Part 145 Maintenance Organisation Exposition Guidance

CAP 2375

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Section 0 - Introduction

0.1 Revision History

Issue	Summary of Change	Date
01	Initial Draft	15/07/2022
02	Clarification of Appendix IV requirements Addition of delegated AM signature to AM Statement & Safety Policy Clarification of Acceptance of maintenance task by pilots Minor formatting and typographical issues	20/02/2023
03	Complete revision of document to incorporate SMS into Part 145 1. Removal of Section 6 'Fabrication of Parts 2. Removal of Section 7 'Appendix IV Certifying staff' – (guidance now on CAA website) 3. minor formatting, typographical issues	07/06/2024

0.2 Definitions & Abbreviations

AMC Acceptable Means of Compliance
AML Aircraft Maintenance Licence
AMM Aircraft Maintenance Manual
AMO Aircraft Maintenance Organisation
AMTO Approved Maintenance Training Organisation
ANAC Brazilian Aviation Authority
AOG Aircraft on Ground
CAA Basic Regulation 2018/1139, Article 3 Definitions (34) 'the CAA' means the Civil Aviation Authority
CAAS Civil Aviation Authority of Singapore
CAP Civil Aviation Publication
C/S Certifying Staff
CC/S Component Certifying Staff (includes Engine and APU certifying staff)
CMM Component Maintenance Manual
DAH Design Approval Holder
EASA European Aviation Safety Agency
EU European Union
ESM Engine Shop Manual
FAA Federal Aviation Administration
GM Guidance Material
ICAO International Civil Aviation Organisation
ILAC International Laboratory Accreditation Cooperation
IORS Internal Occurrence Reporting Scheme
MOA Maintenance Organisation Approval
MOAP Maintenance Organisation Approval Procedures
MOE Maintenance Organisation Exposition
MOR Mandatory Occurrence Reporting
NDT Non-Destructive Testing
NDI Non-Destructive Inspection
OEM Original Equipment Manufacturer
OJT On the job training
'Overseas Approvals' means a third country approval or where an organisation is seeking an airworthiness approval to be issued by the CAA in relation to an organisation where the PPoB is in a state or territory other than the UK.
PMA Parts Manufacturer Approval
POA Production Organisation Approval
PPB Principal Place of Business
SRM Structural Repair Manual
S/S Support Staff
SRM Structural Repair Manual
STCH Supplemental Type Certificate Holder
TCCA Transport Canada Civil Aviation
TCH Type Certificate Holder
UKAS United Kingdom Accreditation Service
WH Working Hours

0.3 Scope & Applicability

The Civil Aviation Authority (CAA) is the Competent Authority for organisations holding a UK Part 145 approval having their principal place of business located within the UK or overseas. The CAA is responsible for the approval of these maintenance organisations and for establishing procedures detailing how Part-145 applications and approvals are managed.

The provisions of this guidance document are complementary to the requirements of Part-145 regulation, as amended, and does not supersede or replace the associated regulatory requirements.

Any regulatory references contained in this document are referencing UK legislation only

0.4 Purpose

This user guide is designed to be used by:

- Approved Maintenance Organisations - To assist them in the production of their own MOE.
- The CAA – For guidance when conducting routine reviews and oversight.
- Along with Part 145 holders guidance as published on the CAA Website.

0.5 Associated Instructions

The CAA has developed associated instructions including Forms and Templates, that detail specific matters which must be considered as an integral part of this procedure.

A complete listing of these documents, together with their applicability to the maintenance organisations, can be found on the CAA website: Guidance for Part 145 approval holders | Civil Aviation Authority (caa.co.uk)

0.6 Communication

All documents and correspondences between the maintenance organisation and the CAA must be in the English language.

Section 1 - General Guidance – Maintenance Organisation Exposition (MOE)

1.1 Preliminary Considerations

The MOE must be customised by each organisation to demonstrate how they comply with:

- Part 145. This includes requirements of Part-M or Part-ML referred in Part-145 regulation, as applicable, and
- the Part M paragraphs applicable to Maintenance Organisations and not already referred/mirrored in the Part-145 regulation, as listed below:
    - M.A.201 (c) – Responsibilities,
    - M.A.403 (b) – Aircraft defects.

For each detailed procedure described within the MOE, the Part 145 organisation should address the following questions:

- *What and when must it be done? Where and how must it be done? Who should do it?*
- *Which procedural documentation should be used?*

The organisation may choose to use another format to the one described in this guide, as long as all the applicable sections of the regulation are addressed and cross-referenced appropriately.

AMC1 145.A.70(a) states: “Where an organisation uses a different format, for example, to allow the exposition to serve for more than one approval, …….”

It should be noted that deviating from the basic format may result in longer review periods, for approval by the CAA.

AMC1 145.A.70(a) must be read in conjunction with the implementing rules of the Basic Regulation, thereby limiting the use of the CAA Part 145 MOE for approvals covered by the Basic Regulation. Consequently, the CAA MOE, associated procedures and lists shall not refer to any national approval and must be exclusively dedicated to the CAA Part 145 approval.

1.2 Exposition Format & Language

It is the CAA policy that the MOE must be produced in an electronic format, such as a Portable Document Format (PDF). This must then be submitted via the guidance on the CAA approvals webpage.

The MOE must be submitted in English as the dominant language and in the case of a multilingual MOE, the English text must precede the second language. The organisation is responsible for ensuring that translation is accurate.

1.3 Terms of Use

For the purposes of this guidance material, the references to the MOE document are identified by the following terms:

- “MOE Part” is used to identify the main parts of the MOE (e.g., Part 1 - General, Part 2 - Maintenance Procedures, Part 3 – Management System Procedures, etc.) as identified in the AMC1 145.A.70(a).
- “MOE chapter” is used to identify each chapter within an MOE Part (e.g., MOE 1.2 - Safety policy and objectives, MOE 3.2 - Internal safety reporting and investigations, MOE 5.1 - Sample of documents, etc.) as identified in the AMC1 145.A.70(a).
- “MOE paragraph” is used to identify a paragraph within an MOE chapter (e.g., MOE 3.9.1 – “Aircraft Certifying Staff and /or Support Staff,” MOE 3.9.2 - “Components/Engines/APU Certifying Staff,” etc.). At the paragraph level the numbering system is not identified in Part 145 and is left to the discretion of the organisation.

1.4 Structure of the Exposition

The MOE may be produced in the form of a single document or may consist of several separate documents.

- Single document: The standard MOE produced in accordance with. 145.A.70(a) subparagraphs (6) and (12) to (17) inclusive, whilst a part of the maintenance organisation exposition, may be kept as separate documents or on separate electronic data files subject to the management part of said exposition containing a clear cross-reference to such documents or electronic data files.
- AMC1 145.A.70(a) is a unique and complete document. It must contain all the information required to show compliance with the regulation including detailed maintenance procedures and detailed management system procedures (see AMC1 145.A.70(a)).
- (Associated documentation): The MOE shall cross refer to any associated procedures, documents, appendices, forms or lists which are managed separately (e.g., the list of Certifying Staff, the capability list, the list of sub- contractors, etc). These should be summarised in chapter 1.11. Associated Procedure: means a procedure providing additional and customised details on how the organisation intends to comply with applicable requirements.
- The associated documents must meet the same rules as described for the MOE and shall not refer to any other approvals.
- The associated documents, procedures and forms etc. shall be provided to, and be approved by the CAA (as part of the overall MOE approval).
- In the case of a referenced document, the MOE chapter shall contain a concise summary of compliance to the relevant areas of standard of the regulation. A simple reference to a separate document is not acceptable.

For any MOE chapters that are not applicable, the MOE should clearly indicate this.

1.4.1 Management Control of the MOE

In order to properly monitor the approval, it is essential that the organisation clearly identifies the particular edition of the MOE and subsequent changes to it.

The MOE chapter 1.10 and 1.11 is intended to detail the methods chosen to identify changes to the MOE (e.g., issue/revision number, vertical bars, etc.).

MOE identified by both, an Issue number and Revision number.

This method uses two different numbering systems (Issue and Revision number).

MOE Changes not requiring prior approval by the CAA only require a revision number change however, when the organisation makes a change requiring prior approval by the CAA, this will warrant an issue number change, the revision number will start again from “0”.

An organisation may use this technique to delineate between large changes requiring the CAA approval (Issue change) and small changes, approved by the organisation under an Indirect approval process (revision change). This capability will be considered on request.

Issue number	Issue date	Revision number	Revision date
1 **(initial)**	1/1/2021	0	1/1/2021
		1	17/2/2021
		2	25/3/2021
2	20/4/2021	0	20/4/2021
		1	10/5/2021
		2	15/6/2021

Note: the modified text should be clearly identified, e.g., using vertical bars, highlighting the changed text with a specific colour, etc.)

1.4.2 Exposition Pages Presentation

Each page of the MOE shall be identified as follows (this information may be added in the header or footer), as applicable depending on the MOE revision identification option chosen in the previous chapter of this User Guide:

- the name of the organisation (official name as defined on the CAA Form 3-145 approval certificate)
- the issue number of the MOE.
- the issue date.
- the revision number of the MOE.
- the revision date.
- the chapter of the MOE (e.g., 1.5).
- the page number.
- the name of the document "Maintenance Organisation Exposition."
- The PART 145 organisation's Approval reference.
- The organisation's Principal Place of Business address, telephone, fax numbers and any generic e-mail address.

1.5 MOE Initial Approval Process

1.5.1 First Submission of the draft MOE.

Prior to submission of the 'draft' MOE to the CAA for approval, the Accountable Manager must sign and date the statement within (MOE chapter 1.1). This confirms that they have read the document and understand their responsibilities under the approval. In the case of change of the Accountable Manager the new incumbent shall sign the document and submit a suitable amendment to the CAA for approval.

1.5.2 Tracking Changes to the Initial draft MOE.

Following the receipt of the first "draft" MOE, the CAA will review it and formulate eventual remarks in writing to the maintenance organisation.

At the receipt of such remarks, the maintenance organisation is expected to revise the first "draft" and produce a second "draft" MOE, where all the remarks have been addressed. To have a clear tracking of the changes and to allow the review of the revised MOE by the CAA, the following is expected:

- The maintenance organisation shall reply in writing to each remark explaining how it has been addressed and in which MOE chapter/paragraph.
- The maintenance organisation shall issue a second "draft" MOE, which clearly identifies the changes introduced. This could be done by:
  - Maintaining the MOE "draft" identified as "initial" (i.e., Issue 1, Rev. 0), but changing the date to identify the new draft issued.
  - Identifying clearly the text modified in each MOE chapter/paragraph (e.g., using vertical bars, highlighting with a specific colour the changed text, etc.)

This process will be eventually continued with the issue of a third, fourth, etc. "draft" MOE, until the Exposition is considered acceptable by the CAA in order to proceed further with the technical investigation process.

Note: The same principle applies to the successive revisions of the MOE and also to the documents associated to the exposition such as procedures and lists subject to CAA approval.

Section 2 - MOE Structure, Content & Format

Part 0 - Introduction

The following section provides AMC for the contents of an MOE. The paragraph numbering conforms to that detailed in Part-145.

0.1 Table of Contents

AMC1 145.A.70(a)

For standardisation purposes and to facilitate the production of the MOE by the Part 145 maintenance organisation, the CAA recommends the use of the MOE table of contents which should be provided in the chapter 0.1 “table of contents” of this User Guide (MOE Part 0 to Part 5). The maintenance organisation should customise the document to suit their organisation and may add pages/paragraphs, as necessary.

The Exposition chapter numbering should remain aligned to the high-level chapters i.e. 1.1, 1.2, 1.3 etc. so as to aid reviews at the point of the approval continuation.

Where any part / section is not used or not relevant to the applicable organisation, then it must be shown in the Exposition as ‘Not Applicable.’

0.2 List of Effective Pages

See 1.4.1 of this document for details on Issue/Revision numbering. The example below is uses both an Issue number and Revision number and clearly indicated the revision date of each page.

Page no.	Issue no.	Revision no.	Revision Date	Page no.	Issue no.	Revision no.	Revision Date
PART 0				121	**1**	1	01/01/22
001	**2**	**0**	01/01/22	122	**1**	1	01/01/22
002	**2**	**0**	01/01/22	**PART 2**			
003	**2**	**0**	01/01/22	201	**1**	**0**	19/12/23
004	**2**	**0**	01/01/22	202	**1**	**0**	19/12/23
005	**2**	**0**	01/01/22	203	**1**	**0**	19/12/23
006	**2**	**0**	01/01/22	204	**1**	**0**	19/12/23
007	**2**	**0**	01/01/22	205	**1**	**0**	19/12/23
008	**2**	**0**	01/01/22	206	**1**	**0**	19/12/23
009	**2**	**0**	01/01/22	207	**1**	**1**	01/01/22
PART 1				**PART L2**			
101	**1**	**0**	19/12/23	L201	**1**	**0**	19/12/23
102	**1**	**0**	19/12/23	L202	**1**	**0**	19/12/23
103	**2**	**0**	01/01/22	L203	**1**	**0**	19/12/23
104	**1**	**1**	01/01/23	L204	**1**	**0**	19/12/23
105	**1**	**1**	01/01/23	**PART 3**			
106	**1**	**0**	19/12/23	301	**2**	**0**	01/01/22
107	**1**	**1**	01/01/23	302	**2**	**0**	01/01/22
108	**1**	**1**	01/01/23	303	**1**	1	01/01/22
109	**2**	**0**	01/01/22	304	**1**	1	01/01/22
110	**1**	**1**	01/01/23	305	**1**	**0**	19/12/23
111	**1**	**0**	19/12/23	306	**1**	**0**	19/12/23
112	**1**	**1**	01/01/23	307	**1**	**0**	19/12/23
113	**1**	**0**	19/12/23	308	**1**	**0**	19/12/23
114	**1**	**0**	19/12/23	**PART 4**			
115	**1**	**1**	01/01/23	401	**2**	**0**	01/01/22
116	**1**	**0**	19/12/23	402	**2**	**0**	01/01/22
117	**1**	**0**	19/12/23	403	**2**	**0**	01/01/22
118	**1**	**0**	19/12/23	**PART 5**			
119	**1**	**0**	19/12/23	501	**2**	**0**	01/01/22

MOE **Issue 2, Revision** 0 dated **01/01/12**

MOE internal Review by the organisation:

Reviewed by: (name, position and signature)	**Date:** xx/xxx/xxxx

MOE Approval[1] (to be only used in case of MOE change not requiring prior approval):

Approved by: (name, position and signature)	**Date:** xx/xxx/xxxx

[1] *In the case of MOE requiring prior approval by the CAA, the MOE approval is given through a formal letter issued by the UK CAA. This letter shall be made available to the final users also. The compliance monitoring function is responsible to ensure that only the approved MOE is made available to maintenance personnel.*

- In the case of MOE change not requiring prior approval, the MOE is completed by the organisation entering the date of the MOE approval, the name, position and signature of the approving person.

0.3 List of Issues / Amendment Record of Revisions

This paragraph details the changes made in each Issue or Revision change.

Issue number	Issue date	Revision number	Revision date	Revision type (Change requiring prior approval / Change not requiring prior approval	Reason for change
1	19/12/23	0 1	19/12/23 01/01/22	**INITIAL**	**n/a** New procedure for cleaning.
2	01/01/22	0	01/01/22	Change requiring prior approval	MOE 1.3 Change of Compliance Manager. MOE 1.9 Extension of the A1 scope of approval to add aircraft Boeing 878-8/9/10 (GEnx).
3	30/01/23	0	30/01/23	Change not requiring prior approval	Minor correction to spelling and grammar in Sections 2 and 3

0.4 Distribution List

This paragraph shall list the recipients of copies of the MOE.

MOE COPY NUMBER	MOE HOLDER	FORMAT
Copy No. 1	Accountable Manager	PDF
Copy No. 2	Engineering Director	PDF
Copy No 3	Safety Manager	PDF
Copy No 4	Aircraft Maintenance Manager	PDF
Copy No. 5	Workshop Maintenance Manager	PDF
Copy No. 6	Compliance Monitoring Manager	PDF
Copy No. 7	CAA	PDF
Copy No. 8	Reserved	
Copy No. 9	Reserved	

Part 1 – General

1.1 Statement by the Accountable Manager

Part 145.A.30 (a) (c) (e) (g) / AMC 145.A.30 (a) - Part 145.A.70 (a) / AMC1 145.A.70 (a) GM1 145.A.70 - Part 145.A.90(a)

This Exposition and any associated referenced manuals define the organisation and procedures upon which the Part 145 approval certificate is issued.

These procedures are endorsed by the undersigned and must be complied with, as applicable, when contracts or work/orders are being progressed under the organisation approval certificate.

These procedures do not override the necessity of complying with any new or amended regulation published from time to time where these new or amended regulations are in conflict with these procedures.

It is understood that the approval of the organisation is based on the continuous compliance of the organisation with Part-145, Part-M and Part-ML, as applicable, and with the organisation's procedures described in this exposition. The CAA is entitled to limit, suspend, or revoke the approval certificate if the organisation fails to fulfil the obligations imposed by Part-145, Part-M and Part-ML, as applicable, or any conditions according to which the approval was issued.

*Signed[2] .....

Dated .....

Accountable Manager and. (quote position if termed differently).....

For and on behalf of..... (quote organisation's name).....

**Signed[3] .....

Dated .....

CEO

(quote organisation's name).....

Whenever the Accountable Manager is changed it is important that the new Accountable Manager signs the statement at the earliest opportunity

The Accountable Manager must be the CEO or equivalent, unless otherwise agreed with the CAA.

[2] ***A new AM signature is required at each revision of the exposition***

[3] ***If the Accountable Manager is not the CEO, then the CEO must countersign***

1.1.1 Access to the Organisation.

Part 145.A.140

For the purpose of determining compliance with the relevant requirements of UK Reg (EU) 1321/2014, the organisation must ensure that access to any facility, aircraft, document, records, data, procedures or to any other material relevant to its activity subject to certification, whether it is subcontracted or not, is granted to any person authorised by the CAA.

1.1.2 Immediate reaction to a safety problem

Part 145.A.155

The organisation must implement:

(a) any safety measures mandated by the CAA in accordance with point 145.B.135.

(b) any relevant mandatory safety information issued by the CAA

1.2 Safety Policy and objectives

Part 145.A.30 (a) / Part 145.A.70 (a) 2 / 145.A.200 (a) 2/ AMC1 145.A.200(a) 2

The Safety Policy should:

- reflect organisational commitments regarding safety, and its proactive and systematic management, including the promotion of a positive safety culture.
- include internal reporting principles, and encourage personnel to report maintenance-related errors, incidents and hazards.
- recognise the need for all personnel to cooperate with the compliance monitoring and internal investigations referred to under point (c) of AMC1 145.A.200(a)(3).
- be endorsed by the accountable manager.
- be communicated, with visible endorsement, throughout the organisation; and
- be periodically reviewed to ensure it remains relevant and appropriate for the organisation.

The safety policy should include a commitment to:

- Comply with all the applicable legislation, to meet all the applicable requirements, and adopt practices to improve safety standards.
- provide the necessary resources for the implementation of the safety policy.
- apply human factors principles, including giving due consideration to the aspect of fatigue.
- enforce safety as a primary responsibility of all managers; and
- apply ‘just culture’ principles to internal safety reporting and the investigation of occurrences and, in particular, not to make available or use the information on occurrences:
    - to attribute blame or liability to front-line personnel or other persons for actions, omissions or decisions taken by them that are commensurate with their experience and training; or
    - for any purpose other than maintaining or improving aviation safety.
- Senior management should continually promote the safety policy to all personnel, demonstrate its commitment to it, and provide necessary human and financial resources for its implementation.
- Taking due account of its safety policy, the organisation should define safety objectives. The safety objectives should:
    - form the basis for safety performance monitoring and measurement.
    - reflect the organisation’s commitment to maintain or continuously improve the overall effectiveness of the management system.
    - be communicated throughout the organisation; and
    - be periodically reviewed to ensure they remain relevant and appropriate for the organisation.

Example Safety Policy

For the purpose of the SMS scalability the following Safety Policy may be considered as an example and amended where appropriate to suit the organisation.

Safety is important to us as it helps us stay in business.

Our safety objective is simply for no aircraft accidents to occur as a result of our operations.

It is important that we meet all applicable regulations and where appropriate exceed them when a safety risk is identified.

I believe in a reporting system that allows people to report safety issues without fear of unfair reprisals. Everybody makes mistakes, and honest mistakes will be treated fairly. A healthy reporting system gives us the information to address safety issues as they arise, not when it is too late.

We expect everyone who works or is connected to our operations to report any safety related events or issues they identify to me or one of our staff. In this respect we will apply just culture principles to any event that is reported to us directly in a timely manner.

This will help our organisation to continuously improve our safety performance which is a shared responsibility.

Signed .....

Dated .....

Accountable Manager and.. (quote position).....

For and on behalf of..... (quote organisation’s name).....

1.3 Management Personnel

Part 145.A.30 (b) 1, 2, 3, (c) / AMC1 145.A.30 (b) 1,2,3,7,8 / GM1 145.A.30(b)(3) / Part 145.A.70 (a) 3

This chapter shall identify the maintenance management personnel of the organisation by listing, as a minimum, the title and names of the Accountable Manager plus all the persons nominated to hold a position as required by Part 145.A.30(b). Their respective deputies have also to be identified. The group of "nominated persons" shall be chosen/identified so that all the Part 145 functions are covered under their respective responsibilities and their credentials shall be submitted to the CAA using Form SRG 1769.

The MOE chapter 1.3 needs to be at any time consistent with the MOE chapters 1.4 and 1.5 and shall represent the up-to-date description of the management structure of the organisation.

1.3.1 Accountable Manager and Deputy.

The organisation should list the names and contact information of the AM and any nominated deputy.

1.3.2 Nominated Persons.

The organisation should list the names and contact information of any of the nominated personnel.

1.3.3 Deputy Nominated Personnel as per 145.A.30(b)

The organisation should list the names and contact information of any of the deputy nominated personnel.

1.3.4 Managers (if applicable).

The organisation should list the names and contact information of any of the nominated managers.

1.3.5 Responsible NDT Level III * (if applicable).

The organisation should list the names and contact information of the nominated Responsible NDT Level III personnel.

* AMC 145.A.30(f)(4) requires examinations related to NDT methods to be conducted by personnel or organisations under the general control of an NDT Board. To consider this requirement met, the

Responsible NDT Level III shall demonstrate they have been qualified in at least one method in accordance with EN 4179, ASNT or PCN Aero by an organisation under the control of a European NDT Board.

The following is an example of a typical management structure, where the name of the nominated persons must be identified. The organisation's procedures must make it clear who can deputise for any person in the case of lengthy absence i.e., longer than two weeks of the said person.

For any absence of a postholder, especially one that is likely to exceed 90 days, the allocated Surveyor must always be contacted.

(This may be done by detailing the procedures to appoint a deputy nominated person or by identifying directly the person by name). The organisation must ensure that any person who deputises has been appropriately competency assessed to do so.

Management Structure	***Deputies***
Accountable Manager	Deputy Accountable Manager
List of Nominated Personnel: • Base Maintenance Manager. • Line Maintenance Manager. • Workshop Maintenance Manager. • Compliance Monitoring Manager. • Safety Manager.	• Deputy Base Maintenance Manager. • Deputy Line Maintenance Manager. • Deputy Workshop Maintenance Manager. • Deputy Compliance Monitoring Manager. • Deputy Safety Manager.
List of Managers: • Auditing Manager. • Safety Reporting Manager. • Engineering Manager. • Logistic manager.	N/A
NDT Level III	N/A

Figure 1 - Management Structure

For the purpose of SMS scalability:

- The same person may be designated to manage both the compliance monitoring and the safety management function. The maintenance manager may also be the Accountable Manager,
- In a small organisation where the Accountable Manager also performs the role of any other Management Personnel, the requirements applicable to those personnel also apply.

Reference AMC1 145.A.30(b)(1), a maintenance function cannot be combined with the compliance monitoring function.

The Accountable Manager must ensure that sufficient resources are allocated to all functions, taking into account the size of the organisation, and the nature and complexity of its activities.

For the smallest of organisations, reference GM1 145.A.10, a combination of the above-mentioned post holders could apply, provided the independent audit element of the compliance monitoring function is subcontracted to an appropriate organisation approved under Part 145 or contracted to a person with appropriate technical knowledge and extensive experience of audits, working under the management system of the organisation, with the agreement of the CAA.

1.4 Duties & Responsibilities of Management Personnel

Part 145.A.30 (a) 1, 2, 3 (c) / AMC1 145.A.30 (a) (b) 3,4,5, (c) / Part 145.A.35 (i) / AMC 145.A.35 (a) 2 / AMC 145.A.45 (d) - Part 145.A.65 (a) / AMC1 145.A.65 / Part 145.A.70 (a) 1, 2 / Part 145.A.90 (a)/ 145.A.200 (a)/ AMC1 145.A.200(a)(1)

The duties and responsibilities of nominated persons identified in the MOE chapter 1.3 must be detailed in this chapter. It shall be ensured that all Part 145 functions are addressed, as applicable to the organisation.

Any Part 145 function, which is applicable to the organisation shall be under the responsibility of a Nominated Person as listed in MOE chapter 1.3 who shall ensure compliance of that function with the relevant Part 145 regulation requirements, e.g. to perform the independent audit, to issue the Part 145 C/S, CC/S, S/S individual authorisation, to have available appropriate facilities, tools and equipment, to issue a certificate of release to service, etc.

The responsibilities of a Nominated Person cannot be delegated to other Manager(s), unless such Manager(s) is/are identified as Deputy Nominated Person for the related function (i.e., Deputy Maintenance Manager).

The duties of any Nominated Person may be delegated to other Manager(s) who are reporting to them.

The MOE chapter 1.4 needs to be at any time consistent with the MOE chapters 1.3 and 1.5 and shall represent the up-to-date description of the management structure of the organisation.

1.4.1 Accountable Manager

Part 145.A.30(a), 145.A.30(b)

- The Accountable Manager is responsible for ensuring that maintenance conducted by the approved organisation meets the standards required by the CAA.
- They are responsible for establishing and promoting the safety policy and objectives.
- They are responsible for nominating the management staff.
- They are responsible for ensuring that the necessary finance, staff resources and facilities are available to enable the company to perform the maintenance to which it is committed for contracted operators and any additional work which may be undertaken.
- They are responsible for the supervision of the progress of the corrective actions/review of the overall results in terms of quality.
- They are responsible for ensuring the competence of all personnel including management personnel has been assessed.
- Must nominate a person or group of persons with the responsibility to manage the development, administration, and maintenance of effective safety management processes as part of the management system.
- They are responsible for ensuring that any charges are paid, as prescribed by the CAA in accordance with. the fees & charge regulation.
- They are responsible to return the approval certificate to the CAA in case of surrender or revocation.

Any additional duties and responsibilities may be added if they do not conflict with those of the other management personnel. Depending on the structure of the organisation some duties may be distributed differently.

1.4.2 Compliance Monitoring Manager

Part 145.A.30(c)

Duties and Responsibilities. (***The following list is not exhaustive***).

- The Compliance Monitoring Manager is responsible for establishing an independent quality assurance system to monitor compliance of the Part 145 organisation with the CAA requirements.
- They shall have direct access to the Accountable Manager on matters concerning the management system; Defines the human factors principles to be implemented within the organisation.
- They are responsible for implementing an audit programme in which compliance with all maintenance procedures is reviewed at regular intervals in relation to each type of aircraft (or component) maintained (including the management and completion of audits and production of audit reports). They should ensure that any observed non-compliances or poor standards are brought to the attention of the person concerned via their manager.
- They are responsible for follow up and closure of any non-conformance.
- The Compliance Monitoring Manager should establish regular meetings with the Accountable Manager to review the effectiveness of the management system. This will include details of any reported discrepancy not being adequately addressed by the relevant person or in respect of any disagreement concerning the nature of a discrepancy.
- They are responsible for verifying that any standard practices and procedures (MOE, including the associated procedure(s) developed by the maintenance manager for use within the organisation and ensuring their adequacy regarding Part 145 and any amendments to the Regulation.
- They are responsible for reviewing/auditing the submission of the MOE and any associated amendments, prior to submission the CAA for approval (which includes completion of and submission of application(s), CAA SRG 1769 or equivalent.
- They are responsible for assessing subcontractors and suppliers of new and used components and materials for satisfactory product quality in relation to the needs of the organisation.
- They are responsible for issue /renewal/cancellation of Part-145 C/S, CC/S, S/S individual authorisations.
- They are responsible for assessing subcontractors working under the organisations' management system and maintaining the expertise necessary to be able to do so, to the satisfaction of the CAA.
- They are responsible for assessing external specialist services required to be used by the organisation in the performance of maintenance.
- They are responsible for acceptance on temporary or occasional cases base maintenance tasks (AD's, SB's) to be performed by a line maintenance organisation.
- They are responsible for the notification to the CAA, as applicable according to the procedures established in the MOE, of maintenance activities conducted outside the approved locations.

It must be reminded that the compliance monitoring system is required to be "independent" which means that the Compliance Monitoring Manager and the Compliance Monitoring Staff are not directly involved in or responsible for the Part 145 function being audited (e.g., MOE update, maintenance process, maintenance certification, issue of authorisations, training, etc.).

Depending on the organisation structure, some of the compliance monitoring system duties may be delegated to one or several managers who report to the Compliance Monitoring Manager and are therefore required to submit a Form SRG1769.

Example of compliance monitoring manager duties that could be delegated:

1.4.2.1 Auditing Function – (Compliance Auditors)

Duties may include:

- Implementing an audit programme in which compliance with all maintenance procedures is reviewed at regular intervals in relation to each type of aircraft (or component) maintained (including the management and completion of audits and production of audit reports). The Auditing Manager should ensure that any observed non-compliances or poor standards are brought to the attention of the person concerned via their manager (CMM).
- Follow up and closure of any non-conformances identified.

1.4.3 Maintenance Manager (may be Base MM and/or Line MM and/or Workshop MM)

Part 145.A.30(c)

Duties and Responsibilities. (***The following list is not exhaustive***).

- They are responsible for the satisfactory completion and certification of all work required by contracted operators/customers in accordance with the work specification (Work Order and approved MOE procedures).
- They are responsible for verifying that the MOE updates including any standard practices, procedures (including the associated procedure(s) are developed by the maintenance manager for use within the organisation and are in compliance with Part 145 and any amendments to the Regulation.
- They are responsible for ensuring that the organisation's procedures and standards are complied with when conducting maintenance.
- They are responsible for ensuring the competence of all personnel engaged in maintenance.
- They are responsible for establishing a programme of training and recurrent training using internal and/or external sources (this responsibility may be also under the Compliance Monitoring Manager).
- They are responsible for ensuring that all sub-contract orders are correctly detailed and that the requirements of the contract/order are fulfilled in respect of inspection and quality control.
- They are responsible for providing feedback to the Compliance Monitoring System/Management System about the services provided by contracted Organisations and Subcontractors.
- They are responsible for responding to compliance deficiencies in the area of activity for which they are responsible, which arise from independent compliance monitoring audits.
- They are responsible for ensuring, through the workforce under their control, that the quality of workmanship in the final product is to a standard acceptable to the organisation and the CAA.
- They are responsible for the implementation of the safety policy and human factor issues.
- They are responsible for availability of facilities appropriate to the planned work including hangars, workshops office accommodation, stores as applicable for the planned work.
- They are responsible for availability of a working environment appropriate to the tasks being undertaken.
- They are responsible for the incoming inspection of components, parts, materials, tools and equipment, the related classification, segregation and storage according to the manufacturer’s recommendations.
- They are responsible to develop a production planning system appropriate to the amount and complexity of the maintenance scope of work.
- They are responsible for availability of tools, equipment and materials to perform the planned tasks.
- They are responsible for availability of sufficient competent personnel to plan, perform, supervise, inspect, and certify the work being performed.
- They are responsible for availability of all necessary maintenance data as required by Part 145.A.45.
- They are responsible to record and notify any inaccurate, incomplete, or ambiguous procedure, practice information or maintenance instruction contained in the maintenance data used by maintenance personnel to the author of maintenance data.
- They are responsible to provide a common work card or worksheet system to be used throughout relevant parts of the organisation and ensure such documents comply with 145.A.45 (e).

- They are responsible for notifying the Accountable Manager whenever deficiencies emerge which require attention in respect of finance and the acceptability of standards (Accountable Manager and Compliance Manager to be officially informed of any lack of 25% of available staff over a calendar month).
- They are responsible for supplying the necessary technical documents for customers and storage of the organisation's technical records.

Any additional duties and responsibilities may be added, provided they do not conflict with those of other management personnel.

Depending on the organisation structure, some of the maintenance duties may be delegated to one or several managers who report to the Maintenance Manager (may be Base MM and/or Line MM and/or Workshop MM) and are therefore not subject to a CAA SRG 1769.

Example of duties that could be delegated by the Maintenance Manager:

1.4.3.1 Engineering Function

Duties

- Ensuring the availability of all necessary maintenance data as required by Part 145.A.45.
- Supplying the necessary technical documents for customers and storage of the organisation's technical records.
- Recording and notifying any inaccurate, incomplete, or ambiguous procedure, practice information or maintenance instruction contained in the maintenance data used by maintenance personnel to the author of maintenance data.
- Providing a common work card or worksheet system to be used throughout relevant parts of the organisation and ensuring such documents comply with 145.A.45(e).

1.4.3.2 Goods-In Function

Duties

- performing the incoming inspection of components, parts, materials, tools and equipment, the related classification, segregation, and storage according to the manufacturer's recommendations.

1.4.4 Responsible NDT Level III[4]

Duties and Responsibilities. (***The following list is not exhaustive***).

- The person is responsible to ensure that the applicable NDT requirements (e.g.,145. A.30(f), EN4179, etc.) are met and to act on behalf of the employer in this area.
- The person is responsible to develop the MOE 3.17 procedures related to the qualification of NDT staff.
- The person is responsible to develop and approve the NDT Manual for specific technique(s) within each method used within the maintenance organisation.

[4] ***Even though the Responsible NDT level 3 does not directly report to the Accountable Manager, they shall provide a completed Form (SRG1769).***

1.4.5 Safety Manager

Part 145.A.30(c)

The safety manager remains the unique focal point for the development, administration, and maintenance of the organisation's safety management processes.

Duties and Responsibilities. (***The following list is not exhaustive***).

They are responsible for:

- managing the safety reporting scheme and the occurrence reporting system, including initiation and follow-up of internal occurrence investigations.
- The organisation should assign responsibility with clearly defined authority, for coordinating action on airworthiness occurrences and for initiating any necessary further investigation and follow-up activity. It is recommended that this function is attributed to the Safety Manager as it is strictly linked with the safety reporting scheme.
- They are responsible for coordinating action on airworthiness occurrences and for initiating any necessary further investigation and follow-up activity (145.A.60, AMC M.A.202(a), CAMO.A.160).
- They are responsible for establishing feedback from maintenance incidents/issues and feeding these back into the recurrent training programme.
- facilitate hazard identification, risk assessment and management.
- monitor the implementation of actions taken to mitigate risks, as listed in the safety action plan, unless action follow- up is addressed by the compliance monitoring function.
- provide periodic reports on safety performance to the safety review board.
- ensure the maintenance of safety management documentation.
- ensure that there is safety training available, and that it meets acceptable standards.
- provide advice on safety matters.

Example of duties that the Safety Manager could delegate:

1.4.5.1 Safety Reporting Function - (Occurrence reporting Manager)

- Managing the safety reporting scheme and the occurrence reporting system, including initiation and follow-up of internal occurrence investigations;

1.5 Management Organisation Chart.

Part 145.A.30(b)&(c) / AMC1 145.A.30(a)&(b)(1) - Part 145.A.70(a) 5

The organisation chart shall show the associated chains of responsibility of the “nominated persons” identified in Chapter 1.3. When other “Managers” are identified (e.g., Auditing Manager, etc.) they need also to be reflected in the organisation chart to show that they report ultimately through a “nominated person” to the Accountable Manager.

The organisation chart of this chapter needs to be at any time consistent with the MOE chapters 1.3 and 1.4 and shall represent the up-to-date description of the management structure of the organisation

The following is an example of a Part 145 Approved Maintenance Organisation structure:

EXAMPLE

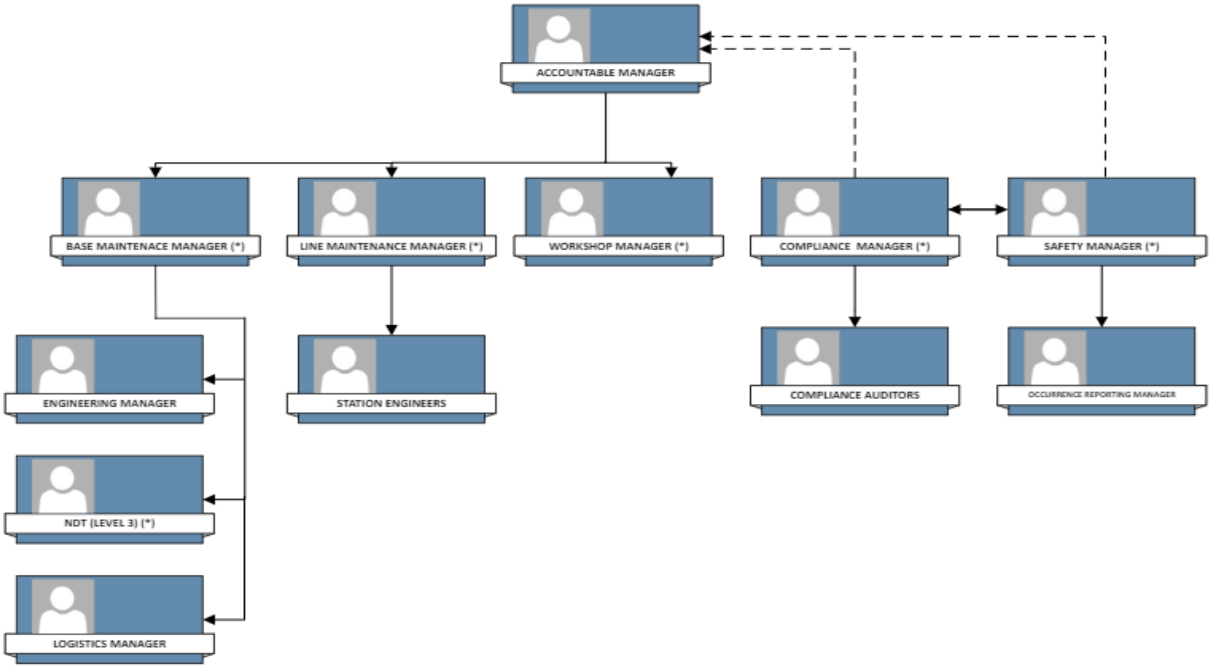

Figure 2 - Sample Organogram

Any post annotated with * requires a Form SRG 1769

The Form SRG 1769 post-holders shall be clearly identified in the chart. The names of the management personnel may be included in the boxes of the organisation chart, but this is optional. Compliance Monitoring personnel must be shown to be independent from the Maintenance Managers.

Certifying Staff may report to any of the managers specified depending upon which type of control the approved maintenance organisation uses (for example licenced engineers/independent inspection/dual function supervisors etc.) as long as the compliance monitoring staff specified in 145.A.200(a)(6) remain independent.

1.6 List of Certifying Staff, Support Staff and Airworthiness Review Staff.

Part 145.A.30 (g) (h) (k) / Part 145.A.35 (j) (k) (m) (n) (o) /145.A.37 / AMC1 145.A.37/ Part 145.A.70 (a) 6 / 145.A.200 (a)

This chapter must hold the list of the certifying staff within the organisation. Where the national licence is used, this should be compared to Part 66 C, B1, B2 & B3 and A categories for Certifying Staff and Support Staff, including the different categories of Certifying Staff and Support Staff depending on the intended scope of work. The content of the list and its management (in conjunction with Chapter 1.10, 1.11).

If the list is extensive, it may be listed in a separate document outside of the MOE but must be referred to and a copy must be supplied at every major change (change in issue number), or when the change is greater than 10%.

The list may be managed under changes not requiring prior approval see 1.11

1.6.1 Certifying Staff (C/S) and Support Staff (S/S).

This chapter must also detail the scope of the national licence by comparison to Part 66 C, B1, B2 & B3 and A categories Certifying Staff and Support Staff, the different categories of Certifying Staff and Support Staff depending on the intended scope of work, the content of the list and its management (in conjunction with Chapter 1.10, 1.11).

1.6.1.1 Scope of the National Licence by Comparison to CAA Certifying Staff Categories.

Please review the webpage for guidance on Appendix IV staff. Part 145 Appendix IV Certifying Staff and Support Staff not qualified to Part 66 | Civil Aviation Authority (caa.co.uk). The sample checklist examples can be found in Section 3 of this document.

1.6.1.2 Categories of Certifying Staff and Support Staff.

Based upon the above comparison, the procedure shall define the privileges to be granted under the Part 145 approval for each Certifying Staff category.

- Aircraft Base maintenance Certifying Staff (Category C).
- Aircraft Base maintenance Support Staff (Category B1, B2, B3).
- Aircraft Line maintenance Certifying Staff:
    - Category B1.
    - Category B2.
    - Category B3, if applicable.
    - Category A (The tasks each staff is authorised to release, have to be recorded in the individual authorisation). See permitted tasks as per AMC 145.A.30(g)
- Engines Certifying Staff (CAA FORM 1).
- Components Certifying Staff (CAA FORM 1).
- Specialised Services (NDT) Certifying Staff (CAA FORM 1).
- Authorisation of Flight Crew for considering whether a check / replacement involves simple techniques with respect to permitted tasks as per AMC 145.A.30(j)(4) see section 3.9.4 Acceptance of maintenance tasks carried out by pilots.

1.6.2 Airworthiness review staff

If the organisation is approved to perform airworthiness reviews and issue the corresponding airworthiness review certificate for aircraft covered by Part-ML (in accordance with the conditions specified in point ML.A.903 and 145.A.75, which details a UK PPoB requirement), this chapter must be developed.

The organisation shall have airworthiness review staff qualified and authorised in accordance with point 145.A.37.

- List of the airworthiness review staff.
- knowledge and experience requirements.
- issuance, extension, renewal of the scope of approval.
- Staff records.

1.6.3 Content of the list(s).

This list must include at least the following main information:

- Name/surname/DoB.
- C/S, CC/S and S/S Category.
- Identification of the Support Staff for Base maintenance activity.
- Function.
- Authorisation identification number.
- Date of the first issue of the authorisation.
- Expiry date of the authorisation.
- Scope/limitation of the authorisation.
- For aircraft Certifying Staff and Support Staff only, the aircraft maintenance licence identification number.
- Line and base maintenance Certifying Staff authorised under the protected rights as per Part 145 Appendix IV, paragraph 2.

1.6.4 Management of the list(s).

This procedure shall detail the following:

- Identification and management of the list(s).
- Approval of the list in conjunction with MOE chapter 1.10 and 1.11.
- Retention of records:
    - Duration / location.
    - Type of documents (evidence).

The Certifying Staff list(s) may be directly inserted in this chapter of the MOE or managed as a separate associated list.

For example, it is possible to cross-refer from this chapter 1.6 to another record (including a computer record) where a list of the approval holders is kept. In this case an explanation of where the list is maintained and how it is updated shall be included in this paragraph thereby meeting the intent of the CAA requirement.

This list(s), whatever included to or separated from the basic MOE, is an integral part of the approval. This means that it shall be approved (directly by the authority or by the organisation, through a procedure which has been previously approved by the CAA (refers to Chapter 1.10, 1.11).

1.7 Manpower Resources.

Part 145.A.70(a)7, 145.A.30(d), AMC1 145.A.30(d)

The organisation must be able to demonstrate that they have adequate resources to support the entire scope of approval.

The organisation shall not declare a percentage of staff used but shall indicate the number of staff needed to comply with Part 145 requirements.

There is no need to amend this chapter as result of routine fluctuations, however any significant re-deployment or loss of staff or any staff change having impact on the approval shall be captured and notified to the CAA according to the criteria specified in the MOE 1.10.

- Summary indication of the total number of staff including all the staff categories below

The number of staff declared in this MOE and the latest application shall remain consistent.

- Splitting of the total staff number in the various staff categories. A summary table is expected
  - Management personnel
  - Technical Support Staff
  - Compliance Monitoring staff
  - Safety Management staff
  - Certifying Staff
  - Base maintenance Support Staff
  - Maintenance technical staff other than Certifying Staff and Support Staff
    - Store and purchasing department staff
    - Training staff
    - Contracted staff

NOTE: Organisations must declare the total number of staff employed within their approved organisation in the Exposition.

1.8 General description of the facilities at each address intended to be approved.

Part 145.A.25 (a) (b) (c) 1, 2, 3,4,5,6, (d)/ AMC1 145.A.25 (a) 1, 2,3,4 / Part 145.A.70 (a) 8, 15/ Part 145.A.75 (d).

This section shall describe each of the facilities, in some detail, at which the organisation intends to conduct maintenance. This shall provide a clear picture of what the UK CAA is being asked to approve. All sites shall be covered; however, a different emphasis can be placed on sites dependent on the level of work undertaken.

Facilities such as stores, line stations, component or sub-contractor's workshops that are not located together with the main facilities of the organisation may be covered by the organisation approval without being identified on the organisation certificate, provided that the MOE identifies these facilities and contains procedures to control such facilities, and the CAA is satisfied that they form an integral part of the approved maintenance organisation.

The system of protection against weather, dust and other airborne contaminants (paint, smoke...), ground water protection, heating/air conditioning, lighting, noise protection, safety system (limited accesses, fire, staff security...) should be described either in the diagram or in the associated text.

1.8.1 Principal Place of Business (PPoB).

The PPoB is the head office or the registered office of the organisation within which the principal financial functions and operational control of the activities referred to in Part 145 regulation are exercised.

The PPB is the address which will be included in the CAA Form 3-145 approval certificate together with the main base sites address(es). Further guidance can be found by referring to Article 2 Definitions (m) and CAP 1539 UK Interpretation of Principal Place of Business

1.8.2 Postal (surface mail and e-mail) address

The postal address of the maintenance organisation to be used by the CAA for formal mail communication needs to be clearly identified.

In addition, to ensure an efficient and stable communication channel between the CAA and the maintenance organisation, the organisation shall create a "generic" email address (without reference to a family name) to be used regardless any future personnel changes.

1.8.3 Base maintenance facilities

Part 145.A.25(a),145.A.25(b), 145.A.25(c), 145.A.25(d)

- Hangar accommodation (***means a closed facility that can house an aircraft and protects from any environmental condition***).
- The Part-145 AMC states that "*subject to a risk assessment and agreement by the CAA, the organisation may use facilities at the approved location, other than a base maintenance hangar for certain aircraft base maintenance tasks, provided that those facilities offer levels of weather and environmental protection that are equivalent to those of a base maintenance hangar, as well as a suitable working environment for the particular work package*."
    - Hangar layout(s) must be included specifying the various allowed aircraft parking configurations, as applicable to the aircraft type(s) included in the scope of approval.

As a minimum, this information must clarification for any approved Hangar, the maximum number of aircraft which can be accommodated at the same time (including any Base and/or Line Maintenance activity), the maximum number of aircraft which can undergo Base Maintenance at the same time, and which is the biggest aircraft type which can be accommodated.

- Aircraft access equipment / platforms / docking[5]
- Specialised workshops
- Environmental provisions
- Office accommodation for: (planning, technical records, compliance technical reference area, Storage, etc.)

See *Guidance for Part 145 approval holders | Civil Aviation Authority (caa.co.uk) - Facilities (145.A.25 for further details)*

1.8.4 Line maintenance facilities (at each location) as appropriate.

Organisation should list all appropriate line stations within their approved Exposition.

The CAA may consider Occasional / Temporary Line stations IN-2017/011: Part-145 - Occasional and Temporary Line Stations | Civil Aviation Authority (caa.co.uk). This enables organisations to establish temporary line stations in accordance with approved procedures and for the CAA to have full knowledge of these facilities.

The use of this Occasional (Temporary) Line maintenance privilege is limited to those cases where the Part 145 organisation has a maintenance contract with a UK Operator (detailed in their MOE) requesting such maintenance. The scope of work (as detailed in their MOE) shall include a reference that the organisation may perform work away from approved locations.

For organisations with a large number of line stations these maybe managed in a separate list as agreed, see Section 1.11.2 Associated Procedures, Lists and Forms

[5] ***For base maintenance aircraft docking staging or scaffolding must be available. Attempting base maintenance work from access equipment such as cherry pickers and mobile extendable platforms would not be deemed sufficient. Failure to adequately demonstrate such equipment during audit may lead to findings being raised.***

1.8.5 Engines / APU and Component maintenance facilities.

Organisation must list all appropriate engine / APU or component facilities within their approved Exposition.

1.8.6 Layout of premises

Where the accommodation is not wholly owned by the organisation, as in the case of a hangar where space is rented or shared, proof of tenancy/access may be required. The CAA may wish to have a copy of the contract / shared agreement included in a section within Section 5 of the MOE (i.e., Section 5.6 Supporting Contracts).

In accordance with AMC1 145.A.25(a)3, for line maintenance of aircraft, hangars may be required. In this case the availability of a suitable hangar shall be demonstrated, particularly in the case of inclement weather for minor scheduled work and lengthy defect rectification.

Note: The hangar visit plan requirement is expected to be in the MOE chapter 2.22, due to relation with the resource plan.

1.8.7 Subcontractors facilities

The level of information in this paragraph depends on the extent of subcontracted activities, as agreed with the assigned surveyor. For simple subcontracted tasks (e.g. specialised services) It may be sufficient to link to the list of Subcontractors already included in the MOE 5.2 where each subcontractor is identified.

Where assembly/repair activities and/or issuance of certificates of release to service is carried out at the subcontractor’s facilities, a layout of the subcontractor’s facilities which are intended to be part of the approval is to be included in this paragraph.

1.9 Organisation's scope of Work.

Part 145.A.20 / AMC2 145.A.20 - Part 145.A.42(c) - Part 145.A70(a) 9 - Part 145.A.75(a)(b)(c)(d)(e)

This chapter must show the range of work conducted at each approved site. When a maintenance organisation is performing maintenance in multiple locations the corresponding scope of work shall additionally be detailed for each site. This shall also relate to chapters 1.8 & 5.3 in such a way that it can be clearly seen which specific tasks are performed at each location.

1.9.1 Aircraft Maintenance *(Example)*

Rating	TC HOLDER	AIRCRAFT MODEL	LIMITATION	MAINTENANCE Level ** up to and including the following:	Base	Line
A1	AIRBUS	A300 B2-320	Airbus A300 basic model (PW JT9D)	Weekly check Excluding defect rectification		X
A1	AIRBUS	A318-110 A321-110	Airbus A318 /A321 (CFM56)	750 FH/ 750 FC / 4 months		X
A1	ATR-GIE Avions de Transport Régional	ATR 42-400 ATR 42-500	ATR 42-400/500 (PWC PW120)	5000 FH / 3000 FC / 2 YRS	X	
A1	The BOEING COMPANY	Boeing 777-200/300	Boeing 777-200/300 (GE90)	112000 FH/ 30000 FC/ 12000 days	X	X
A1	The BOEING COMPANY	Boeing 767-200	BOEING 767-200 (PW 4000)	4C check	X	X
A2	PILATUS AIRCRAFT	PC-12 PC-12/45	Pilatus PC 12 (PW PT6)	Weekly checks		X
A2	LAVIA ARGENTINA S.A. (LAVIASA)	-	Piper PA-25 (Lycoming)	100H/Annual check	X	
A3	EUROCOPTER	AS355 E AS355 F1	Eurocopter AS 355 (RR Corp 250)	Daily		X

Figure 3 - Sample 'A' rated table of scope

Legend: FH-flight hours, FC-flight cycles, YRS-years

For A/C, mentioned in this table:

- in column TC holder: the information from the column "TC Holder" of the table in Appendix I to AMC to Part- 66, as amended.
- in column Aircraft Model: the data from column "Model" from the same Appendix Ito AMC to Part-66, as amended, except that the word "Series" should be deleted
- in column limitation: the information from the column "Part- 66 Type rating endorsement" of the table in Appendix I to AMC to Part-66, as amended, except that the word "Series" should be deleted. The A/C type not intended to be included to the scope of approval should not be mentioned (e.g., Airbus A318/A321, Boeing 737-500).
- in column Maintenance level: the scope of maintenance activity agreed by the CAA.
- in case of group rating, each aircraft composing the group shall be listed.

**: the following considerations shall be done on the maintenance level:

- The limitation relative to the maintenance checks/tasks shall use the naming convention as referenced in TC Holder data (e.g., MRB/MPD).
- In case of unforeseen maintenance such as but not limited to major repairs and modifications that is not already described within this chapter, the maintenance organisations shall contact the CAA.
- The maintenance level is intended to specifically identify the maximum extent of routine maintenance allowed. Defect rectification is to be considered included in the line and/or base maintenance scope of work. A maintenance organisation not intending to perform defect rectification shall exclude defect rectification in the 1.9.

1.9.2 Engine Maintenance *(Example):*

Rating	ENGINE/APU MODEL	Limitation	Maintenance level
B1	TFE 731-20	TFE 731- 20AR	Modules turbine exchange
B1	GE CF6 80 E1	GE CF6-80E1A1 GE CF6-80E1A2	All Modules repair
B1	PWC 545	PWC 545A PWC 545C	Repairs IAW CMM Hot Section
B2	Continental IO-360	IO-360-A IO-360-AES	O/H
B3	Honeywell GTCP 85	GTCP 85-H	Minor repair i.a.w CMM 49- XX-XX

Figure 4 - Sample 'B' rated table of scope

For engines only, shall be mentioned in this table:

- in column Engine / APU Model: the engine type as listed in the engine TCDS.
- in the column Limitation: the engine variant as defined in the engine TCDS.
- in the column Maintenance level: the scope of work agreed by the CAA, reference to the relevant maintenance data shall be made.
- when the maintenance performed under B1 or B3 rating is limited to boroscoping inspections[6], the MOE shall specify the engine/APU types associated to the boroscoping technique limitation
- for Piston engines, the column Engine Model and Limitation shall contain the data: Continental and Continental IO-360 series, respectively.
- as some engines may be installed also by STC, shall be added only the engine agreed for installation as per the list of approved STC shown in the list of the CAA web site (Certification).

For APU only, shall be mentioned in the table:

- in column Engine / APU Model: the APU type.
- in the column Limitation: the APU variant as defined by the OEM.
- in the column Maintenance level: the scope of work agreed by the CAA, reference to the relevant maintenance data shall be made.

[6] ***Organisations seeking approval to perform only borescope inspections are not eligible for a 'D1' rating and thus must be assessed for an 'A' or 'B' rating as appropriate AMC 145.A.30(f) provides further details.***

1.9.3 Component Maintenance.

This section shall specify the component manufacturer or the particular component and/or cross refer to a referenced capability list. The part number and the level of work performed shall be included. The reference of the relevant CMM shall also be added[7].

Example:

Rating	ATA	P/N	Designation	Reference of the CMM	Maintenance Level	Workshop
C1 Air Cond & Press	21	63-09-09/1	ACM	21-31-09	Overhaul	General
C2 Auto Flight	22	101987-3	Control Panel	22-30-17	Repair	Avionic
C3 Comms and Nav	34	101-09-23	Nav/Com	34-21-87	Repair	Avionic
C4 Doors - Hatches	52					
C5 Electrical Power & Lights	24 33	1234-7	Battery	24-01-01	Overhaul	Avionic
C6 Equipment	25					
C7 Engine — APU	71 72 49	GTCP-331	APU	71-10-20	Borescope	APU
C8 Flight Controls	27					
C9 Fuel	28					
C10 Helicopter — Rotors	62 64					
C11 Helicopter — Trans	63 65					
C12 Hydraulic Power	29					
C13 Indicating & recording system	31					
C14 Landing Gear	32					
C15 Oxygen	35					
C16 Propellers	61					
C17 Pneumatic & Vacuum	36 37					
C18 Protection ice/rain/fire	30					
C19 Windows	56					
C20 Structural	51 52 53 54 55 57					
C21 Water ballast						
C22 Propulsion Augmentation	84					

Figure 5 – Sample 'C' rated scope of work (Organisation with multiple ratings)

[7] ***Where it is impractical to list the full extent of an organisation's capability in the MOE (1.9), a Capability List should be raised as an additional document, that forms part of the Exposition as a whole. Changes to the Capability List must be treated as MOE amendments and dealt with in a manner described in MOE Part 1, paragraph 1.11, an associated procedure should be raised to define how changes to the List may be made.***

For C rating, shall be mentioned:

- in the column Rating: the relevant class C rating, if some C ratings are not used, the line should be removed,
- in the column 'ATA', the ATA 2200 reference defined in AMC 145.A.20,
- in the column 'P/N and Designation': the detailed reference number and designation of the component as per CMM respectively,
- in the column 'CMM': the reference of the component maintenance manual (or equivalent document),
- in the column 'Maintenance level': the scope agreed by the CAA
- in the column 'Workshop': the base maintenance shop where maintenance takes place.

When an Organisation is managing a separate "capability list" the information addressed above shall be mentioned in this list in this case the chapter 1.9 shall only address the rating, the ATA and shall refer to the capability list reference (see example below).

Rating	ATA	P/N
C1 Air Cond & Press	21	Components in accordance with the capability list reference XXXX
C2 Auto Flight	22	
C3 Comms and Nav	23-34	
C4 Doors- Hatches	52	

Figure 6 - Simple 'C' rated table of scope

This list, whatever included to or separated from the basic MOE, is an integral part of the approval. This means that it shall be approved (directly by the CAA or changes not requiring prior approval by the organisation, through a procedure which has been previously approved by the CAA (refers to Chapter 1.10, 1.11).

1.9.4 Specialised Services Maintenance.

1.9.4.1 NDT with D1 Rating

When the organisation intends to perform NDT tasks and release such tasks using a CAA Form 1, the rating D1 is necessary[8]. Under the D1 rating, the capability to perform maintenance is determined by the "NDT method" listed in the approval schedule, regardless the specific aircraft, engine or component which is subject to the inspection method. The "D1" Non-Destructive Testing (NDT) rating is only necessary for a Part-145 organisation that carries out NDT as a particular task for another organisation, i.e. it will not have to be shown as an approved rating if it is used solely as part of maintenance performed under another rating such as a B1 or A rating.

Example:

Rating	Limitation	Detail of limitation
D1	Penetrant testing (PT)	Techniques in accordance with the NDT Manual[9] reference XXXXX, approved by the Nominated NDT level 3
	Magnetic testing (MT)	
	Eddy Current testing (ET)	
	Ultrasonic testing (UT)	
	Radiographic testing (RT)	
	Thermographic testing (TT)	
	Shearographic testing (ST)	

Figure 7 - Sample D1 rating table

For D1 rating, shall be mentioned:

- in column Rating: D1,
- in column Limitation: shall be quoted the NDT method (strikethrough as necessary)

1.9.4.2 NDT without D1 Rating ("in the course of maintenance").

When the organisation intends to perform NDT tasks under another approved rating (e.g., as part of the maintenance conducted on aircraft under rating A1, engines under rating B1, components under a C rating) the NDT tasks are considered done in the "course of maintenance".

- In this case, even if the organisation does not need to hold a D1 rating, the various NDT methods applied during maintenance shall be listed in this paragraph for each approved site and workshop

It has to be noted that the same requirements in place for being approved under the D1 rating remain applicable.

1.9.4.3 Other Specialised Activities.

- Each specialised maintenance tasks such as but not limited to composite repairs, painting, welding, machining, NDI, shall be detailed in this paragraph.
- These specialised services shall be detailed for each approved site and workshop.

It has to be noted that those specialised maintenance tasks may need to be conducted under specific conditions (e.g., aircraft painting is considered to be a base maintenance task and therefore a base maintenance scope of approval is required in addition to listing such activity in this chapter).

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[8] CAA policy regarding the qualification of non-destructive inspection (NDI) Certifying Staff is set out in EN4179

[9] Refer to Chapter 3.17 for further details

1.9.4.4 Loss of capability (optional)

Part 145.A.75, Part 145.A.80 & Part 145.A.85

In this section the organisation must detail how it manages periods of lost capability affecting the scope items declared in the above paragraphs 1.9.1, 1.9.2, 1.9.3 or 1.9.4, when an rating is no longer supported due to any of the following[10]:

- Change to facilities.
- Lack of certifying staff.
- Lack of tools and equipment.

For further guidance see Guidance for Part 145 approval holders | Civil Aviation Authority (caa.co.uk) *entitled Part 145 Loss of Capability*.

1.9.5 Maintenance Away from the Approved Locations as per 145.A.75 (c).

- If applicable, this paragraph must reference the fact that the organisation may perform work away from the approved locations, subject to the condition specified in MOE 2.32 (Maintenance away from approved locations).
- See also IN 2017/011 – Temporary & Occasional Line Stations

1.9.6 Parts Fabrication as per 145.A.42 (c)

If applicable, this paragraph must reference the fact that the organisation may fabricate a restricted ranges of parts (detailed here) in the course of maintenance, subject to the conditions specified in their control procedure MOE 2.30 (Fabrication of parts).

The part fabrication privilege is to be considered under an approved rating (e.g., as part of the maintenance conducted on aircraft under rating A1, engines under rating B1, components under a C rating).

[10] Only permitted for periods up to 6 months in duration. If the Approval continuation date is reached and scope remains 'greyed out' then the allocated Surveyor will request its removal from the approval

1.9.7 Use of maintenance data not clearly intended for the rating held

AMC 145.A.45(b) describes the typical maintenance data which is intended to be used depending upon the class rating approval held by the organisation.

This paragraph is optional and only intended to cover the case where the CAA agrees on the use other maintenance data as described in Appendix IV to Part-M Class and Rating system (e.g. an Ax rated AMO wishing to use engine and/or component maintenance data on-wing, a Bx rated AMO wishing to use component and/or aircraft maintenance data, etc.)

- Conditions to use maintenance data which are not clearly intended for the rating held by the AMO
  - Justification to the CAA on the need of this privilege
  - Procedure to assess the task is within the technical capability of the maintenance organisation (e.g., staff, tools, maintenance data, materials, etc.)
  - Assessment on the need to develop maintenance instructions for using the particular maintenance data in order to precisely record the part of the maintenance task effectively conducted
  - Where applicable, procedure to consult with the Ax rated AMO being responsible for some parts of the task when a Cx or Bx AMO[11] are working on-wing (e.g., circuit breaker deactivation, etc.)
  - Procedure entailing possible CRS limitations (e.g., leak test needed by the Ax AMO following a task conducted by the Cx or Bx AMO)
  - Procedure to cover cases where the same maintenance task is available in different maintenance data with different allowed defects. In such cases, the AMO can only use the particular maintenance data if clearly specified in the work order (e.g., a Bx shall not use the AMM under its own decision, when the same task is available in EMM)
  - need of training in the use of maintenance data and in the particular maintenance environment (e.g., a Cx or Bx rated AMO working on-wing in an aircraft line or base maintenance environment)
  - access to the maintenance data

1.9.8 Airworthiness review privileges

If the organisation is approved to perform airworthiness reviews and issue the corresponding airworthiness review certificate for aircraft covered by Part-ML (in accordance with the conditions specified in point ML.A.903), the related privilege shall be indicated in this paragraph, otherwise it shall be indicated as "not applicable."

- Specify capability for airworthiness reviews and airworthiness review certificate (include reference to MOE chapter 2.29 for detailed procedure)

[11] ***Cx or Bx AMO are limited to works respectively at component or engine level carried out on-wing. It is considered outside their scope of approval to perform AMM tasks which are clearly outside the particular component or engine capability (e.g., the Cx or Bx AMO shall not perform any task in cockpit even if related to verifying the serviceability of the component or engine on which the organisation is working, also they shall not perform any deactivation task at aircraft level such as circuit breaker deactivation, etc.)***

1.10 Procedures for changes requiring prior approval (including MOE amendment).

Part 145.A.15 (a) / AMC1 145.A.15/ AMC2 145.A.15 / Part 145.A.30 (a) (b)/ Part 145.A.70 (a) 10,11 (c) / AMC1 145.A.70/ GM1 145.A.70 / Part 145.A.85 / AMC 145.A.85/ AMC1 145.A.85/ AMC2 145.A.85/ GM1 145.A.85/GM1/ 145.A.85(1) / GM1 145.A.85(a)(5)

UK CAA approval is based on the management, organisation, resources, facilities and scope of work described in this Part 1 of the Exposition. Any significant change may therefore affect the conditions under which the approval was granted. This chapter is intended to demonstrate the process to be used by the organisation to notify the CAA of any change affecting the approval.

1.10.1 Notification

The organisation must notify the CAA of any proposed changes **before** such changes take place. The procedure should define all changes which require prior approval by the CAA, the timescales required for each type of change are shown below:

(a) The notification of a **change to an organisation certificate** should be submitted at l**east 30 working day**s before the date of the intended changes.

(b) In the case of a planned change of an **accountable manager or nominated person**, the organisation should inform the CAA at least **20 working days before the date of the proposed change.**

(c) Unforeseen changes should be notified at the earliest opportunity, in order to enable the CAA to determine whether there is continued compliance with the applicable requirements, and to amend, if necessary, the organisation certificate and the related terms of approval.

Also, the personnel required to make the notification or application for change, if required. When the organisation does not have an approved procedure to manage changes not requiring prior approval as per MOE 1.11 chapter, all changes should be subject to prior approval and submitted to the CAA.

For further guidance please see our webpage: *Change an existing Part 145 Approval | Civil Aviation Authority (caa.co.uk)*

In addition, this procedure shall also detail:

- When to notify the change
- How to notify the change (Online Application).
- Who, in the maintenance organisation, is responsible for the notification.
- Where to send the notification (apply@caa.co.uk).

1.10.2 Pre-audit and Compliance Monitoring Manager statement

Part 145.A.15(b)

Once the change has been notified, the maintenance organisation must detail how the related change is internally managed:

- Internal pre-audit by the compliance monitoring system
- Composition of the package associated to any of the above listed change (e.g., MOE, internal audit, Certificate of Incorporation, CAA SRG 1769, etc.)
- Who, in the maintenance organisation is in charge of monitoring the change with the allocated surveyor?

For initial approval and change of approval applications, the organisation shall conduct an internal pre-audit in accordance with its MOE 3.8 audit procedure, prior to any audit by the CAA, confirming that processes, areas, activities and personnel subject to the application have been reviewed and audited showing satisfactory compliance with all applicable Part 145 requirements. The relevant audit report together with a statement of compliance.

The requirement to have such an internal pre-audit conducted as part of any application for change, shall be addressed in a procedure under this MOE 1.10 chapter.

1.10.3 Approval Process of changes requiring prior approval

MOE and associated procedures/list shall be reviewed on a regular basis so that they remain an up-to-date description of the organisation and they comply with any amendment of the applicable regulation. The initial issue of the MOE and/or any associated procedures/lists shall be approved by the CAA.

Note: when the MOE chapter 1.11 does not include a procedure to set the scope of changes not requiring prior approval, any amendments to the MOE and/or associated procedures/lists shall be subject to prior approval by the CAA.

Furthermore, CAA approval does not exempt the maintenance organisation to monitor continuously the approved documents and raise internal findings in case any non-compliance is identified.

Further information can be found at Change an existing Part 145 Approval | Civil Aviation Authority (caa.co.uk)

NOTE: Any change to the approval that affects the scope, approved locations or nominated postholders must have prior approval by the CAA

1.10.4 Management control of the approval

This paragraph is intended to describe how the Part-145 approval is controlled.

The **Maintenance Manager** (Base / Line / Workshop) is responsible for updating the MOE and its content on a regular basis and amending, if necessary, this includes the associated procedures manuals, and the submission of proposed amendments to the allocated Surveyor responsible for oversight.

The **Compliance Monitoring Manager** is responsible to assess any revision of the applicable regulations and user guides for their impact on the organisation's procedures/lists. The CAA expects that traceable evidence is in place to record implementation of this process to be confident that the organisation's procedures/lists finally comply with any applicable requirement.

1.10.5. Changes not requiring amendment of the approval

In the case the organisation temporarily does not hold all the necessary tools, equipment, material, maintenance data, etc., the CAA shall be informed to determine if a need exists to amend the approval or if it may be maintained subject to further conditions.

1.11 Procedure for changes not requiring prior approval (including MOE amendment).

Part 145.A.70 (a) 10, 11, (b) and (c)/ AMC1 145.A.70 / GM1 145.A.70(a)/ GM1 145.A.85

This procedure is intended to describe the process for changes not requiring prior approval by the CAA. The changes will be detailed within section 1.11.1 and the associated documents referenced and shown in the table in 1.11.2.

Any changes to this procedure will require prior approval by the CAA. A revised MOE must be submitted, and approval provided prior to any further changes being made.

The detailed procedure for these changes as per 145.A.70(a)(10) should include:

- the scope of the changes.
- how the changes will be managed by the organisation
- how the organisation will notify the CAA of such changes.
- who the responsible nominated postholder is for notification.

In any case the CAA must be notified of these changes. Any change detailed and approved as not requiring prior approval should be submitted to apply@caa.co.uk, for processing and an acknowledgement received and retained by the organisation. .

1.11.1 Examples of changes not requiring prior approval

As a general principle, the following examples may be considered examples for changes not requiring prior approval:

- Change of postal address of the registered organisation without any change of the approved facilities.
- Expansion or transfer of offices / storage facility layout, (providing the site location remains unchanged).
- Addition or cancellation to the approved capability list where the CAA Part-145 “C” rating is held, and any additional component capability is of similar technology & within an existing ATA chapter capability (MOE 1.9 refers).
- Change to the MOE and its associated procedures/lists referred to in the MOE 1.11 that do not affect the scope of approval. (i.e. line stations list[12]).
- Changes to number of certifying staff (less than 10%)
- Changes to sub-contracted/contracted organisations (detailed in Section 5) of the MOE

[12] ***Addition of permanent line stations is considered a change requiring prior approval and requires CAA audit as part of the process***

1.11.2 Associated Procedures, Lists and Forms.

The minimum procedures/lists to be considered are all those identified in AMC1 145.A.70(a), which are therefore integrally part of the Exposition.

This procedure shall at least address:

- Summary table of associated procedures and lists:

Example:

Type of Document	***Document reference***	***Changes not Requiring prior Approval****	***Reviewed by****	***Scope of minor amendments to which the change not requiring prior approval is limited***
Associated Procedures Manual**	APM	✓	Maintenance Manager & Compliance Monitoring Manager	• Minor amendments • Typing errors
Certifying Staff and Support Staff list	AMO-DOC-1	✓	Maintenance Manager & Compliance Monitoring Manager	• Less than 10% total C/S Staff • Does not affect current scope
Workshop capability list	AMO-DOC-2	✓	Maintenance Manager & Compliance Monitoring Manager	Addition /removal of part numbers within agreed C rating scope
List of Subcontractors	AMO-DOC-3	✓	Maintenance Manager & Compliance Monitoring Manager	Addition/removal of a subcontractor
List of Contractors	AMO-DOC-4	✓	Maintenance Manager & Compliance Monitoring Manager	Addition/removal of a contractor
List of Line Maintenance Locations	AMO-DOC-5	✓	Maintenance Manager & Compliance Monitoring Manager	Removal of line stations only
NDT Manual	AMO-DOC-6	✓	NDT Lev.3 and Compliance Monitoring manager	N/A
Safety Management Manual	AMO-DOC-7	✓	Safety Manager & Compliance Monitoring Manager	All matters related to safety management, excluding any change affecting the terms of compliance with Part-145 regulation

Figure 8 - Sample Table demonstrating changes not requiring prior approval

Note 1: Table above is for example only and not exhaustive. The procedure for 'Changes not requiring prior approval' are to be approved with the allocated surveyor.

Note 2: Organisations are reminded that the Certifying Staff list, Capability List and Management System Manual (SMS Manual), all form part of the approved MOE. Any change to these must be submitted with the relevant MOE update.

** When 'changes not requiring prior approval' is granted, it is important that the chapter 1.11.3 describes the limits of the changes not requiring prior approval privilege. Even if a document is subject to changes not requiring prior approval, in the case of a change affecting the scope of work this document shall be approved by the CAA (i.e., amending the capability list to add a P/N belonging to a new C rating)*

*** when the organisation develops secondary or lower-level procedures (for example to describe the details of maintenance processes in each area/workshop), those procedures may be published in a separate manual (e.g., associated procedures manual) to be also listed in this table.*

- *Definition of criteria for new issue and/or revision*

1.11.3 Approval Process of changes not requiring prior approval

AMC 145.A.85

Changes not requiring prior approval:

- the list of documents for which a change not requiring prior approval privilege is granted shall be listed in the table provided in paragraph 1.11.2
- for each of the above-mentioned documents, the procedure shall at least include:
  - Definition of amendments. In particular, the limits of changes not requiring prior approval for each document shall be limited to those amendments as agreed in 1.11.1 & 1.11.2.
  - The person responsible for the internal approval of the related documents (may be directly identified in the table provided in paragraph 1.11.2, refer to the duties and responsibilities in 1.4)
  - The notification of such approval to the CAA
  - The record of such change.

1.12 Procedures for alternative means of compliance (AltMoC).

Part 145.A.120(a)(b)/ AMC1 145.A.120(b)/ GM1 145.A.120/ GM2 145.A.120

This chapter is optional and describes the application process for an alternative means of compliance.

The Compliance Monitoring Department must have demonstrated adequate ability dealing with Part-145 requirements.

Organisations are encouraged to follow the published AMC and GMs, nevertheless they may choose to propose, and use, subject to approval by the CAA, alternative means of compliance.

This chapter will describe the following:

- Identification of the person responsible for AltMoCs.
- Definition of scope and objectives.
- Procedure for assessing AltMoC.
- Identification of and demonstration of compliance with applicable requirements.
- Procedure to apply for an alternative means of compliance.
- The application for an AltMoc is via the SRG1840: Application for an Alternative Means of Compliance (AltMoC) | Civil Aviation Authority (caa.co.uk). Any AltMoc must be approved by the CAA with the approval of the Exposition including the listed AltMoc in chapter 5.5.
- Procedure for monitoring the effectiveness of AltMoC
- Cross-reference to documents affected.

Part 2 – Maintenance Procedures

2.1 Supplier Evaluation and Subcontractor Control Procedure

Part 145.A.42 (a)/ AMC 145.A.42 (a) / Part 145.A.70 (a) 12, 14, 16 / Part 145.A.75 (b) / AMC1 145.A.75 (b)/ 145.A.205 (a) (b) / GM1 145.A.205/ GM2 145.A.205

This chapter shall be clearly structured to cover all the cases where the maintenance organisation is using the services of other organisations.

2.1.1 Type of Suppliers.

The use of the following terms is made in this paragraph to standardise the terminology for the possible various providers of components/parts/materials and providers of maintenance services.

Definition	Descriptor
PROVIDER	*Any source of components, material, maintenance services external to the maintenance organisation. Any provider may fall in one of the following categories:* • *SUPPLIER* • *CONTRACTED ORGANISATION* • *SUBCONTRACTED ORGANISATION*
SUPPLIER	*Any source providing components, standard parts or materials to be used for maintenance. Possible sources could be Part-145 organisations, Part-21 Subpart G organisations, operators, distributors, brokers, Part CAO organisations, aircraft owners, etc.* *The list of suppliers is not considered an MOE associated list and can be managed under direct control of the Compliance Monitoring Department.* *The term "supplier" used in this chapter excludes the suppliers of tools and tools calibrations* *services which shall be described and referred in the MOE section 2.4.*
CONTRACTED ORGANISATION	*A CAA Part-145 maintenance organisation that conducts maintenance under its own approval for another approved maintenance organisation* *The list of contracted organisations shall be included in the MOE section 5.4.*
SUBCONTRACTED ORGANISATION	*An organisation working under the scope of approval of the subcontracting organisation that conducts aircraft line maintenance or minor engine maintenance or maintenance of other aircraft components or a specialised service as a subcontractor for an organisation appropriately approved under Part-145, as per 145.A.75(d)* *The list of subcontracted organisations shall be included in the MOE section 5.2*

Definition of Suppliers of materials, standard parts, components

- Sources of supplies (e.g., constructor, original manufacturer (OEM), distributor approved by the manufacturer, retailer, airline, ...)
- Types of supplies (e.g., components, consumables, standards, materials, ingredients, etc.)

Definition of Contracted organisations

- Sources of services (e.g., CAA Part 145 approved maintenance organisation and related approved ratings)
- Types of services (e.g., specialised work, line maintenance, component maintenance, etc.)

Definition of Subcontracted organisations

- Sources of services (an organisation working under the scope of approval and management system of the subcontracting organisation and related qualification)
- Types of services (e.g., specialised work, line maintenance, component maintenance, etc.)

2.1.2 Supplier Evaluation.

The use of suppliers which are certified to officially recognised standards does not exempt the organisation from its obligation to ensure supplied components and material are in satisfactory conditions and meet the applicable criteria of Part-145 regulation. Supplier evaluation may depend on different factors, such as the type of component, whether or not the supplier is the manufacturer of the component, the TC holder or a maintenance organisation, or even specific circumstances such as aircraft on ground. This evaluation may be limited to a questionnaire from the Part-145 organisation to its suppliers, a desktop evaluation of the supplier's procedures or an on-site audit, if deemed necessary

Initial approval of each type of supplier:

- Selection processes.
- Internal acceptance process.
- Issuance of the internal authorisations (e.g., scope of authorisation, validity, ...).
- Producing the list of suppliers, contracted organisations and subcontractors.
- Internal distribution of the list – access / authorisation of computerised list

Monitoring of the list of each type of supplier versus internal authorisation:

- Incoming inspection results, audit results, possible internal limitation.
- Assessment of the service provided.
- Updating of the list.
- Withdraw of the internal authorisation, when applicable.

Management of the purchase orders according to the approved suppliers.

Records of supplier's information:

- Files.
- Duration / location.
- Type of documents (Certificates, audit reports, list of suppliers, incoming inspection results)

2.1.3 Monitoring the Contracted Organisations.

Part 145.A.200, 145.A.205

A process similar to the case of monitoring the suppliers may be adopted.

- Initial approval of each contracted organisation
- Monitoring of the lists of each type of contracted organisation versus internal authorisation (refer to MOE 5.4).
- Management of the purchase orders according to the approved contracted organisation; Records of contracted organisations information.

2.1.4 Monitoring Subcontractors.

The acceptance and monitoring process shall comply with AMC1 145.A.75(b).

- Initial approval of each subcontractor.
  - Pre-audit before approval and inclusion in the internal audit plan.

- Approved maintenance organisation expertise and procedures to control the subcontractor.
- Supervision of the inspection and release from the subcontractor.
- Contract to allow access of the CAA to the sub-contractor.

- Monitoring of the lists of each type of subcontractors versus internal authorisation (refer to MOE 5.2).
- Management of the purchase orders according to the approved subcontractors.
- Records of subcontractor's information.

2.2 Acceptance / Inspection of Aircraft Components and Materials and Installation.

Part 145.A.42(a)(i)/(ii)/(iii)/(iv)/(v),145.A.42(b)(i)/(ii)/(iii)/(iv), AMC1145.A.42(a)(i), AMC1 145.A.42(a)(ii), AMC1 145.A.42(a)(iii), AMC1 145.A.42(a)(iv), AMC2 145.A.42(a)(iv), AMC1 145.A.42(a)(v), AMC1 145.A.42(b)(i), GM 145.A.42(b), GM1 145.A.42(b)(i), GM1 145.A.42(b)(ii),

This paragraph shall describe the procedures for receiving components, parts, materials incoming from outside the organisation, such as for example from suppliers, contracted organisations, etc.

2.2.1 Classification and Definitions

- Serviceable components
- Unserviceable components
- Standard parts
- Raw and Consumable material
- Unsalvageable components

2.2.2 Component / Material certification.

This chapter is expected to identify the release documents to be expected/accepted for each type of part/material depending on their status (new/used). It is recommended to develop a table listing all the cases, for easy reference to receiving inspection personnel.

For further guidance please refer to the UK Component acceptability tables

Depending on the type of components the organisation shall additionally describe the specific requirements applicable to PMA parts, Life Limited parts, used parts, etc.

2.2.3 Receiving inspection procedure.

- Receiving inspection for Components / Materials/ Standard Parts received from external sources:

The procedures for acceptance of components, standard parts and materials shall have the objective of ensuring that the components, standard parts and materials are in satisfactory

condition and meet the organisation's requirements. These procedures shall be based upon incoming inspections.

- physical inspection of components, standard parts and/or materials.
  - verify the general condition of components and their packaging in relation to damages that could affect the integrity of the components.
  - verify that the shelf life of the component has not expired.
  - verify that items are received in the appropriate package in respect of the type of component: e.g., correct ATA 300 or electrostatic sensitive devices packaging, when necessary.
  - verify that the component has all plugs and caps appropriately installed to prevent damage or internal contamination. Care shall be taken when tape is used to cover electrical connections or fluid fittings/openings because adhesive residues can insulate electrical connections and contaminate hydraulic or fuel units.
  - Materials/standard parts received in batches and related traceability (e.g., split of batches): Items (fasteners, etc.) purchased in batches should be supplied in a package. The packaging shall state the applicable specification/standard, part number, batch number and the quantity of the items. The documentation accompanying the material shall contain the applicable specification/standard, part number, batch number, supplied quantity, and the manufacturing sources. If the material is acquired from different batches, acceptance documentation for each batch shall be provided.

- Review of accompanying documentation and data
  - Compliance with order / condition
  - Conformity with company requirements (e.g., type of release requested, Sources)
- Identification of parts/material after receiving inspection (e.g., tag)

Traceability of parts and materials to the related documentation (e.g., internal tracking number)

- Receiving inspection records
- "Quarantine" procedure
- Modification Standard and AD compliance
- Identification of storage limitation/ life limits
- Components received in AOG (these parts are normally received directly at the AOG location and dedicated procedures need to be in place).

- Receiving inspection of components from internal sources (e.g., transfer between stores, from the workshops):
  - Conformity with company requirements,
  - Records
  - Required documentation
  - Compliance with order, condition,

- "Quarantine" procedure
- Identification of storage limitation/ life limits
- Internally fabricated parts
- Components removed serviceable from aircraft.

➢ Procedure of treatment of a suspected unapproved part « bogus part »

- Identification
- Record
- notification to the CAA
- Form used (e.g., refer to the MOE 2.18 occurrence reporting procedure/form)
- notification address to CAA Occurrence reporting | Civil Aviation Authority (caa.co.uk)

2.2.4 Installation of components/standard parts/materials

➢ Procedure for verification prior to installation of components/standard parts/materials.

Components, standard parts and materials shall only be fitted when specified in the applicable maintenance data. This could include parts catalogue (IPC), service bulletins (SB), aircraft maintenance manual (AMM), etc. So, the installation of a component, standard part and material can only done after checking the applicable maintenance data.

This check shall ensure that the part number, modification status, limitations, etc., of the component, standard part or material are the ones specified in the applicable maintenance data of the particular aircraft or component (i.e., IPC, SB, AMM, CMM, etc.) where the component, standard part or material is going to be installed. The organisation shall establish procedures to ensure that this check is performed before installation.

- verification the applicable maintenance data specifies the particular component, standard part or material
- verification of satisfactory condition and appropriate document for installation
- verification that, a component is eligible to be fitted when different modification and/or airworthiness directive configuration may be applicable
- verification prior to installation of standard parts on an aircraft or component (e.g., traceability, applicable standard as per maintenance data requirement)
- verification prior to use any raw or consumable material on an aircraft or component (e.g., due dates, applicable specification as per maintenance data requirement)

2.3 Storage, Tagging and Delivery of Components and Material to Maintenance.

Part 145.A.25 (d), AMC 145.A.25 (d) 1, 2, 3 / Part 145.A.40 (a) / AMC 145.A.42 (b) / Part 145.A.70 (a) 12

2.3.1 Storage Procedures

➢ Procedures for maintaining satisfactory storage conditions (including segregation) of:

- Aircraft components
- Perishables, raw material

- Special storage requirements (condition & limitation) i.e ESD sensitive devices, rubber.
- Flammable fluids
- Engines
- Bulky assemblies
- Record of position in the store (s)

➢ Segregation between serviceable, unserviceable unsalvageable

Unserviceable components shall be identified and stored in a secure location under the control of the maintenance organisation until a decision is made on the future status of such components.

➢ System and procedure to control shelf life / Life limit and modification standard.

➢ Access to storage facilities restricted to authorised personnel.

2.3.2 Tagging

➢ Procedures for Tagging / labelling components/standard parts/materials

- Serviceable components
- Unserviceable components

The unserviceable status of the component shall be clearly declared on a tag together with the component identification data and any information useful to define actions necessary to be taken. Such information shall state, as applicable, in- service times, maintenance status, preservation status, failures, defects or malfunctions reported or detected exposure to adverse environmental conditions, and if the component was installed on an aircraft involved in an accident or incident. Means shall be provided to prevent unintentional separation of this tag from the component.

- Standard parts
- Raw and Consumable material
- Unsalvageable components
- Mutilation before disposal

Mutilation shall be accomplished in such a manner that the components become permanently unusable for their original intended use. Mutilated components should not be able to be reworked or camouflaged to provide the appearance of being serviceable, such as by re-plating, shortening and rethreading long bolts, welding, straightening, machining, cleaning, polishing, or repainting.

When in agreement with the component owner, the component is disposed of for legitimate non-flight uses, such as training and education aids, research and development, or for non-aviation applications, mutilation may not be appropriate. In such case, the component may be marked indicating that it is unsalvageable, or the original part number or data plate information can be removed, or a record kept of the disposition of the component.

- records of components with mandatory life limitations or other critical components scrapped/mutilated and information provided to original manufacturer.
- Quarantine.

2.3.3 Release to the maintenance process

The release document expected for components/standard parts/materials are described in MOE chapter 2.2.

➢ Issue of components, standard parts and materials, to the maintenance process (control, identification, batch segregation)

2.4 Acceptance of Tools and Equipment.

Part 145.A.40(a)1, 2, 3 (b) / AMC 145.A.40(a)(b) / Part 145.A.70(a)12

This chapter shall describe the procedures for the acceptance of new, maintained, modified, calibrated tools/ equipment received and also the loaned / hired tooling.

- Tools and equipment acceptance procedure
  - Sources
  - Conformity with company requirements (e.g., certification, ...)
  - Records
- Incoming inspection for tools
  - Required documentation
  - Compliance with order / condition
  - "Quarantine" procedure
  - Internal identification
  - Verification of necessary control / calibration
- Monitoring of tool service providers
  - Selection process
  - internal authorisation process
  - Monitoring of the internal authorisations (e.g., scope of authorisation, validity etc.)
  - Withdrawal of the internal authorisation
  - List of tools service providers

A list of tools service providers (inspection /servicing/ calibration) has to be established. The list:

- *is not considered an MOE associated list and can be managed under direct control of the Compliance Monitoring Department.*
- *should be kept distinguished from the list of suppliers of materials, standard parts and components used in the maintenance process which is referred in the MOE 2.1. However, the two lists may be also combined provided that the "suppliers" as defined in MOE 2.1 are clearly distinguished from the "tool service providers."*

2.5 Calibration of Tools and Equipment.

Part 145.A.40 (a) 1, 2, 3 (b) / AMC 145.A.40 (a) (b) 1, 2 - Part 145.A.70 (a) 12

This chapter shall describe all the procedures related to the controls, revisions, modifications, checking and calibrations of the tools/ equipment.

- Inspection, servicing and calibration programme / equipment and calibrated tool register.
- Establishment of inspection, servicing and calibration time periods and frequencies.
- Person/ department responsible for the calibration programme, the register, the follow-up, time period and frequencies (link between departments if necessary).
- Identification of servicing / calibration due dates.
- Management of personal or loaned calibrated tools
- Procedure for tools found out of tolerance during calibration (e.g., feedback to production, safety assessment, process to identify affected components/products and to inform the customer/operator for further actions in case of safety concerns, etc.)

Tooling calibration within the UK must be to a UK recognised standard. In the UK this is UKAS - The UK Accreditation Body . UKAS are a member of ILAC International Laboratory Accreditation Cooperation.

Click here to use the Signatory Search - ILAC International Laboratory Accreditation Cooperation overseas.

2.6 Use of Tooling and Equipment by Staff (including alternative tools).

Part 145.A.40 (a) 1, 2, 3 (b) and AMC 145.A.40 (a) (b) 1, 2.

This chapter must describe all the management procedures for tooling, distribution and return of the tooling after use:

- Distribution of tools
  - Record of user
  - Location of use
  - Verification of A/C or component is clear of all tools after completion of maintenance
- Determining tool serviceability prior to issue.
- Training and control of personnel in the use of tools and equipment - (records of training).
- Personal (own) instrument / tool control.
- Loan tool control and audit.
- Control of alternative tools:
  - Demonstration of equivalence between design/manufacturing data of alternative tools and the data/features of the tools recommended in the maintenance data of the manufacturers
  - In-house identification rule of alternative tools (PN, SN)
  - Alternative tools validation process
  - Register of alternative tools /tagging/relation between the references of origin tools and alternative tools.
  - Treatment of possible changes of maintenance data according to the new references of alternative tooling (modifications limited to the references of the tooling to be used and/or adaptation of maintenance data regarding alternative tooling)
  - Use/storage/maintenance manuals according to the need
  - In-house approval of each alternative tooling before servicing
  - Storage of the records of alternative tooling.

2.7 Procedure for controlling working environment and facilities .

Part 145.A.25(d), AMC 145.A.25(d), AMC 145.A.47(a)

- Organisation of the cleaning of the facilities:
- “Foreign Object" exclusion programme
- Cleaning programme
- Individual responsibilities
- Timescales
- Waste material disposal
- Special procedure for some facilities (painting, white room, parts cleaning)
- Segregation of facilities to prevent cross contamination
- Environmental control of working environment

Additional guidance on the effects of environmental factors in maintenance can be found in Human Factors Guidelines For Aircraft Maintenance Manual (Doc 9824) | ICAO Store

2.8 Maintenance Data and Relationship to Aircraft / Aircraft Component Manufacturer's Instructions including Updating and Availability to Staff.

Part 145.A.45.(a), 145.A.45.(b),145.A.45(c), 145.A.45(d), 145.A.45(e), 145.A.45(f), 145.A.45(g), AMC 145.A.45(b) AMC1 145.A.45(d), AMC1 145.A.45(e), AMC 145.A.45(f) AMC1 145.A.45(g)

This chapter shall describe the management of all the technical documentation in use within the organisation.

It shall clearly identify the various types of documentation in use (external and/or internal origin), to be controlled by the organisation to perform the intended scope of work. The documentation may be divided in two main groups identified in the paragraphs below.

2.8.1 Maintenance Data Coming from External Sources.

This paragraph needs to identify the applicable Maintenance data in use coming from external sources

Maintenance data may have been prepared by various organisations, but in any case, it needs to be issued by, referenced by, or acceptable to the organisation responsible for the design in accordance with Part 21 (e.g. type certificate holder (TCH), supplemental type certificate holder (STCH), ETSO holder, repair design approval holder). The maintenance instructions published by the component manufacturers may be considered acceptable to the DAH – and hence may be used as maintenance data for maintenance on components approved for installation by the DAH – when they are referenced as additional or optional maintenance information together with the ICA, or when documented by a list by that DAH. Control of Maintenance data obtained directly from the author (ADs, SBs, SIL, CMM, AMM, ESM, etc.)

- Subscription control
- Technical library
- Issue / amendment control

➢ Control of customer supplied maintenance data

➢ Procedure to ensure all applicable maintenance data is readily available for use when required by maintenance personnel

In the case of an Initial or Change of a Part-145 approval for Cx ratings, the AMO shall demonstrate having direct access to the TCH/OEM maintenance data. This means:

a) The AMO has a subscription for the maintenance data directly with the TCH/OEM, or.

b) In the case of operator/customer provided data, the AMO has direct access to TCH/OEM to verify the revision status of the documentation provided by the customer (e.g., typical example would be that the TCH/OEM provides this information freely available in its website). In addition, the conditions specified below apply:

1. A contract shall be in place detailing the responsibilities for ensuring the availability, the update of the maintenance data from the customer/operator and formal authorisation for the use of such data.
2. The maintenance data is available at the time of the audit by CAA.
3. the MOE 1.9 is limited as necessary (to the specific customer/operator), and a notification is done according to MOE 1.10 when the contact is terminated/cancelled because this may directly affect the approval.

2.8.2 Documentation/Maintenance Instructions Issued by the maintenance organisation.

This procedure shall describe the various types of maintenance instructions which may be developed by the maintenance organisation starting from the maintenance data (e.g., AMM, CMM, etc.).

It has to be noted that the MOE 2.13 chapter shall only describe the templates and their use in the maintenance process, while the MOE 2.8 is intended to cover the procedure on how to ensure that maintenance data are correctly transcribed into work instructions.

Specific instructions from manufacturer maintenance data related to CDCCL shall be considered.

- Modification of maintenance instructions by the organisation, if applicable.
- Maintenance instructions issued in conformity to approved data in order to facilitate/customise the maintenance (e.g., work card/work sheet, engineering orders, technical specifications, etc.) as applicable.
    - paper or computer-generated work cards and related amendment control
    - qualification requirements for staff involved in preparation/approval of work cards/work sheets, etc.
    - Incorporation of best practice and human factors principles:
    - Complex or long maintenance tasks subdivided into clear stages to allow recording what was actually accomplished by each individual.
    - differentiation of disassembly, accomplishment, reassembly, testing tasks.
    - compliance and traceability with FTS/CDCCL instructions.

'Complex or long maintenance tasks' refers to tasks involving multiple disciplines or multiple shifts, or multiple zones/access opening, special tools etc., or a combination of theses. The stages into which the work cards are to be subdivided should refer to where work can be interrupted. Subdivision should also indicate when a different discipline continues to work if no separate work cards are provided.

- Documentation issued for internal information purposes (e.g., quality information bulletins, quality alerts, occurrence investigation reports, etc.) as applicable.
    - procedure to ensure awareness by the staff
- Control of information
    - Technical library
    - Issue / amendment control
    - Distribution: access to the staff

2.9 Acceptance, coordination and performance of repair works

Part 145.A.42(b)(iii), AMC1 145.A.42(b)(iii)/ 145.A.45(a)/ 145.A.48(d)/ AMC 145.A.50

2.9.1 Repairs

This chapter is intended to describe how the organisation is performing repairs on aircraft/components/engines according to already available maintenance data and how is managing the repairs not described in the manufacturer's documentation.

It has to be noted that the privilege given by Part 145.A.45(d) in order for the organisation to develop modified maintenance instructions (as described in previous MOE chapter 2.8), is excluding the engineering design of repairs and modifications.

- Repairs according to already available maintenance data
    - Repairs In accordance with AMM, SRM, CMM etc.
    - Repairs already approved by Part 21 DOA.
    - Repairs already approved by the TC / STC Holder.
    - Internal process in use and forms to manage the repairs
- Repairs requiring a new approval (not already included in the available maintenance data)
    - Sources of repair approval as per M.A.304 (e.g.: Part 21 DOA, TC / STC Holder)
    - Acceptance of Minor/major repairs approvals (it is recommended to develop a table listing the various cases, including the acceptance of repairs under bilateral agreements)
    - Work order
    - internal process in use and forms to manage the repairs
    - Maintenance instruction (job cards).
- Control of the scope of work versus the requested repair (limitations and conditions).
- acceptance of standard change and standard repair, if applicable to the scope of work (this procedure is only applicable to airplanes of 5700 Kg MTOM or less, rotorcraft of 3175 Kg MTOM or less and sailplanes, powered seaplanes, balloons and airships).

Repairs approved by a FAA Designated Engineering Representative (DER) are only acceptable under the terms of the bilateral agreement. See International Co-operation | Civil Aviation Authority (caa.co.uk) for further information.

2.10 Acceptance, coordination and performance of scheduled maintenance works.

Part 145 AMC 145.A.45(b)/ AMC 145.A.50(b).

This procedure is primarily applicable for maintenance under Ax ratings in relation to establishing compliance with the operator's maintenance programme. However, it can also be adopted for maintenance under Bx and Cx ratings when necessary to clarify the terms under which scheduled maintenance is to be defined for an engine or component starting from the work order received from the customer.

A procedure shall be included, with intent to explain how the maintenance organisations ensures the operator's maintenance programme is considered to comply with the contract for aircraft maintenance.

Additional guidance can be found in Appendix IV to AMC1 CAMO.A.315(c).

- Identification of the maintenance programme under which the maintenance has to be conducted
- Maintenance programme access by the maintenance organisation as part of the work order/contract
- Procedure to ensure a CRS is done in compliance with the approved operator's maintenance programme (this procedure may cross-refer to the MOE 2.16 chapter)

The certificate of release to service should relate to the task specified in the (S)TC holder's or operator's instructions or the aircraft maintenance programme which itself may cross-refer to maintenance data.

- Support the maintenance organisation may provide to the operator in order to substantiate a deviation request from the maintenance programme.

Deviations from the maintenance programme have to be managed by the approved Part CAMO. The contract between the maintenance organisation and the CAMO should specify the support expected by the maintenance organisation in this regard. This MOE chapter is to be used to detail the policy in place on this matter, while dedicated procedures applicable to each customer operator should be included in MOE chapter 3.15. or in separate interface documents.

2.11 Acceptance, coordination and performance of airworthiness directives works.

Part 145.A.45(b)2, AMC 145.A.45(b), 145.A.42(b)(ii), GM1 145.A.42(b)(ii), GM145.A.50(a)

The follow up of the airworthiness directives is the responsibility of the owner/operator who is responsible to request their accomplishment on the work order sent to the maintenance organisation. The maintenance organisation is then responsible to embody the ADs which have been ordered.

It is necessary to make a difference between the activities of management / launching of ADs on behalf of the customers and the one carried under the Part 145 approval.

Click here to access current *Airworthiness directives | Civil Aviation Authority (caa.co.uk)*

Only the AD related activities which concern the Part-145 approval have to be described in the MOE, with particular reference to the following points.

- Identification of the responsibilities of the maintenance organisation with regards to airworthiness directives, such as but not limited to establishing compliance with the following:

It is considered a good maintenance practice to have a procedure in place to review ADs as applicable to the scope of approval.

- procedure for control of ADs applicable to components in the store(s) of the maintenance organisation
  - When the airworthiness control is directly ensured by the owner/operator, the maintenance organisation shall demonstrate that a contract is in place, attributing the responsibilities related to the ADs to such owner/operator. This also applies to component(s) directly delivered by the operator to the line stations.
  - When the maintenance organisation retains control of the airworthiness status of the component(s) (e.g., the maintenance organisation owns the component), the maintenance organisation shall ensure that all applicable ADs are embodied to the parts they have in store. The maintenance organisation shall employ qualified staff for the AD analysis, issuing internal work orders, performing the AD compliance follow-up
- procedure to hold and use applicable current airworthiness directives (e.g., ordered by the customer, needed for the control of components in store, etc.)
- access to the relevant ADs

This procedure may also refer to a procedure included MOE chapter 2.8 endorsing this requirement

- verification that, prior to installation on an aircraft, a component is eligible to be fitted when different airworthiness directive configuration may be applicable

This procedure may also refer to a procedure included MOE chapter 2.2 endorsing this requirement

- procedure to ensure that a CRS is not issued in case of any non-compliance which is known to endanger flight safety (e.g., overdue AD known by the maintenance organisation, etc.)

This procedure may also refer to a procedure included MOE chapter 2.16 endorsing this requirement

- Accomplishment of aircraft/components/engines ADs / work orders specifying the status of the document to be used
- Awareness of the mandatory character of the associated maintenance data
- Identification of the mandatory requirement in the maintenance documentation

2.12 Acceptance, coordination and performance of modification works.

Part 145.A.45(d)/ 145.A.48(d)/ AMC1 145.A.45(d)/ GM1 145.A.48(c)

This chapter shall refer to the optional modifications to be embodied on the aircraft/components/engines, under the Part-145 approval.

The follow up of the Optional Modification is the responsibility of the operator who must ask their accomplishment on the work order sent to the maintenance organisation.

(Only the activities above which concern the Part-145 approval have to be presented in the MOE).

It has to be noted that the privilege to develop modified maintenance instructions (as described in previous MOE chapter 2.8), is excluding the engineering design of repairs and modifications.

Maintenance procedures shall be established to ensure that damage is assessed, and modifications and repairs are conducted using data specified in 145.A.48(c)(4).

- *Company policy*
  - *Sources of modification approval (UK CAA Part 21 DOA, TC Holder[13])*
  - *embodiment of modifications, including the case of STCs*
- *Control of the scope of work (limitations and conditions)*

For further guidance please refer to International Co-operation | Civil Aviation Authority (caa.co.uk)

2.13 Maintenance Documentation development, completion and sign-off.

Part 145.A.45(g), 145.A.45(e), 145.A.45(f), 145.A.55(a), GM1 145.A.55(a), M.A.201(c), GM1 145.A.48(c)

It is recommended to structure this chapter in different separate paragraphs as indicated below with clear differentiation between each individual rating in the scope of work (e.g., aircraft, engines, components, specialised services).

2.13.1 Templates in use to record maintenance.

This procedure shall identify the process of issuing and updating all the various templates in use by the maintenance organisation to record maintenance, such as work sheets, job cards, non-routine cards, deferred items, etc.

With regards to job cards and work sheets the MOE 2.13 chapter shall only describe the templates and their use in the maintenance process, while the MOE 2.8 is intended to cover the procedure on how to ensure that maintenance data are correctly transcribed into work instructions.

- Identification of the templates in use to record maintenance

This procedure may refer to the MOE chapter 5.1 where the forms and templates in use by the maintenance organisation are included

- Analysis and implementation of manufacturer data revisions
- Initial approval and revision of the template

[13] ***Limited to country where a bilateral with the UK is in place.***

2.13.2 Composition of the work package.

This procedure shall describe the composition of a standard work package as applicable to the scope of work of the organisation (e.g., for aircraft maintenance will be routine work cards, non-routine cards, ADs, SBs, MEL, deferred items, tally sheet, maintenance release certificate, etc.)

- List of maintenance documents which build up a standard work package (e.g., front page with general information, list of tasks required, work cards, associated work orders, expected CRS…)
- Assembly of work packages for issue to maintenance activity
- Worksheets for non-routine tasks
- Assembly of completed work package for certification
- Control and use of customer supplied work card/worksheets

2.13.3 Completion of Maintenance Documentation.

This procedure shall describe the completion of each of the documents identified in the previous paragraph. This may be done by reference to MOE chapter 5.1 where the related sample document is included together with its related filling instructions.

- Process of declaring a task not applicable including conditional tasks
- Process of recording test results and dimensions
- Process of recording materials/parts replaced together with the related traceability to the enclosed documents
- Record and management of additional works
- Record and management of deferred items
- Process to correct a maintenance record imperfectly/incorrectly entered during the performance of maintenance. (*This cannot be done after CRS issuance).*
- Worksheet / work card completion and maintenance / independent inspection sign-off
    - procedure to ensure correct completion of customer provided work cards (e.g., training on customer paperwork, etc.)
- Use of personal stamps

Sign-off policy: summary table for tasks sign-off[14]

The procedure shall clearly indicate when a task is to be considered signed-off and by which mean (e.g., use of personal stamp, use of signature, combination of stamp plus signature, etc.).

The sign-off policy is established to assign clear responsibilities for the performance of maintenance tasks, even when a task may be signed-off by more than one person (e.g., additional inspection) or it is signed-off based on tasks conducted by a contracted or subcontracted organisations.

Any person performing maintenance shall be responsible for the tasks performed. A task can only be signed-off by “authorised personnel”[15].

The use of a sign-off summary table is recommended which shall be consistent to the procedures in MOE 2.25.1 “Procedure to minimise the risk of multiple errors and preventing omissions” and to the job descriptions identified within the maintenance organisations (e.g. Certifying Staff/Support Staff in MOE 3.9, mechanics in MOE 3.14, qualifying inspectors in MOE 3.13, etc.).

[14] A “sign-off” is a statement by the competent person performing or supervising the work, that the task or group of tasks has been correctly performed. A sign-off relates to one step in the maintenance process and is therefore different from the release to service of the aircraft.

[15] “Authorised personnel” means personnel formally authorised by the maintenance organisation approved under Part-145 to sign-off tasks. “Authorised personnel” are not necessarily “Certifying Staff”.

Example:

Type of task	Task sign-off by "authorised personnel"	Aircraft/Component/ Engine release to service
Normal task	authorised person for the task performance (e.g., mechanic, C/S) Or Trainee + authorised person for the task performed under supervision (e.g., C/S, inspector)	Certifying staff[17]
Critical Maintenance task (e.g., one engine installation, one flight control rigging, etc.) with error capturing method[16] of **Independent inspection**	authorised person for the task performance (e.g., C/S, mechanic) + authorised person for the independent inspection (e.g., C/S, inspector) --- Trainee + authorised person for the task performed under supervision (e.g., C/S, inspector) + authorised person for the independent inspection (e.g., C/S, inspector)	
Critical or identical maintenance task (Limited to unforeseen circumstances when only one person is available) (e.g., dual engine oil uplift, replacement of both cabin pressure controllers on one aircraft, etc.) with error capturing method of **re-inspection**	Authorised person for the task performance (e.g., mechanic, C/S) + additional record of re-inspection by the same authorised person	

Figure 9 – Example task/sign off table

[16] Refer to MOE 2.23 and 2.25 for the definition of error capturing methods (and priority criteria), critical and identical maintenance tasks.

[17] In the case of aircraft base maintenance, B1, B2, B3 Support Staff, as applicable, shall ensure that all relevant tasks or inspections have been carried out to the required standard before the category C Certifying Staff issues the certificate of release to service.

2.14 Technical Record Control.

Part 145.A.55(a), GM 145.A.55(a), 145.A.55(b), 145.A.55(c)1, 145.A.55(c)2, 145.A.55(c)3, AMC 145.A.55

- Composition of maintenance records retained by the maintenance organisation
    - CRS copy as applicable to aircraft/engines/components/NDT ratings (e.g., Aircraft Technical Log, base maintenance release, CAA Form 1)

In the case of aircraft base maintenance copy of the base maintenance release certificate plus the associated CRS in the aircraft technical logbook system shall be kept on records by the maintenance organisation.

- copy of any detailed maintenance record associated with the work conducted
- Release documents of components, standard parts installed, and consumable/ raw materials used

Where the release documents are not included in the maintenance records the organisation shall demonstrate traceability is available in the maintenance records to the release documents and that they can be retrieved at any time for all the period to which the records retention requirements apply.

In the case of release documents related to aircraft components, the customer/operator agreement is necessary where those documents are only traceable but not included in the maintenance records provided to the customer/operator.

- Format of the maintenance records
    - Paper and/or.
    - Computer system and related backup

Computer record systems should have at least one backup system, which should be updated within 24 hours of any new entry. Computer record systems should include safeguards to prevent unauthorised personnel from altering the data.

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

- Records storage conditions (fire extinguisher system, fire detection) and retrieval of records (paper or computer based)
- Control of access to records (paper and / or computer-based records)
- Lost or destroyed records (reconstruction and CAA acceptance). This procedure shall only be proposed to CAA in case the actual need arises.
- Retention of records
    - Periods
    - Methods and security

Minimum records retention period is three years from the date the aircraft or component to which the work relates was released by the maintenance organisation

- commitment that all retained maintenance records covering the last three years shall be distributed to the last owner or customer of the respective aircraft or component in case the maintenance organisation terminates its operation.

2.15 Rectification of Defects Arising During - Maintenance.

Part 145.A.50.(c), (e), Part 145.A.70.(a)

This procedure is applicable to any rating and intended to describe how new defects or incomplete maintenance work orders identified during maintenance shall be brought to the attention of the customer/operator for the specific purpose of obtaining agreement to rectify such defects or completing the missing elements of the maintenance work order.

In the case where the customer declines to have such maintenance conducted, 145.A.50(e) is applicable in order to be able to issue the release to service (with incomplete/deferred maintenance), as addressed in MOE chapter 2.16

- Procedure to record defects arising during maintenance
- Analysis of defects and rectification
- Notification process (when necessary) to the customer/operator, manufacturer and authority
- Report to the operator/ approval of the customer to launch the rectification according to the contract

2.16 Release to Service Procedure.

Part 145.A.30(g), 145.A.30(h)1, 145.A.30(h)2, 145.A.30(i), 145.A.30(j)5, AMC1 145.A.30(j)(5), AMC1 145.A.30(j)(5)(i), AMC1 145.A.30(j)(5)(ii), 145.A.48(c),145.A.50(a), GM1 145.A.50(a), 145.A.50(b), 145.A.50(c), 145.A.50(e), 145.A.50(d),145.A.50(f), AMC 145.A.50(b), AMC1 145.A.50(d), AMC1 145.A.50(e), AMC1 145.A.50(f), M.A.403 (b), 145.A.35(a), 145.A.55(a), 145.A.75(e), 145.A.75(c), 145.A.30(j)3, 145.A.30(j)4, AMC1 145.A.30(j)(4), , Appendix I

2.16.1 General requirements of the release to service

- Definition of the CRS statement.
- Minimum information to be contained in the certificate of release to service:
  - Basic details of the maintenance conducted (by reference to the maintenance data and related revision status, plus any eventually associated work package or job card as applicable to the product or component being maintained).
  - The date such maintenance was completed.
  - The location where the release to service is issued.
  - The identity of the organisation, including the approval number of the maintenance organisation.
  - the identity of the person issuing the release to service, including:
    - the Part-145 C/S, CC/S & S/S individual authorisation number (handwritten or stamped) of the Certifying Staff issuing such a certificate.
    - the signature of the Certifying Staff issuing such a certificate (may include electronic signature system when approved by the CAA).
  - The limitations to airworthiness or operations, (if any).
- Cross-reference to work packs (initial work order, additional works, to ensure that all the tasks ordered have been performed).
- General verification conducted after completion of maintenance that the aircraft or component is clear of all tools, equipment and any extraneous part or material and that all access panels removed have been refitted.
- Impossibility to sign a release certificate that could hazard flight safety e.g.:
  - AD ordered or know to be applicable which is overdue and not embodied.
  - Works which were conducted not in accordance with approved data.

    Discrepancies that may have consequences on the airworthiness of the aircraft/ component/ engine.
- Impossibility to sign a release certificate due to unexpected non-availability of facilities, equipment, tooling material, maintenance data or Certifying Staff.

- Particular cases of issuance of CRS for aircraft/engine/component known to be in un-airworthy conditions[18].
  - NDT inspections with defects outside limits.
  - Need to complete a maintenance work order which leaves the aircraft/engine/components in non- approved configuration (e.g., CRS of an aircraft where the maintenance organisation is only ordered to remove an engine).
  - Need to issue a CRS for a maintenance check flight, where an STC has been incorporated which is not yet approved (e.g., parts installed in “prototype status,” maintenance performed using data pending approval, etc.).
- The specificities of CAA Form 1. This procedure shall at least address the following issues:
  - The address to be recorded in the CAA Form 1 block no. 4 is the address of the PPB which is reflected in the first page of the CAA Form 3 certificate. However, to allow the identification of the maintenance site where the CAA Form 1 is issued (in the case this is different from the PPB), the organisation shall ensure a system is in place to retrieve the information of the maintenance site where the CAA Form 1 was issued, starting from the tracking number of the CAA Form 1 (block no. 3).
  - The tracking numbering system of CAA Form 1 shall be described demonstrating a unique number is used.
  - An identification system shall enable to track the location where the maintenance has been released to service.
  - The recording system allowing to easily retrieve all the issued Form 1’s.
  - The cancellation or correction of an CAA Form 1 mistakenly completed/issued.

[18] ***This procedure is optional and should be only included in case of real need by the maintenance organisation. A CRS in the cases above might be issued as long as the incomplete maintenance/non airworthy condition is properly identified in the CRS statement and communicated to the customer/operator (and to CAA in case of disagreement between the maintenance organisation and the customer/operator on the possibility to issue such CRS)***

2.16.2 Aircraft maintenance release to service (Ax ratings).

- Issuance and completion instruction of CRS after Base Maintenance (e.g., Maintenance Release Certificate)
  - Responsibilities of the Cat C Certifying Staff
  - Responsibilities of the B1 / B2 Support Staff
- Issuance and completion instruction of CRS after Line Maintenance
- Issuance of a CRS with limitations/incomplete work within aircraft limitations as per approved data (e.g., maintenance organisation not in condition to complete all the maintenance ordered, deferred maintenance, need to perform a maintenance check flight*)

Only the authorised Certifying Staff, can decide, using maintenance data, whether an aircraft defect hazards seriously the flight safety and therefore decide when and which rectification action shall be taken before further flight and which defect rectification can be deferred. However, this does not apply when the MEL is used by the pilot or by the authorised Certifying Staff.

**Maintenance Check Flight (MCF): Certain maintenance data issued by the design approval holder (e.g., AMM) require that a maintenance task be performed in flight as a necessary condition to complete the maintenance ordered. (See CAP1038: CAA Check Flight Handbook | Civil Aviation Authority)*

- Temporary fitting an aircraft component without appropriate release certificate in AOG condition (e.g., 30 hours of flight, agreement of the customer, acceptable certificate, checking the status of the component, technical log record, corrective action when the aircraft returns to its maintenance base.). See 145.A.50(f)
- Release to service for components removed serviceable from aircraft
  - Issuance of an CAA Form 1 for components removed serviceable from G registered A/C

(This procedure is optional). If the organisation intends to have this procedure approved, it shall comply with paragraph 2.6.1 of AMC2 145.A.50(d). The intention of this paragraph is that a Part-145 organisation may issue a CAA Form 1 for those components only if compliance with paragraph 2.6.1(a) to 2.6.1.(i) of the AMC can be demonstrated.

  - Swap /change over serviceable components between G registered A/C

(This procedure is optional). A component removed serviceable shall be issued a component certificate of release to service before being installed in another aircraft or another position of the same aircraft. The CRS may be issued by using a CAA Form 1 or an internal release document as indicated under paragraph 2.16.3. This procedure shall describe how the CRS is issued to ensure compliance with paragraph 2.6.1 of AMC2 145.A.50(d) irrespective of the type of CRS the maintenance organisation intends to use (CAA Form 1 or internal release document).

- CRS in the case of one-off authorisation (the MOE 3.9 specifies the related qualification requirement)
  - Notification to CAA
  - Definition of records to be kept and location of records
  - Task re-checked when affect flight safety

2.16.3 Components/Engines/APUs maintenance release to service (Cx/Bx ratings).

- Issuance and completion instruction of CRS after components/engines/APUs maintenance (CAA Form 1):
  - Responsibilities of the components/engines/APU Certifying Staff
  - if applicable: CRS on internal tag
  - if applicable: CAA Form 1 issued for unserviceable component undergoing a series of maintenance processes (limitations to be entered in block 12)

  Particular cases of issuance of a CRS by using an internal release document instead of the CAA Form 1 *The use of this procedure is optional and shall be limited to cases when the maintenance organisation maintains a component for use by the same organisation subject to acceptance by the customer/operator. The CRS on the internal release document, shall contain the same level of information included in the CAA Form 1 and shall be issued by an appropriately authorised Certifying Staff.*

  - *Case 1: this procedure may be used under Cx/Bx rating*
  - *Case 2: A possible application of this procedure under Ax rating is to allow the issue of a component CRS in the case of robbery of serviceable components between G registered A/C without need of issuing a CAA Form 1.*

- Issuance of a CRS with limitations/incomplete work within engine/APU/component limitations as per approved data (e.g., maintenance organisation not in condition to complete all the maintenance ordered, deferred maintenance, customer/operator approval)

2.16.4 NDT release to service (D1 rating).

- Issuance and completion instruction of CRS after NDT (CAA Form 1):
  - Responsibilities of the NDT Certifying Staff

- Issuance of a CRS with limitations/incomplete work within aircraft/engine/APU/component limitations as per approved data (e.g., maintenance organisation not in condition to complete all the maintenance ordered, deferred maintenance, customer/operator approval)

2.17 Records for the person or organisation that ordered maintenance

Part 145.A.55 (b)

- Composition of maintenance records to be provided to the customer/operator.

- Contracted record keeping for operators/arrangements for processing and retention of Operator's maintenance records.

This procedure is only applicable when the maintenance organisation is retaining records on behalf of the customer operator according to Part-M requirements (e.g., Original Aircraft Technical Logbooks, Life limited parts records, etc).

2.18 Occurrence reporting (Including Management system additional occurrence reporting).

Part 145.A.60(a), 145.A.60(b), 145.A.60(c), 145.A.60(d), 145.A.60(e), AMC 145.A.60, GM 145.A.60(a), GM 145.A.60(c), Part 145.A.61(a), 145.A.61(b), 145.A.61(c), 145.A.61(d), AMC 145.A.61, GM 145.A.61- 145.A.202(a), 145.A.202(b), 145.A.202(c), 145.A.202(d)- UK Reg (EU) 376/2014 Mandatory Occurrence Reporting

2.18.1 Mandatory Occurrence Reporting System.

As part of its management system, the organisation must establish an internal safety reporting scheme to enable the collection and evaluation of occurrences that are required to be reported under point 145.A.60, 145.A.61 & 145.A.202

The confidential reporting system should be established to encourage safety reporting. This should be supported with a just culture providing appropriate protection for the reporter.

This should also include an effective feedback process to the individual and to the wider organisation where appropriate. This approach should encourage staff at all levels to proactively report errors, near misses and hazards.

Staff need to have confidence in the just culture and the reporting system. They must know that confidentiality will be maintained and that the information they submit will be acted upon, otherwise they will decide that there is no benefit in their reporting.

The scheme must also enable the collection and evaluation of errors, near misses and hazards reported internally.

Through that scheme, the organisation must:

1. identify the causes of, and contributing factors to, the errors, near misses and hazards reported, and address them as part of its safety risk management process in accordance with point 145.A.200(a)(3).

2. ensure an evaluation of all known, relevant information relating to errors, near misses, hazards and the inability to follow procedures, and a method to circulate the information as necessary.

The organisation must make arrangements to ensure the collection of safety issues related to subcontracted activities.

This procedure must describe the reporting procedure to the CAA, and the organisation responsible for the design of the aircraft or component and where applicable the customer operator. Any condition of the aircraft or component identified by the organisation that has resulted or may result in unsafe condition that hazards seriously the flight safety shall be reported.

- List of Reportable occurrences as per , GM1 145.A.61, AMC 20-8 and Article 4 of UK Reg (EU) No 376/2014 & UK Reg (EU) 2015/1018 must also include notification to CAA of all cases where an occurrence is originated as a result of maintenance conducted by the organisation, regardless of the registration of the aircraft or customer and besides any other reporting responsibility to the CAA responsible for the approval under which the maintenance was conducted.

A typical example is a situation where the organisation is made aware of a technical incident of a non-UK customer immediately following a maintenance conducted by the organisation itself, e.g., where an incorrect assembly of aircraft parts by the maintenance organisation was identified as the cause of the incident.

- Method to report occurrences to the CAA and shall be done directly using the Aviation Reporting portal: Occurrence reporting | Civil Aviation Authority (caa.co.uk)
- Reporting Suspected Unapproved Parts:
  - Methods for reporting to:
    - Organisation responsible for design.
    - Operator.
  - Reporting timescale.
  - Reports must contain pertinent information and evaluation of results (where known).
  - Persons responsible for reporting.
  - Occurrences reported by subcontractors.

Ground handling occurrence reporting guidance for MOR's can be found here CAP 382S: Guide to Ground Safety Reporting | Civil Aviation Authority (caa.co.uk)

For UK approved organisations with PPoB overseas, submissions to the EU must still be made using ECCAIRS (European Co-ordination Centre for Accident and Incident Reporting Systems) provides a digital platform to integrate European National Aviation Authorities (NAA's) and Safety Investigation Authorities (SIA's) to enable the implementation of the provisions defined in regulation 376/2014. More information on ECCAIRS, and the safety benefits of reporting is available on ECCAIRS 2 Central Hub | Why Safety Reporting (aviationreporting.eu)

Note:

- ***for UK based organisations, (holding an EASA approval) or,***
- ***for UK approved organisations (with PPoB outside of the United Kingdom), holding a UK and EASA approval.***

It should be noted that organisations have an obligation to report occurrences to the relevant national aviation authority (UK or EASA). When the reporting mechanism is through ECCAIRS, a duplicate report must be made, ensuring both states are notified.

Aircraft accidents and serious incidents shall also be reported directly to the UK AAIB. Definitions for aircraft accidents and incidents can be found Accident Investigations | Civil Aviation Authority (caa.co.uk)

2.18.2 Voluntary Occurrence reporting system

This procedure must describe the voluntary reporting. This reporting is intended to feed the safety reporting scheme described in MOE 3.2.

2.19 Return of Defective Aircraft Components to Store.

Part 145.A.42(a)(iii)

This chapter shall refer to the process of parts returned by maintenance teams to the store.

- Aircraft component received in serviceable status but found “defective” at installation (e.g., involvement of compliance monitoring for investigation, possible need to report the occurrence as per MOE 2.18)
- Labelling and handling of unserviceable components (link between involved departments)
- Labelling and handling of unsalvageable components (link between involved departments)

2.20 Defective Components to Outside Contractors.

Part 145.A.75(b)

This chapter shall refer to the process of sending components to outside contractors for repair or modification.

This chapter is only applicable when the maintenance organisation is sending/contracting component maintenance to:

- Contracted CAA Part 145 approved organisation. This fact shall be reflected in the MOE 2.1 and the contracted organisation(s) listed in MOE chapter 5.4, or
- Subcontracted organisation working under the scope of approval of the subcontracting organisation. This fact shall be reflected in the MOE 2.1 and the “Subcontractors” listed in the MOE chapter 5.2.

- Dispatch of components for maintenance Identification of required work.
- Return of the serviceable component after maintenance at the contractor/subcontractor facility control of dispatch, location and return.
- Return of unserviceable loan parts.
- Management of the packaging and special transportation condition (e.g.: wheels – oxygen bottles).

2.21 Control of Computer Maintenance Records System.

Part 145.A.45(e), 145.A.55(c)2, GM1 145.A.55(a)

This chapter shall refer to the computer systems used to manage and/or record information regarding the maintenance tasks conducted.

This chapter shall not be confused to chapter 2.14 “Technical record control” which is intended to cover the record keeping requirement addressed in 145.A.55

- Description of the computer records system in use and relate objectives (e.g., AMOS to track on-going maintenance in the hangar, etc.)
- Information retrieval
- Verification of Back-up systems (frequency, means, and delay) and second site storage (frequency, means and delay)
- Security and safeguards to unauthorised access

2.22 Control of Man-Hour Planning versus Scheduled Maintenance Work.

Part 145.A.47(b), 145.A.47(c), 145.A.30(d), AMC1 145.A.30(d), 145.A.25(a)1, 145.A.25(a)2, AMC1 145.A.25(a)

- Maintenance man-hour plan (taking into account also maintenance activities conducted outside the scope of the Part-145 approval)
  - Reviewed at least every 3 months and updated when necessary
  - Covering all staff (e.g., Certifying Staff, inspectors, mechanics, planners, quality auditors, etc.)

Particular attention shall be given to the situation when the same person is acting with different roles during a particular maintenance check (e.g., a person who is acting at the same time as Cat. C Certifying Staff and B1 Support Staff during a particular base maintenance check, a person who is acting at the same time as component Certifying Staff and sign-off staff during a particular component workshop maintenance, etc.). In such cases the resource plan for the particular maintenance check should take into account this aspect to ensure the person is allocated enough time to conduct the necessary activities required for each of the different roles they undertake, and appropriate consideration is given to human performance limitations.

- Hangar visit plan versus resource plan

The "hangar visit plan" shall be made available to demonstrate sufficiency of hangar space to conduct planned base maintenance. The relation between the hangar visits plan and the resource plan shall be described. The hangar visit plan shall also include non-commercial air transport or other activities.

- Management system of company planning versus time available (e.g., A/C or components base maintenance activity …)
- Type of planning (man hours availability versus workload)
- Type of factors taken into account in the planning
  - Human performance limitations
  - Complexity of work
  - Additional factors
- Planning revision process Organisation of shifts
- Use of “contracted”[19] personnel

At least half the staff that perform maintenance in each workshop, hangar or flight line on any shift shall be employed to ensure organisational stability. To meet a specific operational necessity, a temporary increase of the proportion of contracted staff may be permitted to the organisation by the CAA, in accordance with an approved procedure to be included in this MOE chapter, which shall describe the extent, specific duties, and responsibilities for ensuring adequate organisation stability.

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[19] “Contracted” means the person is employed by another organisation and contracted by that organisation to the maintenance organisation approved under Part-145. For Guidance see IN-2017/015: Part 145 – Maintenance Staff Employment Status | Civil Aviation Authority (caa.co.uk)

- *Procedure to manage risks of work force unbalances:*
  - *Actual staff available lower than planned level for any shift or period*
  - *Temporary increase of contracted staff for specific operational needs*
- Notification to the Compliance Monitoring Manager and Accountable Manager of deviations exceeding 25% between the workload and the man hour availability.

2.23 Critical maintenance tasks and error-capturing methods

Part 145.A.48(b), AMC1 145.A.48(b), AMC2 145.A.48(c)(2), AMC3 145.A.48(c)(2), AMC4 145.A.48(c)2

The organisation should detail in this section its procedures for Identifying critical tasks and also how they propose to mitigate any risk(s) associated with it. Furthermore, they should identify the error capturing methods they intend to use.

2.23.1 Critical maintenance tasks

- Definition of “critical maintenance task”

“Critical maintenance task” means a maintenance task that involves the assembly or any disturbance of a system or any part of an aircraft, engine or propeller that, if an error occurred during its performance, could directly endanger the flight safety.

- Procedure to identify of a list of “critical maintenance tasks” defined by the maintenance organisation (e.g., tasks that may affect aircraft stability control systems such as autopilot or fuel transfer, tasks that may affect the propulsive force of the aircraft including installation of engines/propellers/rotors, etc.)
  - Person responsible to amend the list
  - Data sources used to identify and amend the list of “critical maintenance tasks” (TCH data, occurrence reporting, results of audit, feedback from training, etc.)

This procedure shall ensure that critical maintenance tasks are reviewed to assess the impact on flight safety. The list of critical maintenance tasks shall be customised to the scope of work of the organisation and may contain critical tasks peculiar only to certain aircraft or components. This list may be included into a separate document under the control of the Compliance Monitoring Manager

The list of “critical maintenance tasks” should be subject to continuous evaluation and when necessary, amended by the organisation as the result of maintenance errors investigations, audit, TCH data analysis, etc.

When the operator/customer defines its own list of critical maintenance tasks, the effective independent inspection tasks to be conducted are the independent inspections required by the Part-145 MOE plus the ones required by the customer/operator.

2.23.2 Error-capturing methods

This paragraph shall identify and detail the management of each possible error-capturing method in use by the organisation

- Identification of the error-capturing method(s) to be used:
  - The primary error-capturing method to be used shall be the independent inspection
  - Re-inspection (limited to unforeseen cases when only one person is available)
- Independent inspection procedure

This paragraph shall address the requirements of AMC4 145.A.48(c)(2) for independent inspection

  - Definition of independent inspection
  - Personnel authorised for the independent inspections

The qualification of this personnel is expected in the MOE 3.13 Qualifying Inspectors

- How to perform an independent inspection
  - What has to be checked (e.g., all those parts of the system that have actually been disconnected or disturbed shall be inspected for correct assembly and locking, etc.)
  - How a task requiring independent inspection is signed-off

This procedure can refer to the MOE 2.13 sign-off policy. Consistency has to be ensured with MOE chapter 2.13.

- Reinspection procedure

This paragraph shall address the requirements of AMC4 145.A.48(c)(2) for reinspection:

  - Definition of reinspection
  - how to perform a reinspection by the same person
  - how to record the identification and the details of the reinspection

2.24 Reference to Specific Procedures.

Part 145.A.75(c), AMC 145.A.35(a)

- Maintenance outside the approved location (s)
- Special Maintenance Tasks, e.g.
  - Engine run up
  - Aircraft pressure run
  - Aircraft towing
  - Aircraft taxiing
  - Technical wash
  - Control/ supervision of de-icing systems
  - Maintenance Check flights
  - Handling and control of waste materials
  - Scrapping of parts
  - Aircraft Painting

2.25 Procedures to Detect and Rectify Maintenance Errors

Part 145.A.48(c), AMC1 145.A.48(c(3)), AMC4 145.A.48(b), GM1 145.A.48(c)(3)

This chapter shall describe procedures to minimise the risk of multiple errors and errors being repeated in identical maintenance tasks compromising more than one system or function. One such method may be 'independent inspections' as defined in AMC4 145.A. 48(b)

Maintenance errors may also be detected as part of the occurrence reporting system, for example following internal or external occurrence reports investigation; this process is expected to be described in the MOE chapter 2.18.

2.25.1 Procedures to minimise the risk of multiple errors and preventing omissions

Consistency with the MOE 2.13 chapter (sign-off policy) shall be ensured.

- Policy to ensure every maintenance task is signed-off only after completion
- Describe how the grouping of tasks for the purpose of sign-off allows critical steps to be clearly identified

Procedure to ensure work performed by non-authorised personnel (e.g., temporary staff, trainees) is checked and signed-off by an authorised person

2.25.2 Procedure to minimise the risk of errors being repeated in identical maintenance tasks compromising more than one system or function

- Criteria to define the identical maintenance tasks

The objective of the procedure is to ensure no person is required to perform a maintenance task involving removal/installation or assembly/disassembly of several components of the same type fitted to more than one system[20] on the same aircraft or component during a particular maintenance check.

2.25.3 Identification of methods in use to minimise the risks

- Planning method (only applicable to identical maintenance tasks)

This paragraph shall address the GM1 145.A.48(c) describing how the planning method is used to minimise the risk of errors being repeated in identical maintenance tasks planning the performance by different authorised persons of the same task in different systems.

- Identification of the error-capturing method(s) to be used (the specific procedure on how each error capturing method is accomplished shall be detailed in the MOE 2.23).

When more than one error-capturing method is defined, then a criteria must be established to prioritise the methods to be adopted. The use of a table is recommended.

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[20] the failure of which could have an impact on safety

Example:

Type of Task	***Description of Task***	***Minimising the risk of errors being repeated in identical maintenance tasks and error capturing methods priority***	
		Primary	***Secondary***
Identical Maintenance Task	Removal/installation or assembly/disassembly of **several components of the same type fitting to more than one system, a failure of which can have an impact on safety, on the same aircraft or component during a particular maintenance check**. (e.g., dual engine oil uplift, replacement of both cabin pressure controllers on one aircraft, etc.)	**Performance by different authorised persons of the same task in different systems (planning method)**	**Re-inspection** by the same Authorised person who has performed the task. **(Limited to unforeseen cases when only one person is available)**
Critical Maintenance Task	a maintenance task that involves the assembly or any disturbance of a system or any part of an aircraft, engine or propeller that, if an error occurred during its performance, could **directly endanger the flight safety. (e.g., one engine installation, one flight control rigging, etc.)**	**Independent inspection**	

Figure 10 - Sample Task identification table

2.26 Shift / Task Handover Procedures.

Part 145.A.47 (c) / AMC 145.A.47 (c) - Part 145.A.70 (a) 12

- Aims and objectives of the shift handover
- Training of personnel in shift/task handover processes Recording of shift/task handover
- Formalised shift handover process and required information
  - Facility status
  - Work status
  - Personnel status
  - Outstanding issues
  - Other possible information
- Responsible person for managing and filling up the shift / task handover

2.27 Procedures for Notification of Maintenance Data Inaccuracies and Ambiguities

Part 145.A.45 (c) / AMC1 145.A.45(c) 1, 2 - Part 145.A.70 (a) 12

- Definitions of maintenance data ambiguities
- Method of internal reporting of maintenance data ambiguities
- Method of external reporting of maintenance data ambiguities to the authors of that data (the reporting method may be referred to the one indicated in MOE 2.18 as per 145.A.60)
- Feedback to staff and implementation of TC Holder/Manufacturer corrections
- Impact of the data ambiguity on the on-going maintenance task

The authors are:

- Aircraft / component design organisation (AMM, SB, SRM.)
- The UK CAA (AD's)
- The organisation itself in the case of organisation job cards
- The customers in the case of job cards issued and furnished by the customers

2.28 Production planning and organising of maintenance activities

Part 145.A.47(a), AMC 145.A.47(a), 145.A.47(b), AMC1 145.A.47(b), GM1 145.A.47(b), 145.A.10, AMC1 145.A.10, 145.A.65(b)1; GM2 145.A.65(b)(1)

- Decision Making Process. Analysis of the work order to ensure:
  - A clear work order or contract has been agreed between the maintenance organisation and the customer/operator to clearly establish the maintenance to be conducted.

GM 145.A.65(b)(1) provides guidance on the elements that need to be considered for the maintenance contract between the CAMO and the maintenance organisation. The Part-145 organisation should take into account these elements to ensure that a clear contract or work order has been concluded before providing maintenance services.

  - the requested maintenance remains within the approved scope of approval
  - need of special facilities

The main driver to determine whether the requested maintenance is within the scope of approval, shall be the content of the specific maintenance activity ordered. Additional tasks or constraints may be also associated to the requested activity such as deferred items, rectification of defects, inspection requesting skilled workers, qualification of the Certifying Staff, environmental conditions, overall length of the tasks etc. Therefore, a "decision making process" is necessary to assess whether the content of the maintenance activity is within the scope of approval. In addition, access to special facilities (e.g., hangar with specialised equipment, etc.) shall be part of the decision making.

- Verification that the maintenance work package provided by the customer is understandable by the maintenance organisation. In any case the organisation shall issue an internal work package as detailed in MOE Chapter 2.13:
  - Case 1: customer job cards to be used (with appropriate training)
  - Case 2: work package to be developed and prepared by the maintenance organisation based on the customer work order
- Control of the availability and update of maintenance documents (list + MM / job cards /…)
- Procedure for establishing that all necessary resources are available before commencement of work (e.g., hangar, labour with required capabilities, staff, facilities, tools, equipment, parts, documentation, etc.)
- Procedure for outsourcing contractors, as necessary.
- Organising of shifts

Good practices in the maintenance domain and applicable rules should be considered. The resulting shift schedule should be shared with the maintenance staff sufficiently in advance so they can plan adequate rest. The established shift durations should not be exceeded merely for management convenience even when staff is willing to work extended hours.

Working time policy.

- Consideration of fatigue in the planning of maintenance
- Fatigue is a physiological state of reduced mental or physical performance capability resulting from sleep loss or extended wakefulness, circadian phase, or workload (mental and/or physical activity) that can impair a person's alertness and ability to safely perform their tasks.
- Planning of critical maintenance tasks

2.29 Airworthiness Review Procedures and Records.

Part 145.A.55(a),GM1 145.A.55(a),145.A.75(f)

This chapter is only applicable to organisations with their Principle Place of Business (PPoB) in the UK as per CAP1539: UK CAA Interpretation of Principal Place of Business | Civil Aviation Authority

If the organisation is approved to perform airworthiness reviews and issue the corresponding airworthiness review certificate for aircraft covered by Part-ML (in accordance with the conditions specified in point ML.A.903), this chapter must be developed and this capability stated in the MOE chapter 1.9, otherwise it shall be indicated as "not applicable".

- Procedures to perform the airworthiness reviews and issue the corresponding airworthiness review certificate
- Records retention related to airworthiness review

2.30 Fabrication of Parts

Part 145.A.42(b)(iii), AMC1 145.A.42(b)(iii)

This procedure can only be included when the possibility to fabricate parts is included in the MOE 1.9.7 chapter. The organisation must detail the scope and their process/procedures relating to fabrication, using the guidance as per AMC1 145.A.42(b)(iii).

2.31 Procedure for component maintenance under aircraft or engine rating

GM1 145.A.45(b)

This procedure can only be included when the possibility to use component maintenance data under aircraft or engine ratings is included in the MOE 1.9.

2.31.1 Conditions for using the privilege

- Justification to the CAA is required for the need of this privilege and confirmation that it is for simple component maintenance, as defined in the following paragraph
- A Procedure to assess the task that is within the technical capability of the maintenance organisation (e.g. staff, tools, maintenance data, materials, etc.)

This assessment may be considered as being met without further demonstration, where the organisation holds the relevant Cx/Bx rating and performs a task included in the already approved capability at P/N level, however using workshop staff “on-wing” under the Ax rating.

- Assessment on the need to develop maintenance instructions for using the particular maintenance data in order to precisely record the part of the maintenance task effectively carried out (e.g. a B1 rated AMO will not take care of circuit breaker deactivation in the cockpit and should not record this task as being done by the AMO as this is a function / responsibility of the Ax rated AMO)
- Where applicable, a procedure to liaise with the Ax rated AMO being responsible for some parts of the task when a Cx or Bx AMO24 are working on-wing (e.g. circuit breaker deactivation, etc.)
- A Procedure detailing the possible CRS limitations (e.g. leak test needed by the Ax rated AMO following a task carried out by the Cx or Bx AMO)
- Procedure to cover cases where the same maintenance task is available in different maintenance data with different allowed defects. In such cases, the AMO can only use the particular maintenance data if clearly specified in the work order (e.g. a Bx shall not use the AMM under its own decision, when the same task is available in EMM)
- Documented training need analysis (or specific training if required), in the use of maintenance data and in the particular maintenance environment (e.g. a Cx or Bx rated AMO working on-wing in an aircraft line or base maintenance environment)
- Access to the applicable maintenance data

2.31.2 Definition of simple component maintenance

This definition is to be customised to the scope of work of the organisation. It is not intended to define simple tasks which are not applicable to the organisation.

The criteria below are only intended to address the case of an Ax rated organisation wishing to use component maintenance data.

The tasks to be carried out are:

- Not requiring any specific workshop environment (e.g. special temperature/humidity requirements, special cleanness standard) and/or workshop test bench
- Limited to cabin related maintenance tasks, such as:
- Cosmetic repairs (e.g. seats, galleys, lavatories, stowage, partitions)
- Minor inspection (e.g. fire extinguisher weighing, seats inspection)
- Minor repairs (e.g. seats subpart replacement)
- The component may be temporarily removed from aircraft in order to improve access to that component, except when such removal generates the need for additional maintenance. The component shall be reinstalled back to the same aircraft, and the related repair recorded in the aircraft maintenance work package
- Amendment status of component maintenance data used under this procedure shall be controlled as per MOE chapter 2.8

Other scenarios may be considered for inclusion in this paragraph subject to the acceptance of the allocated surveyor.

2.32 Maintenance away from approved location

Part 145.A.75(c)

Organisations holding an appropriate 'A' rating scope, in Section 1.9, may perform work away from their approved location subject to the need for such maintenance arising from the unserviceability of the aircraft and in accordance with an agreed procedure accepted by the CAA. This procedure must ensure that the allocated Surveyor is notified at the time this privilege is used.

Further guidance can be found in IN-2017/011: Part-145 - Occasional and Temporary Line Stations | Civil Aviation Authority (caa.co.uk)

2.33 Procedure for assessment of work scope as line or base maintenance

The content of chapter may be included in the chapter 2.28 "Production planning and organising of maintenance activities", which describes the "Decision making process" (in this case the MOE 2.33 should cross-refer to MOE 2.28).

The process described in the title of this MOE 2.33 chapter applies to all types of organisations holding Ax ratings, therefore the assessment of work scope as line or base maintenance is only one particular case of the larger "Decision making process" intended to assess any work scope.

2.34 Procedures for the handling, storage and maintenance of critical parts, and actions following their removal from service.

If the organisation handles, stores or maintains components or parts that have been classified as 'Critical Parts' by the design approval holder (DAH), this paragraph shall describe the procedures for how the organisation ensures that the integrity of the parts or components is maintained during handling, storing and maintaining such parts, in accordance with the approved data published by the DAH.

This paragraph shall also describe the procedures to ensure that life-controlled critical parts that are removed from an aircraft or component before reaching their full life retirement time are reported to the DAH through the occurrence reporting system established in accordance with 145.A.60 and MOE paragraph 2.18.

This paragraph shall also describe the process for the storing (quarantining) and returning life-controlled critical parts to the DAH, when requested by them to do so as part of any Continuing Integrity Verification Programme (or similar).

For further guidance see Critical parts awareness and training | Civil Aviation Authority (caa.co.uk)

Part L2 – Additional Line Maintenance Procedures

MOE Part L2 is intended to provide additional procedures which are specific for the line maintenance environment, which have not been covered in the MOE Part 2, or to complement those Part 2 procedures if necessary. Where a procedure, was already covered in the MOE Part 2 and there is no need of further detail to be added, a direct reference to the MOE (Part 2) chapter may be used in the relevant MOE (part L2) chapter.

L2.1 Line Maintenance Control of Aircraft Components, Tools, Equipment, etc.

Part 145.A.70 (a) 12, 15 - Part 145.A.75 (b), (c), (d)

This chapter must describe the additional / special procedures of the management of the facilities, materials, tools/ equipment, technical documentations & staff associated to the line maintenance activity. For example, this applies when a line station separate from the main maintenance site needs to use procedures to control the components, tools, equipment which are not the same used in the main site as described in MOE Part 2.

- Component / Material acceptance - (required documentation, condition, "Quarantine" procedure)
- Components removed serviceable from aircraft.
- Procedures to maintain satisfactory storage conditions - (rotable, perishables, flammable fluids, engines, bulky assemblies, special storage requirements)
- System for control of shelf life and modification standard
- Tagging / labelling system (serviceable, unserviceable, scrap, etc.)
- Release of components to the maintenance process
- Tools and test equipment, servicing and calibration programme / equipment register
- Identification of servicing / calibration due dates

L2.2 Line Maintenance Procedure Related to Servicing / Fuelling / De-icing including inspection for/removal of de-icing/anti-icing fluid residues, etc.

Part 145.A.70 (a) 12, 15 - Part 145.A.75 (b), (c), (d), AMC1 145.A.70(a)

This chapter must describe the additional/ special procedures of management of the specific activities:

- Technical and maintenance documentation management (control and amendment)
- Company Technical Procedures / Instructions management
- Fuel supply quality monitoring (bulk storage / aircraft re-fuelling)
- Ground de-icing (procedures / monitoring of sub-contractors)
- Maintenance of ground support equipment
- Monitoring of sub-contracted ground handling and servicing

L2.3 Line Maintenance Control of Defects and Repetitive Defects.

Part 145.A.70 (a) 12, 15 / Part 145.A.75 (b), (c), (d),/AMC1 145.A.70(a)

This chapter must describe the general procedures followed by the organisation regarding the rectification of defects in line maintenance. The identification and management of repetitive defects is an operator responsibility; however, the maintenance organisation may also identify such repetitive defects or be involved by the operator in related rectification actions and this MOE chapter is also intended to describe this area of activity.

- Rules for deferring (periods - review - permitted personnel - conformity with MEL /CDL provisions)
- Awareness of deferred defects carried by aircraft
- Analysis of technical log (repetitive defects – crew complaints - Analysis and transfer of cabin log items as required)
- Co-ordination with the operator
- Procedure on how to deal with defects requiring B2 Certifying Staff in the case of line stations where such staff is not permanently available

L2.4 Line Procedure for Completion of Technical Logs.

Part 145.A.70 (a) 12, 15, AMC1 145.A.70(a) - Part 145.A.75 (b), (c), (d)

This chapter must describe the additional procedures of management/completion of the technical log(s) in use. It must also cover the procedures for ETOPS release where applicable. These procedures must be associated to chapters 2.13, 2.16 of the MOE.

- Technical Log system:
  - Considering Operator Procedures
  - Completion of Sector Record Page
  - Distribution of copies
- Training on customer operators' procedures and maintenance record completion (logbook, …) Certification / Sign-off (Maintenance Statements)
- Maintenance Independent Inspections
- ETOPS Certification
- Retention of records
  - Periods
  - Methods and security

L2.5 Line Procedure for Pooled Parts and Loaned Parts.

Part 145.A.70 (a) 12, 15, AMC1 145.A.70(a) - Part 145.A.75 (b), (c), (d)

This chapter must describe the additional management procedures for pooled or loaned parts specific to the line maintenance activity. It shall also cover the removal of serviceable parts from aircraft for use on another aircraft. These procedures must be associated to chapters 2.2, 2.3, 2.19, 2.20 of the MOE.

- Verification of approved sources of parts (sources, conformity with company requirements, Modification Standard and AD compliance, records)
- Compliance with loan and contract requirements
    - Tracking and control
    - Required documentation
- Processing removed loan parts for return to source (records)
- Components removed serviceable from aircraft

L2.6 Line Procedure for Return of Defective Parts Removed from Aircraft.

Part 145.A.70 (a) 12, 15, AMC1 145.A.70(a) - Part 145.A.75 (b), (c), (d)

This chapter must describe the additional management procedures for treatment of defective components associated with the line maintenance activity. These procedures must cover the same subjects specified in chapters 2.19, 2.20 (return of removed components, sending components...) of the MOE.

- Required documentation Service record
- Processing advice of removal (W/O) and dispatch to technical records Dispatch of the part for rectification

L2.7 Line Procedure for critical maintenance tasks and error-capturing methods.

Part 145.A.75(d)

This chapter is the equivalent of the chapters 2.23 and 2.25 of the MOE for the line maintenance activity.

It is intended to describe peculiarities, if any, for managing the critical maintenance tasks in the line maintenance environment together with any associated error-capturing method.

Part 3 – Management System Procedures

3.1 Hazard identification and safety risk management schemes

Part 145.A.200(a)(3), GM1 145.A.200(a)(3),AMC1 145.A.200(a)(3)

This chapter should describe the identification of safety hazards associated with the maintenance activities, the assessment of the associated safety risks and the investigation process, including the mitigation actions to monitor their effectiveness.

The scalability of the SMS system should reflect the size, complexity of the organisation, taking into account the parts, products and appliances being maintained and their criticality.

Further guidance is available in CAP 795: Safety Management Systems - Guidance to Organisations | Civil Aviation Authority (caa.co.uk) Chapter 4.

Hazard identification process.

➢ Process for safety data collection- proactive and reactive methods.

➢ Identification of data sources, external and internal.

➢ Process for safety data analysis.

➢ Procedure(s) for the identification and classification of hazards relevant to the Organisation/activity.

➢ Records management (hazard log/register).

➢ Responsibilities and management of the hazard log.

➢ Internal communication process.

Safety risk management

The Organisation should describe in detail the risk assessment process in place.

Once hazards are identified, the risk of their consequences should be assessed, analysed and mitigation actions should be implemented accordingly. A formal safety risk management process should be developed and maintained which considers the following:

Analysis process (e.g. in terms of the probability and severity of the consequences of hazards and occurrences)

➢ Severity should evaluate the seriousness of the consequences

➢ Likelihood should identify the possibility (and frequency) of the occurrence.

➢ The likelihood and severity should be clearly defined.

➢ Regardless of the method used (ICAO safety risk matrix, ARMS, BOW-TIE, etc.), it is important to customise the risk assessment matrix to reflect the operational profile.

Tolerability assessment

➢ The organisation should assess the acceptability of the potential consequences associated with the potential occurrences and hazards identified. This should be done in accordance with the organisation's defined safety performance criteria

Mitigation actions

➢ Control (in terms of mitigation) of risks to an acceptable level

➢ Decision-making process, including responsibilities

➢ Implementation of actions

➢ Monitoring of the effectiveness of the implemented actions

Mitigation is the process of incorporating risk barrier controls (for example, preventive controls or recovery controls) to reduce the severity and/or the likelihood of the identified hazard, therefore reducing the risk to an acceptable level, and, if possible, to eliminate the risk.

Those risk controls should be Specific, Measurable, Agreed, Realistic and Time constrained. Human Factors should be considered as part of the development of risk controls.

The responsible person/position in charge of the implementation and management of mitigation measures should be identified (including follow-up procedure).

Effectiveness of mitigations should be monitored. When necessary, risk controls should be changed because of that assessment.

For the purpose of the SMS scalability, the following may be considered:

- Paper Forms may be used instead of dedicated software.
- A simple layered approach may be applied, as per example below:

Identified Hazard	Associated Risk	Existing Mitigation Measures in Place	Current Level of risk	Further Mitigation Measures	Revised Level of Risk	Action by who & when
Incorrect maintenance action: Wire locking missing from aileron system connecting rod. (Safety report form number 046)	Connecting rod detaches causing loss of control of the aircraft.	Aircraft Maintenance Manual instruction to wire lock the connecting rod bolt. Independent Inspection required	Severity 5 Likelihood 3 Unacceptable	Reiterate adherence to Aircraft Maintenance Manual and independent inspections. Introduction of staged worksheets for breakdowns Implementation of a Maintenance Error Management System (MEMS).	Severity 5 Likelihood 2 Review	A. Smith (July 2024)

Figure 6 - Example Hazard Log

All safety events, issues, or hazards should be reported to [*insert name*] by e-mail [*insert e-mail address*], telephone [*insert telephone number*] or verbally; they will all be documented and assessed as below.

All events and reported issues will be assessed by [*insert name*] to determine what the issue is, what could happen as a result, and what actions need to be taken (if any) and by whom to manage the risk.

The Hazard Log (see example above) must be updated and reviewed quarterly, and the updated version will be posted on the *[state location i.e., workshop safety notice board]*. All staff should read the Hazard Log and provide feedback, if they have any issues with the content or feel something is missing.

For organisations with a lower risk level, the risk assessment model used may be very simple in cases in which the identified hazards are easy to mitigate. The organisation should classify risks in a consistent manner, expert judgement might be sufficient to measure the efficiency of the safety barriers, especially when the volume of data or safety information does not allow to precisely support the evaluation of the likelihood and the severity of the consequences of the hazards.

The mechanism and the type of safety information to report to the relevant bodies will depend on the organisation's size and structure and the process for the decision-making (e.g., which level of authority).

Resources should be allocated as required to reflect the organisation's size and structure to support an effective MS. Some options include:

- Justification for a full-time safety manager.
- a safety action group may be establishment as a standing group or as an ad hoc group to assist or act on behalf of the Safety Manager or SRB.
- a formal SRB may not need to be established. In this case, the tasks normally allocated to the safety review board should be allocated to the safety manager.

3.2 Internal safety reporting and investigations.

Part 145.A.202(a);145.A.202(b);145.A.202(c);145.A.202(d); AMC1 145.A.202; GM1 145.A.202;

For the purpose of SMS scalability, where a separate SMS Manual is being used, or the details of the internal safety reporting and investigation processes are contained within other documents, then appropriate cross-referencing to such documents within the POE will be made

Safety Reporting Scheme

As part of its management system, the organisation must establish an internal safety reporting scheme to enable the collection and evaluation of occurrences to be reported, as detailed in MOE 2.18.

Through this scheme, the organisation must:

(1) identify the causes of and contributing factors to any errors, near misses, and hazards reported and address them as part of safety risk management process

(2) ensure evaluation of all known, relevant information relating to errors, the inability to follow procedures, near misses, and hazards, and a method to circulate the information as necessary.

This chapter should include, but not be limited to, the following information, with respect to the internal safety reporting scheme:

Confidentiality and safety promotion

The internal safety reporting scheme should be a confidential reporting system and enable and encourage free and frank reporting of any potentially safety-related occurrence, including incidents such as errors or near misses, safety issues and hazards identified. This will be facilitated by the establishment of a just culture.

Identification of clear policy and objectives

The internal safety reporting scheme should include:

- clearly identified aims and objectives with demonstrable corporate commitment.
- a just culture policy as part of the safety policy (as defined in 1.2) and related just culture implementation procedures.

Safety investigation process

Description of the process to investigate occurrences (e.g. criteria to identify occurrences to be investigated, investigation report format, methods of maintenance errors investigation such as "maintenance errors decision aid- MEDA" or "Human Factors Analysis and Classification System (HFACS)" process, corrective actions in response to investigation findings, follow-up system, feedback to staff, etc.) Maintenance errors identified should be used for internal human factors training and for amendment of the procedure for critical maintenance tasks (may cross refer to MOE 2.23)

In line with its just culture policy, the organisation should define how to investigate incidents such as errors or near misses, to understand not only what happened, but also how it happened, to prevent or reduce the probability and/or consequence of future recurrences.

The scope of internal investigations should extend beyond the scope of the occurrences required to be reported to the CAA in accordance with 2.18.

The internal safety reporting scheme should include a detailed process:

- to identify those reports which require further investigation.
- to classify occurrences against the mandatory reportable criteria established in 2.18 and decide on further actions accordingly.
- to investigate all the causal and contributing factors, including any technical, organisational, managerial, or Human Factor issues, or any other contributing factors related to the occurrence, incident, error or near miss.
- to analyse the collective data showing the trends and frequencies of the contributing factor.
- to identify, implement and monitor the effectiveness of the appropriate corrective and preventive actions based on the findings of investigations.

Additional considerations for this chapter include:

- Initial and recurrent training requirements for staff involved in internal investigations.
- Coordination and cooperation with the customer/operator on occurrence investigations by exchanging relevant information to improve aviation safety.
- Recurrent training updates, in accordance with the established training policy and procedures, whilst maintaining appropriate confidentiality.
- Feedback loop to reporters and other maintenance staff.

Example - Company X Safety Report Form

Part A to be completed by the person identifying the safety issue or hazard.

Date of event		Local time	
Location:			
Name of Reporter		Section / Organisation	

Please fully describe the event or identified hazard:

Include your suggestions on how to prevent similar occurrences.

In your opinion, what is the likelihood of such an event or similar happening or happening again?

Unlikely	Probable	Likely
1	2	3

What do you consider could be the worst possible consequence if this event did happen or happened again?

Negligible	Serious Incident	Fatal Accident
1	3	5

Part B - To be completed by the *(insert title of responsible person).*

The report has been dis-identified and logged.

Report Reference		
Signature		Date:
Name		

If further investigation is needed, perform that now and document on the investigation form. This information will support the Safety Committees activities.

Part C - To be completed by the Safety Committee.

Rate the likelihood of the event occurring or recurring:

Unlikely	Probable	Likely
1	2	3

Rate the most credible worst-case consequences?

Negligible	Serious Incident	Fatal Accident
1	3	5

What action or actions have been or are being taken to prevent the issue or hazard from occurring in the future and/or to mitigate its consequences?

Resources Required	
Responsibility for Action	

Agreed and accepted by

[insert title of responsible person]	Date
Responsible Manager	Date
Accountable Executive	Date

Appropriate Feedback given to staff by Safety Officer Signed:	Date

Follow up action required:

What	
Who	
When	
Where	

3.3 Safety action planning.

Part 145.A.202(a)

This chapter should describe the safety action planning process in place, describing the Safety Review Board (SRB) and Safety Action Group (when applicable) composition, meetings and functions.

The Safety Review Board (SRB) is a high-level committee which considers strategic safety functions. The accountable manager should be actively involved in the SRB and normally chairs the meeting. The SRB should normally include the senior management/ nominated persons of the organisation. Membership of the board and frequency of meetings should be defined. The SRB ensures that appropriate resources are allocated to achieve the established safety performance and gives strategic direction to the safety action group. It should also look to the Safety Action Group (SAG) to highlight significant risk issues and provide an input to the high-level strategy.

The SRB monitors:

- Safety performance against the safety policy and objectives.
- Effectiveness of the SMS.
- Effectiveness of the safety oversight of sub-contracted organisations.
- Corrective or mitigating actions are being taken in a timely manner.
- Effectiveness of the organisation’s safety management processes.

The SRB may also be tasked with:

- reviewing the results of compliance monitoring.
- monitoring the implementation of related corrective and preventive actions.

Depending on the size of the organisation and the nature and complexity of its activities, a safety action group may be established as a standing group or as an ad hoc group to assist, or act on behalf of the Safety Manager or the SRB.

More than one SAG may be established, depending on the scope of the task and the specific expertise required. The SAG usually reports to, and takes strategic direction from, the SRB, and may be composed of managers, supervisors and personnel from operational areas.

The SAG may be tasked with or assist in:

- monitoring safety performance.
- defining actions to control risks to an acceptable level.
- assessing the impact of organisational changes on safety.
- ensuring that safety actions are implemented within agreed timescales.
- reviewing the effectiveness of previous safety actions and safety promotion.

This procedure should also specify when/how often SRB meetings and SAG meetings take place.

Note: The allocated surveyor of the organisation should be invited to attend these meetings

3.4 Safety performance monitoring.

Part 145.A.202(a)

A key function of the SMS is assurance that the system is working and is effective. This involves:

- The setting and monitoring of Safety Performance Indicators (SPIs) to measure the organisation's safety performance.
- Assessing the effectiveness of the SMS by confirming that the mitigations, controls and defences put in place are working and effective to ensure safe operational practices.
- Monitoring compliance with the appropriate regulations and standards.

Note: These all require safety and compliance monitoring to be integrated or working closely together.

Safety objectives need to have been established before setting SPIs. This allows the safety performance of the organisation to be measured against its safety policies and objectives. Organisations should review the CAA Safety Plan as this may provide ideas for SPIs.

The following should be considered in setting safety objectives:

- Define what the organisation hopes to achieve.
- It should be a statement of a desired outcome.
- Safety objectives should be short, high-level statements of the safety priorities and should reflect the organisation's safety policy.
- Safety objectives should address the organisation's most significant risks

Once safety objectives have been set then SPIs can be established. SPIs can be used to measure the performance of the SMS and the operational safety performance. SPIs will require the monitoring of data from various sources such as:

- Occurrences and events.
- Safety reports.
- Safety studies.
- Safety reviews including trend analysis.
- Audits.
- Surveys.
- Internal safety investigations.

Safety audits are used to ensure that the structure of the SMS is sound in terms of:

- Adequate staff levels.
- Compliance with approved procedures and instructions.
- Levels of competency and training to carry out specific roles.
- Maintaining required levels of performance.
- Achievement of the safety policy and objectives.
- Effectiveness of interventions and risk mitigations.

Safety and cultural surveys should be carried out as a matter of routine, to provide assurance to managers of safe operational activity. They are used to identify issues or problems in daily operations. They can also be used to gather the views and opinions of operational personnel. Surveys may involve the use of:

- Day to day observation checks.
- Questionnaires.
- Informal confidential interviews. Safety culture surveys allow an organisation to identify behaviours and attitudes of staff. This may identify human conditions that can impact an organisation's safety performance. Survey information is subjective and should therefore be verified before any corrective action is initiated but may provide a valuable source of safety information.

3.5 Change Management.

Part 145.A.202(a); GM2 145.A.200(a)(3),

Changes in organisational structure, facilities, scope of work, personnel, documentation, policies and procedures, can result in unintended consequences and the inadvertent introduction of new hazards, which therefore expose the organisation to new or increased safety risk(s).

The introduction of a change is the trigger for the organisation to perform their hazard identification and risk management process.

Some examples of typical changes include, but are not limited to:

- changes to the organisational structure.
- the inclusion of a new aircraft type in the terms of approval.
- the addition of aircraft of the same or a similar type.
- significant changes in personnel (affecting key personnel and/or large numbers of personnel, high turnover).
- new or amended regulations.
- changes in the security arrangements.
- changes in the economic situation of an organisation (e.g. commercial or financial pressure).
- new schedule(s), location(s), equipment, and/or operational procedures; and
- the addition of new subcontractor.

The change management process should consider:

- Identification and description of the change
- Assessment of the criticality and impact
- Existing controls and implementation of new controls
- Change implementation and transition period
- Monitoring the effectiveness of the change implementation

The Organisation must develop and maintain a process to identify and assess changes which may affect the level of safety risk associated with its services and to identify and manage the safety risks that may arise from those changes. The management of change should be a documented process to identify external and internal changes that may have an adverse effect on the safety and compliance of its continuing airworthiness management activities. The introduction of a change is a trigger for the organisation to perform their hazard identification and risk management process.

Regardless of the magnitude of the change, (large or small), its safety implications should always be proactively considered. This is primarily the responsibility of the team that proposes and/or implements the change.

The magnitude of a change, its safety criticality, and its potential impact on human performance should be assessed in any change management process. A change may have the potential to introduce new, or to exacerbate pre-existing, human factors issues. The purpose of integrating human factors into the management of change is to minimise potential risks by specifically considering the impact of the change on the people within a system.

The process should also consider business related changes (organisational restructuring, resources, IT projects, etc.) and interfaces with other organisations/departments. Responsibilities and timelines should be defined.

Any significant organisational changes will be assessed for safety issues related to the change and documented in the hazard log.

Change Management should consider the following:

1) **Criticality of systems and activities**. Criticality relates to the potential consequences of equipment being improperly operated or an activity being incorrectly executed.
2) **Stability of systems and operational environments**. programmed change such as business growth, changes in scope of approval, changes in contracted services, or other changes directly under the control of the organisation. Changes in the operational environment are also important, such as economic or financial status, changes in political or regulatory environments, or changes in the physical environment such as cyclical changes in weather patterns. While these factors are not under the direct control of the organisation, it must take action to respond to them.
3) **Past performance**. of critical systems is a proven indicator of future performance. This is where the closed-loop nature of safety assurance comes into play. Trend analyses in the safety assurance process should are employed to track safety performance measures over time and to factor this information into the planning of future activities under situations of change. Where deficiencies have been found and corrected as a result of past audits, evaluations, investigations or reports that such information is considered to assure the effectiveness of corrective actions.

Organisation should consider the use of risk assessment table, as per the example shown in 3.1 above.

If appropriate, an ad-hoc meeting will be arranged with all available staff to discuss significant changes where their expertise will be beneficial to identify possible safety issues. Any actions or decisions from this meeting will be documented.

3.6 Safety training (including Human Factors) and promotion.

Part 145.A.202(a); GM1 145.A.65; 145.A.200(a)(4); AMC1 145.A.200(a)(4); GM1 145.A.200(a)(4).

This section should detail the relevant safety training and promotion materials & procedures supporting the organisations ability to meet the applicable requirements.

3.6.1 Safety Training Programme and promotion.

Safety training programme

The Safety training, combined with safety communication and information sharing, forms part of safety promotion. The organisation should ensure that:

- All staff can demonstrate an understanding of safety management principles including Human Factors, related to their job function.
- All staff are familiar with the safety policy and the procedures and tools that can be used for internal safety reporting.
- Staff who have been designated safety management responsibilities are familiar with the relevant processes in terms of hazard identification, risk management, and the monitoring of safety performance.

For that purpose, personnel involved in the basic maintenance service of the organisation should receive both initial and recurrent safety training, appropriate for their responsibilities. This should include at least the following staff members:

- nominated persons, line managers supervisors.
- certifying staff, support staff and mechanics.
- Technical support personnel such as planners, engineers, technical record staff.
- Persons involved in compliance monitoring and/or safety management-related processes and tasks, including the application of human factors principles, internal investigations and safety training.
- Specialised services staff.
- Stores department staff, purchasing department staff.
- Ground equipment operators.

Initial safety training should cover all the topics of the training syllabus specified in GM1 145.A.30(e) either as a dedicated course or else integrated within other training. The syllabus may be adjusted to reflect the nature of the organisation. The syllabus may also be adjusted to suit the nature of work for each function within the organisation.

Initial safety training should be provided within 6 months of joining the organisation, but temporary staff may need to be trained shortly after joining the organisation to cope with the duration of employment. Personnel being recruited from another organisation, and temporary staff should be assessed for the need to receive any additional safety training.

Training should be provided to management and staff at least:

- during the initial implementation of safety management processes.
- for all new staff or personnel recently allocated to any safety management related task.
- on a regular basis to refresh their knowledge and to understand changes to the management system.
- when changes in personnel affect safety management roles, and related accountabilities/responsibilities; and
- when performing dedicated safety functions in domains such as safety risk management, compliance monitoring, internal investigations.

Recurrent safety training should be delivered either as a dedicated course or else integrated within other training. It should be of an appropriate duration in each 2-year period, in relation to the relevant compliance monitoring audit findings and other internal/external sources of information available to the organisation on safety and HF issues. Recurrent training should take into account certain information reported through the internal safety reporting scheme.

➢ System of maintaining personnel trained and competent to perform their tasks

The purpose of recurrent safety training is primarily to ensure that staff remain current in terms of SMS principles, HF and to collect feedback on safety and HF issues. Consideration should be given to involving compliance monitoring staff and key safety management personnel in this training to provide a consistent presence and facilitate feedback. There should be a procedure to ensure that feedback is formally reported by the trainers through the internal safety reporting scheme to initiate action where necessary.

The organisation should establish communication about safety matters that:

- ensures that all personnel are aware of the safety management activities, as appropriate, for their safety responsibilities.
- conveys safety-critical information, especially related to assessed risks and analysed hazards.
- explains why particular actions are taken; and
- explains why safety procedures are introduced or changed.

Communication means/information sharing related to safety matters. Significant events, changes and investigation outcomes should be communicated. Safety policy and objectives should be known by staff.

Regular meetings with personnel at which information, actions, and procedures are discussed, may be used to communicate safety matters. Safety bulletins/communications/newsletters/emails/etc. are other means used to share safety information.

The process should describe what, when, and how safety information needs to be communicated. Subcontracted/Contracted organisations should be included in the communication where appropriate.

The means of communication should be adapted to the audience and the significance of what is being communicated.

3.6.2 Safety Training (including Human Factors) Procedure.

Part 145.A.30(e), AMC4 145.A.30(e), GM1 145.A.30(e);

This chapter shall refer the human factors training for the organisation personnel.

Any new employee, contractor, or contracted organisation will be required to read this manual (including updates) and sign for having read and understood it, to compliment this a verbal brief of how safety works within our organisation will be delivered by the Accountable Manager / Safety Manager, in their role as the safety manager.

Any safety critical information that needs distributing will be sent by e-mail to all our stakeholders and posted on the safety notice board. A distribution list is available held on the secure [company name] website and will be reviewed annually. All staff are expected to review the safety notice board and read any new safety articles.

3.6.2.1 Initial Training

- Aims and objectives.
- Categories of staff to be trained.
- Implementation period.
- Training methods and syllabus: GM1 145.A.30(e) tailored to the audience + audit findings + feedback in relation to relevant quality audit findings and other internal/external sources of information available to the organisation on human errors in maintenance (link with chapter 2.25).
- Duration of training.
- Validation of the training courses (syllabus and duration).
- Requirements for trainers.
- Training Records.
  - Duration / location.
  - Type of documents.

3.6.2.2 All Maintenance staff Recurrent training

- Aims and objectives
- Categories of staff to be trained
- Training methods and syllabus: GM1 145.A.30(e) tailored to the audience + audit findings + feedback in relation to relevant quality audit findings and other internal/external sources of information available to the organisation on human errors in maintenance (link with chapter 2.25).
- Duration of training
- Validation of the training courses (syllabus and duration) Requirements for trainers
- Training Records
  - Duration / location
  - Type of documents

Human factors training could be adjusted to reflect the particular nature of the organisation (size, scope of work). Human factors continuation training shall be of an appropriate duration in each two-year period.

For further guidance please refer to CAP 1742 Continuation Training Guidance

3.7 Immediate safety action and coordination with the operator's ERP.

Part 145.A.155

3.7.1 Immediate safety action

The organisation must detail a procedure should be implemented to enable the organisation to act promptly when it identifies safety concerns with the potential to have immediate effect on flight safety, including clear instructions on who to contact at the owner/customer/operator, and how to contact them, including outside normal business hours.

Identification of responsibilities for contacting owner/operator/CAMO in case of safety concern with potential immediate effect on flight safety is identified.

Internal and external coordination, including contact details of key functions and personnel within the Maintenance Organisation (manager, Nominated Postholder, etc.) and within the operator/CAMO (Maintenance Control Centre, operator/CAMO contact person, etc.).

3.7.2 Coordination with the operator's ERP.

The organisation must detail a procedure that should be implemented to enable the organisation to act promptly when the Emergency Response Plan (ERP) is triggered by the operator and it requires the support of the Part-145 organisation, including clear instructions on who to contact at the owner/customer/operator, and how to contact them, including outside normal business hours.

- Identification of responsibilities for the implementations and management of the ERP
- Procedure(s) for transition from normal to emergency operations
- Procedure(s) for transition from emergency to normal operations
- Internal and external coordination, including contact details of key functions and personnel
- ERP training requirements
- ERP training/simulations (scope, frequency)

3.8 Compliance Monitoring

3.8.1 Audit plan and audit Procedures.

Part 145.A.200(a)(6), AMC1 145.A.200(a)(6), AMC2 145.A.200(a)(6), AMC3 145.A.200(a)(6), AMC4 145.A.200(a)(6), GM1 145.A.200(a)(6), GM2 145.A.200(a)(6), GM1 145.A.200(a)(6)

This chapter must explain how the audit of internal procedures is organised and managed i.a.w. regulatory requirements. This chapter shall describe how the requirements for system/procedure audit are complied with and the methodology of the audit. Small organisations may choose to sub-contract the audits to another organisation or an outside person with satisfactory technical knowledge and satisfactory audit experience (link to chapter 3.6).

- Definition of the "system/procedure" audit[21]
  - Single exercise audit or subdivided over 12 months
  - Definition of remote audit methodology and applicability

    When remote audit methodology is used it should be clearly stated in the related audit reports.

- "System/procedure" Audit programme
  - System/procedure audit plan (refer to the example provided at the end of this paragraph)

    The audit plan shall ensure that all aspects of Part-145 compliance are checked every 12 months. The cross-reference table included below can be used as a reference of the level of detail expected in the system/procedure audit for compliance check of applicable regulation requirements and MOE chapters.
  - Principles of annual audit procedure planning
  - Grouping of audits
  - Dates and timescales.
  - Audit of the compliance monitoring system by an independent auditor, being either:
    - A person employed by the maintenance organisation and working in another department (e.g., production), or.
    - A person contracted by the maintenance organisation (part-time basis or short time contract based on the 145.A.30(d) contracted personnel) to perform audits on the compliance monitoring system procedures. This case does not mean subcontracting the compliance monitoring system.
  - Audit of contracted organisations /Subcontractors/suppliers, as applicable depending to the monitoring criteria defined in MOE chapter 2.1.
  - Scheduled audits and unannounced audits to be conducted during maintenance including night shifts.
  - Validation/internal approval of the audit programme and management of changes to the programme

[21] ***The internal audit plan shall also take into account the applicable Part-M requirements listed in chapter 1.1 "Preliminary considerations" of this guidance***

Follow up of the audit program, including scheduled, performed, audit report issued, open/closed

- Company Audit Policy including compliance audit:
    - Audit notification.
    - Audit reports (documents used, writer, issue, points checked, and deviations noted, deadline for rectification)
    - Allocation of resources to the audit (audit team, team leader, etc.)
    - Principles when deviations are noted on a line or product
- Compliance audit reports retention
    - Duration (At least duration of 2 years from the date of the findings closure) / location
    - Type of documents (notification, audit reports, check list, audit programs)

An audit report shall be raised each time a system audit is conducted describing what was checked and the resulting findings against applicable requirements, procedures and products.

EXAMPLE

The purpose of this example is to provide an acceptable audit plan (there is any number of other acceptable working audit plans). The following criteria should be met:

- The audit plan is intended to monitor compliance with the applicable requirements and at the same time review all areas of the organisation, where such requirements are applicable.
- In order to achieve this objective, as a first element, the organisation needs to identify all the regulatory requirements, AMC and CAA guidance applicable to the activity and scope of work under consideration, to allow the audit plan to focus on the relevant subject matters. Each subject matter (e.g., facilities, personnel, etc.) should be cross-referred with the relevant requirement and the related organisation procedure in the exposition, where the subject matter is described.
- as a second element, all functional areas of the organisation in which Part-145 functions are intended to be conducted, including subcontracting, need to be listed with the objective of identifying the applicability of any subject matter in each functional area.
- a matrix can be used (**refer to TABLE 1 below**), capturing the two above-mentioned elements. This is intended to be a living document to be customised by the organisation depending on its scope of work and structure. This matrix would represent the overall compliance of the audit system and would need to be amended, as necessary, based upon any change to applicable regulations, CAA guidance, organisation procedures and functional areas of the organisation (e.g., change of the scope of work to include line maintenance, etc.).
- The audit plan (**refer to TABLE 2 below**), can be finally presented as a simplified schedule, showing the operational areas of the organisation against a timetable to indicate when the area is scheduled for audit and when the audit was completed. The number of product audit and subcontractors audit directly depends on the number respectively of product lines and subcontracted organisations in use. The audit plan should also identify some unannounced audits during on-going maintenance (including unannounced audits during the night for those organisations that work at night).
- The audit of each operational area will review all the subject matters which are applicable to the relevant functional area. For each subject matter, the audit should check that the Part-145 requirement is documented in the corresponding exposition procedure and that the exposition procedure is effectively implemented in the operational area subject to the audit. In addition, the audit should also identify any practice/process implemented in the operational area which has not been documented in any exposition procedure.

The tables below provide an example (to be further completed) of audit matrix and audit plan for an organisation involved in aircraft base maintenance (2 x base maintenance hangars) and line maintenance (2 x line maintenance locations) See GM2 145.A.200(a)(6) for further guidance

TABLE 1 – SAMPLE audit plan/matrix (Subject matter- Regulatory reference- Exposition- Functional areas)

Figure 13 - Sample Audit Plan 1/matrix

Subject Matter	Regulation/User Guide reference	Exposition	FUNCTIONAL AREAS					
			Base Maintenance	Line Maintenance	Quality	Receiving and Storage	Subcontracting	…
Facilities	145.A.25(a)(1)	1.8	X	X		X	X	…
	AMC1 145.A.25(a)	2.2 2	X	X		X	X	…
	…	…						…
Personnel	145.A.30(c)	1.4			X			…
	145.A.30(d)	1.7, 2.22	X	X	X	X	X	…
	…	…						…
Record Keeping	145.A.55(a)	…	X	X		X	X	…
	…	…						…
Certifying Staff	145.A.35(a)/	3.8	X	X	X			…
	…	…						…
Fabrication of Parts	145.A.42(b)(iii)/	1.9, 2.9	X	X		X	X	…
…	…	…	…	…	…	…	…	…

TABLE 2 – audit plan

Figure 14 - Sample Audit plan 2

OPERATIONAL AREA	FUNCTIONAL AREA	Planned	Completed	Remarks
Base Maintenance Hangar 1	Base Maintenance	mmm yyyy	dd mmm yyyy	
Base Maintenance Hangar 2	Base Maintenance	mmm yyyy	dd mmm yyyy	
Line Maintenance location 1	Line Maintenance	mmm yyyy	dd mmm yyyy	
Line Maintenance location 2	Line Maintenance	mmm yyyy	dd mmm yyyy	
Quality	Quality	mmm yyyy	dd mmm yyyy	
Store 1,2,3	Receiving and Storage	mmm yyyy	dd mmm yyyy	
Receiving Inspection	Receiving and Storage	mmm yyyy	dd mmm yyyy	
Subcontractor 1	Subcontracting	mmm yyyy	dd mmm yyyy	
Aircraft Base Product audit A320	Base Maintenance	*unannounced*	dd mmm yyyy	*during night shift*
Aircraft Line Product audit A380	Line Maintenance	mmm yyyy	dd mmm yyyy	
……		……	……	

3.8.2 Product Audit and Inspections.

Part 145.A.200(a)(6), AMC2 145.A.200(a)(6)

This chapter must describe the procedures related to the product audits to be conducted by the organisation with respect to the aircraft, aircraft component, engine or specialised service, as required by Part 145.A.200(a)(6), AMC2 145.A.200(a)(6).

- Definition of “Product” audit (*ref. point AMC2 145.A.200(a)6(f)*
- Company “Product” Audit Policy
  - A dedicated “Product” audit policy may be added, provided it does not conflict with the one described in the previous chapter. The Company audit procedure shall include the quality audit of aircraft (and/or component)
- “Product” Audit programme
  - Product samples for each line of product (aircraft and / or components and/or engines and/or specialised services)
  - Dates and timescales
- “Product” Auditing methods
  - Sampling
  - "Trail" / “investigation” audits
- Records of “Product” audit reports
  - Duration (At least duration of 2 years from the date of the findings closure) / location
  - Type of documents (notification, audit reports, check list, audit programs, …)

  An audit report shall be raised each time a product audit is carried out describing what was checked and the resulting findings against applicable requirements, procedures and products.

(Small organisation’s may choose to subcontract the audits to another organisation or an outside person with satisfactory technical knowledge and satisfactory audit experience (3.12).

3.8.3 Audit findings- Corrective Action Procedure.

Part 145.A.95(a)(2), 145.A.95(a)(3)

This chapter must describe the procedures of follow up of corrective actions.

- Findings classification (ref. 145.A.95)
  - Notification to the Accountable Manager and the CAA in case of level 1 finding identified by the internal audit and immediate actions to self-limit the approval/privileges as necessary
- Management of finding due dates
  - Alert system, finding database
  - Extension of the due date
  - Procedure describing the organisation actions when the corrective action deadline has to be postponed or when the answer has not been received on time.
- Corrective action process
  - Corrective action planning and follow-up (e.g., notified, answered, corrective action accepted, open/closed)

Finding follow-up should describe the actions taken by the auditor or auditing manager to verify the implementation of corrective actions.

  - The corrective action plan shall be designed in a way which allows identifying and recording the finding, the root cause, the relevant immediate and long-term preventive action with the appropriate timescales.
  - Management responsibilities for corrective action and follow-up
  - Process of corrective actions following findings from the CAA
- Description of the compliance feedback reporting system[22]
  - Access to Accountable Manager
  - Review of the Compliance system overall results
  - Meeting with the Accountable Manager (including record of meeting procedure)
  - Regular meetings to check the progress of corrective actions

Further guidance can be found in CAP1760: Effective Problem Solving and Root Cause Identification | Civil Aviation Authority (caa.co.uk)

[22] ***The compliance feedback reporting system cannot be subcontracted.***

3.9 Certifying Staff and Support Staff Qualification, authorisation and Training Procedures.

Part 145.A.30(e), AMC1 145.A.30(e), AMC2 145.A.30(e), AMC3 145.A.30(e), AMC4 145.A.30(e), AMC5 145.A.30(e), GM1 145.A.30(e), GM2 145.A.30(e), GM3 145.A.30(e), GM4 145.A.30(e), GM5 145.A.30(e) 145.A.30(f), AMC1 145.A.30(f), 145.A.30(g), , 145.A.30(h)1, 145.A.30(h)2, AMC1 145.A.30(h), 145.A.30(i), 145.A.30(j)1, 145.A.30(j)2, , 145.A.35(a), 145.A.35(b),145.A.35(c), 145.A.35(d), 145.A.35(e),145.A.35(f), 145.A.35(g), 145.A.35(h), 145.A.35(j), 145.A.35(m), 145.A.35(n), 145.A.35(o), AMC 145.A.35(a), AMC 145.A.35(b), AMC 145.A.35(c), AMC1 145.A.35(d), AMC1 145.A.35(e), AMC1 145.A.35(f, Appendix IV

3.9.1 Aircraft Certifying Staff and/or Support Staff.

- The minimum age for Certifying Staff and Support Staff is 21 years.
- Experience, training and competence requirements (including compliance with Part 145 Appendix IV for staff not qualified to Part 66)
- Part-145 C/S - S/S individual authorisation *: requirements for initial issue, extension (scope of work), renewal, withdrawal of the authorisation, including, as applicable:
    - “Certification Authorisation” for aircraft line/base maintenance Certifying Staff (Cat. A, B1, B2, B3, C as applicable).
    - Individual authorisation for aircraft base maintenance Support Staff (B1, B2, B3 as applicable)
- Recurrent training procedures (Organisation procedures, new technology, human factor issues, etc.)
- Demonstration of 6/24 months maintenance experience including a table of similar aircraft types (relevant to the scope of work held by the maintenance organisation) to be used for the demonstration of 6/24 months requirement.

For further guidance please refer to: CAP2377: Part 145 - 6/24-month Recency Guidance | Civil Aviation Authority (caa.co.uk).

- One-off certification authorisation (CRS procedure following one-off authorisation to be included in MOE 2.16)

The competence assessment process for issuance, extension, and renewal of the CAA Part-145 C/S - S/S individual authorisation is expected to be described in the MOE 3.19 “Competence Assessment”.

For further guidance please refer to CAP1715: Competency Assessment Guidance Document | Civil Aviation Authority (caa.co.uk).

- Continuation training procedures (Organisation procedures, new technology, human factor issues, etc.) Demonstration of 6/24 months maintenance experience including a table of similar aircraft types (relevant to the scope of work hold by the maintenance organisation) to be used for the demonstration of 6/24 months requirement.

For further guidance please refer to: CAP1742: Continuation Training Guidance Document | Civil Aviation Authority (caa.co.uk)

For further guidance on Appendix IV Certifying Staff please refer to: Part 145 Appendix IV Certifying Staff and Support Staff not qualified to Part 66 | Civil Aviation Authority (caa.co.uk)

3.9.2 Components/Engines/APU Certifying Staff.

- The minimum age for Certifying Staff is 21 years.

- Experience, training and competence requirements.
- Part-145 CC/S individual authorisation: initial issue, extension (scope of work), renewal, withdrawal procedures.

For further guidance on how to develop this procedure, refer to: CAP2995: Components, Engines and APU certifying staff Qualification Guidance | Civil Aviation Authority (caa.co.uk)

The competence assessment process for issuance, extension, renewal of the Part-145 CC/S individual authorisation is expected to be described in the MOE 3.19 "Competence Assessment

- Recurrent training procedures (Organisation procedures, new technology, human factor issues, etc.)

For further guidance on how to develop this procedure, refer to: CAP1742: Continuation Training Guidance Document | Civil Aviation Authority (caa.co.uk)

- Demonstration of 6/24 months maintenance experience including criteria to define similarity of engines/components/APUs (relevant to the scope of work held by the maintenance organisation) to be used for the demonstration of 6/24 months requirement.

For further guidance please refer to CAP2377: Part 145 - 6/24-month Recency Guidance | Civil Aviation Authority (caa.co.uk).

3.9.3 Specialised Services (NDT) Certifying Staff.

- The minimum age for Certifying Staff and Support Staff is 21 years.
- Internal Experience, training and competence requirements in addition to EN4179
- Part-145 C/S individual authorisation: initial issue, extension (scope of work), renewal, withdrawal procedures.

For further guidance on how to develop this procedure, refer to: CAP2995: Components, Engines and APU certifying staff Qualification Guidance | Civil Aviation Authority (caa.co.uk)

Note: the competence assessment process for issuance, extension, renewal of Part-145 C/S individual authorisation is expected to be described in the MOE 3.19 "Competence Assessment".

For further guidance please refer to CAP1715: Competency Assessment Guidance Document | Civil Aviation Authority (caa.co.uk).

- Recurrent training procedures (Organisation procedures, new technology, human factor issues, etc.)

For further guidance please refer to the CAP1742: Continuation Training Guidance Document | Civil Aviation Authority (caa.co.uk)

- Demonstration of 6/24 months maintenance experience

For further guidance please refer to: CAP2377: Part 145 - 6/24-month Recency Guidance | Civil Aviation Authority (caa.co.uk).

3.9.4 Acceptance of maintenance tasks carried out by pilots

Part 145.A.30(j)4, AMC 145.A.30(j)4

Part 145 permits certain maintenance tasks to be conducted by a suitably qualified pilot. AMC 145.A.30(j)(4) lists various tasks which a qualified pilot may be issued an Authorisation to perform.

For further guidance see Acceptance of maintenance tasks carried out by pilots | Civil Aviation Authority (caa.co.uk)

3.10 Certifying Staff and Support Staff Records.

Part 145.A.35(h) 145.A.35(j), 145.A.35(k), 145.A.35(l)/AMC 145.A35(a)/ GM 145.A.35/ Part 145.A.70 (a)

This chapter must describe how the Certifying Staff records are managed.

- List of certifying personnel and B1/B2 Support Staff (refer, if necessary, to 1.6)
- Content of the records including:
  - Identity, date of birth, Part-145 C/S, CC/S-S/S individual authorisation reference number, experience, scope of the authorisation, date of issue, validity, copy of the licence, copy of diplomas, copy of training certificate, continuation training, copy of the Part-145 C/S, CC/S-S/S individual authorisation, summary sheet, C/S assessment check lists and associated documents / material, ...)
  - Type of record: electronic or paper copy
- Management of Certifying Staff records
- Retention of records
- Personnel records shall be kept for as long as a person works for the organisation, and shall be retained for at least 3 years after the person has left the organisation, or after an authorisation issued to that person has been withdrawn
  - Duration / location
  - Type of documents
- Format of the Part-145 C/S, CC/S-S/S individual authorisation document and authorisation codes
- Control of Certifying Staff records
  - Authorised persons
  - Part 66 personnel
  - Authorised managers
  - Delivery of a copy of their Part-145 C/S, CC/S & S/S individual authorisation in either a documented or electronic format (Part 145.A.35 (k)). The scope of work must be detailed, including limitations when applicable
- Access to records
  - C/S, CC/S & S/S shall be given access on request to their personal records
  - upon request, the maintenance organisation shall furnish C/S, CC/S & S/S with a copy of their personal record on leaving the organisation.

3.11 Airworthiness Review staff qualification, authorisation and records

Part 145.A.37 AMC1 145.A.37 GM1 145.A.37(b) Annex Vb (Part-ML)

This chapter must describe how the airworthiness review personnel are managed:

In order to be approved to carry out airworthiness reviews and to issue the corresponding airworthiness review certificates (ARC) for aircraft covered by Annex Vb (Part-ML), the organisation must have airworthiness review staff that comply with all of the following requirements:

- they have acquired experience in continuing airworthiness of at least 1 year for sailplanes and balloons and of at least 3 years for all other aircraft.
- they hold a certifying staff authorisation for the corresponding aircraft.
- they have acquired knowledge of Annex I (Part-M), Subpart C, or of Annex Vb (Part-ML), Subpart C.
- they have acquired knowledge of the procedures of the maintenance organisation relevant to the airworthiness review and issue of the airworthiness review certificate.

Before the organisation issues an airworthiness review authorisation to a candidate, that candidate must perform an airworthiness review under the supervision of the CAA or under the supervision of a person that is already authorised as airworthiness review staff by the organisation. If this airworthiness review under supervision is satisfactory, the CAA may formally accept that candidate to become airworthiness review staff.

The organisation must ensure that the airworthiness review staff can demonstrate appropriate recent continuing airworthiness experience. the airworthiness review staff should have either:

- been involved in continuing airworthiness management activities for at least 6 months in every 2-year period; or
- conducted at least one airworthiness review in the last 12-month period.

3.12 Compliance monitoring and safety management personnel.

Part 145.A.30(e)

This chapter must describe how the Compliance Monitoring System personnel are managed.

- Required experience and competence (professional background and minimum number of audits performed under supervision)
- Required training including audit techniques, Root Cause/Corrective Action, Regulation, MOE and recurrent training
- Specific experience and/or technical training in order to be authorised to audit specific areas or to cover specific audit functions, as applicable to the organisation (e.g., audit of NDT areas, Lead auditor, etc.)
- Scope of authorisation for auditors (e.g., Product auditor, System Auditor, NDT auditor, etc.)
- Authorisation issue, extension, renewal or withdrawal procedures

Note: the competence assessment process for issuance, extension, renewal of the Part 145 Authorisation is expected to be described in the MOE 3.19 “Competency Assessment”

- Independence of compliance monitoring audit personnel when the organisation uses skilled personnel working within another department than that of Compliance Monitoring
- Retention of records

Personnel records shall be kept for as long as a person works for the organisation and shall be retained for at least 3 years after the person has left the organisation, or after an authorisation issued to that person has been withdrawn.

  - Duration / location
  - Type of documents
- Check that the number of compliance monitoring personnel remains adapted to the maintenance activity to be supervised (relation with 2.22 Man hour planning).
- Allocated resource (if not full-time employed) shall be addressed.

3.13 Inspection staff qualification & records.

Part 145.A.30(e)

This chapter is dedicated to the qualification and authorisation of the “qualifying inspectors” which undertake inspection functions and sign-off the related task(s).

- Identification of the various types of Inspectors in the maintenance organisation

The various types of “inspector” personnel, as applicable to the organisation, need to be addressed (e.g., aircraft inspector, component inspector, engine inspector, store receiving inspector, etc.). Clear differentiation is expected for each of the different ratings in the scope of work (e.g., aircraft, engines, components, specialised services).

It is recommended that a roster listing all maintenance personnel formally authorised to sign-off tasks as “Inspectors” is available in the maintenance organisation under the control of the Compliance Monitoring Manager

They may be authorised:

EXAMPLE

As Aircraft/component/engine inspectors, in order to sign-off (ref. MOE 2.13 table) the tasks performed under supervision (e.g., work performed by trainees)

As Aircraft/component/engine inspectors, in order to sign-off (ref. MOE 2.13 table) the independent inspection tasks

As Store incoming inspectors, to perform and attest the receiving inspection of aircraft components/materials as per MOE 2.2 procedure

An aircraft / component / engine inspector is not authorised to issue a release to service for aircraft or component or engine unless they are also holding a Certifying Staff privilege.

In the aircraft base maintenance environment, the inspector function does not correspond to the Support Staff function. After the task sign-off, a further inspection stage is necessary by B1, B2, B3 Support Staff as applicable. Support Staff shall ensure that all relevant tasks or inspections have been conducted to the required standard before the category C Certifying Staff issues the certificate of release to service.

When the staff is holding more than one authorisation (e.g., mechanic, inspector and Certifying Staff), the different authorisations shall be clearly distinguished. A person may be at the same time:

EXAMPLE

- airframe mechanic on the A320(CFM56), B777 (GE90) and ERJ-170 (GE CF34).
- airframe inspector on the A320(CFM56) and B777 (GE90).
- holding a certification authorisation as Certifying Staff only for the B777 (GE90).

Experience, training and competence requirements

- Aeronautical and practical Experience,
- General training (FTS, CDCCL, EWIS when needed and Human Factor, MOE, standard practice)
- Specific training requirements applicable to the scope of activity (aircraft, engine, store etc.)
- Knowledge of the language in which the maintenance approved data are written. Authorisation’s issue, extension, renewal or withdrawal procedures including scope of authorisation

The competence assessment process for issuance, extension, renewal of the Part 145 Authorisation is expected to be described in the MOE 3.19 Competence Assessment.

For further guidance please refer to CAP1715: Competency Assessment Guidance Document | Civil Aviation Authority (caa.co.uk).

- Recurrent training procedures including
  - Training Programme (MOE and associated procedures, Part 145, HF, special requirements).
  - Training setting up.
  - Duration, intervals.
- Retention of records

Personnel records shall be kept for as long as a person works for the organisation and shall be retained for at least 3 years after the person has left the organisation, or after an authorisation issued to that person has been withdrawn.

  - Duration / location.
  - Type of documents.

3.14 Mechanics qualification and records.

Part 145.A.30(e)

This chapter shall refer to the different specialities of mechanics (e.g., airframe mechanics, powerplant mechanics, avionics, sheet metal workers, cabin, fuel, engines, painters, welders, cleaners, components, NDT staff, composites, line maintenance, ...), as applicable to the organisation. Those personnel have to be considered authorised by the maintenance organisation approved under Part-145 to sign-off[23] tasks that they have personally performed. Consistency shall be ensured with the sign-off policy described in MOE chapter 2.13. An authorised mechanic is not authorised to issue a release to service for aircraft or component or engine or NDT, unless they are also holding a "Certifying Staff privilege."

- ❖ Identification of the various types of Mechanics in the maintenance organisation

It is recommended that a register listing all maintenance personnel formally authorised to sign-off tasks as "Mechanics" is available in the maintenance organisation under the control of the Compliance Monitoring Manager.

When the staff is holding more than one authorisation (e.g., mechanic, inspector and Certifying Staff), the different authorisations shall be clearly distinguished.

A person may be at the same time:

"EXAMPLE"

- ❖ airframe mechanic on the A320(CFM56), B777 (GE90) and ERJ-170 (GE CF34).
- ❖ airframe inspector on the A320(CFM56) and B777 (GE90).
- ❖ holding a certification authorisation as Certifying Staff only for the B777 (GE90).

Clear differentiation is expected for each different rating in the scope of work (e.g., aircraft, engines, components, specialised services)

- ➢ Experience, training and competence requirements
- ➢ Aeronautical and practical Experience,
- ➢ General training (FTS, CDCCL, EWIS when needed and Human Factor, MOE, standard practices.)
- ➢ Specific training requirements applicable to the scope of activity (aircraft, engine, etc.) Knowledge of the language in which the maintenance approved data are written.
- ➢ Authorisation's issue, extension, renewal or withdrawal procedures including scope of authorisation

[23] A "sign-off" is a statement by the competent person performing or supervising the work, that the task or group of tasks has been correctly performed. A sign- off relates to one step in the maintenance process and is therefore different from the release to service of the aircraft.

The competence assessment process for issuance, extension, renewal of the Part 145 Authorisation is expected to be described in the MOE 3.19 “Competence Assessment”.

- *Recurrent training procedures including*
  - *Training Programme (MOE and associated procedures, PART 145, Human Factors, specific technical requirements, …)*
  - *Training setting up*
  - *Duration, intervals*
- *Retention of records*

Personnel records shall be kept for as long as a person works for the organisation and shall be retained for at least 3 years after the person has left the organisation, or after an authorisation issued to that person has been withdrawn.

  - *Duration / location*
  - *Type of documents*

3.15 Process for deviation from aircraft/aircraft component maintenance tasks.

Part 145.A.65(b)1, GM2 145.A.65(b)(1)

This chapter must describe the procedures of the organisation regarding exceptional authorisations related to maintenance tasks. Deviations must be requested by the operator to the CAA or granted by the operator in accordance with a procedure acceptable to the CAA. The contract between the operator and the maintenance organisation shall specify the support the Part-145 approved organisation may provide to the operator to substantiate the deviation request. This chapter is to be considered applicable only under these circumstances.

- System for control and processing with the CAA which includes:
  - Support the maintenance organisation may provide to the operator/customer in order to substantiate a deviation request from the maintenance programme (e.g. one time extension of task interval due to unavailability of tools, materials, parts, etc.)

Deviations from the maintenance programme must be managed by the CAMO. The contract between the maintenance organisation and the CAMO should specify the support expected by the maintenance organisation on this regard. This MOE chapter is to be used to detail the policy in place on this matter, while dedicated procedures applicable to each customer operator should be included in MOE Part-4 or is separate interface documents.

  - Relations with the operator/ customer in case of derogation for an intervention in progress by the workshop
  - Supply to the customer/ operator of information enabling to write out requests for exceptional authorisation applications.
  - Control of the approval by the CAA (linked with CRS)

The difference between the activity study/ preparation/ redaction/ submission of exceptional authorisation application related to maintenance tasks on behalf of customers/ operator and the Part 145 activity here above should be kept in mind.

3.16 Concession Control for Deviation from the Organisation's Procedures.

Part 145 AMC1 145.A.65

This chapter must describe the procedures followed by the maintenance organisation to deviate from the approved MOE procedures.

It shall be understood that any request for concession to deviate from an MOE procedure shall be anyway in compliance with any regulatory requirement with particular reference to Part 145. Under no circumstances this chapter may be used to deviate from regulatory requirements.

- Concession criteria
  - Object, procedures involved, justifications, compensatory conditions, period of validity, etc.
- Concession management procedure
  - Internal evaluation
  - Drafting process
  - Response
  - Internal validation process and follow-up
- System of approval and control of concession
- Feedback from the Compliance Monitoring system to the CAA

Note: Any concession must be approved by the CAA

3.17 Qualification Procedure for Specialised Activities Such as Non-Destructive Testing, Welding, etc.

Part 145.A.30(f)- AMC 145.A.30(f)- EN 4179

This chapter shall refer to the qualification of specialised services staff such as defined in AMC 145.A.30(f). It shall apply to all the specialised services mentioned in MOE paragraph 1.9.4 (e.g., NDT, painting, welding, machining, NDI).

It is recommended to structure this chapter to provide qualification requirements for each group of specialised services staff in a separate paragraph.

The EN4179 requires that an NDT written practice shall be in place to define:

- The specific technique(s) for each NDT method used in the maintenance organisation.
- The qualification and authorisation of NDT staff to meet the requirements of EN 4179

For the purpose of Part-145 the following document shall be issued:

- A document associated to be MOE to be referred as “NDT manual” only detailing the technical compliance of NDT activities/techniques under the control and approval of the responsible NDT level 3 to be referred in the MOE 1.9 chapter. In addition, the related approval process is to be described in the MOE 1.11 chapter.
- A procedure detailing the qualification and authorisation of the NDT staff to be included directly in the MOE 3.17 chapter.

3.17.1 NDT personnel

- NDT staff
  - List of non-destructive testing personnel
  - Levels of qualification and authorisation
  - Role and privileges of these staff (including responsible level 3 person who shall approve the organisation’s NDT Manual
- Experience & qualification
  - Criteria regarding experience, training and skills
  - Experience required by NDT method for each level of authorisation
  - Responsible NDT level III shall demonstrate an appropriate knowledge of the manufacturer maintenance Data, Part 145 requirements, MOE, Human Factors, FTS and EWIS
  - Level III requires suitable training/examination provided by an organisation under the general control of the NDT Board should be addressed in this paragraph
- Training
  - Basic NDT training for each level of authorisation
  - Training on the NDT procedures of the organisation
- Examination

- Procedure of skills assessment (practical assessment and/or examination related to the job card)
- General examination on the fundamentals of the NDT methods
- Specific examination by NDT method
- Practical examination by level of authorisation
- Medical examination
- Eyesight testing

- Continuation training and testing
- Authorisation's issue, renewal or withdraw procedures
- Retention of NDT staff records
  - Duration / location
  - Type of documents
- Contract arrangement (this applies in the case of contracted staff as per AMC1.145. A.30.(d))

The Certifying Staff authorised in accordance with subcategory B1 of the Part 66 can conduct and/or control colour contrast dye Penetrant tests.

When an Organisation uses NDT methods defined by EN 4179 para 6.4 as "emerging NDT method", the related requirements for personnel training, experience and examination shall be established by the organisation in accordance with EN 4179 and the particular equipment manufacturers' recommendations.

This chapter shall also describe the qualification requirements applicable to NDT Level III, particularly when they are contracted and/or not Certifying Staff.

Detailed guidance on NDT Level III qualification requirements may be found in EN4179

3.17.2 Other specialised activities personnel (i.e., welders, painters, etc.)

- Identification of the various types of specialised activities personnel in the maintenance organisation

For further guidance please see Welder approvals | Civil Aviation Authority (caa.co.uk)

The organisation shall include the qualification process for each specialised activity (refer to the list of topics indicated for NDT staff qualification procedure). The qualification process should be based on international industry standards and/or manufacturer published standards.

3.18 Management of External Working Teams.

Part 145.A.47(d), 145.A.75(b), AMC1 145.A.75(b), AMC1 145.A.10, 145.A.55(a), 145.A.205

This chapter shall refer to the role of outside teams acting in the premises of the organisation to conduct a maintenance task on an aircraft/engine/component in the scope of a task under the responsibility of the organisation. The organisation shall ensure the contracted or sub-contracted activities performed by external working team will be subject to hazard identification and safety risk management (see section 3.1).

The organisation shall describe their procedure for the management of the arrangements/ contracts with the external organisations, as well as their oversight of such teams.

3.18.1 External Working Team (under their own Part 145 Approval).

In this case the external team would be seen as a "Contracted organisation" at the end of the work, the external team will issue their own CRS for the work done (aircraft CRS or CAA Form 1, as applicable, depending on the ratings held).

- Segregation between the two maintenance organisations working in the same premises Clear work order/scope of work detailing the work to be performed.
- Type of support (tools/equipment, facilities.) made available to the External Team Working.
- Management of the progress of work (meetings, etc.)
- UK Part 145 release to service to be expected from the working team.

3.18.2 External Working Team (not holding a Part 145 Approval).

In this case, the external working team shall be considered as a "Subcontractor" and the applicable procedures developed in MOE chapter 2.1 shall be followed. The organisation shall be listed in MOE 5.2 together with the scope of authorisation.

- Control of the Subcontractor
- System for control of materials, tools, working instructions and procedures.
- System for control of documentation such as drawings, modification, repairs instructions.
- Management of the progress of work (meetings, etc)
- Certification procedure for work performed by the outside team such as: repair, replacement, modification, overhaul, test, inspection.
- Environmental conditions.
- Final certification.
- Training on the internal procedures to external staff.

3.19 Competence Assessment of Personnel.

Part 145.A.30(a)3, 145.A.30(b)3, 145.A.30(e) , AMC1 145.A.30(a), AMC1 145.A.30(e), AMC2 145.A.30(e), GM2 145.A.30(e), GM3 145.A.30(e), GM4 145.A.30(e),145.A.35(a), AMC 145.A.35(a), Appendix IV to AMC 145.A.30(e)

This chapter applies to all maintenance personnel involved in the Part-145 activities (management personnel, Certifying Staff, qualifying mechanics, qualifying inspectors, quality auditor, engineering staff, production planning staff, store inspectors, tools administrators, purchasers, etc....).

The qualification requirements to be assessed for each category of staff (being different from one to the other staff category) is expected to be found in the relevant MOE chapter (i.e., chapter 3.9 in case of Certifying/Support Staff, chapter 3.12 for compliance monitoring auditor, chapter 3.14 for qualifying mechanics, chapter 3.13 for qualifying inspectors, etc.)

- Management of competence assessment
  - Assessment procedures for initial, extension and renewal of an authorisation (process/method used)
  - Person responsible for this process on behalf of the organisation
  - When the assessment shall take place
  - Assessors
  - Commission / examination
  - Actions to be taken when the assessment is not satisfactory.

- The competence assessment shall include:
  - Verification that all the applicable qualification requirements for the specific category of staff as detailed in the relevant MOE chapter/Job Description (e.g., 3.9 in the case of Certifying Staff, etc.) are met
  - Verification of the competences listed in the GM2 145.A.30(e) and include verification of:
  - relevant knowledge skills and experience on the product/technical area as applicable to the job function
  - appropriate attitude towards safety and observance of procedures
  - knowledge of the procedures (e.g., handling and identification of components, MEL use, etc.) as applicable to the job function.

- The competence assessment shall be based on:
  - Review of personnel records
  - Interview
  - evaluation of competence “On-the-Job performance” and/or testing of knowledge by appropriately qualified staff (e.g., in the case where the assessment is related to a new activity for which the maintenance organisation is not yet approved such as a new aircraft type, new component, new maintenance level, etc.).
- Assessment records

- Location
- Type of documents
- Clearly identify the scope of the assessment (initial, extension or renewal of the Part-145 C/S-S/S individual authorisation). This means for example:

EXAMPLE

- For aircraft Certifying Staff, which is/are the category(s) (i.e., B1 line maintenance Certifying Staff, B1 base maintenance Support Staff, C base maintenance Certifying Staff, A line maintenance Certifying Staff, etc.) and which is/are the aircraft type (s) being assessed for endorsement on the authorisation (initial or extension of privileges).
- For components Certifying Staff, which is/are the rating(s) (i.e., C14, C6, C5, etc.) and the specific components associated to each rating (i.e., Landing Gears P/N, Battery P/N, etc.) being assessed for endorsement on the authorisation (initial or extension of privileges).
- For compliance monitoring auditor, which is the scope of the auditor authorisation (i.e., system/procedures or product audit).

➢ upon request, the maintenance organisation shall furnish any staff with a copy of their personal records on leaving the organisation (for C/S-S/S also refer to MOE 3.10).

A template is available in GM 3 145.A.30(e) which may be used to record the professional experience gained and the training received in the maintenance organisation. This document can be provided to staff when leaving the organisation (together with associated evidence's, such as training certificates/experience logbooks, etc.), and be considered during the competence assessment of the individual in another organisation.

➢ Procedure to take credit of experience/training for new maintenance personnel joining the maintenance organisation (ref. GM 3 145.A.30(e))

➢ Procedure to assess the need of EWIS training for the various categories of maintenance personnel, when applicable to the scope of approval of the organisation

CAA guidance is provided for EWIS training programme to maintenance organisation personnel in: Easy Access Rules for Acceptable Means of Compliance for Airworthiness of Products, Parts and Appliances (AMC-20) (Amendment 17) (caa.co.uk)

➢ Procedure to assess the need of Fuel Tank Safety training for the various categories of maintenance personnel, with particular reference to those involved in the compliance of CDCCL tasks, when applicable to the scope of approval of the organisation

CAA guidance is provided for training programme in Appendix IV to AMC to 145.A.30(e) and 145.B.10(3)

For further guidance please refer to CAP1715: Competency Assessment Guidance Document | Civil Aviation Authority (caa.co.uk).

3.20 Training procedures for OJT training.

Section 6 of Appendix III to Part-66

Organisation should detail their process / procedure for conducting and delivering OJT. This shall include:

- List of supervisors / assessors
- List of types OJT being conducted
- List of approved OJT log books

Note 1: OJT can only be performed in an Organisation holding a valid UK Part 145 approval.

Note 2: OJT completed at an EASA Part 145 organisation up to 31 December 2022 remains acceptable for the issue of a UK Part 66 AML. OJT carried out on or after 1 January 2023 is only acceptable when it is completed within a UK Part 145 approved organisation.

For further guidance please refer to CAP1530: Licensed Aircraft Engineers: On the Job Training (OJT) for first type ratings in any Category or sub Category | Civil Aviation Authority (caa.co.uk)

3.21 Procedure for the issue of a recommendation to the CAA for the issue of a Part-66 Licence in accordance with 66.B.105

This chapter is limited to organisations holding Part 145 approval, where the CAA, as the licensing authority for their Part-66 Licence, has developed and approved an organisation to issue recommendations for the issue of a Part 66 Licence.

3.22 Management System record keeping

Part 145.A.55(a), 145.A.55(c), AMC.A.55, GM 145.A.55, GM1 145.A.55(a) AMC1 145.A.55(c) 145.A.200(a),145.A.200(b), 145.A.200(c), GM1 145.A.200(a)(5);

This paragraph should describe the management system record-keeping process.

The organisation shall ensure that the following records are retained:

➢ Records of management system key processes.

➢ Contracts, both for contracting and sub-contracting.

Management system records shall be kept for a minimum period of 5 years.

It should include the following details:

- Definition of records to be stored and format.
- Storage type, location and accessibility.
- Responsibilities.
- Access to records.
- Retention periods.
- Storage procedure and preservation of records.
- Subcontracting record storage.
- Facility management, including third party facilities.
- Storage of electronic records.
- Electronic safeguards and remote servers.
- Transfer of records.
- Management of records in specific circumstances (e.g. accidents).

Part 4 – Relationship with Customer / Operators

This MOE Part is to be considered applicable only when the organisation is holding a maintenance contract for aircraft covered by the Basic Regulation and this part is intended to cover any operator peculiar requirement which has to be endorsed in the MOE for the purpose of being used in the performance of maintenance (e.g., how to acquire the necessary information for removal of serviceable components, etc.). It is recommended to have a separate procedure for each customer operator.

When the organisation is performing line maintenance for a customer operator limited to an IATA Standard Ground Handling Agreement, this part is not applicable and the line maintenance procedures to be followed are the one indicated in the MOE Part L2 plus any other line maintenance procedure directly provided by the customer operator (e.g., operator line station manual).

4.1 List of Commercial Operators To Which the Organisation Provides Regular Aircraft Maintenance Services

Part 145.A.70(a)13

This chapter must list those operators for whom maintenance is provided on a regular basis, with details of the types of aircraft (and/or engines/APU) and the scope of work undertaken, e.g., Base maintenance, Line maintenance, Defect rectification etc. with any limitations.

4.2 Customer Interface Procedures and Paperwork.

Part 145.A.65(b)1, GM2 145.A.65(b)(1), AMC1 145.A.65(b)(2))

4.2.1 Customer interface procedures

This paragraph must describe for each contracting operator, the special mode of operation (procedures/documents/exchange of information, planning meetings, technical, quality, reliability) between the organisation and its customer.

- Need to receive training on customer operator procedures
- Procedure to ensure correct completion of customer provided work cards (e.g., training on customer paperwork, etc.)

4.2.2 Customer paperwork

Part 145.A.60(d), 145.A.65(b)1, 145.A.55(b), 145.A.55(c)1, 145.A.55(c)2, 145.A.55(c)3

This paragraph must describe (for each contracted operator) how the organisation:

- Completes operator's logbooks
- Keeps the operator's technical records
- Retains records on behalf of the operators
- Communicates with the operator

Part 5 – Supporting Documents

5.1 Sample Documents.

AMC1 145.A.70(a)

This chapter must list all the documents and forms in use by the organisation. Each form shall be uniquely identified with a number and revision date to allow traceability of changes.

EXAMPLE:

- Request to CAA for approval of an Exposition amendment.
- Request to CAA for acceptance of a Capability List change.
- Material tags: Serviceable, Unserviceable and Scrap labels.
- Tooling identification tag
- Maintenance Task Card (Scheduled Maintenance)
- Maintenance Task Card (Additional Defects)
- Base Maintenance CRS
- Line Maintenance CRS
- CAA Form 1
- Compliance Audit Report Form
- Compliance Audit Corrective Action Report Form
- Personnel Training Record
- Part-145 C/S-S/S individual authorisation
- Concession Application and Approval
- Sample SGHA contract (if applicable)

5.2 List of subcontractors as per point 145.A.75 (b).

Part 145.A.70(a)14

This chapter must list the non-PART 145 subcontractors working under of the maintenance organisation compliance monitoring system - linked with MOE 2.2.

The list of subcontractors list shall include the following minimum information:

- Name of the Subcontracted Organisation.
- Locations(s) where subcontracted activities are carried out.
- Activities which are subcontracted.

5.3 List of line Maintenance Locations as per point 145.A.75(d)

Part 145.A.70(a)15, 145.A.75(d)

This chapter must list the line station locations – linked with MOE chapter 1.8.4 and 1.9 – (airport and addresses). If a separate document, then either:

- A copy to be provided, or
- A hyperlink to the approved document is preferred

5.4 List of Contracted Organisations as per point 145.A.70(a)(16).

Part 145.A.70(a)16

This chapter must provide the list of contracted organisations such as but not limited to Part 145- linked with MOE chapter 2.2.

The lists shown in 5.2, 5.3 and 5.4 whatever included to or associated to the MOE, is an integral part of the approval. This means that it shall be approved (directly by the CAA or by the organisation, through a procedure which has been previously approved by the CAA (refers to Chapter 1.10, 1.11).

5.5 List of used AltMoC as per point 145.A.70(a)(17)

Part 145.A.70(a)(17); 145.A.120(a)/(b);

In this chapter the organisation should include the list of alternative means of compliance currently approved/used under its approval and it is only applicable when the MOE 1.12 includes an approved procedure to develop AltMoC.

Content of the list.

This list must include at least the following main information, as applicable:

• Title of the approved alternative means of compliance.

• Reference of the approved alternative means of compliance.

• Date of approval.

CAA Accepted AltMoc's can be found in CAP1721: Alternative Means of Compliance (AltMoCs) | Civil Aviation Authority (caa.co.uk)

PART 6 – RESERVED

PART 7 FAA SUPPLEMENTARY PROCEDURES FOR A TITLE 14 CFR PART -145 REPAIR STATION

(**Only applicable to organisations with their Principal Place of Business within the UK**)

This section is reserved for those CAA Part-145 approved maintenance organisations that are also certificated as an FAA Title 14 CFR Part -145 repair station.

The contents of this Part should be based on the Maintenance Annex Guidance (MAG) issued by the CAA and the FAA following the agreement between the United States of America and the United Kingdom on cooperation in the regulation of civil aviation safety.

Access to the UK-US Bilateral and MAG can be found International Co-operation | Civil Aviation Authority (caa.co.uk) under United States of America.

PART 8 TRANSPORT CANADA CIVIL AVIATION (TCCA) SUPPLEMENTARY PROCEDURES FOR A CAR 573 MAINTENANCE ORGANISATION

(**Only applicable to organisations with their Principal Place of Business within the UK**)

This section is reserved for those CAA Part-145 approved maintenance organisations holding a CAR 573 approval.

The content of this Part should be based on the Technical Arrangement on Maintenance issued by CAA and the TCCA following the agreement on civil aviation safety between the United Kingdom and Canada.

Access to the UK-TCCA Bilateral and MAG can be found International Co-operation | Civil Aviation Authority (caa.co.uk) under Canada.

PART 9 ANAC SUPPLEMENTARY PROCEDURES FOR AN RBAC 145 MAINTENANCE ORGANISATION

(**Only applicable to organisations with their Principal Place of Business within the UK**)

This section is reserved for those CAA Part-145 approved maintenance organisations that hold an RBAC 145 approval.

The contents of this Part should be based on the Maintenance Annex Guidance (MAG) issued by the CAA and ANAC following the agreement on civil aviation safety between the United Kingdom and Brazil.

Access to the UK-ANAC Bilateral and MAG can be found International Co-operation | Civil Aviation Authority (caa.co.uk) under Brazil.

PART 10 CAAS SUPPLEMENTARY PROCEDURES FOR A SAR-145 MAINTENANCE ORGANISATION

(**Only applicable to organisations with their Principal Place of Business within the UK**)

This section is reserved for those CAA Part-145 approved maintenance organisations holding a SAR-145 approval.

The content of this Part should be based on the Technical Arrangement on Maintenance issued by the CAA and the CAAS following the agreement on civil aviation safety between the United Kingdom and Singapore.

Access to the UK-CAAS Bilateral and MAG can be found International Co-operation | Civil Aviation Authority (caa.co.uk) under Singapore.

Section 3 - Part-145 Appendix IV (C/S Staff) and ICAO Annex I checklists

The following example checklists may be used as reference for UK Overseas Part 145 organisations, when reviewing their certifying staff qualifications.

Check List 1: To be reviewed before granting / extending / renewing a Part-145 C/S - S/S authorisation, for Part-66 staff Part-66.

Certifying Staff Name:	**Purpose of the review** ☐ Initial grant ☐ Extension ☐ Renewal	**Intended scope of authorisation under CAA approval:** *A, B1, B2, B2L, B2, L*	**A/C type:**

	PART-145 regulation / Requirements	**Checked & compliant**	**Reference of the document provided.**	**additional guidance**
Licence & Scope	Does the C/S - S/S holds a valid Part-66 licence?	☐		
	Does the scope of work of the C/S - S/S remain within the scope of work defined by the Part-66 AML and is any limitation listed licence endorsed on the Part-145 C/S - S/S individual authorisation?	☐		
	In the case of Part-145 C/S - S/S individual authorisation in category B1, B2 or C, are the relevant A/C type ratings of the individual authorisation endorsed in the Part-66 Licence?	☐		
	In the case of cat. "A" Part-66 AML was the relevant task training completed?	☐		
Age	Is the C/S - S/S more than 21 years old?	☐		
Additional Training	Has the C/S - S/S received an Initial Human Factor Training According to 145.A.30 (e) and GM 1 145.A.30 (e) syllabus.	☐		
	Has the C/S - S/S received an appropriate training to the MOE and associated procedures/lists?	☐		
	Has the C/S - S/S received the initial FTS training as per Appendix IV to AMC to Part 145.A.30 (e)?	☐		
	Has the C/S - S/S received the EWIS training (refer to AMC 20-22 for further details)?	☐		
	Has the C/S - S/S received training to the Customer`s operator procedures, such as but not limited to the customer`s ATL, work cards, work pack, list of independent inspection items, MEL, etc.?	☐		
additional aircraft training	Has the C/S and S/S received additional training, as appropriate, on the differences for the particular model/variant and/or the particular configuration of the aircraft intended to be maintained by the maintenance organisation?	☐		
Maintenance experience	Can the C/S and S/S demonstrate recent experience on the A/C type (or similar aircraft) intended to be endorsed in the Part-145 individual authorisation?	☐		CAP 2377 – demonstration of 6/24 months maintenance experience
In addition to the above points, the following applies for renewal of existing Part-145 C/S - S/S individual authorisation				
Renewal of Part-145 C/S – S/S individual authorisation	Has the Certifying Staff/Support Staff received continuation training that covers up-to-date information on relevant technologies, Human Factors, FTS, Organisation procedures (including changes in Aviation legislations), EWIS as applicable to the organisation scope of approval and individual authorisation held?	☐		
	Has the Certifying Staff/Support Staff demonstrated a 6 month of experience during the two-year period preceding the renewal of the authorisation?	☐		CAP 2377 – demonstration of 6/24 months maintenance experience
When all the above points are positive, the following applies				
Assessment	Has the Certifying Staff/Support Staff been assessed for competence including a language skill evaluation.	☐		Refer to the table "Summary of topics to be Assessed for A/C Certifying and Support Staff"
	Has any additional training been identified and performed, as required, following the internal assessment?	☐		

Check List 2: To be reviewed before granting / extending / renewing a Part-145 C/S - S/S authorisation, for Part-66 staff.

Certifying Staff Name:	**Purpose of the review** ☐ Initial grant ☐ Extension ☐ Renewal	**Intended scope of Part-145 C/S - S/S individual authorisation:** *Category A," "B1", "B2" or "C"*	**A/C type:**

	PART-145 regulation / Requirements	**Checked & compliant**	**Reference of the document provided**	**Additional User Guide**
Part-145 Appendix IV(a)	Does the C/S - S/S hold a valid licence or a Certifying Staff authorisation issued under the country's National regulations in compliance with ICAO Annex 1?	☐		Part-145 Appendix IV and ICAO Annex I check list
	Are there any differences between national licence that need to be addressed?	☐		
Part-145 Appendix IV(b)	Does the scope of work of the C/S - S/S remain within the scope of work defined by the National licence/Certifying Staff authorisation and is any limitation listed in the National licence endorsed in the Part-145 C/S - S/S individual authorisation?	☐		Refers to MOE guidance: Category and associated privileges of the national licence to be addressed in the MOE chapter 1.6.
Part-145.35(m)	Is the C/S - S/S staff more than 21 years old?	☐		
Part-145 Appendix IV(c)	Has the C/S - S/S demonstrated that they have received training on human factors referred to in module 9 of Appendix I to Annex III (Part-66)?	☐		
	Has the C/S - S/S demonstrated that they have received training on aviation legislation referred to in module 10 of Appendix I to Annex III (Part-66)?	☐		
	Has the provided training (module 9 and module 10) been evaluated for compliance with Appendix I to Annex III (Part-66) In terms of syllabus and level (B1/B2) of training (refers Chapter 1.4.3)?	☐		
Part-145 Appendix IV(d)	Has the C/S - S/S staff demonstrate the required maintenance experience **Category "A" = 3 years** **Category "B1"," B2" = 5 years** **Category "C" = 8 years.**	☐	Record the number of years	
	Can the C/S - S/S demonstrate recent experience on the A/C type intended to be endorsed in the Part-145 individual authorisation?	☐		CAP 2377 - demonstration of 6/24 months maintenance experience.

Certifying Staff Name:	**Purpose of the review** ☐ Initial grant ☐ Extension ☐ Renewal	**Intended scope of Part-145 C/S - S/S individual authorisation:** ***Category A," "B1", "B2" or "C"***	**A/C type:**

	PART-145 regulation / Requirements	**Checked & compliant**	**Reference of the document provided**	**Additional User Guide**
Part-145 Appendix IV (e) (f)	Has the C/S - S/S demonstrated they followed a task or a type training and pass the examination at the relevant category, referred to in Appendix III to Annex III (Part-66)? Note: Category "C" Certifying Staff shall demonstrate they received type training and passed examination at the category C level referred to in Appendix III to Annex III (Part-66) for each aircraft type in his /her Part-145 individual authorisation, except that for the first aircraft type, training and examination shall be at the category B1, B2 or B3 level of Appendix III.			
	Is the theoretical part of the type training provided by an approved Part-147 organisation?	Y☐ N☐		
	Is the practical element of the training provided by an approved Part-147 organisation?	Y☐ N☐		
	Is the task training provided by an approved Part-145 or Part-147 organisation?	☐		
Additional Aircraft Training	Has the C/S and S/S received additional training, as appropriate, on the differences for the particular model/variant and/or the particular configuration of the aircraft intended to be maintained by the maintenance organisations	☐		
Additional Training	Has the Certifying Staff/Support Staff received an Initial Human Factor Training According to 145.A.30 (e) and GM 1 145.A.30 (e) syllabus.	☐		
	Has the C/S and S/S received an appropriate training to the MOE and associated procedures/lists?	☐		
	Has the C/S and S/S received the initial FTS training as per Appendix IV to AMC to Part 145.A.30 (e)?	☐		
	Has the C/S and S/S received the EWIS training (refer to AMC 20-22 for further details).	☐		
	Has the C/S and S/S received training to the Customer`s operator procedures, such as but not limited to the customer`s ATL, work cards, work package, list of independent inspection items, deferred items procedures, MEL, etc?	☐		
In addition to the above points, the following applies for renewal of existing Part-145 individual authorisation				

Certifying Staff Name:	**Purpose of the review** ☐ Initial grant ☐ Extension ☐ Renewal	**Intended scope of Part-145 C/S - S/S individual authorisation:** ***Part 66 Category A", "B1", "B2" or "C"***		**A/C type:**
	PART-145 regulation / Requirements	**Checked & compliant**	**Reference of the document provided**	**additional guidance**
Renewal of Part-145 individual authorisation	Has the C/S and S/S received continuation training that covers up-to-date information on relevant technologies, Human Factors, FTS, Organisation procedures (including changes in Aviation legislations), EWIS, as applicable to the organisation scope of approval and individual authorisation held?	☐		
	Has the C/S and S/S demonstrated a 6 month of experience during the two-year period preceding the renewal of Part-145 C/S – S/S individual authorisation?	☐		CAP 2377 demonstration of 6/24 months maintenance experience
When all the above points are positive, the following applies				
Assessment	Has the C/S and S/S been assessed for competence including a language skill evaluation?	☐		Refer to the table 'Summary of topics to be Assessed for A/C Certifying Staff'
	Is any additional training justified following the internal assessment?	☐		

Check list 3: Areas to be assessed before granting / extending / renewing a Part-145 C/S - S/S individual authorisation, for Part-66 staff.

Purpose of the Assessment

☐ Initial grant ☐ Extension ☐ Renewal

The competence assessment shall include evaluation of "On the Job Performance" and /or "testing of knowledge" by appropriately qualified personnel

	IV QUALIFICATION	**Remarks**
I.1.	Refer to the check list 1 "Topics to be Reviewed Before to Grant /Extend/ Renew an Individual Authorisation for C/S & S/S Qualified to Part-66".	
	I KNOWLEDGE	
II.1.	Knowledge of human factors, human performance and limitations	
II.2.	Knowledge of organisation capabilities, privileges and limitations (scope of approval, etc.)	
II.3.	Knowledge of Part-M, Part-145 (and any other relevant regulations)	
II.4.	Knowledge of relevant parts of the MOE and associated procedures	
II.5.	Knowledge of safety risks linked to the working environment	
II.6.	Knowledge on CDCCL (when relevant)	
II.7.	Knowledge on EWIS (when relevant)	
II.8.	Knowledge of occurrence reporting system and understanding of the importance of reporting occurrences, incorrect maintenance data and existing or potential defects	
	IIIUNDERSTANDING	
III.1.	Understanding of professional integrity, behaviour and attitude towards safety	
III.2.	Understanding of conditions for ensuring continuing airworthiness of aircraft and components	
III.3.	Understanding of his/her own human performance and limitations	
III.4.	Understanding of personnel authorisations and limitations	
III.5.	Understanding of critical task	
	IV ABILITY	
IV.1	Ability to supervise the performance of tasks conducted by non-C/S personnel (e.g., mechanics, etc.)	
IV.2	Ability to compile and control completed work cards	
IV.3	Ability to consider human performance and limitations	
IV.4	Ability to determine required qualifications for task performance	
IV.5	Ability to identify and rectify existing and potential unsafe conditions	
IV.6	Ability to check and document proper accomplishment of maintenance tasks	
IV.7	Ability to identify and correctly plan performance of critical task	
IV.8	Ability to prioritise tasks and report discrepancies	
IV.9	Ability to process the work requested by the operator	
IV.10	Ability to properly process removed, uninstalled and rejected parts	
IV.11	Ability to properly record and sign for work accomplished	
IV.12	Ability to determine the acceptability of parts to be installed prior to fitment	
IV.13	Ability to understand work orders, work cards and refer to and use applicable maintenance data	
IV.14	Ability to use information systems	
IV.15	Ability to use, control and be familiar with required tooling and/or equipment	
IV.16	Adequate communication and literacy skills: The A/C Certifying Staff shall be able to demonstrate a working knowledge of the language in which the maintenance data is published. In addition, should the language of the maintenance data not be English, then English language working knowledge is required to: • Understand EU Airworthiness directives. • Communicate with EU operator not using the language of the state of registry.	

Note: This list shall not be considered as exhaustive. It remains the responsibility of the maintenance organisation to adjust it.
It is recommended that the assessment form contains an open text field where the person responsible for the assessment records the questions raised, comments or any other information useful to support the recommendation for the pass/fail result.

Checklist 4: Review of topics to be assessed before granting / extending / renewing a Part-145 C/S - S/S individual authorisation, for Part-66 staff.

Purpose of the Assessment: ☐ Initial grant ☐ Extension ☐ Renewal **The competence assessment shall include evaluation of "On the Job Performance" and /or "testing of knowledge" by appropriately qualified personnel**		
I QUALIFICATION		**Remarks**
I.1.	Refer to the check list 2 "Topics to be Reviewed Before to Grant /Extend/ Renew an Individual Authorisation for C/S & S/S Not Qualified to Part-66".	
II KNOWLEDGE		
II.1.	Knowledge of human factors, human performance and limitations	
II.2.	Knowledge of organisation capabilities, privileges and limitations (scope of approval, etc.)	
II.3.	Knowledge of Part-M, Part-145 (and any other relevant regulations)	
II.4.	Knowledge of relevant parts of the MOE and associated procedures	
II.5.	Knowledge of safety risks linked to the working environment	
II.6.	Knowledge on CDCCL (when relevant)	
II.7.	Knowledge on EWIS (when relevant)	
II.8.	Knowledge of occurrence reporting system and understanding of the importance of reporting occurrences, incorrect maintenance data and existing or potential defects	
III UNDERSTANDING		
III.1.	Understanding of professional integrity, behaviour and attitude towards safety	
III.2.	Understanding of conditions for ensuring continuing airworthiness of aircraft and components	
III.3.	Understanding of his/her own human performance and limitations	
III.4.	Understanding of personnel authorisations and limitations	
III.5.	Understanding of critical task	
IV ABILITY		
IV.1	Ability to supervise the performance of tasks conducted by non-C/S personnel (e.g., mechanics, etc.)	
IV.2	Ability to compile and control completed work cards	
IV.3	Ability to consider human performance and limitations	
IV.4	Ability to determine required qualifications for task performance	
IV.5	Ability to identify and rectify existing and potential unsafe conditions	
IV.6	Ability to check and document proper accomplishment of maintenance tasks	
IV.7	Ability to identify and carefully plan performance of critical task	
IV.8	Ability to prioritise tasks and report discrepancies	
IV.9	Ability to process the work requested by the operator	
IV.10	Ability to properly process removed, uninstalled and rejected parts	
IV.11	Ability to properly record and sign for work accomplished	
IV.12	Ability to determine the acceptability of parts to be installed prior to fitment	
IV.13	Ability to understand work orders, work cards and refer to and use applicable maintenance data	
IV.14	Ability to use information systems	
IV.15	Ability to use, control and be familiar with required tooling and/or equipment	
IV.16	Adequate communication and literacy skills: The A/C Certifying Staff shall be able to demonstrate a working knowledge of the language in which the maintenance data is published. In addition, should the language of the maintenance data not be English, then English language working knowledge is required to: • Understand UK Airworthiness directives. • Communicate with UK operator not using the language of the state of registry.	
Note: This list shall not be considered as exhaustive. It remains the responsibility of the maintenance organisation to adjust it. It is recommended that the assessment form contains an open text field where the person responsible for the assessment records the questions raised, comments or any other information useful to support the recommendation for the pass/fail result.		

Table 1: National licence(s) to be considered for a CAA approved Part-145 organisation.

Part 145 organisation (PPB[24] outside UK territory) having facilities outside the UK territory						
Specific case	**Possible options for qualification**	**Applicability**		**Qualification allowed by**		**Possible alternatives to UK Part-66**
		145.A.30 (j)(1)	**145.A.30 (j)(2)**	**145.A.30 (j)(1)**	**145.A.30 (j)(2)**	
for **all facilities** in country A being the country where the PPB is	BASE MAINTENANCE: qualification in accordance with aviation regulations of country **A;** subject to compliance with the requirements in Appendix IV	YES	N/A	**Country A**	N/A	Country A
	LINE MAINTENANCE: qualification in accordance with aviation regulations of country **A;** subject to compliance with the requirements in Appendix IV	N/A	YES	N/A	**Country A**	Country A
for **base maintenance** facility in country **B** different from PPB	BASE MAINTENANCE: qualification in accordance with aviation regulations of country **B;** subject to compliance with the requirements in Appendix IV	YES	N/A	**Country B**	N/A	Country B
for **line maintenance** station in country **C**	LINE MAINTENANCE: qualification in accordance with aviation regulations of country **A or of country C;** subject to compliance with the requirements in Appendix IV	YES PPB registered in (A)	YES based in C	**Country A**	**Country C**	Country A Country C
For line maintenance stations (within UK)	Qualification in accordance with Part 66 145.A.30 (g), (h) ONLY	N/A	N/A	NONE	NONE	NONE
NOTE: "Qualified in accordance with national aviation regulations" means that the qualification must have been issued or recognised (validated) in accordance with that national regulation. For recognition of licences from other authorities the criteria in Appendix IV to Part-145 are not relevant. However, in order for the Part-145 organisation to grant the Part-145 C/S - S/S individual authorisation, the person must meet the requirements defined in Appendix IV to Part-145						

[24] PPB: Means the head office or the registered office of the undertaking within which the principal financial functions and operational control of the activities referred to in this Regulation are exercised

Checklist 5: Aircraft Maintenance Licence ICAO Annex I format compliance

ICAO Annex I - Chapter 5 § 5.1 1.2: The following details shall appear on the licence	Compliance Y/N	Name of licence holder (if "N")
I) Name of Contracting State (in bold type);		
II) Title of licence (in bold type);		
III) Serial number of the licence, in Arabic numerals, given by the authority issuing the licence;		
IV) Name of holder in full (in Roman alphabet also if script of national language is other than Roman);		
• IVa) Date of birth		
V) Address of holder if desired by the Contracting State;		
VI) Nationality of holder;		
VII) Signature of holder;		
VIII) Authority and, where necessary, conditions under which the licence is issued;		
IX) Certification concerning validity and authorisation for holder to exercise privileges appropriate to licence;		
X) Signature of officer issuing the licence and the date of such issue;		
XI) Seal or stamp of authority issuing the licence;		
XII) Ratings, e.g., category, class, type of aircraft, airframe, aerodrome control, etc.;		
XIII) Remarks, e.g., special endorsements relating to limitations and endorsements for privileges,		
XIV) Any other details desired by the Contracting State issuing the licence.		
ICAO Annex I Chapter 5. § 5.1.2 - Material		
First quality paper or other suitable material, including plastic cards, shall be used and the items mentioned in 5.1.1.2 shown clearly thereon.		
ICAO Annex I Chapter 5. § 5.1.3 - Language		
When licences are issued in a language other than English, the licence shall include an English translation, as a minimum, of the following items I), II), VI), IX), XII), XIII) and XIV).		
When provided in a language other than English, authorisations issued in accordance with 1.2.2.1 shall include an English translation of:		
• the name of the Contracting State issuing the authorisation,		
• the limit of validity of the authorisation,		
• any restriction or limitation that may be established.		
ICAO Annex I Chapter 5 § 5.1.4 - Arrangement of items		
Item headings on the licence shall be uniformly numbered in roman numerals as indicated in 5.1.1, so that on any licence the number will, under any arrangement, refer to the same item heading.		
Note. — Item headings may be arranged in such order as may best suit the convenience of the Contracting State issuing the licence		
ICAO Annex I - § 4.2.2.3.1		
Details of the certification privileges should be endorsed on or attached to the licence, either directly or by reference to another document issued by the Contracting State.		

If difference to ICAO requirement is identified the organisation shall identify it in the column compliance with "N" and record in the same row the name of the corresponding licence holder