expected in this case pending long term action in continuation.

Level three finding do not have certain limit for rectification but they are monitored during continuing surveillance to avoid discrepancies that can lead to level one or two findings



#### **20F.5.4.3.7 Additional actions**

See also Airworthiness Procedures Manual Chapter 18 – Enforcement Procedures & Chapter 20F.6

In case of level one or level two findings, the letter of agreement may be subjected to a partial or full limitation, suspension or revocation. The manufacturer shall provide confirmation of receipt of the notice of limitation, suspension or revocation of the production organisation approval within 48 hours after receipt of such information

#### **20F.5.4.3.8 Audit Follow-up (if Applicable)**

The manufacturer 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. The HCAA Team evaluates the closures, where necessary, carrying out a follow-up audit and closes the findings, completing also HCAA /EASA Form F6 if applicable. The findings shall be closed within the determined periods.

In case the manufacturer does not respond within the prescribed period or the follow up audit is not satisfactory the inspector or Team Leader can recommend to the HCAA / FSD Director one of the following:

Level one findings – limitations, suspension or revocation (total or partial) of the approval that shall be made not more than 5 working days after the due date

Level two findings – extension of the due period of the corrective action based on comprehensive plan of the implementation of the corrective action and having an evidence of objective reasons to extent the period or upgrading the finding requesting immediate action by the manufacturer or limitations, suspension or revocation (total or partial) of the approval. The action shall be made within 10 working days after the due date.

Level three findings – in case the organisation decides not to implement any action or the action is out of the time schedule no action is required against the company but the finding is recorded to the monitoring file and a special attention is put to this area during the surveillance

#### **20 F.5.4.3.9 Maintenance of the Letter of Agreement**

Based on the continuing surveillance of the Part 21F organisation the HCAA shall maintained the letter of agreement as long as:

(a) The manufacturer is properly using the EASA Form 52 as a Statement of Conformity for complete aircraft, and the EASA Form 1 for products other than complete aircraft, parts and appliances and

(b) Inspection performed by the HCAA before the validation of the EASA Form 52 or the EASA Form 1, as per 21A.130(c) and did not reveal any finding of non-compliance against the requirements of the procedures as contained in the manual provided by the manufacturer, or against the conformity of the respective products, parts or appliances. The inspections and audits shall check at least that:

1. The agreement covers the product, part or appliance being validated, and remains valid
2. The manual described in 21A.125(b) and its change status referred in the letter of agreement is used as basic working document by the manufacturer. Otherwise, the inspection shall not continue and therefore the release certificates shall not be validated
3. Production has been carried out under the conditions prescribed in the letter of agreement and satisfactory performed
4. Inspections and tests (including flight tests, if appropriate), as per 21A.130(b) (2) and /or (b)(3), have been carried out under the condition prescribed in the letter of agreement and satisfactory performed
5. The inspections by the HCAA described or addressed in the letter of agreement (including references to the manufacturers' manuals) have been performed and found acceptable
6. The statement of conformity complies with 21A.130, and the information provided by it does not prevent its validation and

(c) any termination date for the letter of agreement as well as other termination limit has not been reached





#### 20F.5.4.4 HCAA monitoring file

HCAA / FSD keeps a monitoring file in continuation to the Certification and Correspondence files of each manufacturer to which the letter of agreement has been issued. The file contains for the minimum the following:

- Name of the organisation
- The letter of agreement approval number
- Annual plan and its amendments
- Reports of the audits performed organised by type of audit
- Notification of findings to the manufacturer
- Response of the manufacturer
- Acceptance or not acceptance of the corrective actions

The file is compiled by the HCAA Team Leader, Quality control is made by HCAA PO Manager and recorded by the Technical Library.

### 20F.6 Suspension and revocation

*REF: 21B.145 Law 1815/88, Chapter 18 of this Manual*

HCAA / FSD takes a decision on restriction (imposing limitations), surrender, suspension or revocation of letter of agreement in such a way to comply with European as well as Greek national laws and regulations relating to appeal rights and the conduct of appeals, unless the decision has been taken by the Agency. In such case, the Agency appeal procedures will apply.

General procedure of the Chapter 18 of the Airworthiness Procedures Manual is applicable and additionally:

#### 20F.6.1 Definitions:

- *Restriction* - is temporary withdrawal of some of the privileges.
- *Surrender* - is a permanent cancellation of the letter of agreement by the Competent Authority upon formal written request by the accountable manager of the organisation concerned. The organisation effectively relinquishes its rights and privileges granted under the approval and, after cancellation, may not make certifications invoking the approval and must remove all references to the approval from its company documentation
- *Suspension* - is temporary withdrawal of all the privileges of the manufacturer. The approval remains valid but no certifications invoking the approval may be made while the suspension is in force. Approval privileges may be re-instated when the circumstances causing the suspension are corrected and the organisation once again can demonstrate full compliance with the Requirements
- *Revocation* - is a permanent and enforced cancellation of the whole of an approval by the Competent Authority. All rights and privileges of the organisation under the approval are withdrawn and, after revocation, the organisation may not make any certifications or other statements invoking the approval and must remove all references to the approval from its company documentation

#### 20F.6.2 Corrective Action Plan

Upon restriction or suspension of the approval it is expected that the manufacturer will move quickly to re-establish compliance with Part 21 and not risk the possibility of total letter of agreement suspension or revocation. Therefore, the corrective action period granted by the HCAA must be appropriate to the nature of the finding but in any case initially must not be more than 6 months (See findings classification). In certain circumstances and subject to the nature of the finding the HCAA can vary the 6 months period subject to a satisfactory corrective action plan agreed by the HCAA.

Failure to comply within time scale agreed by the HCAA means that provisional suspension of the letter of agreement can turn into whole suspension or revocation.



### 20F.6.3 Information exchange

The HCAA FSD communicates the Restriction, Surrender, Suspension and Revocation of the letter of agreement to:

The Agency

The Airworthiness Authorities which approvals or actions could be affected by the Restriction, Surrender, Suspension and Revocation

The design data holder or Design Organisation and all Production Organisations and manufacturers that approvals could be affected

### 20F.7 Occurrence reporting

*REF: 21A.120 (e) and (f)*

See Chapter 14 of the Airworthiness Procedures Manual and the “HCAA Mandatory Reporting Occurrence Scheme

### 20F.8 Records

*REF: 21B.150*

The HCAA has established a system of record keeping that allow the traceability of the process to issue, maintained, amend, suspend or revoke each individual letter of agreement

The records contain:

- the documents provided by the applicant for, or a holder of, a letter of agreement
- documents established during investigation and inspections, in which the activities and the final results of the elements in 21A.120 are stated
- the letter of agreement including changes
- minutes of the meetings with the manufacturer

The records are archived for a minimum retention period of six years after termination of the letter of agreement. Only the HCAA PO manager decides after this period which records shall be kept and which ones can be destroyed.

The HCAA also maintain records of all Statements of Conformity (EASA Form 52) and Authorised Release Certificates (EASA Form 1) that HCAA has validated

See Chapter 5 on Airworthiness Section Organisation and the Technical Library and Records system

### 20F.09 Validating Statements of Conformity and Authorised Release Certificates

*REF: 21A.130 (c)*

The HCAA FSD appoints inspectors for validating EASA Form 52 as a Statement of Conformity for complete aircraft and the EASA Form 1 for products other than complete aircraft, parts and appliances for each manufacturer – program addressed in the letter of agreement. The inspectors are appointed based on their qualification and good knowledge of the manufacturers’ system, the technology and the procedures are essential for appointment of the inspectors. Different inspectors can be appointed to different phases / steps of the production process but only one of them shall be authorized for validating the EASA Form 52 or EASA Form 1 as applicable.

The manufacturers’ inspection system shall identify the points in which the product shall be inspected in means either separate inspection sheets or specific fields in production documentation (travelers). The manufacturer shall not proceed further with the production unless the assigned HCAA inspector performs the inspection and signs the specific documentation accordingly.

During final release of the product the assigned HCAA inspector reviews all the relevant production documentation and countersigns the EASA Form 52 as a Statement of Conformity for complete aircraft and the EASA Form 1 for products other than complete aircraft, parts and appliances. The HCAA FSD keeps records of each product, part or appliances ( it means each specific serial number) that has had countersigned in the FSD library.





## **20F.10 Update ADMS Database**

Certain information received by the applicant in support of his/her application shall be entered in the ADMS System during the appropriate certification procedure steps. This information includes, but is not limited to, the applicant or organisation address, phone numbers, base location, Senior Managers names, the letter of agreement validity period, scope of work, etc. In addition, all findings from the various certification steps will also be entered into the computerized system for tracking and historical record purposes. This information will be kept up to date by including all subsequent changes (if any) to the letter of agreement according to para. 20F.3.11.6, 20F4.10.8 and 20F5.4.4 of this Chapter.

### **Note:**

***Inspector tools and additional guidance, as appropriate, is provided in Continuation of this manual.***



## CHAPTER 20

### Part P

#### Production Organization Approval (Part 21 - Subpart G)

**REF: EU Commission Regulation EC 748/2012 Part 21 – Subpart G**

**EASA ED Decision No. 2003/1/RM**

**EASA ED Decision No 2007/012/R**

##### **20P.1 General**

**REF: 21.B.20**

The certification of production organizations in accordance with EASA Part 21 – Subpart G regulation involves initial approval and monitoring production organization activities and inspection of its facilities throughout the EU Member State in a consistent manner. It is essential the processes provide for quick and efficient response to requests emanating from the POs for the purpose of variations of their approvals and from EASA and HCAA for the resolution of open issues, disputes or possible problems.

As an EU member state, Greece applies the production organisation approval procedure policy as it is described herein. This policy is based on and satisfies the conditions and provisions of the Part 21 – Subpart G regulation. Furthermore, the intent of this policy is to assure standardization of procedures and methods employed within the HCAA and EASA system.

The procedures have been compiled according to the requirements of the regulation EC 748/2012 Section B of Part 21 – Subpart G (POA) (and all subsequent amendments) as well as the EASA Acceptable Means of Compliance and Guidance Material published in ED Decisions.

##### **20P.2 Competent Authority**

**REF: 21.B.20, 21.B.25**

Hellenic Republic has designated the Hellenic Civil Aviation Authority as the competent Authority for the above-mentioned tasks. According to the P.D. 56/89 (as it has been amended) the Flight Standards Division – Airworthiness Section is responsible for the Production Organization approvals.

##### **20P.2.1 PO - Manager**

**REF: 21.B.25(b)**

The FSD Director appoints Production Organisation Manager (PO Manager) who is responsible for execution of tasks related to production organisation activities (Part 21 G & F certified by HCAA). The PO Manager is responsible for day to day running of the HCAA activities and serves as a focal point in relations to EASA and other Authorities. He reports to the FSD Director and the Head of Airworthiness Section. He is responsible for:

- the management of investigation teams
- the selection of team leaders/members
- the supervision of investigation and surveillance activities
- the administrative management of certificates and approvals including record keeping
- the external and internal interface activities including feedback to the Agency
- the control and distribution of documentation
- the resolution of disputes



## 20P.3 Initial Issue of a Part 21–Subpart G Production Organisation Approval (POA)

### 20P.3.1 Objective

*REF: 21.B.30*

The following procedure is intended to ensure that HCAA carries out the approval process in a consistent and standardised manner ensuring that the process is in accordance with the Part 21-Subpart G and related AMC & GM.

### 20P.3.2 Letter of Intent & Pre-Application Meeting

Once an applicant's letter of intent has been submitted to HCAA, the latter will schedule a pre-application meeting. This meeting will take place at HCAA's premises and the applicant will be given the «PO Application Package Documents» in electronic form (floppy disk /CD-ROM), that includes the following:

- ◆ Application Form (HCAA / EASA Form 50)
- ◆ POA Conformance Document
- ◆ Management Acceptance Form (HCAA /EASA Form 4)
- ◆ A list of the required Manuals/Documents for submission (see also para. 20P.3.4)

A briefing is also given to the applicant during this meeting on the PO initial approval process, applicable regulation, including guidance on the completion of the application form and conformance document. The HCAA PO Manager is responsible to conduct and offer guidance at this pre-application meeting. The applicant should be represented (as a minimum) by the Accountable Manager and the Quality Manager or persons proposed for these functions. It should also be explained to the Applicant at this time the need to delegate the appropriate staff designated as the focal point for the company during the PO initial approval process. It is preferable that this designated person is a senior technical member or the Quality Manager and he/she will serve as the coordinator for the applicant during the initial approval Process. One of the functions of this person will be to assure that all the findings issued by the HCAA are directed to, and properly addressed by the appropriate personnel within the company. It will be much more efficient for the Production Organisation Approval Team (POAT) to track the status of findings and comments through this person rather than several persons responsible for specific areas. Another function of this company coordinator will be to arrange the on-site visits and ensure that the appropriate company personnel will be present and available.

The following documents/guidance lists will be given:

- ◆ HCAA / EASA Application Form 50
- ◆ HCAA / EASA Application Form 4
- ◆ Conformance Document POA

**Note I:** *The PO - Manuals/Documentation list (internal document) will also be available in electronic format (floppy disk or CD-ROM) for applicant's convenience. Once the Flight Standards Division's Web page airs on the Internet, the above Manual/Documentation list will be available on-line to all interested applicants.*

**Note II:** *During any meeting with the applicant meeting minutes should be kept and recorded to relevant files.*

To summarize, during this meeting the following should be accomplished:

- ◆ determine if the applicant's business activities justify the grant of POA
- ◆ determine the eligibility and discuss it with the applicant
- ◆ specify the applicable procedures which accommodate the specific regulations requirements
- ◆ clarify the requirements bound in the POE & associated procedures



- ◆ clarify the associated requirements (data, tool, staff, training)
- ◆ Appoint a date for the Application & Application Meeting

#### 20P.3.2.1 Eligibility

*REF: 21.A.133, GM 21A.133, AMC No.1 21A.133(b) & (c), AMC No.2 21A.133(b) & (c)*

Eligibility of the PO is examined according to 21.A.133. An appropriate arrangement with the applicant for, or holder of, an approval of that specific design, shall assure satisfactory coordination between production and design. The organization is informed if the PO is not eligible for the approval and the preferable solution is to be discussed with HCAA (i.e. Part 21F approval, ETSO approval, sub-contractor etc.)

#### 20P.3.3 Application & Application Meeting

*REF: HCAA Administration Procedures Manual, Chapter 4  
GM 21.A.134, AMC 21B.220*

HCAA receives application as described below and determines if it is for Initial approval of POA.

For the initial issue of a Part 21 POA, the applicant shall submit the completed *HCAA /EASA Form 50* and *HCAA /EASA Form 4s* in accordance with the *Incoming Documents* procedure described in the HCAA Administration Procedures Manual, Chapter 5.

##### 20P.3.3.1 Appointment of Production Organisation Approval Team (POAT)

Upon receipt of the application documentation, and prior to the Application Meeting, a Production Organisation Approval Team (POAT) is assigned by the Flight Standard Division (FSD/D2) Director to oversee the PO initial approval process of the new applicant.

The team will be formed by the Team Leader and Team members.

The Team Leader should satisfy all of the criteria for a team member and will be selected by the FSD Director considering the following additional criteria:

- the capability to lead and manage a team
- the capability to prepare reports and be diplomatic
- experience in approval team investigations (not necessarily only Part 21A Subpart G)
- knowledge and understanding of production and quality systems for aircraft and related products and parts

In any case, the knowledge, experience and background of the persons assigned will be considered in the appointment of the team and matched to the complexity of the PO activity. The Team Leader should agree with the Head of Airworthiness Section on the size of the POAT and the specialisations to be covered taking into account the scope of work and the characteristics of the applicant. Team members should be selected by considering the following criteria:

- training, which is mandatory, for Part 21 Section A, Subpart G and Section B, Subpart G
- education and experience, to cover appropriate aviation knowledge, audit practices approval procedures
- the ability to verify that an applicant's organisation conforms to its own POA procedures that its key personnel are competent
- specialists shall be appointed for escorting and support of POAT on specific activities of the Production organization (avionics, composite materials, engines, aircraft systems etc.)



#### 20P.3.3.2 Acceptance of the Application

REF: 21.B.220, AMC 21B.220(c)

The Application will be considered officially submitted, when the above HCAA / EASA Forms are submitted along with all required Manuals/Documentation as described in detail in paragraph 20P.3.4 of this Manual. If the documents are complete, the application will be processed within 90 days. The 90 day's period will not commence until all the documentation has been received and accepted by HCAA. The quality of the documentation submitted will also have an effect on the 90 day's period. The level of last minute corrections will be kept to minimum possible affecting the time necessary to establish and run the product line for the scope to prove the organization capability that is not counted in the 90 day's period.

Note: The 90 days period can be extended if mutually agreed by HCAA POAT and the applicant in cases where extension of this period is necessary (i.e. determine procedures in new product line or for manufacturing of a new product etc.)

Applicable fees are prescribed by a Decision of the Ministry of Economics. It shall be understood that expenses relevant to the initial approval i.e. travel expenses of team members to the facilities of the Applicant, sub-contractors and suppliers are fully covered by the Applicant.

#### 20P.3.3.3 Application Meeting

The Application Meeting, which officially starts the PO initial approval process, should not be held unless it is assured that all the documents required with the application will be completed and ready to be officially submitted at least three days prior to the Application Meeting.

The Application Meeting should be cancelled and rescheduled if the application documentation is not complete as stated. In this case the Application is not complete all the documentation is returned to the applicant

The Application Meeting is only held if the appropriate personnel, as mentioned above, are present. The HCAA's personnel in attendance will be the Head of the Airworthiness Section and the assigned POAT. It is also desirable for the Flight Standards Director to attend if available.

The main objectives of the Application Meeting are to:

- ◆ Present the PO to the POAT
- ◆ Introduce the Organization's Management personnel to the HCAA POAT.
- ◆ Assure that the applicant's PO team understands the PO initial approval process.
- ◆ Answer any questions the Applicant may have in extent relevant to this meeting
- ◆ Identify the site locations needing investigation
- ◆ Identify the sub-contractors and their locations needing investigation
- ◆ Distribute the documents/manuals to the appropriate members of the POAT.
- ◆ Discuss and agree upon the target dates for the various phases outlined in the initial approval Schedule
- ◆ Establish links and coordination with the Design Organisation

#### 20P.3.3.4 Initial investigation planning

During the Application meeting the following steps are discussed and target date for each step is agreed. In some cases it is not possible and the target date of one step can be established only after termination of the previous one. Additional meeting between POAT and company management will take place any time it is considered necessary.

The following steps are normally set:

- Submission of required manuals and documentation (Applicant)
- Evaluation of these manuals and documentation (POAT)
- Management personnel qualification review, interviews with this personnel (POAT & Applicant)
- Audits to the Applicants' facilities and sub-contractors, suppliers (POAT & Applicant)
- Determination of findings (POAT)



- Corrective actions (Applicant), Corrective actions plan acceptance (POAT)
  - Verification of accomplishment of corrective action plan steps
  - Assembling files, approvals of documentation and issuance of certificates (POAT)
- Meeting are organised in each step as required. Minutes shall be kept for each meeting and archived to the certification file.

#### **20P.3.4 Submission of Required Manual(s)/Documentation**

*REF: 21.A.143, GM 21.A.143 & AMC 21.A.143*

The potential PO Organization's management personnel should submit the following:

- ◆ Completed HCAA /EASA Form 50
- ◆ Completed HCAA /EASA Form 4s
- ◆ Production Organization Exposition Manual (POE)
- ◆ Part 21G PO Conformance Document
- ◆ Quality Manual if not included entirely in POE
- ◆ Other associated company procedures
- ◆ DO – PO or PO – PO agreements

***Note:** Separate manuals (Quality Manual etc.) are also acceptable. All associated procedures shall be also submitted*

#### **20P.3.5 Management personnel qualification – review**

*REF: 21.A.143, 21.A.145*

The qualifications of the Accountable Manager and the other Managers are those required by the EC 748/12 21.A.143 (c). The acceptance of the Managers is made by accepting the Form 4's. A specific letter is issued issued by the HCAA / Flight Standards Director. Clear evidence that the Accountable manager has corporate authority for ensuring (by financing and employment) that all production work is carried out to the required standard is required. The team shall interview all (proposed) managers. Not only the formal prerequisites for the position but also the knowledge and skills requires for the position should be examined including specific expertise where required.

#### **20P.3.6 Manual(s) & Documentation Review**

*REF: 21.A.139 & 21.A.165*

The review of the submitted Manual(s)/Documentation is carried out by the POAT to assess the Part 21G - PO, GM & AMC requirements.

This is conducted by a general review of the Part 21G - PO documents/manual(s) submitted by the applicant with the application. This review provides the applicant with timely initial feedback and assesses the applicants understanding of the requirements.

The review of manuals includes all associated procedures. In case the organizations' scope of work is not limited only to production activities within the scope of (requested) PO approval (i.e. there are other production or maintenance – operation activities) it shall be clearly distinguished which procedures or procedure changes affect the PO approval and these procedures shall be controlled in satisfactory manner.

The POE and the above referenced procedures shall be in full compliance with the arrangement between Design and Production organization and shall not exceed the scope of this arrangement or deviate from the scope of the approval.

##### **20P.3.6.1 Part 21G – Production Organisation Conformance Document**

The POAT will evaluate the Part 21G - PO Conformance Document. If the Conformance Document needs further work, it should be returned to the PO together with the comments



summary as an attachment to an Audit Finding Form, shown in Appendix F of Chapter 7. The Part 21G - PO Conformance Document is shown in Appendix at the end of this Chapter.

#### **20P.3.6.2 Organization's POE Manual**

[REF: 21.A.143, GM 21A.143](#)

The POAT will evaluate the PO Organization's POE Manual in order to establish that it complies with 21.A.143. If the POE Manual needs further work, it should be returned to the PO together with the comments summary as an attachment to an Audit Finding Form, shown in Appendix F of Chapter 7.

#### **20P.3.6.3 Organisation's Procedures & Quality System**

[REF: GM No.1 to 21A.139 \(a\), GM No.2 to 21A.139\(a\), GM 21A.139 \(b\)\(1\), GM No.1 to 21A.139 \(b\)\(2\), GM No.2 to 21A.139\(b\)\(2\), GM 21A,145 \(b\)\(2\)](#)

All organization procedures relevant to the requested approval shall be well controlled and documented. The procedures can be included in the POE and some of them held separately.

The Quality System of the organisation has two basic elements

- to assure the conformity of the organisation, its procedures, instruction, data, personnel, sub-contractors and suppliers, supplied parts and appliances, material, processes etc. with applicable standards
- to monitor independently the functioning of the organisation

The above elements are independent. The system includes the internal occurrence reporting as well as reporting to the EASA and the HCAA.

See the referred GM for details!

#### **20P.3.6.4 Procedures related to DO – PO agreement**

[REF: 21.A.139\(c\), GM 21A.131](#)

Procedures related to DO – PO or PO – PO agreement are essential for the function of the production process. These procedures cannot be changed without written agreement with the Design Organisation. Company procedures used during production and / or maintenance of different programs shall be agreed by the supporting Design Organisation. These procedures shall assure the correct transfer of all applicable design data in controlled and timely manner.

#### **20P.3.6.5 Sub-contractors' procedures**

All sub-contractors shall use either procedures issued by the PO and described in POE and associated quality procedures or their own procedure if accepted by the POA holder and HCAA. The PO is responsible for not violating standards of the approved design. The sub-contractors' personnel shall know the procedures in extent required for the correct accomplishment of assigned tasks, within the Terms of Approval.

#### **20P.3.7 Deleted**

#### **20P.3.8 Coordination with EASA and Airworthiness Authorities**

[REF: EC 216/08 as amended](#)

The HCAA PO Manager ensures coordination, as applicable, related to certification, investigation, approval or authorisation teams of HCAA, other Member States and the Agency to ensure efficient exchange of information relevant for safety of the products, parts and appliances.

This exchange of information should especially take place in accordance with Article 14 of the Basic Regulation:

- an immediate reaction of a competent authority of the Member State to a safety problem





- granting of exemptions by the competent authority of the Member State from the substantive requirements of the Basic Regulation and its implementing rules (for a period of more than two months or when the exemptions become repetitive)
- granting of approvals on an equivalent level of protection by the HCAA by derogation from the Part 21 requirements

The HCAA PO Manager shall notify on behalf of HCAA any difficulty in the implementation of this Part to the EASA Initial Airworthiness Standardisation.

The HCAA PO Manager cooperates with the Team Leader to coordinate with the EASA Initial Airworthiness Standardisation the process of approval. In case POs of other countries are involved in the process of design and production, the Team Leader contacts the responsible managers / inspectors of the responsible Authorities.

The EASA has the right to appoint a member of the POAT (observer) in order to achieve better coordination of the process. Additionally advice and guidance from the Agency is requested where necessary

The Team Leader cooperates with the HCAA PO Manager in order to establish and maintain links with EASA, national authorities or other bodies to ensure efficient exchange of information relevant to safety of product, part or appliance.

Liaison with the competent authority of the other Member State shall take place where there is seen to be a need to visit a production approval holder facility in that Member State for one of the following reasons:

- where a manufacturer has subcontracted production to another organisation and therefore a need arises to ensure that contract has the same meaning for all parties to the contract, and the competent authority of the Member State agrees
- to inspect a product, part, appliance, or material under production for its own, Member States or non-EU register

#### Coordination for the purpose of Auditing facilities, partners, suppliers & subcontractors in other Member State

(See also 20P.3.10.5.2)

In the cases where the competent authority of the contractor (POA holder) considers that it is necessary to establish closer ties with the competent authority of the supplier (i.e., critical or significant parts) exchange of information between the competent authorities should be organised as follows:

#### Tasks of the competent authority of the POA contractor.

The competent authority of the contractor should inform in writing the competent authority of the subcontractor with the following:

- Identification (and location ) of the contractor
- Identification (and location) of the subcontractor
- Identification of the subcontracting (parts, contract N°, etc.)
- Reference to the quality requirements attached to the contract
- Name and address of the competent authority office/person in charge of the POA
- Whether Direct Delivery Authorisation (DDA) applies
- Any specific action item/requirement from the competent authority
- Request for a biennial reporting (both ways).

EASA Form 58 is provided for convenience of the competent authorities for this purpose. The competent authority of the contractor should require that the contract/order from the contractor to the subcontractor should indicate that it is placed under the surveillance of its competent authority on behalf of the competent authority of the contractor and should address the subject to the payment of the possible surveillance fees.

#### Tasks of the competent authority of the supplier (subcontractor).

On receipt of the information from the competent authority of the contractor, the competent authority of the subcontractor should:

- Verify that the scope of work of the POA of the supplier covers the intended supply (or envisage to extend it in liaison with the supplier).
- Verify that the specific quality requirements for the parts have been introduced in the quality system of the supplier.
- Confirm to the competent authority of the contractor that the procurement is included in the POA of the supplier and that their surveillance will cover this activity.





- Indicate the name and address of the competent authorities office/person in charge of the POA.

If the supplier has no POA under Part 21, or does not want to extend it, and/or if its competent authority cannot conduct surveillance on behalf of the other competent authority, the competent authority of the supplier will inform the competent authority of the contractor in order for it to decide on appropriate actions.

Exchange of information between the competent authorities.

This information should normally take two forms:

1. Immediate exchange of information between both competent authorities in case of serious quality problems.
2. a biennial exchange of information at a given date in order to guarantee proper on going control of the subcontract by both competent authorities.

This information should cover in a concise form:

- for the competent authority of the contractor:
  - a resume of the quality problems encountered by the contractor, on receipt inspection, on installation on aircraft or on in service aircraft.
  - a status of the reference documents
- for the competent authority of the subcontractor:
  - a resume of at least the following subjects;
  - changes in organisation and qualification of the subcontractor.(in case of impact on the procurement),
  - quality problems encountered during manufacture,
  - corrective actions following problems encountered earlier on the procurement,
  - findings from national authorities surveillance that may have an impact on the procurement,
  - quality problems related to the contractor procurement (materials, documentation, procedures, processes).

Exchange of information between national authorities according to this procedure is **strictly confidential** and should not be disclosed to other parties.

It is recommended to plan at least every 5 years a meeting between Industry and the two national authorities to review each major subcontract to verify proper management by the various parties involved.

### 20P.3.9 Corrective Actions

Manuals/Documentation submitted by the PO applicant are checked by reviewing the completed Part 21G submitted Conformance Document. If any non-compliance is found and/or if corrections are needed, the assigned team members 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 PO's Certification file appropriate section (correspondence). It is important that all correspondence with the Applicant should abide by the procedures for Incoming and Outgoing Documents described in HCAA Administration Manual, Chapter 13. On the basis of the findings against the POE, the PO is responsible for the relevant corrective actions / modifications required by the HCAA. The POAT team members must properly track each item in order to ensure its rectification.

### 20P.3.10 On-Site audit(s)

GM 21A.145(a)

The On-site audits are performed only if the POE and associated procedures are acceptable to the HCAA in order to verify that the organization complies with all relevant requirements and the referred company procedures are in place and working. During the on-site inspection phase the personnel, facilities, services, procedures, tools and equipment of the PO organization are assessed for acceptability.

The following steps can be used as a general guideline:

- ◆ Determine the areas to be audited and who will do what.



- ◆ From the Conformance Document and POE pick specific items and subjects for the audit – schedule, the provisional number of days, plan travel arrangements (if applicable), etc.
- ◆ Prepare a plan for investigation and coordinate it with the organisation
- ◆ Notify the applicant of the start of the audit and request an opening meeting with the attendance of the Accountable Manager.

The organisation (applicant) shall be informed by FAX of the audit plan, areas, facilities and personnel planned to be audited.

More than one audit are organised to cover all the requirements in all activities of the organisation and for verifying the progress of the approval and the corrective actions progress.

#### **20P.3.10.1 Opening Meeting**

The purpose of the opening meeting is to:

- ◆ Introduce the HCAA POAT to the PO's Management
- ◆ Briefly explain the purpose of the initial approval procedure - to comply with HCAA / EASA requirements.
- ◆ Describe the process to be followed
- ◆ Explain the Audit Finding Forms and the Leveling of Findings
- ◆ Clearly explain that the level of the finding is provisional until endorsed by the Head of the HCAA Airworthiness Section
- ◆ Explain that all leveling of findings and the way they shall be closed either before the approval can be granted (level 1 findings and level 2 findings when required) or the cases a corrective action plan shall be agreed and implemented
- ◆ Request the Closing Meeting - This will either be a debrief at the end of the on-site audit or a specific meeting set for a few days later when the report has been produced and can be handed to the PO.

The opening meeting takes place within the organization premises and the top management of the organization is invited to participate. The participation of the Accountable manager, the Quality managers and the personnel seeking for which Forms 4 have been submitted is considered necessary. The company Accountable manager invites personnel that are able to answer questions of the HCAA team. The time schedule is discussed taking in account the working hours and the availability of facilities if limited by objective reasons.

#### **20P.3.10.2 Meeting the Managers**

[REF: 21A.145, GM 21A.145 \(c\)](#)

During the Audit all responsible Managers (as nominated in POE) shall be met either during common or separate meetings. Each Manager shows substantial knowledge of his duties and responsibilities, the company procedures, the respective legal requirements and the organisation and functioning of his / her department. The Accountable Manager is responsible for the whole company and he /she shall show relevant knowledge of the functioning of the company and its management. Each Manager shows detailed knowledge respectively to the size of the company. Cooperation and coordination among managers should be shown without significant discrepancies.

#### **20P.3.10.3 On-Site Audit**

##### **a) During the on-site Audit:**

- ◆ Each member of Team should be accompanied by a company representative, preferably the Quality Assurance personnel of the PO.
- ◆ Follow the Audit Plan and audit against the Part 21G requirements.
- ◆ Follow-up on any Audit Findings that have been issued against the POE Manual.



- ♦ Progressively complete the HCAA / EASA Form 56, recording any findings against the sub-paragraph of the requirement and the applicable area of the audit. Draft any Finding Forms and provide provisional copy to PO.
- ♦ Team Leader to monitor progress of audit against the plan and time-scale what was projected.
- ♦ Confirm time and date for Closing Meeting.

#### **b) Talking to the people - Interviews**

Remember that the employees know much more than anybody else about the work they perform. Interview is very efficient mean of auditing providing it is performed correctly. The people should be asked only on their work in a way they can understand. Their answers should be evaluated and compared to others answers and to the procedures. Extensive discussions on items irrelevant to the audit should be avoided. Take in mind your time schedule!

#### **c) Employees' qualification**

*REF: 21A.145, AMC 21A.145 (d)(1), AMC 21A.145(d)(2), AMC 21A.145(d)(3)*

Each employee involved in the production process shall show the relevant qualification to his/her function. He /she shall have the physical and psychical pre-requisites and education. General knowledge of the laws and the legal system as well as of company general and specific procedures shall be demonstrated accordingly to the function(s) performed. General and specific training followed by examination or practical assessment should be performed. Specific standards are applicable for NDT / NDI, welding and where described by the design.

**The qualification shall be recorded.** These records are kept secure because in many cases includes personal data. The HCAA POAT members always require only a minimum number of the copies of these records and keep them accordingly.

#### **d) Compliance with procedures & standards**

The HCAA POAT members should be familiar not only with the legislation and the HCAA procedures but also with the procedures of the audited organisation well before the on-site audit. The Team members participates in the evaluation of the organisations' procedure. The Team Leader organizes meeting with the team members and provides them with the necessary information i.e. the company POE and procedures relevant to the part of organisation that will be audited by each team member. The HCAA POAT members understand that because of the extent of the procedures in large organisation the preparation phase is necessary and should not be avoided.

The organisation shall comply with the legislation and also with the company procedures. Revision to the company procedures shall be requested when the compliance with them is not effective, they don't comply with the regulations or they are ubiquitous, misleading or superseded by implementation of new technologies or practices. In all other cases the company personnel shall comply with the procedures as they are published.

The POE, procedures and processes can be distributed in controlled hard copies or through electronic means (CD's, DVD's, and intranet). Only controlled copies are permitted within the production (except for training purposes when adequately marked and controlled).

The organisation shall assure that in each moment of time only the latest revision of the procedures is available. The older revision shall be withdrawn.

The recording system shall show all previous revisions of the approved procedures and data used within production. The system shall provide the revision information for each product, series or batch produced.

#### **e) Facilities, tools, equipment, raw material, processes**

The facilities, tools, equipment, raw material, processed shall meet the standards prescribed or agreed by the Design organisation and by the current legislation, standards.



#### **f) Safety & security issues**

The safety of the employees and the product are essential for the approval. The team members pay special attention to the issues of safety and security and relevant findings are considered as serious.

The team members comply with the safety and security regulations implemented by the organisation i.e. they are obliged to wear the personal protective devices and avoid any hazardous situations. The PO is kindly requested to provide the team members with the necessary means and to inform them accordingly.

In case there are dangerous areas or areas of restricted access for safety or security reasons the organisation assure access of the team members to these areas when required.

Restriction of access to facilities or airfields due to security reasons are not acceptable and can lead to deny of approval.

#### **d) Collecting evidence**

The basic evidence of the audit is correctly fulfilled Form 56 and attached Finding Forms.

The POE and procedures are kept by the POAT members and transferred to the D2 Library for future evidence.

The above evidence is not considered enough even in areas with no findings. The team members should keep written remarks of the audit that includes:

- names and function of the personnel, information of their training and qualification
- procedures audited (revisions)
- documents
- numbers of tools and equipment
- data of material
- observations made
- audit plan (performed, partially performed, issues not performed and the reason for it)

In case non-conformity is discovered and finding is issued the above information is attached to the finding form. The finding form is signed by the company representative as "witnessed by". This signature doesn't mean that the company accept or not the finding it just verifies the information described in the finding.

Each finding shall be identified as non-compliance with the certain paragraph(s) of the Regulation itself.

### **20P.3.10.4 On Site Audit – Subcontractors & Suppliers**

Audits of the sub-contractors and supplier are performed in the extent necessary for verification of the system of the audited production organisation. We should understand that these audits are not independent audit to an organisation but a part of the PO initial approval process. The audit is actually part of the audit to the PO and the findings are raised against the PO not against the sub-contractor or supplier. The presence of the PO representative is inevitable during the audit.

The audit itself is performed according to the procedures described above. Not all team members usually participate in the audit but only those required by subject and extent of the sub-contractor or supplier activities relative to the PO approval. (The First Article Inspection procedure shall be documented by the PO).

#### **20P.3.10.4.1 Auditing facilities, partners, suppliers & subcontractors in third countries**

*REF: 21B.220(c)*

##### Facilities

Facilities of the applicant for POA located in third countries (outside the member states) are treated in all aspect as part of the applicants POA organisation facilities in Greece. Therefore these facilities are subjected for investigation and auditing as described in above paragraphs. The facilities shall be included in Terms of Approval when issuing (or amending) the POA – Form 55.



The local Airworthiness Authority will be informed in advance and invited to participate in On – Site Audit.

The applicant for POA is responsible for granting access to the relevant facilities.

#### Partners, suppliers & subcontractors

In respect of the applicant for the POA the POAT shall

- a) investigate the PO applicant partners, suppliers and subcontractors as necessary I to ensure that the partners, suppliers and subcontractors comply with the requirements of Part 21G
- b) in accordance with relevant procedure the HCAA has assessed and accepted the documented procedure for supplier control as part of the POA holder's quality system, (including changes to that procedure prior to implementation).

The level of co-operation between the HCAA and the local airworthiness authority of the third country where a partner, supplier or subcontractor of the production organisation is located shall be determined by FSD Director in close cooperation with the HCAA PO Manager. Co-operation with the local airworthiness authority of the third country should be based on the capability and goodwill of that authority, and a complete interchange of necessary information. Cooperation (including technical assistance) with the local airworthiness authority is desirable in the phase of initial investigation but the HCAA will not delegate any tasks to the third country at this stage. For the continuing surveillance an agreement should be established (see below) where the standards are similar to that of the HCAA. EASA should be consulted in this case.

The level of co-operation between the HCAA and the competent authority of the third country where a partner/supplier/subcontractor of the production organisation is located may influence the authorities' activities concerning this partner/supplier/subcontractor. Co-operation with the competent authority of the third country should be based on the capability and goodwill of that authority, and a complete interchange of necessary information.

a) The involvement of this competent authority of the third country in the surveillance of the partner/supplier/subcontractor will be based on the following principles:

When a recognition agreement under Article 9 of the Basic Regulation covering production subjects has been concluded:

- The HCAA in accordance with GM No. 2 to 21A.139(a) may decide that direct surveillance of the POA holder activities at the foreign location may not be necessary.
- In any other case, provisions of the recognition agreement on the subject apply (technical assistance, ...). If a recognition agreement has not been concluded, or it does not cover production subjects, it may be necessary that the competent authority of the Member State, the Agency, and the competent authority of a third country enter into a specific working arrangement addressing the following matters:
  - acceptance by the competent authority of the third country of conducting manufacturing surveillance of the relevant production activities on behalf of the HCAA, under the respective quality standards defined by the EASA and HCAA.
  - tasks to be performed
  - practical methods

These arrangements are between authorities and do not relieve the applicant of its obligations. This is limited to the BASA agreements or working arrangements that took place before the implementing of the Basic Regulation.

b) In all cases, even though surveillance tasks are delegated to the competent authority of the third country, the HCAA remains the responsible authority and may consequently exercise direct surveillance if necessary.

c) In case that it is not possible to delegate surveillance tasks to the competent authority of the third country, the HCAA will have to establish a direct surveillance program in accordance with its procedure concerning supplier control as part of the overall surveillance of the POA holder.

***Remark:** Investigation of organisation already approved by the EASA or Member State competent authorities for similar activities should be limited to a minimum level that assures compliance with the requirements. The HCAA PO Manager will cooperate with EASA or a*



*Member State for common approach. Previous experience of EASA and competent authorities of Member States of production and working arrangements with the third countries (non-member States) are taken into consideration.*

**20P.3.10.4.2 Auditing facilities, partners, suppliers & subcontractors in other Member State**

*REF: 21B.220(c), ICAO Annex 8*

For the purpose of this paragraph the partners, suppliers and subcontractors located in other Member States are divided into two categories – organisation under supervision of the competent authority of the Member State for the relevant scope of work and organisation that is not under surveillance of any Authority.

In principle duplication of investigation and continuous surveillance should be avoided. The Member States are following the same rules and standards. Consequently agreement between the HCAA and the other Member State competent authority could take place. Through this agreement the HCAA can delegate certain tasks of investigation and supervision of partners, suppliers and subcontractors to the other authority. The HCAA keeps the right of direct supervision at the local partners, suppliers and subcontractors locations especially when serious quality problems are encountered. In such case, co-ordination will be organized between both competent authorities. (See also 20P.3.8 & 20P.9.3).

The HCAA PO Manager is responsible for these arrangements.

This delegation of surveillance is to be considered automatic as soon as the supplier holds a Part 21 POA provided that the intended supply is included in the approved scope of work. Evidence of that approval will normally be found through the release of the supplied parts with an EASA Form 1. In addition, the competent authority of the supplier should immediately inform the competent authority of the contractor in case of a serious quality problem.

Other items

a) Release documentation.

Release of parts by the POA subcontractor holding POA to the contractor will be accompanied by an «Authorised Release Certificate EASA Form 1» issued for «Airworthiness» or for «Conformity» as appropriate.

b) Sub-subcontracting.

If the sub-contractor wants itself to subcontract, it is up to the competent authority of the subcontractor to verify that this is done in accordance with the conditions of the contract, to organise as necessary the related authority surveillance and to inform the competent authority of the contractor.

c) Language.

Except if agreed otherwise it is recommended to use the English language for exchange of information between the competent authorities.

Partners, suppliers and subcontractors located in other Member States that are not under surveillance of the competent authorities of the Member State shall be submitted to full investigation of the HCAA POAT except if a relevant agreement is established during the time of investigation and the competent authorities of the Member State take the control of the subcontractors and suppliers.

**20P.3.10.6 Product line audit**

The team shall audit all the elements of the product line to verify the correct incorporation of the company procedures and use of applicable design data. In case of new product - either test run or other equivalent means will be used to determine that the work is performed up to the desired standard before the first certified product is released.

**20P.3.11 Inspection Results & Findings**

**Classification of findings**

The findings issued during process of initial approval to the PO are classified as follows:





**A level one finding** is any non-compliance with this Part which could lead to uncontrolled non-compliances with applicable design data and which could affect the safety of the aircraft.

**A level two finding** is any non-compliance with this Part which is not classified as level one.

**A level three finding** is any item where it has been identified, by objective evidence, to contain potential problems that could lead to a non-compliance under paragraphs above.

#### 20P.3.11.1 Team meetings

The Team Leader organises meetings with the team at the end of each working day or more often if deemed necessary to solve problems and questions. The Team meeting takes place before any finding is presented to the organisation. Common findings are summarised to one.

#### 20P.3.11.2 Team Report

- ◆ Is produced in the standard format – each audit is reported individually identifying all findings against the requirements and Form 56 is compiled at the end with the recommendation or no recommendation of the approval.
- ◆ Subjective comments can be attached to the report but any finding of non-compliance with the requirement must be objective and supported by an audit finding attached as an appendix to the report.
- ◆ The report must be signed by the Team members and endorsed by the HCAA Head of Airworthiness Section.

#### 20P.3.11.3 Closing Meeting

During the meeting the Team Leader

- ◆ Thanks organization for co-operation during the audit.
- ◆ Review the content of the report highlighting both positive and negative aspects.
- ◆ Review the specific findings that must be resolved and closed before approval or corrective action plan for finding that should be completed after the issue of the approval. Inform of the levels of findings and agree on due dates
- ◆ Provide the opportunity for queries and clarification.
- ◆ Confirm the process of follow-up and closure of the findings.

#### 20P.3.11.4 Notification of findings

Findings are notified to the PO by letter or facsimile without delay.

**Level one findings** shall be rectified before issue of the approval

**Level two findings** shall be rectified as requested by the POAT. Level two findings shall be rectified before issue of the approval but in some cases (i.e. where the manufacturing line run is necessary) specific action plan could be agreed extending the period after the approval date. These findings will be included in continued monitoring plan and included in HCAA tracking system for findings.

**Level three findings** do not have certain limit for rectification but they are monitored during continuing surveillance to avoid discrepancies that can lead to level one or two findings

#### 20P.3.11.5 Audit Follow-up

The PO responds to findings (as applicable) and resubmits the Audit Finding Form(s) with either the full corrective action described on the form or cross referenced as an attachment. POAT evaluates the closures, where necessary, carrying out a follow-up audit and closes the findings, completing also HCAA /EASA Form 56. Although there is no specific time schedule required for the findings closure the finding's period shall not exceed three months except if otherwise agreed.

In case the applicant PO does not respond within three months the initial approval is considered inconclusive, and a new full scale audit is required.



#### 20P.3.11.6 Assembling the HCAA Certification File

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

- ◆ Part 21G - PO Conformance Document
- ◆ Completed HCAA / EASA Form 56 with the closure date endorsed - see Appendix D
- ◆ HCAA / EASA Form 50
- ◆ HCAA / EASA Form 4s
- ◆ DO-PO (PO-PO) arrangements
- ◆ Relevant approvals (POA, Form 4 personnel acceptance, DO-PO agreement and other procedures and contracts approved)
- ◆ Finding forms and the correspondence
- ◆ Minutes of the meetings (internal and with the applicant)

#### 20P.3.12 Preparation for Issue of the Approval (Part 21G - POA)

Once the POAT is satisfied that all the relevant findings are closed for the applicable items, as described above or corrective action plan is agreed and its progress is satisfactory, he will prepare the Certification folder to be presented to the FSD Director. The Certification file contents and relevant forms can be found in Appendix of this Chapter.

The following is a list of the Certification folder contents:

- ◆ Completion of the Documentation Check Sheet
- ◆ HCAA / EASA Form 50
- ◆ DO-PO (PO-PO) arrangements
- ◆ HCAA / EASA Form 4s and copy of acceptance letter
- ◆ POE approval letter and file record
- ◆ HCAA / EASA Form 56
- ◆ Team Reports and Audit Finding Closure documents
- ◆ Draft Approval – HCAA / EASA Form 55
- ◆ Draft of letter to PO forwarding the HCAA / EASA Form 55

##### 20P.3.12.1 Quality Check

The Team Leader will present the Certification File to the PO Manager, or in his absence to the Director of Flight Standards, who will carry out the 'quality check'. The quality check is confirmed by signature on Form 56. This must include a review of all documents and HCAA / EASA Forms from the initial application through to the drafted HCAA / EASA Form 55. Sample HCAA Forms are shown in Appendices at the end of this Chapter.

##### 20P.3.12.2 Issue of the Approval

[REF: 21.A.151](#)

Following the Quality Check of the Form 56, the FSD Director will sign and stamp the approval certificate and associated letters and pass them back to the Team Leader for processing.

Each approval certificate has a unique reference number in format **EL.21G.XXXX** recorded by HCAA FSD monitoring system.





### 20.P.3.12.3 Reporting - Information relevant to registers established by the Agency

[REF: GM 21.B.43](#)

The HCAA PO Manager notifies any certificate or approval issued, changed or revoked including details of the scope of that certificate or approval to the EASA for inclusion in a central register managed by the EASA

### 20P.3.12.4 HCAA Certification File

The completed Certification File is then placed in the allocated space in the library. For Certification File contents and structure refer to Appendix of this Chapter.

The Certification file includes the following document:

- documents provided by the applicant for POA certificate
- documents established the investigation
- continuing surveillance programme
- POA certificates
- Minutes of meetings

Certification file is archived for period of 6 years.

### 20P.3.12.5 Inconclusive approval process

The initial approval process is considered inconclusive in the following cases

- the organisation fails to comply with the requirements of the Part 21 Subpart G Section A
- the organisation, its sub-contractors or suppliers deny access to any facility that shall be audited for the scope of the approval
- the finding are not closed in satisfactory and timely manner (within three months)
- changes to the organisation take place during the initial approval period and invalidates the process
- links to the design organisation are lost (DO – PO arrangement is not in effect)

In case the initial approval is considered inconclusive the HCAA / EASA Form 56 and associated team report are completed accordingly. The FSD Director accepts the report and the organisation are informed by letter without undue delay.

## 20P.4 Variation of Approval

[REF: 21.A.147, 21.A.148, 21.A.153, 21.B.240, GM 21A.147\(a\), AMC 21A.148](#)

### 20P.4.1 Significant changes

Significant changes requiring approval of the HCAA include:

- Significant changes to production capacity and methods
- Changes to the organisation structures especially in the Quality System that could affect the approval (see GM 21A.147(a))
- Changes of the Accountable manager and other nominated managers
- Changes in the production or quality system that may have an important impact on the conformity / airworthiness of each product, part or appliance
- Changes in the placement or control of significant sub-contracted work of supplied part
- Changes to the location
- Changes to the ownership

An approved PO wishing to alter any of the elements listed above, shall submit a HCAA Form 51 accompanied with the affected manuals and documentation for evaluation by the HCAA except for:

- Changes to the Accountable manager and other managerial staff the Form 51 is required and Form 4 is mandatory (Form 4 is not required for the Accountable manager). Relevant changes to the POE and company procedures shall take place in the time of approval.



These changes are subjected to HCAA approval to. The responsible POAT member interviews the proposed managers before the approval

- Changes of procedures can be submitted without Form 51 if the approval schedule is not affected. These changes may require on site audit before approval and implementation
- Changes of sub-contracted work usually require on-site audit in sub-contractors facilities

Changes to the location usually require special arrangements with the Authority. These arrangements shall be made well in advance and continuous surveillance of the company quality system by the HCAA is mandatory.

#### **20P.4.2 Other changes**

The other changes even if considered insignificant shall be evaluated by the HCAA except if agreed differently. The agreement shall be shown in the POE where the procedures clearly distinguish among:

- Changes requiring HCAA approval – see above
- Changes not requiring such approval but communicated to the HCAA – minor changes to production capacity, normal changes of employees etc.
- Changes for which no approval is required – changes to the organisation elements that do not have impact to the approval such as administration and logistics changes

The responsible POAT members pay a special attention to the changes because in some cases it is difficult to estimate the impact to the PO.

Minor changes are monitored during the continued surveillance.

#### **20P.4.3 Application for change**

The PO applies for approval for change submitting to the HCAA the following documentation or part of it as described above.

- The HCAA / EASA Form 51 signed by the Accountable Manager (or nominee)
- Changes to the POE and associated procedures
- Form 4s for managerial personnel
- For changes of Certifying staff the required data supporting their qualification
- For changes of capacity the data and procedures supporting the ability to change the capacity
- For changes of location the description of the new facilities and the conditions for transfer the production to the new or added location. In case the production is terminated the date of the termination. The date of starting production in new facilities. The procedures of control of the production during transfer where applicable.
- The intended time schedule in which the changes takes place
- The PO is kindly requested to submit the application in advance to avoid delays in the process.

#### **20P.4.4 Evaluation of changes**

The responsible HCAA Team Leader evaluates the application according to the following criteria:  
Eligibility – the proposed changes shall comply with the legibility criteria. The eligibility of the initial approval shall not be affected by the new scope of work. The changes shall be supported by the required arrangement with the DO and the DO – PO arrangement shall be amended when required.

Significance – the HCAA Team Leader evaluates the changes. He may require additional information and upgrade or degrade the change

Submitted application – the HCAA Team Leader receives the application, checks the data for completeness and informs the PO if the documentation is insufficient. He returns the complete application to the PO when it is not complete or it includes significant mistakes.



#### 20P.4.5 Review of procedures & submitted documentation

REF: 21.A.139 & 21.A.165

The review of the submitted Manual(s)/Documentation is carried out by the POAT to assess the Part 21G - PO, GM & AMC requirements.

This is conducted by a general review of the Part 21G - PO documents/manual(s) submitted by the applicant with the application. This review provides the applicant with timely initial feedback and assesses the applicants understanding of the requirements.

The review of manuals includes all associated procedures. In case the organizations' scope of work is not limited only to production activities within the scope of (requested) PO approval i.e. there are other production or maintenance – operation activities it shall be clearly distinguished which procedures or procedure changes affects the PO approval and these procedures shall be controlled in satisfactory manner. The POAT shall review not only changes to the procedures but the whole procedures because the unchanged procedures can invalidate the proposed changes. Remind to check cross references to current status.

The POE and the above referenced procedures shall be in full compliance with the arrangement between Design and Production organization as amended (as applicable) and shall not allow exceeding the scope of this arrangement or deviating from the scope of the approval.

##### 20P.4.5.1 Part 21G – Production Organisation Conformance Document

The PO is requested to fulfill the Conformance Document for significant changes of the organisation. Unchanged fields can be marked accordingly.

The POAT will evaluate the Part 21G - PO Conformance Document. If the Conformance Document needs further work, it should be returned to the PO together with the comments summary as an attachment to an Audit Finding Form. The Part 21G - PO Conformance Document is shown in Appendix at the end of this Chapter.

##### 20P.4.5.2 Changes to Organization's POE Manual

REF: 21.A.143, GM 21A.143

The POAT will evaluate changes of the PO Organization's POE Manual in order to establish that it complies with 21.A.143. If the POE Manual needs further work, it should be returned to the PO together with the comments summary as an attachment to an Audit Finding Form.

The amended POE must include the subject headings and reflect the preferred procedures. The HCAA POAT members are required to evaluate whether the procedures specified in the exposition are in compliance with the intent of Part 21G – PO and then estimate whether these procedures are, actually, intended for use. Procedures irrelevant to the scope of the approval, to the size of the organisation or to the activities shall be corrected. Procedures common for the whole organisation should distinguish among different functions. The Quality system manuals can cover various approvals and scopes but in many cases one function cannot replace the other and duplication of similar tasks is necessary to cover the requirements.

Exposition approval will be accomplished when all items identified in the HCAA / EASA Form 56, have been identified and evaluated as satisfactory. **A specific approval letter will be issued for Changes of the POE Manual, as described in this Chapter.** It is not recommended to issue a formal approval letter before a verification of the procedures is made by the Audit in the Organisation.

POE Approval and Revision Record forms of the Certification file shall be amended accordingly.



#### 20P.4.5.3 Changes to Organisation's Procedures & Quality System

*REF: GM No.1 to 21A.139 (a), GM No.2 to 21A.139(a), GM 21A.139 (b)(1), GM No.1 to 21A.139 (b)(2), GM No.2 to 21A.139(b)(2), GM 21A,145 (b)(2)*

All organization procedures relevant to the requested approval shall be well controlled and documented. The procedures can be included in the POE and some of them held separately.

The Quality System of the organisation has two basic elements

- to assure the conformity of the organisation, its procedures, instruction, data, personnel, sub-contractors and suppliers, supplied parts and appliances, material, processes etc. with applicable standards
- to monitor independently the functioning of the organisation

The above elements are independent. The system includes the internal occurrence reporting as well as reporting to the EASA and the HCAA.

See the referred GM for details!

#### 20P.4.5.4 Changes of Procedures Related to Changes to DO – PO agreement

*REF: 21.A.139(c), GM 21A.131*

Procedures related to DO – PO or PO – PO agreement are essential for the function of the production process. Changes to these procedures shall be changed with written agreement with the Design Organisation. Changes to PO procedures used during production and / or maintenance of different programs shall be accepted by all Design Organisation. These procedures shall assure the correct transfer of all applicable design data in controlled and timely manner.

#### 20P.4.5.5 Changes to Sub-contactors or Sub-contractors' procedures

All sub-contractors shall use either procedures issued by the PO and described in POE and associated quality procedures or their own procedure if accepted by the POA holder. The PO is responsible for not violating standards of the approved design. The sub-contractors' personnel shall know the procedures in extent required for correct accomplishment of his work.

Sub-contractor shall be informed of changes to procedures in extent their work is affected. New sub-contractor shall receive all the relevant knowledge.

#### 20P.4.6 Changes to Eligibility

*REF: 21.A.133, GM 21A.133, AMC No.1 21A.133(b) & (c), AMC No.2 21A.133(b) & (c)*

Eligibility of the PO is examined according to 21.A.133. An appropriate arrangement with the applicant for, or holder of, an approval of that specific design, shall assure satisfactory coordination between production and design. Any change to these arrangements shall be evaluated within the process of approval of changes without exemption. The organization is informed if the change to the POA is not eligible for the approval and the preferable solution is to be discussed (i.e. Part 21F approval, ETSO approval, sub-contractor etc.)

#### 20P.4.7 Coordination with EASA and Airworthiness Authorities

The Team Leader coordinates through PO Manager with the EASA and involved Airworthiness Authorities with process similar to the para. 20P.3.8, 20P.3.10.5.1 & 20P.3.10.5.2 if it is required.

#### 20P.4.8 Corrective Actions

Changes to Manuals/Documentation submitted by the PO applicant are checked by reviewing the completed Part 21G submitted Conformance Document. If any non-compliance is found



and/or if corrections are needed, the assigned POAT members 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 PO's Certification file appropriate section (correspondence). It is important that all correspondence with the Applicant should abide by the procedures for Incoming and Outgoing Documents described in HCAA Administration Manual, Chapter 13. On the basis of the findings against the POE, the PO is responsible for the relevant corrective actions / modifications required by the HCAA. The POAT team members must properly track each item in order to ensure its rectification.

#### **20P.4.9 On-Site audit(s)**

GM 21A.145(a)

The On-site audits are performed only if changes to the POE and associated procedures are acceptable to the HCAA in order to verify that the organization complies with all relevant requirements and the referred company procedures are in place and working. During the on-site inspection phase the personnel, facilities, services, procedures, processes, tools and equipment of the PO organization are assessed for acceptability.

The following steps can be used as a general guideline:

- ◆ Determine the areas to be audited and who will do what. It is not necessary to audit all areas of the company if there are not changes in these areas and the areas were audited recently. It is recommended areas not affected by the changes but not audited for some time and avoid duplicate audits to one area if not required
- ◆ From the Conformance Document and POE pick specific items and subjects for the audit – schedule, the provisional number of days, plan travel arrangements (if applicable), etc.
- ◆ Prepare a plan for investigation and coordinate it with the organisation
- ◆ Notify the applicant of the start of the audit and request an opening meeting with the attendance of the Accountable Manager.

The organisation (applicant) shall be informed by FAX of the audit plan, areas, facilities and personnel planned to be audited.

More than one audit are organised to cover all the requirements in all activities of the organisation and for verifying the progress of the variation of the approval.

##### **20P.4.9.1 Opening Meeting**

The purpose of the opening meeting is to:

- ◆ Introduce the HCAA POAT to the PO's Management
- ◆ Briefly explain the purpose of the amendment procedure
- ◆ Describe the process to be followed
- ◆ Explain the Audit Finding Forms and the Leveling of Findings
- ◆ Clearly explain that the level of the finding is provisional until endorsed by the Head of the HCAA Airworthiness Section
- ◆ Explain which findings shall be closed before the change to the approval can be granted and which shall be closed within due time period.
- ◆ Request the Closing Meeting - This will either be a debrief at the end of the on-site audit or a specific meeting set for a few days later when the report has been produced and can be handed to the PO.

The opening meeting takes place within the organization premises and the top management of the organization is invited to participate. The participation of the Quality manager and other responsible managers and the personnel seeking approval (for which Forms 4 have been submitted) is considered necessary. The time schedule is discussed taking in account the working hours and the availability of facilities if limited by objective reasons.



#### 20P.4.9.2 Meeting the Managers

REF: 21A.145, GM 21A.145 (c)

During the Audit all nominated Managers, which duties are relevant to the scope to the variation, shall be met either during common or separate meetings. Presence of responsible managers is required during initial and closing meeting is requested. It is not recommended to proceed with meeting only with managers' nominees or subsidising persons.

#### 20P.4.9.3 On-Site Audit

##### During the on-site Audit:

- ◆ Each member of Team should be accompanied by a company representative, preferably the Quality Assurance personnel of the PO.
- ◆ Follow the Audit Plan and audit against the Part 21G requirements.
- ◆ Follow-up on any Audit Findings that have been issued against the POE Manual.
- ◆ Progressively complete the HCAA / EASA Form 56, recording any findings against the sub-paragraph of the requirement and the applicable area of the audit. Draft any Finding Forms and provide provisional copy to PO.
- ◆ Team Leader to monitor progress of audit against the plan and time-scale what was projected.
- ◆ Confirm time and date for Closing Meeting.

##### a) Talking to the people - Interviews

Remember that the employees know much more than anybody else about the work they perform. Interview is very efficient mean of auditing providing it is performed correctly. The people should be asked only on their work in a way they can understand. Their answers should be evaluated and compared to others answers and to the procedures. Extensive discussions on items irrelevant to the audit should be avoided. Take in mind your time schedule!

##### b) Employees' qualification

REF: 21A.145, AMC 21A.145(d)(1), AMC 21A.145(d)(2), AMC 21A.145(d)(3)

Each employee involved in the production process shall show the relevant qualification to his/her function. He /she shall have the physical and psychical pre-requisites and education. General knowledge of the laws and the legal system as well as of company general and specific procedures shall be demonstrated accordingly to the function(s) performed. General and specific training followed by examination or practical assessment should be performed. Specific standards are applicable for NDT / NDI, welding and where described by the design. Changes to the PO can require additional training of the personnel or hiring of new personnel

**The qualification shall be recorded.** These records are kept secure because in many cases includes personal data. The HCAA POAT members always require only a minimum number of the copies of these records and keep them accordingly.

##### c) Compliance with amended procedures & standards

The HCAA POAT members should be familiar not only with the legislation and the HCAA procedures but also with the procedures of the audited organisation well before the on-site audit. The Team Leader organizes meeting with the POAT members and provides them with the necessary information i.e. the company POE and procedures relevant to the part of organisation that will be audited by each POAT member. The HCAA POAT members understand that because of the extent of the procedures in large organisation the preparation phase is necessary and should not be avoid.

The organisation shall comply with the legislation and also with the company procedures. Revision to the company procedures shall be requested when the compliance with them is not effective, they don't comply with the regulations or they are ambiguous, misleading or





superseded by implementation of new technologies or practices. In all other cases the company personnel shall comply with the procedures as they are published.

The POE, procedures and processes can be distributed in controlled hard copies or through electronic means (CD's, DVD's, and intranet). Only controlled copies are permitted within the production (except for training purposes when adequately marked and controlled).

The organisation shall assure that in each moment of time only one revision of the procedures is available. The older revision shall be withdrawn.

The recording system shall show all previous revisions of the approved procedures and data used within production. The system shall provide the revision information for each product, series or batch produced.

The amended procedures shall not take place before formal approval by HCAA where required except as specifically agreed.

#### **d) Facilities, tools, equipment, raw material, processes**

The facilities, tools, equipment, raw material, processed shall meet the standards prescribed or agreed by the Design organisation and by the current legislation, standards. Changes to location and facilities are considered significant and specific arrangements approved by HCAA are required unless the production is interrupted and starts in new facilities upon approval of HCAA. Several audits of the HCAA POAT members could be performed during transfer of facilities.

#### **e) Safety & security issues**

Safety and security provisions shall not be violated during changes within the organisation. The Team gives a special attention to these issues.

#### **f) Collecting evidence**

The basic evidence of the audit is correctly fulfilled Form 56 and attached Finding Forms.

The POE and procedures are kept by the POAT members and transferred to the D2 Library for future evidence.

The above evidence is not considered enough even in areas with no findings. The POAT members should keep written remarks of the audit that includes:

- names and function of the personnel, information of their training and qualification
- procedures audited (revisions)
- documents
- numbers of tools and equipment
- data of material
- observations made

In case non-conformity is discovered and finding is issued the above information is attached to the finding form. The finding form is signed by the company representative as "witnessed by". This signature doesn't mean that the company accept or not the finding it just verifies the information described in the finding.

Each finding shall be identified as non-compliance with the certain paragraph(s) of the Regulation itself.

### **20P.4.9.4 On Site Audit – Subcontractors & Suppliers**

Audits of all and new sub-contractors and supplier are performed in the extent necessary for verification of the system of the audited production organisation. We should understand that these audits are not independent audit to an organisation but a part of the PO approval amendment (change) process. The audit is actually part of the audit to the PO and the findings are aroused against the PO not against the sub-contractor or supplier. The presence of the PO representative is inevitable during the audit.

The audit itself is performed according to the procedures described above. Not all team members usually participate in the audit but only those required by subject and extent of the sub-contractor or supplier activities relative to the PO approval.



#### **20P.4.9.5 Auditing facilities, partners, suppliers & subcontractors in third countries and in other Member States**

Apply procedure of para 20P.3.10.5.1 or 20P.3.10.5.2 of this Chapter. Where working arrangements are made with the competent authorities, they shall be used in order to verify the compliance of new (and old as applicable) partners, suppliers and sub-contractors with the regulation. These arrangements shall be amended if required.

#### **20P.4.9.6 Product line audit**

The team shall audit all the elements of the product line to verify the correct incorporation of the company procedures and use of applicable design data. In case of new product either test run or other equivalent means will be used to determine that the work is performed up to the desired standard before the first certified product is released.

### **20P.4.10 Inspection Results & Findings**

#### **20P.4.10.1 Team meetings**

The Team Leader organises meetings with the team at the end of each working day or more often if deemed necessary to solve problems and questions. The Team meeting takes place before any finding is presented to the organisation. Common findings are summarised to one.

#### **20P.4.10.2 Team Report**

- ◆ Is produced in the standard format – each audit is reported individually identifying all findings against the requirements and Form 56 is compiled at the end with the recommendation or no recommendation of the approval..
- ◆ Subjective comments can be attached to the report but any finding of non-compliance with the requirement must be objective and supported by an audit finding attached as an appendix to the report.
- ◆ The report must be signed by the Team members and endorsed by the HCAA Head of Airworthiness Section.

#### **20P.4.10.3 Classification of findings**

The findings issued during process of approval of changes to the PO the findings are or two major groups:

**Findings related to new activities** that should be handled as the findings made in initial approval of the organisation and

**Continuing surveillance findings** are classified in three levels.

**A level one finding** is any non-compliance with this Part which could lead to uncontrolled non-compliances with applicable design data and which could affect the safety of the aircraft.

**A level two finding** is any non-compliance with this Part which is not classified as level one.

**A level three finding** is any item where it has been identified, by objective evidence, to contain potential problems that could lead to a non-compliance under paragraphs above.

#### **20P.4.10.4 Closing Meeting**

During the meeting the Team Leader

- ◆ Thanks organization for co-operation during the audit.
- ◆ Review the content of the report highlighting both positive and negative aspects.
- ◆ Review the specific findings that must be resolved and closed before approval. Inform of the level of findings and agree on due dates.
- ◆ Provide the opportunity for queries and clarification.
- ◆ Confirm the process of follow-up and closure of the findings.





- ◆ Review the audit plan and the accomplishment of it.

#### 20P.4.10.5 Notification of findings

Findings are notified to the PO by letter or facsimile without delay.

**Level one** findings shall not be notified without undue delay but not later than three working days after determination of the finding. The level one findings are always sent to the Accountable manager by means that assures the confirmation of the delivery

**Level two** findings should not be notified later than two weeks after determination of the finding

**Level three** findings are notified to the organisation as soon as practicable

Normally all findings are notified to the PO together except when Level one Findings shall be notified sooner. Additional actions are notified to the POA holder at the same time. (see also 20P.5.4.3.7.)

The POAT Leader shall assure that the findings reached the recipient (PO organisation)!

#### 20P.4.10.6 Periods required for rectification

**Level one findings** shall be rectified within 21 working days after written confirmation of the finding

**Level two findings** shall be rectified within 3 months. In some cases this period could be extended due to the nature of the finding. It is HCAA policy to request rectification within less than 3 months initially. If the period of more than 3 months is requested by the organisation it shall be notified to the Accountable manager. Short term corrective action is expected in this case pending long term action in continuation.

**Level three findings** do not have a certain limit for rectification but they are monitored during continuing surveillance to avoid discrepancies that can lead to level one or two findings

Findings related to amendment of the approval or to changes within the PO shall be rectified before the amendment of the approval or the approval of changes, if appropriate

#### 20P.4.10.7 Audit Follow-up (if Applicable)

The PO 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. POAT evaluates the closures, where necessary, carrying out a follow-up audit and closes the findings, completing also HCAA /EASA Form 56.

It is not necessary to close all findings before the approval for changes is granted but only those affecting the approval. Also all level one findings shall be closed. For level two findings a corrective action plan can be submitted to the HCAA and agreed.

In case the applicant PO does not respond within three months to the findings relevant to amendment of the approval the procedure for approval of changes is considered inconclusive. The applicant shall be informed in writing if the procedure is inconclusive.

#### 20P.4.10.8 Amending the HCAA Certification File

At this stage the following documents should be prepared for amending of in the PO's Certification File:

- ◆ Part 21G - PO Conformance Document (Amended)
- ◆ Completed HCAA / EASA Form 56 with the closure date endorsed as Before Approval for Findings relevant to the Amendment and Before the requested closure data for other findings
- ◆ HCAA / EASA Form 51
- ◆ HCAA /EASA Form 4s (if amended)
- ◆ HCAA / EASA Form 55
- ◆ Changed DO-PO (PO-PO) arrangements if applicable
- ◆ Relevant approvals
- ◆ Finding forms and the correspondence



The original documentations are kept in the certification file for reference marked as superseded. The new documentation shall be inserted to the certification file only after the quality check made by PO manager.

#### **20P.4.11 Preparation for Amendment of the Approval (Part 21G - POA)**

Once the POAT is satisfied that all the relevant findings are closed for the applicable items, as described above, it will prepare the Certification folder to be presented to the FSD Director. The Certification file contents and relevant forms can be found in Appendix of this Chapter.

The following is a list of the Certification folder contents:

- ◆ Completion of the Documentation Check Sheet
- ◆ HCAA / EASA Form 50
- ◆ HCAA / EASA Form 4s and copy of acceptance letter
- ◆ POE approval letter and file record
- ◆ HCAA / EASA Form 56
- ◆ Team Report and Audit Finding Closure documents
- ◆ Draft Approval – HCAA / EASA Form 55
- ◆ Draft of letter to PO forwarding the HCAA / EASA Form 55
- ◆ Changed DO-PO (PO-PO) arrangements if applicable

##### **20P.4.11.1 Quality Check**

The Team Leader will present the Certification File to the PO Manager, or in his absence to the Director of Flight Standards, who will carry out the 'quality check'. This must include a review of all documents and HCAA / EASA Forms from the initial application through to the drafted HCAA / EASA Form 55. Sample HCAA Forms are shown in Appendices at the end of this Chapter.

##### **20P.4.11.2 Amending the Approval**

[REF: 21.A.151, 21A.153](#)

Following the Quality Check signed on Form 56 by the PO Manager, the FSD Director will sign and stamp the approval certificate and associated letters and pass them back to the Team Leader for processing.

Each approval certificate has a unique reference number in format EL.21G.XXXX recorded by HCAA FSD monitoring system.

##### **20P.4.11.3 HCAA Certification File**

The completed Certification File is then placed in the allocated space in the library. For Certification File contents and structure refer to Appendix of this Chapter.

##### **20P.4.11.4 Inconclusive Process**

The process of approval of changes and amendment of the POA is considered inconclusive in the following cases

- the organisation fails to comply with the requirements of the Part 21
- the organisation, its sub-contractors or suppliers deny access to any facility that shall be audited for the scope of the approval
- the findings are not closed in satisfactory and timely manner
- changes to the organisation take place during this period and invalidate the process
- links to the design organisation are lost



In case the changes or amendment of the approval is considered inconclusive the HCAA / EASA Form 56 and associated team report are completed accordingly. The FSD Director accepts the report and the organisation is informed by letter without undue delay.

## **20P.5 Continuing surveillance**

**See also Chapter 13 for HCAA / FSD Procedures for Continuing Surveillance Administration and General Procedures**

### **20P.5.1 Annual Monitoring Provisions**

The FSD Director in cooperation with the PO Manager will appoint a Team Leader and Team members for continuing surveillance of each Production Organisation approved by HCAA.

The Head of Airworthiness Section prepares an Annual Audit plan of production organisation. A full complete audit shall be accomplished within 24 consecutive months. At least one partial audit shall be performed each year. There are two basic kinds of audits:

The organisation audit – is focused on organisation functions with special attention on performance of its quality system (see 21B.235(a) and POE)

The product audit – focused on product line on each product produced under the PO approval. Some elements of the audits are duplicated but none element shall be omitted.

The annual audit plan is communicated to the PO(s). A specific surveillance form is included in the certification file of the organisation allowing easy tracking of the elements audited and due elements. The annual audit plan is amended depending on the changes of the organisation and performance of the quality system of the organisation.

#### **20P.5.1 Annual Monitoring Provisions for Auditing facilities, partners, suppliers & subcontractors in third countries and/ or other Member State**

The facilities, partners, suppliers & subcontractors in third countries and/ or other Member State subjected to working arrangements with the competent authorities of these States are audited according to these arrangements.

The facilities, partners, suppliers & subcontractors in third countries and/ or other Member State not subjected to working arrangements shall be included in HCAA Annual Monitoring Plan and audited by the POAT accordingly.

It is not possible to audit all the partners, suppliers and subcontractors. The HCAA PO manager will evaluate the importance of each organisation in conjunction of the safety impact to the final product and includes the organisations to the audit plan. The more important organisation should be audited more often and the less important on random basis. The existence of quality system of a partner, suppliers or subcontractor is taken into account.

### **20P.5.2 Ad-hoc audit (unplanned audit)**

The FSD Director will order ad-hoc audit to the organisation each time there is an evidence or suspicion for non-compliance with the safety standards by the PO.

### **20P.5.3 Preparation of audit**

The Team Leader prepares the audit with the team members. Standard check lists prepared by the Airworthiness Section are used for specific audits. Form 56 is used for complete evaluation of the PO. The Form 56 could be completed partially but at the end of the 24 months period all applicable items shall be accomplished and this fact verified by the Team Leader.

The complete team can audit the organisation or some of POAT members if the task doesn't require the presence of the whole team. Each team member should be familiar with the applicable legislation, regulation and procedures. He prepares his own check lists in cooperation with the Team Leader and other members of the team.



The organisation is informed by facsimile or e-mail on date(s) of the audit, about the elements audited, the facilities and the personnel requested to be present during the audit. The dates of the audit are coordinated to achieve the best results of the audit. Dates of strikes, public holidays, summer vacations when no activities are performed should be avoided.

#### **20P.5.4 Performing the audit**

##### **20P.5.4.1 Opening Meeting**

The purpose of the opening meeting is to:

- ◆ Introduce the HCAA POAT to the PO's Management (can be omitted if the team members and the PO managers knows each other)
- ◆ Briefly explain the purpose of the audit (the audit could be full scale or partial or product audit)
- ◆ Describe the process to be followed
- ◆ Explain the Audit Finding Forms and the Leveling of Findings
- ◆ Clearly explain that the level of the finding is provisional until endorsed by the Head of the HCAA Airworthiness Section
- ◆ Explain that all findings shall be closed before the required date i.e. the action shall be completed not only scheduled
- ◆ Request the Closing Meeting - This will either be a debrief at the end of the on-site audit or a specific meeting set for a few days later when the report has been produced and can be handed to the PO.

The opening meeting takes place within the organization premises and the top management of the organization is invited to participate. The participation of the Quality managers and the personnel having responsibility for functions audited is considered necessary. The time schedule is discussed taking in account the working hours and the availability of facilities if limited by objective reasons.

##### **20P.5.4.2 On-Site Audit**

###### **a) Meeting the Managers**

[REF: 21A.145, GM 21A.145 \(c\)](#)

During the Audit the nominated Managers should be met either during common or separate meetings. Each Manager shows detailed knowledge respectively to the size of the company and the department he / she manages. It is not necessary to interview the managers from the beginning but verification of the correct functioning of the production process is desirable.

###### **b) During the on-site Audit:**

- ◆ Team remains or splits according to the tasks to be accomplished, the Team Leader appoints duties to the Team members taking in account his particular knowledge of specific subjects
- ◆ Each member of Team should be accompanied by a company representative, preferably the Quality Assurance personnel of the PO.
- ◆ Follow the Audit Plan and audit against the Part 21G requirements.
- ◆ Progressively complete the HCAA / EASA Form 56 or its relevant part, recording any findings against the sub-paragraph of the requirement and the applicable area of the audit. Draft any Finding Forms and provide provisional copy to PO.
- ◆ Team Leader to monitor progress of audit against the plan and time-scale what was projected.
- ◆ Confirm time and date for Closing Meeting.

###### **c) Talking to the people - Interviews**



Remember that the employees know much more than anybody else about the work they perform. Interview is very efficient mean of auditing providing it is performed correctly. The people should be asked only on their work in a way they can understand. Their answers should be evaluated and compared to others answers and to the procedures. Extensive discussions on items irrelevant to the audit should be avoided. Take in mind your time schedule!

#### **d) Employees' qualification**

REF: 21A.145, AMC 21A.145(d)(1), AMC 21A.145(d)(2), AMC 21A.145(d)(3)

Each employee involved in the production process shall show the relevant qualification to his/her function. He /she shall have the physical and psychical pre-requisites and education. General knowledge of the laws and the legal system as well as of company general and specific procedures shall be demonstrated accordingly to the function(s) performed. General and specific training followed by examination or practical assessment should be performed. Specific standards are applicable for NDT / NDI, welding and where described by the design.

**The qualification shall be recorded.** These records are kept secure because in many cases includes personal data. The HCAA POAT members always require only a minimum number of the copies of these records and keep them accordingly.

Recurrent training should be provided according to plan. Changes to the personnel shall be recorded and the qualification of personnel that have left the company or changed position shall be kept for the prescribed period of time. Specific authorization document shall be issued for certifying staff and the staff should reach and present in within reasonable time to the auditors

#### **e) Compliance with procedures & standards**

The HCAA POAT members should be familiar not only with the legislation and the HCAA procedures but also with the procedures of the audited organisation well before the on-site audit. The Team Leader organizes meeting with the POAT members and provides them with the necessary information i.e. the company POE and procedures relevant to the part of organisation that will be audited by each POAT member. The HCAA POAT members understand that because of the extent of the procedures in large organisation the preparation phase is necessary and should not be avoid.

The organisation shall comply with the legislation and also with the company procedures. Revision to the company procedures shall be requested when the compliance with them is not effective, they don't comply with the regulations or they are ambiguous, misleading or superseded by implementation of new technologies or practices. In all other cases the company personnel shall comply with the procedures as they are published.

The POE, procedures and processes can be distributed in controlled hard copies or through electronic means (CD's, DVD's, and intranet). Only controlled copies are permitted within the production (except for training purposes when adequately marked and controlled).

The organisation shall assure that in each moment of time only one revision of the procedures is available. The older revision shall be withdrawn.

The recording system shall show all previous revisions of the approved procedures and data used within production. The system shall provide the revision information for each product, series or batch produced.

#### **f) Facilities, tools, equipment, raw material, processes**

The facilities, tools, equipment, raw material, processed shall meet the standards prescribed or agreed by the Design organisation and by the current legislation, standards.

#### **g) Safety & security issues**

The safety of the employees and the product are essential for the approval. The POAT member pay special attention to the issued of safety and security and relevant findings are considered as serious.

The POAT members comply with the safety and security regulations implemented by the organisation i.e. they are obliged to wear the personal protective devices and avoid any hazardous situations. The organisation is kindly requested to provide the POAT members with the necessary means and to inform them accordingly.



In case there are dangerous areas or areas of restricted access for safety or security reasons the organisation assure access to these areas when required.  
Restriction of access to facilities or airfields due to security reasons are not acceptable and can lead to deny of approval.

#### **h) Collecting evidence**

The basic evidence of the audit is correctly fulfilled Form 56 and attached Finding Forms.

The POE and procedures are kept by the POAT members and transferred to the D2 Library for future evidence.

The above evidence is not considered enough even in areas with no findings. The POAT members should keep written remarks of the audit that includes:

- names and function of the personnel, information of their training and qualification
- procedures audited (revisions)
- documents
- numbers of tools and equipment
- data of material
- observations made

In case non-conformity is discovered and finding is issued the above information is attached to the finding form. The finding form is signed by the company representative as “witnessed by”. This signature doesn’t mean that the company accept or not the finding it just verifies the information described in the finding.

Each finding shall be identified as non-compliance with the certain paragraph(s) of the Regulation itself.

#### **i) Monitoring production standards**

The products produced by each organisation under surveillance of the HCAA are monitored for continuous compliance with the approved standards. This monitoring is included into a yearly product sampling plan that can be amended if required. The plan is based on the complexity of the organisation, on number of products and their complexity and impact to the safety of the aircraft. Each product line should be audited one time a year or more.

*The plan includes (as applicable for the product) investigation of:*

- A modification or change status
- The installation, testing or operation of the part or system
- The accuracy and generation of the Flight Tests report data
- The accuracy and generation of the Weighing report data
- An engine test bed run
- Records
- The accuracy and generation of the Statement of Conformity data and the associated safe operation determination
- The accuracy and generation of EASA Form 1 data

*The plan should be flexible, is revised if required with respect to:*

- Changes in production rate
- Use of results from other samples – reports
- Use of results from POA investigation – focuses on areas where problems were identified in previous audits

*The accomplishment of the product audit plan is performed by individual inspector(s) – investigator(s) that:*

- Have a good practical knowledge of the product, part or appliance
- Have a good practical knowledge of the manufacturing processes
- Have an up to date knowledge of the manufacturers production programme
- Use an appropriate and up to date sample plan and compliance check lists
- Use a suitable recording system for the results
- Have a properly operating feedback system to their national authorities organisation for POA and the manufacturer
- Maintain an effective working relationship with the manufacturer and his staff
- Be able to communicate effectively





Specific form (check list) is used for this activity

### 20P.5.4.3 Inspection Results & Findings

#### 20P.5.4.3.1 Classification of findings

The findings issued during continuing surveillance audits can be classified in three levels.

**A level one finding** is any non-compliance with this Part which could lead to uncontrolled non-compliances with applicable design data and which could affect the safety of the aircraft.

**A level two finding** is any non-compliance with this Part which is not classified as level one.

**A level three finding** is any item where it has been identified, by objective evidence, to contain potential problems that could lead to a non-compliance under paragraphs above.

Remark: Attention shall be given to repetitive findings. These findings can indicate malfunctioning of the Quality system of the organisation or formal closure of findings without substantial changes to the PO system. A consultation of the finding with the Accountable Manager and additional action can take place.

The results of audits and inspection of facilities, partners, suppliers & subcontractors in third countries and/ or other Member State performed by competent authorities of these States are evaluated and translated to findings against the PO. These findings shall be answered and rectified within the responsibility of the POA holder quality system.

#### 20P.5.4.3.2 Team meetings

The Team Leader organises meetings with the team at the end of each working day or more often if deemed necessary to solve problems and questions. The Team meeting takes place before any finding is presented to the organisation. Common findings are summarised to one.

#### 20P.5.4.3.3 Team Report

- ◆ Is produced in the standard format – each audit is reported individually identifying all findings against the requirements and Form 56 is compiled at the end of the 2 year period when all elements have been audited. When the Form 56 is completed recommendation is made to the FSD for continuation (or not) of the POA.
- ◆ Objective evidence in form of copies of documents and manuals, notes from examination of product, tools and equipment or information collected from interviews is attached
- ◆ Subjective comments can be attached to the report but any finding of non-compliance with the requirement must be objective and supported by an audit finding attached as an appendix to the report.
- ◆ The report must be signed by the Team members and endorsed by the HCAA Head of Airworthiness Section.

#### 20P.5.4.3.4 Closing Meeting

During the closing meeting the Team Leader

- ◆ Thanks organization for co-operation during the audit.
- ◆ Review the content of the report highlighting both positive and negative aspects.
- ◆ Review the specific findings. Inform of the level of findings and agree on due dates.
- ◆ Provide the opportunity for queries and clarification.
- ◆ Confirm the process of follow-up and closure of the findings.
- ◆ Review the audit plan and the accomplishment of it.

#### 20P.5.4.3.5 Notification of findings

Findings are notified to the PO by letter or facsimile without delay.



**Level one** findings shall not be notified without undue delay but not later than three working days after determination of the finding. The level one findings are always sent to the Accountable manager by means that assures the confirmation of the delivery

**Level two** findings should not be notified later than two weeks after determination of the finding

**Level three** findings are notified to the organisation as soon as practicable

Normally all findings are notified to the PO together except when Level one Findings shall be notified sooner. Additional actions are notified to the POA holder at the same time. (see also 20P.5.4.3.7.)

The POAT Leader shall assure that the findings reached the recipient (PO organisation)!

#### **20P.5.4.3.6 Periods required for rectification**

**Level one findings** shall be rectified within 21 working days after written confirmation of the finding

**Level two findings** shall be rectified within 3 months. In some cases this period could be extended due to the nature of the finding. It is HCAA policy to request rectification within less than 3 months initially. If the period of more than 3 months is requested by the organisation it shall be notified to the Accountable manager. Short term corrective action is expected in this case pending long term action in continuation.

**Level three findings** do not have a certain limit for rectification but they are monitored during continuing surveillance to avoid discrepancies that can lead to level one or two findings

#### **20P.5.4.3.7 Additional actions**

See also Airworthiness Procedures Manual Chapter 18 – Enforcement Procedures & Chapter 20P.6

In case of level one findings, the POAT shall evaluate the safety impact of the finding and recommends to the FSD Director additional actions to be taken. The production organisation approval shall be subjected to a partial or full limitation, suspension or revocation. The holder of the production organisation approval shall provide confirmation of receipt of the notice of limitation, suspension or revocation of the production organisation approval within 48 hours after receipt of such information.

Also in case of level two findings the POAT evaluates the safety impact of the finding and additional action could take place if considered necessary.

#### **20P.5.4.3.8 Audit Follow-up (if Applicable)**

The PO 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. POAT evaluates the closures, where necessary, carrying out a follow-up audit and closes the findings, completing also HCAA /EASA Form 56 if applicable. The findings shall be closed within the determined periods.

In case the POA holder does not respond within the months prescribed period or the follow up audit is not satisfactory the POAT member or Team Leader can recommend to the HCAA / FSD Director one of the following:

Level one findings – limitations, suspension or revocation (total or partial) of the approval that shall be made not more than 5 working days after the due date

Level two findings – extension of the due period of the corrective action based on comprehensive plan of the implementation of the corrective action and having an evidence of objective reasons to extend the period or upgrading the finding requesting immediate action by the PO or limitations, suspension or revocation (total or partial) of the approval. The action shall be made within 10 working days after the due date.

Level three findings – in case the organisation decides not to implement any action or the action is out of the time schedule no action is required against the company but the finding is recorded to the monitoring file and a special attention is put to this area during the surveillance





#### 20P.5.4.3.9 ADMS control

Audits are plan on yearly basis according to Chapter 13 procedures. Each planned audit is shown in the ADMS system from the phase of planning through the performance up to the closure of the last finding. Each finding is tracked and monitored by the ADMS system and responsible inspectors are informed about the due dates of audits and finding closures.

#### 20P.5.4.4 HCAA monitoring file

HCAA / FSD keeps a monitoring file in continuation to the Certification and Correspondent files of each approved Production Organisation. The file contains for the minimum the following:

- Name of the organisation
  - Production organisation approval number
  - Meeting minutes
  - Annual plan and its amendments
  - Reports of the audits performed organised by type of audit
  - Notification of findings to the PO
  - PO response
  - Acceptance or not acceptance of the corrective actions
- The file is compiled by POAT Leader, Quality control will be performed by PO Manager and recorded by the Technical Library.

Certification file is archived for period of 6 years.

### 20P.6 Suspension and revocation

*REF: 21A.159, 21B.245, GM 21B.245, Law 1815/88, Chapter 18 of this Manual*

HCAA / FSD takes a decision on restriction (imposing limitations), surrender, suspension or revocation of POA in such a way to comply with European as well as Greek national laws and regulations relating to appeal rights and the conduct of appeals, unless the decision has been taken by the Agency. In such case, the Agency appeal procedures will apply.

General procedure of the Chapter 18 of the Airworthiness Procedures Manual is applicable and additionally:

#### 20P.6.1 Definitions:

- **Restriction** - is temporary withdrawal of some of the privileges of a POA under 21A.163.
- **Surrender** - is a permanent cancellation of a production organisation approval by the Competent Authority upon formal written request by the accountable manager of the organisation concerned. The organisation effectively relinquishes its rights and privileges granted under the approval and, after cancellation, may not make certifications invoking the approval and must remove all references to the approval from its company documentation
- **Suspension** - is temporary withdrawal of all the privileges of a production organisation approval under 21A.163. The approval remains valid but no certifications invoking the approval may be made while the suspension is in force. Approval privileges may be re-instated when the circumstances causing the suspension are corrected and the organisation once again can demonstrate full compliance with the Requirements
- **Revocation** - is a permanent and enforced cancellation of the whole of an approval by the Competent Authority. All rights and privileges of the organisation under the approval are withdrawn and, after revocation, the organisation may not make any certifications or other statements invoking the approval and must remove all references to the approval from its company documentation

#### 20P.6.2 Corrective Action Plan

Upon restriction or suspensions of the approval it is expected that the POA holder will move quickly to re-establish compliance with Part 21 and not risk the possibility of approval revocation.



Therefore, the corrective action period granted by the Competent Authority must be appropriate to the nature of the finding but in any case initially must not be more than 3 months (See findings classification). In certain circumstances and subject to the nature of the finding the Competent Authority can vary the 3 months period subject to a satisfactory corrective action plan agreed by the Competent Authority.

Failure to comply within time scale agreed by the Competent Authority means that provisional Suspension of the POA in whole or in part must proceed.

### **20P.6.3 Information exchange**

The HCAA FSD communicates the Restriction, Surrender, Suspension and Revocation to:

- The Agency
- The Airworthiness Authorities which approvals or actions could be affected by the Restriction, Surrender, Suspension and Revocation
- The Design Organisation or Production Organisation that signed the DO – PO or PO – PO agreements

### **20P.7 Occurrence reporting**

**See Chapter 14 of the Airworthiness Procedures Manual and the “HCAA Mandatory Reporting Occurrence Scheme**

### **20P.8 Records**

See Chapter 5 on Airworthiness Section Organisation and the Technical Library and Records system

### **20P.9 Resolution of Disputes**

#### **20P.9.1 Procedures**

[REF: 21B.40\(a\)](#)

It is essential for the efficient accomplishment of the HCAA activities related to Part 21 that all decisions regarding the resolution of disputes are taken at as low a level as possible. The PO Manager is responsible for handling disputes regarding technical matters of PO approvals and continuation surveillance.

The following policy is implemented in order to solve disputes efficiently:

Different opinions among members of the POAT are discussed in team meetings aiming in common interpretation of the requirements and the way of implementing the rules. The POAT leader is responsible for coordination at this level. Different opinions of team members shall not be discussed in front of PO personnel.

When the disputes are not solved in the team level they are submitted to the PO Manager that gives the solution. The PO Manager can consult with EASA and other Airworthiness Authorities for correct implementation of the rules. He recommends amendment of HCAA procedure or issue of Technical order for standardization purposed.

The Head of Airworthiness Section is responsible for solution of personal or administration disputes and of contacting the HCAA upper management when necessary. The Hellenic Republic laws for civil servants are applicable.

#### **20P.9.2 Disputes between the PO and the HCAA**

Disputes between the PO and the HCAA POAT should be presented to the PO Manager that tries to give solution. He organizes meeting with the PO management and the Head of Airworthiness Section and the FSD Director are present. The conclusions are communicated to the PO by a letter signed by the FSD Director. The PO can use a legal means of the Hellenic Republic if not satisfied with the solution.



### **20P.9.3 Agency for mediation**

REF: 21B.40(b)

Where a dispute, which cannot be resolved, exists between the competent authorities of the Member States it is the responsibility of the PO manager to raise the issue with the Agency for mediation.

### **20P.10 Update ADMS Database**

Certain information received by the PO applicant in support of his/her application shall be entered in the ADMS System during the appropriate certification procedure steps. This information includes, but is not limited to, PO organization's address, phone numbers, base location, Senior Managers names, POA approval validity period, PO scope of work, etc. In addition, all findings from the various certification steps will also be entered into the computerized system for tracking and historical record purposes. This information will be kept up to date by including all subsequent changes (if any) to the PO Approval according to this Chapter.

**Note:**

***Inspector tools and additional guidance, as appropriate, is provided in Continuation of this Manual.***



## **APPENDIX A**

Production Organization Approval related Forms



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## CHAPTER 21

### Guidance on the Implementation of Article 83 bis

***REF: Law 211/47 Ratification of the Convention on International Civil Aviation (Chicago 1944)***  
***Article 83 bis of the Convention on International Civil Aviation***  
***Annexes 1,6&8 of the Convention on International Civil Aviation***  
***ICAO Circular 295***  
***EU Regulation 216/2008 as amended***  
***EU Regulation 1702/03 as amended***  
***EU Regulation 2042/03 as amended***  
***EU OPS***  
***JAR-FCL 1,2,3 as adopted***

#### 21.1 General

The ***Convention on International Civil Aviation*** allocates certain safety oversight functions to the State of Registry. The ICAO assembly recognized that the State of Registry may be unable to fulfill its responsibilities adequately in instances where aircraft is leased, chartered or interchanged - in particular without crew – by an operator of another State and that the Convention itself may not adequately specify the rights and obligations of the State of the Operator in such instances. This was caused by the situation in which one obligatory State found itself unable to discharge adequately the functions allocated to it by the Convention i.e. to delegate to the State of the Operator, subject to acceptance by the latter State those functions of the State of Registry that can be more adequately discharged by the State of the Operator. With the entry into force of Article 83 bis of the Convention, such transfer agreement will have effect in respect of Contracting States which have ratified the related Protocol (Doc 9318) upon fulfillment of the conditions established in Article 83 bis.

The Article 83 bis establishes agreements for transfer of certain oversight responsibilities from the State of Registry to the State of Operator. The transfer of responsibilities may involve functions and duties under Articles 12, 30, 31 and 32a) of the Convention, which address rules of the air, radio licensing, certificates of airworthiness and personnel licenses. The Article 83 bis is only an umbrella for transfer of functions and duties from one contractory State to another but the ratification of the Article 83 bis does not entitle one State to act on behalf of the other State. The transfer of duties and responsibilities require an agreement between the States as detailed further in this procedure.

As an ICAO contracting State and EU member state, Greece has ratified the Article 83 bis. The HCAA policy for implementation of Article 83 bis is established to fulfill Greece obligations as an ICAO contracting and the EU – EASA member state in the same time. The principles of the Convention on International Civil Aviation, the EASA basic Regulation and EASA implementing rules are incorporated in the HCAA policy and described in the procedure that follows. Furthermore, the intents of this policy are to assure standardization of procedures and methods employed within the HCAA and EASA system.

#### 21.2 Competent Authority

Hellenic Republic has designated the Hellenic Civil Aviation Authority as the competent Authority for the above-mentioned tasks. According to the P.D. 56/89 (as it has been amended) the Flight Standards Division is responsible for implementation of the procedures relating to the aircraft airworthiness, operations and personnel licensing.

The Hellenic Civil Aviation Authority is represented by its Governor. The Governor represents the Hellenic Republic (the State) for the scope of agreements established according to the Article 83



bis. The Governor can delegate his responsibilities to the Deputy Governors, General Directors or Directors by his decision.

The Competent Authority of the other contracting State is designated by the legal system of that State and is normally represented by the Director General of the Authority.

## **21.3 Implementation of procedure relating to the Article 83 bis**

### **21.3.1 Objective**

The following procedure is intended to ensure that HCAA carries out the process of transferring duties and responsibilities from HCAA to another State competent Authority and vice versa in a consistent and standard manner ensuring that the process is in accordance with the respective parts of the Convention on International Civil Aviation, the Article 83 bis of the Convention in particular and the applicable laws and regulations of the European Union, the Hellenic Republic and the other contracting State as well.

The HCAA procedure does not cover any legal agreement between operators that are considered to be private commercial legal agreements subjected to certain national and international arrangements.

The scope of this procedure is to use for aircraft involved in the commercial air transport but it can be also used in aerial work or private aircraft operations if found suitable.

### **21.3.2 Structure of the Procedure**

The Procedure is divided to several parts.

The first part refers to general prerequisites and tasks that shall be accomplished.

The following four parts are dedicated to:

1. Transferring of duties, functions and responsibilities from the HCAA to another Authority - general
2. Transferring of duties, functions and responsibilities to the HCAA from another Authority - general
3. Simplified procedure to transfer duties, functions and responsibilities from the HCAA to another Authority that follows the EASA system
4. Simplified procedure to transfer duties, functions and responsibilities to the HCAA from another Authority that follows the EASA system

The fifth part includes samples of agreements to be used by the HCAA when transferring the responsibilities according to Article 83bis and of letters between Authorities

### **21.3.3 General**

The transfer of duties and responsibilities from one State to other should make the international navigation safer. It means that any Greek registered aircraft operating under supervision of other Authority should not be maintained and operated to lower standards than they were before the transfer and on the other hand the aircraft operated under the supervision of HCAA should meet the same standards if involved in same operations.

#### **21.3.3.1 Definitions**

The definitions used in the Procedure are those defined in relevant parts of the Convention, the Annexes to the Convention, the Basic Regulation and the Implementing Rules of the EASA.

#### **21.3.3.2 Prerequisites**

The Procedure is applicable for transfer of functions, duties and responsibilities of ICAO contractory States that have ratified the Article 83 bis. Additionally it is HCAA policy not to establish agreements under the provisions of the Article 83 bis with countries in which the



level of safety is questionable and to allow the operation of Greek registered aircraft under AOC of operators listed on the “black list” (banned airlines within the EU - Regulation 2111/2005) or to allow operation of these operators under Greek AOC.

#### **21.3.3.3 Applicability**

The Procedure is applicable to the following cases:

- Dry lease of aircraft
- Wet lease of aircraft
- Dump lease of aircraft
- Interchange of aircraft
- Chartering an aircraft

The Dry lease case is the most common case that agreement under the provisions of Article 83 bis may be needed. In each case the necessity of establishment of the agreement should be evaluated. It is essential to understand that the preparation of the agreement takes some time and also upon termination of the agreement some actions could be required in order to establish full control of the State of Registry upon the aircraft.

### **21.3.4 Transferring of duties, functions and responsibilities from the HCAA to another Authority - general**

#### **21.3.4.1 Initiating the Procedure**

The Procedure is normally initiated by the owner of the aircraft or the lessee in case he is responsible for the aircraft against the HCAA (sub-lease case). Also application from the future operator is acceptable if the responsibility is transferred to him by the means of the lease or equivalent agreement between owner and the operator or between operators. A formal request for transfer of functions, duties and responsibilities shall be submitted to the HCAA stating as a minimum the following

- ◆ Identification of the aircraft – type, registration and serial number
- ◆ Type of the commercial agreement for cross-border lease, charter or interchange of the aircraft
- ◆ The duration of the agreement
- ◆ Identification of the owner, lessor and lessee
- ◆ Identification of the (future) operator including the place of business
- ◆ The AOC
- ◆ Identification of the country to which the responsibilities are requested to be transferred

The request is addressed to the HCAA Flight Standards Division.

#### **21.3.4.2 Assignment of inspector**

After having received the request the HCAA Flight Standards Director assign an aviation safety inspector (or group of inspectors) to evaluate the request and the possibility to transfer the functions, duties and responsibilities to other State responsible Authority.

The assigned inspector shall:

- Evaluate the request
- Identify the State and the Authority to which the responsibilities will be transferred
- Identify which duties and functions will be transferred. All or part of the duties and functions pertaining to Articles 12, 30, 31 and 32 a) of the Convention could be transferred. The transferred duties and functions shall be mentioned specifically in the transfer agreement as, in the absence of such mentioned, they are deemed to





remain with the State of Registry. Special attention shall be paid to the guidance of the ICAO Airworthiness Manual (Doc 9760), Volume II, Part B, Chapter 10 – International Leasing Arrangements. Additional guidance regarding operational surveillance of the Manual of Procedures for Operations, Inspection, Certification and Continued Surveillance (Doc 8335), Chapter 10 – Lease, Charter and Interchange Operations is used where necessary.

- Evaluate whether the State to which the responsibilities will be transferred is capable to perform adequately the duties and functions that are envisaged for transfer
- Evaluate the applicable national requirements of both countries
- Evaluate whether the transfer is appropriate

The assigned inspector submits to the Flight Standards Division Director report with the above-mentioned elements and a recommendation for continuation (or no continuation) of the process and establishment of the agreement. The recommendation may be issued for all tasks and function requested and/or evaluated, a part of them or the conclusion can be negative for the scope of the transfer.

#### **21.3.4.3 Contact the foreign Authority**

The Flight Standards Director upon receive of positive recommendation estimates the necessity of the transfer and the extent of duties and responsibilities that should be transferred. He assigns a Focal point - Flight Standards Division employee that will serve as a contact person with the foreign Authority.

The Focal point establishes contact with the foreign Authority. He is responsible to find the correct persons, which are responsible for the duties and responsibilities within the scope of transfer. These contacts are important initially for correct preparation of the agreement and in continuation for the exchange of information between the Authorities whenever it is required.

#### **21.3.4.4 Preparation of the Agreement**

The Flight Standards Director has the responsibility to decide whether the transfer of functions, duties and responsibilities are appropriate and the extent of the transfer taking in account the ensurance of compliance of the applicable international and national regulations and the achievement of the desirable level of safety. It is not acceptable to lower the level of safety of Greek registered aircraft operated abroad by any means.

The Focal point prepares the agreement in cooperation with the assigned inspector(s) and the Flight Standards Director. He coordinates with the foreign Authority the level and the extent of the agreement. He prepares the draft agreement and submits it to the Flight Standards Director.

*\*Note: Model agreement and letters for exchange between the Authorities can be found at the end of this Chapter*

#### **21.3.4.5 Comments to the Agreement**

Comments to the Agreement are made by the management of the HCAA and by the foreign Authority. The Focal point receives the comments, negotiate them and when agreed incorporates them into the Agreement.

It is essential to understand that both parties shall agree not only on the transfer of functions, duties and responsibilities but also on the text of the Agreement.

#### **21.3.4.6 Signing the Agreement**

The Agreement to which the comments have been incorporated as agreed by both parties is signed as appropriate. The level of authority for signing the transfer Agreement should be equivalent (on both sides) to that required for administrative arrangements between aeronautical authorities. Normally the Director General of Civil Aviation (HCAA Governor in terms of HCAA structure) is an appropriate level for signing the Agreement. More



diplomatic credential may be required for bilateral agreements between States. The Flight Standards Director is authorised to sign letters to foreign Authorities if limited to functions, duties and responsibilities of FSD.

#### **21.3.4.7 Duration of the Agreement**

The duration of the Agreement on the transfer should not exceed the period covered by the corresponding commercial arrangement. The period should be mentioned in the agreement, taking into consideration that the registration of the aircraft concerned will not be changed.

#### **21.3.4.8 Continuing surveillance of the aircraft**

The way of achievement of the continuing surveillance shall be determined within the contract. It includes exchange of information between the Authorities, occurrence reporting to the HCAA and common inspections to the aircraft. Access to the HCAA inspectors should be granted to the aircraft, records and the operators' facilities in extent necessary to verify the condition of the aircraft and its operations.

#### **21.3.4.9 Renewal of the Airworthiness Review Certificate (ARC)**

(If applicable)

It is highly recommended even for aircraft leased to non-EASA countries to assure that continuing airworthiness of the aircraft is managed by CAMO. Some exceptions may be granted in this case. The ARC is renewed by CAMO or following the recommendation of the CAMO by HCAA.

#### **21.3.4.10 Termination of the Agreement**

The Agreement is normally terminated on the date of the termination of the commercial arrangement. Additionally the Agreement can be terminated by a letter from one Authority to the other explaining the reason for the termination of the Agreement. Conditions for re-delivery of the aircraft to the surveillance of the HCAA shall be determined within the Agreement.

#### **21.3.4.11 Carriage of the Agreement on board the aircraft**

The operator is responsible for the carriage of a certified copy of the Agreement on board of each aircraft affected.

### **21.3.5 Transferring of duties, functions and responsibilities to the HCAA from another Authority - General**

#### **21.3.5.1 Initiating the Procedure**

The Procedure is normally initiated by the foreign Authority upon request of the owner of the aircraft or the lessee in case he is responsible for the aircraft against the Authority (sub-lease case). The HCAA could be informed by the foreign Authority or by the future operator holding Greek AOC. He accepts the responsibility is transferred to him by the means of the lease or equivalent arrangement between owner and the operator or between operators. A formal request for transfer of functions, duties and responsibilities to the HCAA is expected from the foreign Authority stating as a minimum the following

- ◆ Identification of the aircraft – type, registration and serial number
- ◆ Type of the commercial agreement for cross-border lease, charter or interchange of the aircraft
- ◆ The duration of the agreement
- ◆ Identification of the owner, lessor and lessee
- ◆ Identification of the (future) operator including the place of business
- ◆ The AOC



- ◆ Identification of the country from which the responsibilities are requested to be transferred

The request is addressed to the HCAA Flight Standards Division.

#### **21.3.5.2 Assignment of inspector**

After having received the request the HCAA Flight Standards Director assign an aviation safety inspector (or group of inspectors) to evaluate the request and the possibility to transfer the functions, duties and responsibilities to the HCAA. Normally the inspector(s) responsible for the company to which the AOC the aircraft will be included. Are assigned.

The assigned inspector(s) shall:

- Evaluate the request
- Identify the State and the Authority from which the responsibilities will be transferred
- Identify which duties and functions will be transferred. All or part of the duties and functions pertaining to Articles 12, 30, 31 and 32 a) of the Convention could be transferred. The transferred duties and functions shall be mentioned specifically in the transfer agreement as, in the absence of such mentioned, they are deemed to remain with the State of Registry. Special attention shall be payed to the guidance of the ICAO Airworthiness Manual (Doc 9760), Volume II, Part B, Chapter 10 – International Leasing Arrangements. Additional guidance regarding operational surveillance of the Manual of Procedures for Operations, Inspection, Certification and Continued Surveillance (Doc 8335), Chapter 10 – Lease, Charter and Interchange Operations is used where necessary.
- Evaluate the applicable national requirements of both countries and identified HCAA additional requirements that shall apply in order to incorporate the aircraft into the AOC taking in consideration the operation of the company
- Evaluate whether the transfer is appropriate

The assigned inspector submits to the Flight Standards Division Director report with the above-mentioned elements and a recommendation for continuation (or no continuation) of the process and establishment of the agreement. The recommendation may be issued for all tasks and function requested and/or evaluated, a part of them or the conclusion can be negative for the scope of the transfer.

#### **21.3.5.3 Preparation of the Agreement**

The Flight Standards Director has the responsibility to decide whether the transfer of functions, duties and responsibilities are appropriate and the extent of the transfer taking in account the insurance of compliance of the applicable international and national regulations and the achievement of the desirable level of safety. It is not acceptable to lower the level of safety of companies operating under the Greek AOC by incorporating foreign registered aircraft operated into the AOC.

The Focal point prepares the agreement in cooperation with the assigned inspector(s) and the Flight Standards Director. He coordinates with the foreign Authority the level and the extent of the agreement. He reviews the Agreement proposed by the foreign Authority or prepares the draft agreement in cooperation with the foreign Authority and submits it to the Flight Standards Director.

*\*Note: Model agreement and letters for exchange between the Authorities can be found at the end of this Chapter*

#### **21.3.5.4 Comments to the Agreement**

Comments to the Agreement are made by the management of the HCAA and by the foreign Authority. The Focal point receives the comments, negotiate them and when agreed incorporates them into the Agreement.

It is essential to understand that both parties shall agree not only on the transfer of functions, duties and responsibilities but also on the text of the Agreement.



#### **21.3.5.5 Signing the Agreement**

The Agreement to which the comments have been incorporated as agreed by both parties is signed as appropriate. The level of authority for signing the transfer Agreement should be equivalent (on both sides) to that required for administrative arrangements between aeronautical authorities. Normally the Director General of Civil Aviation (HCAA Governor in terms of HCAA structure) is an appropriate level for signing the Agreement. More diplomatic credentials may be required for bilateral agreements between States. The Flight Standards Director is authorised to sign letters to foreign Authorities if limited to functions, duties and responsibilities of FSD.

#### **21.3.5.6 Duration of the Agreement**

The duration of the Agreement on the transfer should not exceed the period covered by the corresponding commercial arrangement. The period should be mentioned in the agreement, taking into consideration that the registration of the aircraft concerned will not be changed.

#### **21.3.5.7 Continuing surveillance of the aircraft**

The way of achievement of the continuing surveillance shall be determined within the contract. It includes exchange of information between the Authorities, occurrence reporting to the HCAA and common inspections to the aircraft. Access to the foreign Authority inspectors should be granted to the aircraft, records and the operators' facilities in extent necessary to verify the condition of the aircraft and its operations.

#### **21.3.5.8 Renewal of the validity of the C of A**

The foreign Authority remains responsible for the renewal of the validity of the C of A of the aircraft as well as some other documents carried on board. These documents should be identified in the Agreement as well as the procedure for the continuous validity or renewal of the validity of these documents.

#### **21.3.5.9 Termination of the Agreement**

The Agreement is normally terminated on the date of the termination of the commercial arrangement. Additionally the Agreement can be terminated by a letter from one Authority to the other explaining the reason for the termination of the Agreement. Conditions for re-delivery of the aircraft to the surveillance of the foreign Authority shall be determined within the Agreement.

#### **21.3.5.10 Carriage of the Agreement on the board of the aircraft**

The operator is responsible for the carriage of a certified copy of the Agreement on board of each aircraft affected. The HCAA provides the required number of certified copies to the operator.

### **21.3.6 Simplified procedure to transfer duties, functions and responsibilities from the HCAA to another Authority that follows the EASA system**

The procedure of the paragraph 21.3.4 is followed. The following items are not necessarily examined:

Airworthiness – the assigned inspector identifies whether the aircraft is following the EASA system. In this case additional arrangement to the airworthiness are not required. Ensure that the operators' CAMO is responsible for the aircraft. Inform the foreign Authority for exemptions. Inform the foreign Authority for non-EASA (Annex II to the EC 216/08) aircraft.

Operations – simplify the procedure for aircraft operating under EU AOC taking into consideration the intended operation of the aircraft

Licensing – no action required for JAR-FCL and EC 2042/03 Part 66 licensed staff



### **21.3.7 Simplified procedure to transfer duties, functions and responsibilities to the HCAA from another Authority that follows the EASA system**

The procedure of the paragraph 21.3.5 is followed. The following items are not necessarily examined:

Airworthiness – the assigned inspector identifies whether the aircraft is following the EASA system. In this case additional arrangement to the airworthiness are not required. Ensure that the operators' CAMO is responsible for the aircraft. Check for exemptions. Not applicable for non-EASA (Annex II to the EC 216/08) aircraft.

Operations – simplify the procedure for aircraft operating under EU AOC taking into consideration the intended operation of the aircraft

Licensing – no action required for JAR-FCL and EC 2042/03 Part 66 licensed sta

### **21.3.8 Instruction for use of the Model agreement**

It should be understood that the Model Agreement couldn't be just printed and submitted for signature as it is. Each paragraph shall be read, understood, examined and revised in certain level within the scope and conditions of each Agreement that will be signed.

In respect to each paragraph please follow these instruction:

Terms in brackets shall be replaces by names of States, Operators, Maintenance organisation, Persons etc. as applicable

State X - is State of Registry, in case of Greece – Hellenic Republic

State X – CAA – Civil Aviation Authority of the State of Registry, in case of Greece – Hellenic Civil Aviation Authority

State Y – is State of the Operator i.e. the State that issued the Operator's AOC, in case of Greece – Hellenic Republic

State Y – CAA – Civil Aviation Authority of the State of the Operator, in case of Greece – Hellenic Civil Aviation Authority

In Article II - Transferred Responsibilities:

Annexes 1,2,6,8 should be referred. Refer responsibilities transferred to the State of the Operator and remaining within the State of Registry. Use the following statement for instance:

CAA X will retain the responsibility under the Convention for the regulatory oversight and control of the following ICAO Annex (-es)....

Annex 1 – licenses issued of rendered validity Annex 1, 1.2.2

Annex 6 – Functions and duties that are normally incumbent on the State of Registry can be transferred all or part of them. Function and duties that are incumbent on the State of the Operator need not to be transferred. Refer to respective Part of the Annex 6 for helicopter and general aviation aircraft (aerial work).

Annex 8 – the Attachment 2 to the model Agreement should not be used if the control remains within the State of Registry

Maintenance Control Manual (MCM) – Operator's CAME in terms of EASA.

In Article III – Notification:

The State of the Operator normally undertakes the responsibility to notify the ICAO and the States concerned except if otherwise agreed.

The certified copy (certified by the State Y – CAA) shall be at least in English.

Certified true copy of AOC – as required by ICAO

Remove the copies from each aircraft upon termination of the Agreement



#### Article IV- Coordination

Specify the interval of the meetings or other means of communication if meetings are inappropriate.

The same conditions for the operation and maintenance of aircraft shall be verified if aircraft is subleased.

Assure that besides the meetings the State X – CAA retains the right to conduct inspections or audits, as it deems necessary, in order to verify that State Y – CAA is fulfilling its safety oversight obligations as transferred from State X. State X – CAA will be permitted access to State Y – CAA documentation concerning the Operator. Such inspections will occur only after reasonable notice (determine in the Agreement if necessary) is given to State Y – CAA.

Common audits to the Operator seem to be appropriate way for both Parties.

#### Article V – Final clauses

Specify the date of entry into force if different.

HCAA Governor normally represents the HCAA

#### In Attachment 1

Aircraft type – as specified in Type Certificate and referred in Certificate of Airworthiness

#### In Attachment 2

Mandatory continuing airworthiness information – the way of transmitting the information to the State Y – CAA and to the Operator shall be determined in order to assure compliance in timely manner. Develop or adopt requirements (if Parties have different requirements) to ensure the continuing airworthiness of the aircraft during its service life – the Agreement period

Communication with the State of Design – Communicate the Agreement to the State of Design to ensure that all information concerning the aircraft will reach the responsible Authority and the Operator

Annex 6, Part I – relevant parts of Annex 6 to be stated for helicopters or general aviation aircraft. For aircraft which operation is not covered by ICAO Annex 6 specific requirements should be developed.

Operation of aircraft in compliance with its C of A – Limitations to operation of the aircraft stated in C of A shall not be violated

Operator's maintenance responsibilities – for operators other than EU operators (for which EC 2042/03 Part 145 AMO is required) or operators following EASA system specific conditions maintenance and return to the EASA system shall be determined. Determine the condition for airworthiness of the aircraft if damaged and the procedure for ferry flight (Special flight permit).

Operator's MCM - Include to approved Operator's CAME (if functions and duties are transferred to HCAA) in manner acceptable to the State of Registry.

Maintenance records – Determine the interval (normally 6 months) and the way of inspections. In some cases it could be difficult to inspect of spot. Inspect of e-records could be appropriate. Access to the relevant operator's record shall be granted for inspectors of the State of Registry.

Continued airworthiness information – amend the MCM (CAME) if necessary.

Modification and repairs – the Operator shall follow the EC 748/12 for Greek register aircraft. Ensure that the Operator understand the relevant part of the EASA Implementing Rules.





Approved maintenance organisation and maintenance release – determine by specific agreement if organisation other than Part 145 AMO (for line or base maintenance) will be used

### 21.3.9 Attachment I

#### AGREEMENT BETWEEN STATE X AND STATE Y CONCERNING THE TRANSFER OF REGULATORY OVERSIGHT FUNCTIONS AND DUTIES

WHEREAS the Protocol relating to Article 83 bis of the Convention on International Civil Aviation (Chicago, 1944) (hereinafter referred as “the Convention”), to which STATE X and STATE Y 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 State X (State of Registry) and State Y (State of the Operator) in accordance with the Convention;

WHEREAS, with reference to the relevant Annexes to the Convention, this Agreement organizes the transfer from State X to State Y of functions and duties normally carried out by the State of Registry, as set out in Articles III and VI below;

The Government of State X, represented by its Civil Aviation Authority X and the Government of State Y, represented by its Civil Aviation Authority Y hereinafter referred to as “Parties”;

Declaring their mutual commitment to the safety and efficiency of international aviation;

Recognizing that both Governments have a mutual interest in ensuring the flight safety of aircraft engaged in international air navigation for aircraft operating on the State X Register of Aircraft and Flight Crew under an Air Operator Certificate (AOC) issued by State Y;

Desiring to ensure the continued safety of aircraft operating on the State X register under a transfer agreement;

Have agreed as follows:

*The Agencies responsible for implementing this Agreement shall be CAA X for the Government of State X and CAA Y for the Government of State Y.*

#### Article I – Scope

This Agreement has been developed based on Articles 33 and 83 bis of the Convention. The scope of this Agreement shall be limited to (types of aircraft) on the register of civil aircraft of State X and operated under leasing arrangement by (operator), whose principal place of business is in State Y. This Agreement pertains to the transfer of certain functions and duties contained in the Int Aviation Organization (ICAO) Annexes set out below between CAA X and CAA Y and is limited to aircraft on the State X register operated by State Y air operators as specified by type, registration mark and serial number in the attached Schedule 1, which also indicates the term of each leasing arrangement. 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 State X (State of Registry) and State Y (State of the Operator).

The State of Registry shall be relieved of responsibility in respect of the functions and duties transferred to the State Y, upon due publicity or notification of this Agreement as determined in paragraph b) of Article 83 bis.

#### Article II



Under this Agreement, the Parties agree that State X transfers to State Y the following functions and duties, including oversight and control of relevant items contained in the respective Annexes to the Conventions:ernational Civil

Annex 1 – Personnel Licensing, issuance and validation of licenses

Annex 2 – Rules of the Air, enforcement of compliance with applicable rules and regulations relating to the flight and maneuver of aircraft

Annex 6 – Operation of Aircraft (Part I – International Commercial Air Transport – Aeroplanes), all responsibilities which are normally incumbent on the State of Registry. Where responsibilities in Annex 6, Part I, may conflict with responsibilities in Annex 8 – Airworthiness of Aircraft, allocation of specific responsibilities is defined in Attachment 2.

Under this Agreement, while State X will retain full responsibility under the Convention for the regulatory oversight and control of Annex 8 – Airworthiness of Aircraft, the responsibility for the approval of line stations used by the operator, which are located away from its main base, is transferred to State Y. The procedure related to the continuing airworthiness of aircraft to be followed by the operator will be contained in the operator's maintenance control manual (MCM). Attachment 2 hereunder describes the responsibilities of the Parties regarding the continuing airworthiness of aircraft.

#### Article III – Notification

Responsibility for notifying directly any States concerned of the existence and contents of this Agreement pursuant to Article 83 bis b) rests with State Y as the State of Operator, as needed. This Agreement, as well as any amendments to it, shall also be registered with ICAO by State X as the State of Registry or State Y as the State of the Operator, as required by Article 83 of the Convention and in accordance with the Rules for Registration with ICAO of Aeronautical Agreements and Arrangements (Doc 6685).

A certified true copy (in each language) of this Agreement shall be placed on board each aircraft to which the Agreement applies.

A certified true copy of the air operator certificate (AOC) issued to operator by State Y, in which the aircraft concerned will be dully listed and properly identified, will also be carried on board each aircraft.

#### Article IV – Coordination

Meetings between State X – CAA and State Y – CAA will be held in three months intervals to discuss both operations and airworthiness matters resulting form inspections that have been conducted by respective inspectors. For the sake of enhanced safety, these meetings will take place for the purpose of resolving any discrepancies found as a result of the inspections and in order to ensure that all parties are fully informed about the operator's operation. The following subjects will be among those reviewed during these meetings:

- Flight operations
- Continuing airworthiness and aircraft maintenance
- Operator's MCM procedures, if applicable
- Flight and cabin crew training and checking
- Any other significant matters arising form inspections

Subjected to reasonable notice, State X – CAA will be permitted access to State Y – CAA documentation concerning operator in order to verify that State Y is fulfilling its oversight obligations as transferred from State X.

During the implementation of this Agreement, and prior to any aircraft subject to it being made the object of a sub-lease, State Y, remaining the State of the Operator, shall inform State X. None of





the duties and functions transferred from State X to State Y may be carried out under the authority of a third State without the express written agreement of State X.

#### Article V – Final clauses

This Agreement will enter into force on its date of signature, and come to an end for aircraft listed in Attachment 1 at the completion of the respective leasing arrangements under which they are operated. Any modification to the Agreement shall be agreed by the parties thereto in writing.

Any disagreement concerning the interpretation or application of this Agreement shall be resolved by consultation between the Parties.

In witness thereof, the undersigned directors of civil aviation of State X and State Y have signed this Agreement.

For the  
Government of State X

For the  
Government of State Y

Signature  
Name  
Title  
Place and Date

Signature  
Name  
Title  
Place and date

#### Attachments:

Attachment 1 – Aircraft Affected by this Agreement

Attachment 2 – Responsibilities of State X and State Y Regarding Airworthiness

### 21.3.10 Attachment II

#### EXCHANGE OF LETTERS BETWEEN STATE X AND STATE Y (by FACSIMILE)

##### TELEFAX

To: CAA Y

Subject: Operator in State Y

Dear Sir,

As you are informed, the above-mentioned operator intends to lease type aeroplane, registration no.

Since we see ourselves, in this case, unable to fulfill the responsibilities of the State of Registry, we kindly request that your Authority supervise flight operations and maintenance of the said airplane in accordance with ICAO Annex 6, Part I, Chapter 3, while being operated by Operator in State Y until date.

We kindly ask you to observe that:

The State X airworthiness requirements have to be complied with  
Maintenance shall be performed only by regionally approved organisations  
Major incidents and accidents shall be reported to State X – CAA  
Modifications performed during the lease period shall be stated and reported



Please be informed that according to our national regulations, the annual maintenance check review (maintenance inspection) has to be informed by a State X maintenance organisation.

Your reply would be appreciated.

Best regards,

\*Deputy Head of Division, Licensing of Air Carriers of CAA X

Instructions for use of the letter:

Header - Use standard HCAA header valid

Airplane – airplane or helicopter as applicable

State X airworthiness requirements - requirements for certification and maintenance of the aircraft

Annual maintenance check review – airworthiness review to be performed by CAMO. This form of letter is not appropriate if agreed that the aircraft will (for the period of lease) follow other than EASA system

\*Deputy Head....- state the correct title i.e. normally Flight Standard Division Director

### 21.3.11 Attachment III

#### LETTER

To: State X – CAA

Subject: Dry lease of aircraft type registration no. from company in State X to operator in State Y to be operated in commercial air transportation operations up to date

Dear Sirs,

With reference to your letter reference, we wish to inform you that State Y-CAA is willing to accept, in accordance with the provisions of Article 83 bis of the Convention on International Civil Aviation, the continued transfer of operations, personnel and continuing airworthiness surveillance responsibilities related to the subject aircraft while being operated by operator in State Y until date.

In accordance with ICAO recommendations, please also consider that your delegation is understood and will be accomplished by State Y – CAA with the following conditions. These conditions, in line with what has already been agreed in previous similar cases, provide working arrangements between State X – CAA and State Y CAA describing how they discharge their legal responsibilities for the operations, personnel and continuing airworthiness surveillance of the subject aircraft when operated by operator in State Y in commercial air transportation operations under a dry lease agreement. These arrangements will also avoid undue burden on the operators by eliminating duplication of tasks as much as possible.

Delegated responsibilities and oversight/control functions:

1. ICAO Annex 6, Part I
2. ICAO Annex 8, Part II, 4, 6 and 8 (only those portions that provide for aircraft operator and operator's Authority responsibilities in relation to the intended operations)
3. ICAO Annex I

Working arrangements:

- The aircraft must comply with State X – CAA approved aircraft type design; State Y – CAA will be responsible for supervising compliance with this requirements after aircraft delivery



all the time the aircraft is being operated by the national operator under foreign country of registration marks

- The aircraft must comply with State X – CAA airworthiness directives (AD's); in this regard, the State Y – CAA operator will be requested to make a subscription for applicable State X – CAA AD's and any other airworthiness action mandated by State X – CAA in accordance with State X – CAA current distribution system. State X – CAA will provide, periodically, the State Y – CAA Regional office of address and numbers with an updated list of State X – CAA AD's applicable to the aircraft type concerned and parts / products thereof. An alternative system to comply with these latter two conditions may be agreed to by State Y – CAA and State X – CAA, the involved counterparts, and the agreed solutions should be included in the leasing contract. The aircraft may also be requested to comply with State Y – CAA AD's applicable to the subject aircraft model and parts thereof, when an equivalent airworthiness action has not been made mandatory by State X – CAA or more restrictive terms of compliance are mandated by State Y – CAA. Terms of compliance with, and design implication of, the above-mentioned mandatory airworthiness actions, as well as any derogation to the State X – CAA AD's, if requested or necessary, will be coordinated between State Y – CAA and State X – CAA.
- Aircraft shall be maintained in accordance with the approved maintenance programme (AMP), approved by State Y – CAA for the lessee for the specific type of aircraft. Surveillance of aircraft maintenance will be performed by State Y – CAA in accordance with its national procedures; any variations, if requested, to the AMP (e.g. short-term interval extensions, escalations) will be approved by State Y – CAA in accordance with the pertinent procedures approved for the State Y operator. (State Y requirements and guidelines for AMP management are in line with relevant regional requirements, guidelines and interpretative materials.)
- Major repairs and modifications to be performed on the aircraft shall be approved by State X – CAA. As an alternative, when delegated by State X – CAA, State Y – CAA may approve modifications and repairs in accordance with its national procedures or with procedures provided by State X – CAA on case-by-case basis. Minor repairs will be approved according to the procedures of the operator's Authority. Repairs in accordance with the approved structural repair manual (SRM) are considered as approved; any deviations from the SRM, once classified by State Y – CAA as minor or major, will be approved in accordance with the above-mentioned pertinent procedure.
- The aircraft shall be operated in accordance with the State X – CAA approved aeroplane flight manual (AFM) and the State Y – CAA approved minimum equipment list (MEL) that has not to be less restrictive than the approved master minimum equipment list (MMEL); any deviation from the approved MEL shall be approved by State Y – CAA in accordance with the pertinent procedures approved for the State Y operator
- Aircraft shall be requested to be equipped in accordance with the State Y operational requirements for the intended type of operations. Consequently, the State X – CAA approved AFM may be requested to be integrated accordingly with the State Y – CAA required and approved supplements, with the agreement of State X – CAA. If major changes to aircraft type design would be necessary for such a configuration, they would be treated in accordance with the provisions described above.
- Information, written in English, on significant in-service occurrences that affect or could affect the continuing airworthiness of the aircraft shall be provided by the lessee to the organisations responsible for the type design, State Y – CAA and State X – CAA, as soon as possible but not later than three days after any such occurrence. State Y – CAA shall provide State X – CAA with more detailed information on investigation processes of those major events for which mandatory airworthiness actions are taken or deemed necessary by State Y – CAA. In case of in-service occurrences that could invalidate the aircraft certificate of airworthiness (C of A), State Y – CAA is entitled to prevent aircraft from resuming any operations and shall also inform State X – CAA in order to allow proper corrective actions.
- All the maintenance inspections, repairs and modifications to be performed on the aircraft have to be carried out by a regional, appropriately approved / accepted maintenance organization.
- Maintenance activities must be performed by personnel licensed or qualified within an organisation accepted by State Y – CAA in accordance with national regulations.



- Flight operations will be conducted by the State Y operator employing flight crew members holding an appropriately rated license issued or validated by State Y – CAA in accordance with national regulations and validated by State X – CAA.
- Aircraft C of A shall be renewed by State X – CAA on the basis that the aircraft has been properly maintained and is in condition for safe operation. As agreed, and upon timely application from the lessee, State Y – CAA will perform, in accordance with its internal procedures and the provisions of the present letter, a complete yearly inspection of the aircraft to determine whether it is in an airworthy condition. State Y – CAA will then provide State X – CAA with the herein enclosed “STATEMENT” with the attached copy of the relevant State Y – CAA internal inspection report. A copy of this documentation shall be sent to company in State X and kept aboard the aircraft together with the State X – CAA C of A.
- The lessee shall be responsible for maintenance and record keeping during the leasing period in accordance with ICAO Annex 6 and national procedures; all the maintenance records, as described in ICAO Annex 6, shall be transferred to the lessor when the aircraft will be leased back.
- Aircraft operations, being the aircraft operated under the State Y lessee’s AOC / license, will be carried out under the provisions of the applicable State Y rules and regulations; surveillance will be accomplished by State Y – CAA in accordance with the current national procedures
- The lessor and lessee shall be engaged to provide free access for State Y – CAA and State X – CAA inspections, respectively, at any time it will be required. Maintenance and operational records must be up to date and available upon request from State Y – CAA and State X – CAA until the end of the delegation. The associated documents shall be issued in English.
- The leasing contract and the lessee’s State Y – CAA approved/accepted maintenance and organization manuals must reflect the above-mentioned conditions, as applicable.

The agreement reached through this letter and your letter of delegation mentioned above will be registered with ICAO in accordance with ICAO provisions. The State Y operator will be requested to keep on board during the lease period a certified, through copy of the above-mentioned letters.

If you need any further information, please do not hesitate to contact the undersigned

Yours sincerely,



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