

Part 145 Maintenance Organisation Exposition Guidance

CAP 2375

A large, abstract graphic in shades of blue and purple occupies the lower half of the page. It features a curved, layered design that resembles a stylized wing or a modern architectural element, with a gradient from light blue to dark purple.

Published by the Civil Aviation Authority, 2023

Civil Aviation Authority
Aviation House
Beehive Ring Road
Crawley
West Sussex
RH6 0YR

You can copy and use this text but please ensure you always use the most up to date version and use it in context so as not to be misleading, and credit the CAA.

First published July 2022
Second edition February 2023

Enquiries regarding the content of this publication should be addressed to: apply@caa.co.uk

The latest version of this document is available in electronic format at: www.caa.co.uk

Contents

| | |
|---|-----------|
| Contents | 3 |
| Section 0 - Introduction | 12 |
| 0.1 Revision History..... | 12 |
| 0.2 Definitions & Abbreviations | 13 |
| 0.3 Scope & Applicability | 14 |
| 0.4 Purpose..... | 14 |
| 0.5 Entry into Force | 14 |
| 0.6 Associated Instructions..... | 14 |
| 0.7 Communication | 14 |
| Section 1 - General Guidance – Maintenance Organisation Exposition (MOE) | 15 |
| 1.1 Preliminary Considerations..... | 15 |
| 1.2 Exposition Format & Language..... | 15 |
| 1.3 Terms of Use..... | 15 |
| 1.4 Structure of the Exposition..... | 16 |
| 1.4.1 Management Control of the MOE | 16 |
| 1.4.2 Exposition Pages Presentation | 17 |
| 1.5 MOE Initial Approval Process | 18 |
| 1.5.1 First Submission of the draft MOE. | 18 |
| 1.5.2 Tracking Changes to the Initial draft MOE. | 18 |
| Section 2 - MOE Structure, Content & Format | 19 |
| Part 0 - Introduction | 19 |
| 0.1 Table of Contents | 19 |
| 0.2 List of Effective Pages | 20 |
| 0.3 List of Issues / Amendment Record of Revisions | 21 |
| 0.4 Distribution List..... | 21 |
| Part 1 – Management..... | 22 |
| 1.1 Corporate Commitment by the Accountable Manager | 22 |
| 1.2 Safety & Quality Policy | 23 |
| 1.3 Management Personnel..... | 24 |
| 1.4 Duties & Responsibilities of Management Personnel..... | 25 |

| | |
|--|----|
| 1.4.1 Accountable Manager..... | 25 |
| 1.4.2 Quality Manager / Compliance Monitoring Manager | 26 |
| 1.4.2.1 Occurrence Reporting Manager..... | 27 |
| 1.4.2.2 Auditing Manager | 27 |
| 1.4.3 Maintenance Manager (may be Base MM and/or Line MM and/or Workshop MM) . | 27 |
| 1.4.3.1 Engineering Manager | 29 |
| 1.4.3.2 Logistics Manager | 29 |
| 1.4.4 Responsible NDT Level III | 29 |
| 1.5 Management Organisation Chart..... | 30 |
| 1.6 List of Certifying Staff, Support Staff and Airworthiness Review Staff. | 30 |
| 1.6.1 Certifying Staff (C/S) and Support Staff (S/S). | 31 |
| 1.6.2 Airworthiness review staff..... | 32 |
| 1.6.3 Content of the list(s). | 32 |
| 1.6.4 Management of the list(s). | 33 |
| 1.7 Manpower Resources..... | 34 |
| 1.8 Facilities. | 35 |
| 1.8.1 Principal Place of Business (PPB). | 35 |
| 1.8.2 Postal (surface mail and e-mail) address..... | 35 |
| 1.8.3 Base maintenance facilities | 35 |
| 1.8.4 Line maintenance facilities (at each location) as appropriate. | 36 |
| 1.8.5 Engines / APU and Component maintenance facilities. | 36 |
| 1.8.6 Layout of premises | 36 |
| 1.9 Scope of Work..... | 37 |
| 1.9.1 Aircraft Maintenance..... | 37 |
| 1.9.2 Engine Maintenance | 38 |
| 1.9.3 Component Maintenance..... | 39 |
| 1.9.4 Specialised Services Maintenance. | 41 |
| 1.9.4.2 NDT without D1 Rating | 41 |
| 1.9.5 Maintenance Away from the Approved Locations as per 145.A.75 (c). | 42 |
| 1.9.6 Parts Fabrication as per 145.A.42 (c) | 42 |
| 1.9.7 Use of maintenance data not clearly intended for the rating held..... | 42 |
| 1.9.8 Airworthiness review privileges..... | 43 |

| | |
|---|----|
| 1.10 Notification Procedure to the Authority Regarding Changes to the Organisation's Activities / Approval / Location / Personnel. | 44 |
| 1.10.1 Notification..... | 44 |
| 1.10.2 Management of the change with the assigned Surveyor | 47 |
| 1.11 Exposition Amendment Procedures (including delegated procedures). | 48 |
| 1.11.1 MOE Amendment. | 48 |
| 1.11.2 Associated Procedures, Lists and Forms..... | 49 |
| 1.11.3 Approval Process | 50 |
| 1.11.4 List of applicable regulations and supporting Documents | 50 |
| Part 2 – Maintenance Procedures | 51 |
| 2.1 Supplier Evaluation & Control Procedure..... | 51 |
| 2.1.1 Type of Suppliers..... | 51 |
| 2.1.2 Monitoring the Suppliers. | 52 |
| 2.1.3 Monitoring the Contracted Organisations..... | 52 |
| 2.1.4 Monitoring Subcontractors..... | 53 |
| 2.2 Acceptance / Inspection of Aircraft Components and Materials from Outside Contractors..... | 53 |
| 2.2.1 Classification and Definitions | 53 |
| 2.2.2 Component / Material certification..... | 53 |
| 2.2.3 Receiving inspection procedure..... | 54 |
| 2.2.4 Installation of components/standard parts/materials | 55 |
| 2.3 Storage, Tagging and Release of Aircraft Components and Materials to Aircraft Maintenance..... | 56 |
| 2.3.1 Storage Procedures..... | 56 |
| 2.3.2 Tagging | 56 |
| 2.3.3 Release to the maintenance process..... | 57 |
| 2.4 Acceptance of Tools and Equipment. | 57 |
| 2.5 Calibration of Tools and Equipment. | 59 |
| 2.6 Use of Tooling and Equipment by Staff (including alternative tools)..... | 60 |
| 2.7 Cleanliness Standards of Maintenance Facilities. | 61 |
| 2.8 Maintenance Instructions and Relationship to Aircraft / Aircraft Component Manufacturer's Instructions including Updating and Availability to Staff. | 62 |
| 2.8.1 Maintenance Data Coming from External Sources. | 62 |

| | |
|---|----|
| 2.8.2 Documentation/Maintenance Instructions Issued by the maintenance organisation. | 63 |
| 2.9 Repair Procedure. | 64 |
| 2.9.1 Repairs | 64 |
| 2.9.2 Fabrication of Parts. | 64 |
| 2.10 Aircraft Maintenance Programme Compliance..... | 65 |
| 2.11 Airworthiness Directives Procedure. | 66 |
| 2.12 Optional Modification Procedure..... | 67 |
| 2.13 Maintenance Documentation in use and its Completion..... | 67 |
| 2.13.1 Templates in use to record maintenance. | 67 |
| 2.13.2 Composition of the work package. | 68 |
| 2.13.3 Completion of Maintenance Documentation. | 69 |
| 2.14 Technical Records Control. | 71 |
| 2.15 Rectification of Defects Arising During Base Maintenance..... | 72 |
| 2.16 Release to Service Procedure. | 73 |
| 2.16.1 General requirements of the release to service..... | 73 |
| 2.16.2 Aircraft maintenance release to service (Ax ratings). | 74 |
| 2.16.3 Components/engines/APUs maintenance release to service (Cx/Bx ratings)..... | 76 |
| 2.16.4 NDT release to service (D1 rating)..... | 76 |
| 2.17 Records for the Operator. | 76 |
| 2.18 Reporting of Defects to the Competent Authority/ Operator/ Manufacturer. | 77 |
| 2.18.1 Internal Occurrence Reporting System. | 77 |
| 2.18.2 Reportable Occurrences as per 145.A.60. | 78 |
| 2.19 Return of Defective Aircraft Components to Store. | 78 |
| 2.20 Defective Components to Outside Contractors. | 79 |
| 2.21 Control of Computer Maintenance Records System. | 79 |
| 2.22 Control of Man-Hour Planning versus Scheduled Maintenance Work. | 80 |
| 2.23 Control of Critical Tasks..... | 81 |
| 2.23.1 Critical maintenance tasks | 81 |
| 2.23.2 Error-capturing methods | 82 |
| 2.24 Reference to Specific Maintenance Procedures. | 83 |
| 2.25 Procedures to Detect and Rectify Maintenance Errors | 83 |
| 2.25.1 Procedures to minimise the risk of multiple errors and preventing omissions..... | 84 |

| | |
|---|-----|
| 2.25.2 Procedure to minimise the risk of errors being repeated in identical maintenance tasks compromising more than one system or function | 84 |
| 2.25.3 Identification of methods in use to minimise the risks..... | 84 |
| 2.26 Shift / Task Handover Procedures. | 86 |
| 2.27 Procedures for Notification of Maintenance Data Inaccuracies and Ambiguities to the Type Certificate Holder..... | 86 |
| 2.28 Production Planning Procedures | 87 |
| 2.29 Airworthiness Review Procedures. | 89 |
| Part L2 – Additional Line Maintenance Procedures | 90 |
| L2.1 Line Maintenance Control of Aircraft Components, Tools, Equipment, etc..... | 90 |
| L2.2 Line Maintenance Procedure Related to Servicing / Fuelling / De-icing / etc..... | 90 |
| L2.3 Line Maintenance Control of Defects and Repetitive Defects..... | 91 |
| L2.4 Line Procedure for Completion of Technical Log. | 91 |
| L2.5 Line Procedure for Pooled Parts and Loan Parts. | 92 |
| L2.6 Line Procedure for Return of Defective Parts Removed from Aircraft..... | 92 |
| L2.7 Line Procedure for critical maintenance tasks and error-capturing methods. | 92 |
| Part 3 – Quality System Procedures..... | 93 |
| 3.1 Quality Audit of Organisation Procedures. | 93 |
| 3.2 Quality Audit of Aircraft and/or Components. | 97 |
| 3.3 Quality Audit Corrective Action Procedure. | 98 |
| 3.4 Certifying Staff and Category B1 and B2 Support Staff Qualification and Training Procedures..... | 99 |
| 3.4.1 Aircraft Certifying Staff and/or Support Staff. | 99 |
| 3.4.2 Components/Engines/APU Certifying Staff. | 100 |
| 3.4.3 Specialised Services (NDT) Certifying Staff. | 100 |
| 3.4.4 Acceptance of maintenance tasks conducted by pilots | 100 |
| 3.5 Certifying Staff and B1/B2 Support Staff Records..... | 101 |
| 3.6 Quality / Compliance Audit Personnel. | 102 |
| 3.7 Qualifying Inspectors. | 103 |
| 3.8 Qualifying Mechanics..... | 105 |
| 3.9 Aircraft or Aircraft Component Maintenance Tasks Deviation Process Control. | 106 |
| 3.10 Concession Control for Deviation from the Organisation's Procedures. | 107 |

| | |
|---|------------|
| 3.11 Qualification Procedure for Specialised Activities Such as Non-Destructive Testing, Welding | 108 |
| 3.11.1 NDT personnel..... | 108 |
| 3.11.2 Other specialised activities personnel (e.g., welders, painters, etc.)..... | 109 |
| 3.12 Control of Manufacturers' and Other Maintenance Working Teams. | 109 |
| 3.12.1 External Team Working under their own UK Part 145 Approval..... | 110 |
| 3.12.2 External Working Team not holding a UK Part 145 Approval..... | 110 |
| 3.13 Human Factors Training Procedure..... | 110 |
| 3.13.1 Initial Training (except C/S and S/S) | 111 |
| 3.13.2 All Maintenance staff Continuation Training | 111 |
| 3.14 Competence Assessment of Personnel..... | 112 |
| 3.15 Training procedures for on-the-job training as per Section 6 of Appendix III to Part-66..... | 114 |
| 3.16 Procedure for the issue of a recommendation to the competent authority for the issue of a Part-66 Licence in accordance with 66.B.105..... | 114 |
| Part 4 – Contracted Operators..... | 115 |
| 4.1 Contracting Operators..... | 115 |
| 4.2 Operator Procedures and Paperwork..... | 115 |
| 4.3 Operator Record Completion..... | 115 |
| Part 5 - Documents | 116 |
| 5.1 Sample of Documents..... | 116 |
| 5.2 List of Subcontractors as per Part 145.A.75 (b)..... | 116 |
| 5.3 List of Line Maintenance Locations as per Part 145.A.75 (d)..... | 116 |
| 5.4 List of Contracted Organisations as per 145.A.70 (a) (16)..... | 116 |
| Part 6 – Operators Maintenance Procedures..... | 117 |
| Part 7 – FAA Supplement..... | 118 |
| Part 8 – TCCA Supplement | 119 |
| Part 9 – ANAC Supplement..... | 120 |
| Part 10 – CAAS Supplement | 121 |
| Section 3 – Fabrication of parts..... | 122 |
| 1.0 Definitions | 122 |
| 1.0.1 Fabrication of Parts | 122 |

| | |
|---|------------|
| 1.0.2 Production of Parts | 122 |
| 1.1 Process Flow Chart | 123 |
| 1.2 General principles for fabrication of parts | 124 |
| 1.3 Scope of fabrication of parts | 125 |
| 1.3.1 Identification of fabrication groups | 125 |
| 1.4 Fabrication file | 125 |
| 1.4.1 Fabrication data | 125 |
| 1.4.2 Fabrication process – work card/worksheet system | 127 |
| 1.4.3 Composition of the fabrication file | 127 |
| 1.4.4 Final inspection and conformity statement | 127 |
| 1.5 Fabrication inspection system | 128 |
| 1.6 Marking | 129 |
| 1.6.1 Fabrication part number identification | 129 |
| 1.7 Fabrication records | 130 |
| 1.7.1 Fabrication file record | 130 |
| 1.7.2 List of parts fabricated | 130 |
| Section 4 - Part-145 Appendix IV (C/S Staff) and ICAO Annex I check list | 131 |
| 0.1 Scope and applicability | 131 |
| 0.2 Purpose | 131 |
| 0.3 Communication | 131 |
| A/C Certifying Staff & Support Staff | 132 |
| 1.1 A/C Certifying Staff & Support Staff definition | 132 |
| 1.1.1. A/C Certifying Staff (C/S) | 132 |
| 1.1.2. Support Staff (S/S) | 132 |
| 1.1.3. Part-66 AML categories and subcategories | 132 |
| 1.2. Individual authorisation procedures | 132 |
| 1.3. Aircraft Certifying Staff and Support Staff qualified to Part 66 | 133 |
| 1.3.1. Licence and scope | 133 |
| 1.3.2. Age | 133 |
| 1.3.3. Additional training | 133 |
| 1.3.4. Additional aircraft training | 134 |
| 1.3.5. Maintenance experience | 134 |

| | |
|--|-----|
| 1.3.6. Additional criteria for the renewal of individual authorisation..... | 134 |
| 1.3.7. Assessment..... | 135 |
| 1.3.8. Check List 1: Topics to be reviewed before granting / extending / renewing a Part-145 C/S - S/S individual authorisation, for staff qualified to Part-66. | 136 |
| 1.3.9 Summary of topics to be assessed before granting / extending / renewing a Part-145 C/S - S/S individual authorisation, for staff qualified to Part-66. | 137 |
| 1.4 A/C Certifying and Support Staff not qualified to Part-66. | 138 |
| 1.4.1 Appendix IV paragraph 1. (a)..... | 138 |
| 1.4.2 Appendix IV paragraph 1 (b)..... | 138 |
| 1.4.3 Appendix IV paragraph 1 (c)..... | 139 |
| 1.4.4 Appendix IV paragraph 1 (d)..... | 140 |
| 1.4.5 Appendix IV paragraph 1 (e) (f) | 140 |
| 1.4.5.1 A/C type training for category B1, B2 C/S, S/S and category C c/s | 140 |
| 1.4.5.2 Type training for differences | 141 |
| 1.4.5.3 Tasks training for category A C/S | 141 |
| 1.4.6 Additional aircraft training. | 142 |
| 1.4.7 Additional training. | 142 |
| 1.4.8 Additional criteria for the renewal of individual authorisation. | 143 |
| 1.4.9 Assessment..... | 143 |
| 1.4.10 Check List 2: Topics to be reviewed before granting / extending / renewing a Part-145 C/S - S/S individual authorisation, for staff not qualified to UK Part-66. | 144 |
| 1.4.11 Summary of topics to be assessed before granting / extending / renewing a Part-145 C/S - S/S individual authorisation, for staff not qualified to UK Part-66. | 147 |
| 1.4.12 National licence(s) to be considered for a UK CAA approved Part-145 organisation. | 148 |
| 1.5 Management of the Part-145 C/S - S/S individual authorisation..... | 149 |
| 1.5.1 List of A/C Certifying Staff and Support Staff..... | 149 |
| 1.5.2 Part-145 C/S - S/S individual authorisation..... | 149 |
| 1.6 One-off authorisations. | 150 |
| 1.6.1 Applicability. | 150 |
| 1.6.2 MOE..... | 151 |
| 1.7 Privileges of C/S and S/S..... | 151 |
| 1.8 Records..... | 151 |

| | |
|---|------------|
| Appendix 1 – ICAO Annex 1 Checklist | 152 |
| 1. Scope and applicability..... | 152 |
| 2. Communications..... | 153 |
| 3. Purpose..... | 153 |
| 4. Completion instructions. | 155 |
| 5. Maintenance organisation data..... | 155 |
| 6. Scope of the National Licence by Comparison to Certifying Staff & Support Staff Categories..... | 156 |
| 7. Individual Aircraft Maintenance Licence Holders (technician/engineer/mechanic). . | 157 |
| 8. Aircraft Maintenance Licence ICAO Annex I format compliance | 158 |
| 9. Compliance check list of selected C/S - S/S with Part-145 requirements (Part 145.A.30 & Appendix IV) and relevant ICAO provisions. | 159 |

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 |
| | | |
| | | |

0.2 Definitions & Abbreviations

| Abbreviations | |
|---------------|--|
| AMC | Acceptable Means of Compliance |
| AML | Aircraft Maintenance Licence |
| AMO | Aircraft Maintenance Organisation |
| AMTO | Approved Maintenance Training Organisation |
| ANAC | Brazilian Aviation Authority |
| AOG | Aircraft On Ground |
| CAAS | Civil Aviation Authority of Singapore |
| CAP | Civil Aviation Publication |
| C/S | Certifying Staff |
| CC/S | Component Certifying Staff |
| EU | European Union |
| ESM | Engine Shop Manual |
| FAA | Federal Aviation Administration (U.S.A) |
| GM | Guidance Material |
| ILAC | International Laboratory Accreditation Cooperation |
| IOSRS | Internal Occurrence Reporting System |
| 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 |
| PMA | Parts Manufacturer Approval |
| PPB | Principal Place of Business |
| SRM | Structural Repair Manual |
| S/S | Support Staff |
| 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 UK CAA is the Competent Authority for Part-145 organisations. Having their principal place of business located within the UK or overseas, and 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 user guide are complementary to the requirements of Part-145 regulation, as amended, and does not supersede or replace the associated regulatory requirements.

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 Competent Authority – For guidance when conducting routine reviews.
- Along with [Part 145 holders guidance](#) as published on the CAA Website

0.5 Entry into Force

This User Guide comes into effect 30 days after publication on the UK CAA website, or as indicated in the UK CAA Skywise industry notification.

0.6 Associated Instructions

The UK CAA has developed associated instructions including Forms and Templates, that detail specific matters which have to 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 UK CAA website: <https://www.caa.co.uk/commercial-industry/aircraft/airworthiness/approval-information-and-guidance/part-145-holders-guidance/>

0.7 Communication

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

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

1.1 Preliminary Considerations

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

- Part 145, 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.

AMC 145.A.70 (a) 3 states: “Where an organisation uses a different format, for example, to allow the exposition to serve for more than one UK CAA approval,

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

AMC 145.A.70 (a) 3 must be read in conjunction with the implementing rules of the Basic Regulation, thereby limiting the use of the UK CAA Part 145 MOE for approvals covered by the Basic Regulation. Consequently, the UK CAA MOE, associated procedures and lists shall not refer to any national approval and must be exclusively dedicated to the UK 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 UK CAA approvals webpage.

The MOE shall be submitted in English as the dominant language and in the case of a multilingual MOE, the English text shall precede the second language. The organisation must ensure 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 - Management, Part 2 - Maintenance Procedures, Part 3 - Quality System Procedures, etc.) as identified in the AMC 145.A.70.(a).

- “MOE chapter” is used to identify each chapter within an MOE Part (e.g., MOE 1.2 - Safety and quality policy, MOE 3.2 - Quality audit of aircraft, MOE 5.1 - sample of documents, etc.) as identified in the AMC 145.A.70.(a).
- “MOE paragraph” is used to identify a paragraph within an MOE chapter (e.g., MOE 3.4.1 - “Aircraft Certifying Staff,” MOE 3.4.2 - “Components 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 i.a.w. 145.A.70(a) subparagraphs (6) and (12) to (16) 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.
- AMC 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 quality system procedures (see AMC 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.

- The associated documents must meet the same rules as described for the MOE and shall not make reference to any national approvals.
- The associated documents, procedures and forms etc. shall be provided to, and be approved by the UK 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 1.11 chapter is intended to detail the methods chosen to identify changes to the MOE (e.g., issue/revision number, vertical bars, etc.).

Depending on the complexity and needs of an organisation, one of the two following possibilities is recommended:

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

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

Small changes to the MOE may only require a revision change, however when the organisation makes a change large enough to 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 UK 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 |

MOE identified only by a revision (or issue) number.

This solution requires any change to the MOE, however small, to be identified by a change of revision (or issue) number. The numbering of the revision (or issue) will start with “0” and increase at each revision.

| Revision (or issue) Nr. | Revision (or issue) date |
|-------------------------|--------------------------|
| 0 (initial) | 1/1/2012 |
| 1 | 17/2/2012 |
| 2 | 25/3/2012 |

Note: In either case, 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 UK Form 3 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.

Each page of the MOE shall be identified with the following, where applicable:

- Name of the document “Maintenance Organisation Exposition.”
- The name of the organisation (official name as defined on the UK CAA Form 3 approval certificate).
- Issue number and issue date of the MOE.
- Revision number and revision date of the MOE.
- MOE chapter (e.g., 1-5).
- Page number.

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 Corporate Commitment statement (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.

Important 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

AMC 145.A.70(a)

For standardisation purposes and to facilitate the production of the MOE by the Part 145 maintenance organisation, the CAA recommends adoption of the standardised MOE table of contents 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.

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

0.2 List of Effective Pages

See 2.4.1 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 | 01/01/07 |
| 001 | 2 | 0 | 01/01/12 | 122 | 1 | 1 | 01/01/07 |
| 002 | 2 | 0 | 01/01/12 | PART 2 | | | |
| 003 | 2 | 0 | 01/01/12 | 201 | 1 | 0 | 19/12/06 |
| 004 | 2 | 0 | 01/01/12 | 202 | 1 | 0 | 19/12/06 |
| 005 | 2 | 0 | 01/01/12 | 203 | 1 | 0 | 19/12/06 |
| 006 | 2 | 0 | 01/01/12 | 204 | 1 | 0 | 19/12/06 |
| 007 | 2 | 0 | 01/01/12 | 205 | 1 | 0 | 19/12/06 |
| 008 | 2 | 0 | 01/01/12 | 206 | 1 | 0 | 19/12/06 |
| 009 | 2 | 0 | 01/01/12 | 207 | 1 | 1 | 01/01/07 |
| PART 1 | | | | PART L2 | | | |
| 101 | 1 | 0 | 19/12/06 | L201 | 1 | 0 | 19/12/06 |
| 102 | 1 | 0 | 19/12/06 | L202 | 1 | 0 | 19/12/06 |
| 103 | 2 | 0 | 01/01/12 | L203 | 1 | 0 | 19/12/06 |
| 104 | 1 | 1 | 01/01/07 | L204 | 1 | 0 | 19/12/06 |
| 105 | 1 | 1 | 01/01/07 | PART 3 | | | |
| 106 | 1 | 0 | 19/12/06 | 301 | 2 | 0 | 01/01/12 |
| 107 | 1 | 1 | 01/01/07 | 302 | 2 | 0 | 01/01/12 |
| 108 | 1 | 1 | 01/01/07 | 303 | 1 | 1 | 01/01/07 |
| 109 | 2 | 0 | 01/01/12 | 304 | 1 | 1 | 01/01/07 |
| 110 | 1 | 1 | 01/01/07 | 305 | 1 | 0 | 19/12/06 |
| 111 | 1 | 0 | 19/12/06 | 306 | 1 | 0 | 19/12/06 |
| 112 | 1 | 1 | 01/01/07 | 307 | 1 | 0 | 19/12/06 |
| 113 | 1 | 0 | 19/12/06 | 308 | 1 | 0 | 19/12/06 |
| 114 | 1 | 0 | 19/12/06 | PART 4 | | | |
| 115 | 1 | 1 | 01/01/07 | 401 | 2 | 0 | 01/01/12 |
| 116 | 1 | 0 | 19/12/06 | 402 | 2 | 0 | 01/01/12 |
| 117 | 1 | 0 | 19/12/06 | 403 | 2 | 0 | 01/01/12 |
| 118 | 1 | 0 | 19/12/06 | PART 5 | | | |
| 119 | 1 | 0 | 19/12/06 | 501 | 2 | 0 | 01/01/12 |

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 Approval¹ (to be only used in case of indirect approval):

| | |
|---|--------------------------|
| Indirectly approved by: (name, position and signature) | Date: xx/xxx/xxxx |
|---|--------------------------|

¹ In the case of MOE direct approval by the competent authority, 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.

- In the case of MOE indirect approval by the Quality Assurance manager, the MOE approval 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 (Direct / Indirect) | Reason for change |
|--------------|------------|-----------------|---------------|-----------------------------------|---|
| 1 | 19/12/06 | 0 | 19/12/06 | INITIAL | n/a |
| | | 1 | 01/01/07 | Indirect | New procedure for |
| 2 | 01/01/12 | 0 | 01/01/12 | Direct | Change of Quality Assurance Manager and extension of the A1 scope |

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 | Aircraft Maintenance Manager | PDF |
| Copy No. 5 | Workshop Maintenance Manager | PDF |
| Copy No. 5 | Quality Manager | PDF |
| Copy No. 6 | UK CAA | PDF |
| Copy No. 7 | Reserved | |
| Copy No. 8 | Reserved | |

Part 1 – Management

1.1 Corporate Commitment by the Accountable Manager

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

This Exposition and any associated referenced manuals define the organisation and procedures upon which the UK CAA Part 145 approval is based as required by Part 145.A.70

These procedures do not apply to aircraft which are outside the remit of the Basic Regulation. They are approved by the undersigned and must be complied with at all times and when work/orders are being progressed under the terms of the Part 145 approval.

It is accepted that these procedures do not override the necessity of complying with any new or amended regulation published by the UK CAA from time to time where these new or amended regulations are in conflict with these procedures.

It is understood that the UK CAA will approve this organisation whilst satisfied that the procedures are being followed and work standards maintained. It is further understood that the UK CAA reserves the right to suspend, limit or revoke the Part 145 approval of the organisation if the UK CAA has evidence that procedures are not followed, or standards not upheld.

Signed: _____

Dated: DD / MMM /YYYY

Accountable Manager

(quote position in organisation)

on behalf of *(quote organisation's name)*

Signed: _____

Dated: DD / MMM /YYYY

Delegated Accountable Manager

(quote position in organisation)

on behalf of *(quote organisation's name)*

According to PART 145.A.70(a)1, if the Accountable Manager is not the highest level responsible for the organisation, then that person must countersign the statement.

Whenever the Accountable Manager is changed it is important that the new Accountable Manager signs the statement at the earliest opportunity as part of his/her acceptance by the UK CAA.

This statement is a copy of the text given in GM 145.A.70 (a). Any modification to the statement must not alter its intent.

*** Note - A new AM signature is required at each revision of the exposition**

1.2 Safety & Quality Policy

Part 145.A.30 (a) - Part 145.A.65 (a) / AMC 145.A.65 (a) - Part 145.A.70 (a) 2

The Quality and Safety Policy shall, as a minimum, include a statement committing the organisation to:

- Apply human factors principles.
- Encourage personnel to report maintenance related errors/incidents to meet Part-145 requirements.
- Always recognise safety as a prime consideration for all the staff.
- Recognise that compliance with procedures, quality standards and regulations is the duty of all personnel.
- Recognise the need for all personnel to cooperate with the quality auditors.
- Ensure that safety standards are not reduced by commercial imperatives.
- Ensure good use of resources and pay particular attention to conduct correct maintenance at the first attempt.
- Train all organisation staff to be aware of human factors and set a continuous training programme in this field.

Signed: _____

Dated: DD / MMM /YYYY

Accountable Manager

(quote position in organisation)

on behalf of *(quote organisation's name)*

Signed: _____

Dated: DD / MMM /YYYY

Delegated Accountable Manager

(quote position in organisation)

on behalf of *(quote organisation's name)*

1.3 Management Personnel

Part 145.A.30 (b) 1, 2, 3, 4, (c) / AMC 145.A.30 (b) 1,2,7,8 - 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) & (c). 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 competent authority using a [UK CAA Form 4 \(SRG 1705\)](#).

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 maintenance management structure of the organisation

1.3.1 Accountable Manager and Deputy.

1.3.2 Nominated Persons.

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

1.3.4 Managers (if applicable).

1.3.5 Responsible NDT Level III * (if applicable).

* The 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. In order 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 by an organisation under the control of a European NDT Board.

The following is an example of a maintenance organisation list of management personnel, where the name of the person associated to each position/title shall also be added:

| Management personnel List | Deputies |
|---|---|
| Accountable Manager | Deputy Accountable Manager |
| List of Nominated Personnel: <ul style="list-style-type: none"> Base Maintenance Manager. Line Maintenance Manager. Workshop Maintenance Manager. Quality Manager. | <ul style="list-style-type: none"> Deputy Base Maintenance Manager. Deputy Line Maintenance Manager. Deputy Workshop Maintenance Manager. Deputy Quality Manager. |
| List of Managers: <ul style="list-style-type: none"> Auditing Manager. Occurrence Reporting Manager. Engineering Manager. Logistic manager. | N/A |
| NDT Level III | N/A |

1.4 Duties & Responsibilities of Management Personnel

Part 145.A.30 (a) 1, 2, 3 (c) / AMC 145.A.30 (a) (b) 3,4,5,6 (c) - Part 145.A.35 (i) / AMC 145.A.35 (a) 2 - AMC 145.A.45 (d) - Part 145.A.65 (a) (c) 2 / AMC 145.A.65 (a) (c) (2) (4) - Part 145.A.70 (a) 1, 2 - Part 145.A.90 (a)

The duties and responsibilities of all management personnel 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 (e.g., to perform the independent audit, to issue the UK CAA Part-145 C/S - S/S individual authorisation, to have available appropriate facilities, tools and equipment, to issue a certificate of release to service, etc.) 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.

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 him/her.

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 maintenance management structure of the organisation.

1.4.1 Accountable Manager

- The Accountable Manager is responsible for ensuring that maintenance conducted by the approved organisation meets the standards required by the UK CAA.
- They are responsible for establishing and promoting the safety and quality policy; 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.
- They are responsible for ensuring that any charges are paid, as prescribed by the UK CAA i.a.w. the fees & charge regulation.
- They are responsible to return the approval to the competent authority in case of surrender or revocation
- They are responsible for ensuring that any charges are paid, as prescribed by the UK CAA i.a.w. the fees & charge regulation.

Any additional duties and responsibilities may be added provided that 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 Quality Manager / Compliance Monitoring Manager

Duties and Responsibilities. The following list is not exhaustive.

- The Quality Manager is responsible for establishing an independent quality assurance system to monitor compliance of the Part 145 organisation with the UK CAA requirements.
- They shall have direct access to the Accountable Manager on matters concerning the quality system; Defines the human factors principles to be implemented within the organisation.
- They are responsible for implementing a quality 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 his/her manager.
- They are responsible for follow up and closure of any non-conformance.
- The Quality Manager should establish regular meetings with the Accountable Manager to appraise the effectiveness of the quality 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 preparing standard practices and procedures (MOE, including the associated procedure(s) for use within the organisation and ensuring their adequacy regarding Part 145 and any amendments to the Regulation.
- They are responsible for submission of the MOE and any associated amendments, to the UK CAA for approval (which includes completion of and submission of UK Form 2 (s), UK CAA Form 4 (SRG 1705) 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 UK CAA Part-145 C/S - S/S individual authorisations.
- 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)).
- They are responsible for establishing feedback from maintenance incidents/issues and feeding these back into the continuation training programme.
- They are responsible for assessing subcontractors working under the quality system and maintaining the expertise necessary to be able to do so, to the satisfaction of the UK 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 establishing feedback from maintenance incidents/issues and feeding these back into the continuation training programme.
- 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 competent authority, as applicable according to the procedures established in the MOE, of maintenance activities conducted outside the approved locations.

It must be reminded that the quality system is required to be "independent" which normally means that the Quality Manager and the Quality Monitoring Staff are not directly involved in the Part 145 function being audited (e.g., maintenance process, maintenance certification, issue of authorisations, training, etc.).

Depending on the organisation structure, some of the quality system duties may be delegated to one or several managers who report to the Quality Manager and are therefore not subject to a [UK CAA Form 4 \(SRG1705\)](#).

Example of quality system duties that could be delegated:

1.4.2.1 Occurrence Reporting Manager

Duties

- Establishing feedback from maintenance incidents/issues and feeding these back into the continuation training programme.

1.4.2.2 Auditing Manager

Duties

- Implementing a quality 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.
- 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)

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 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 continuation training using internal and/or external sources (this responsibility may be also under the Quality Manager/ 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 Quality System/Management System about the services provided by contracted Organisations, Subcontractors.
- They are responsible for responding to quality deficiencies in the area of activity for which they are responsible, which arise from independent quality 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 UK 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 Quality 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 UK CAA Form 4 (SRG 1705).

Example of maintenance duties that could be delegated:

1.4.3.1 Engineering Manager

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 Logistics Manager

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 III²

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.(e), EN4179, etc.) are met and to act on behalf of the employer in this area.
- The person is responsible to develop the MOE 3.11 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.

² Even though the Responsible NDT level 3 does not directly report to the Accountable Manager, they shall provide a completed Form 4 (SRG1705).

1.5 Management Organisation Chart.

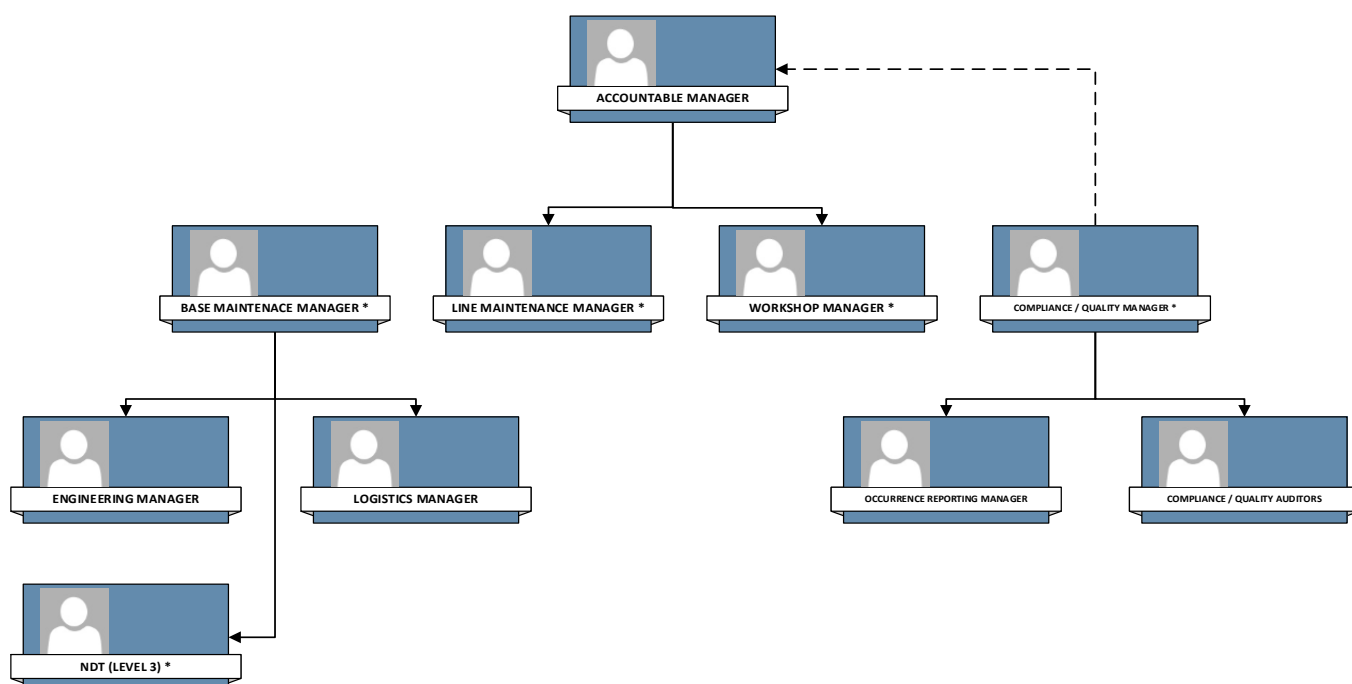
Part 145.A30 (b) (c) / AMC 145.A.30 (b) 2 - Part 145.A.70 (a) 5

The organisation chart shall show the associated chains of responsibility of the “nominated persons” identified in Chapter 1.3. When other “Managers” are identified in chapter 1.3 (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 maintenance management structure of the organisation

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

EXAMPLE



Any post annotated with * requires a UK SRG 1705 (CAA Form 4)

The UK Form 4 (SRG 1705) 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. Quality Assurance 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 quality compliance monitoring staff specified in 145.A.65(c)(1) remain independent.

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

Part 145.A.30 (g) (h) (k) (l) - Part 145.A.35 (j) (k) (l) (n) (o) / UK.145.A.36 / AMC 145.A.35 (j) - Part 145.A.70 (a) 6 / GM 145.A.70 (a) 3

This chapter shall detail the scope of the national licence by comparison to UK Part 66 C, B1, B2 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 Certifying Staff (C/S) and Support Staff (S/S).

This chapter shall detail the scope of the national licence by comparison to UK Part 66 C, B1, B2 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 UK CAA Certifying Staff Categories.

This comparison is not needed when the maintenance organisation intends to authorise staff holding a UK CAA Part 66 Licence.

- Summary (preferably in a table) of the privileges of the national licence (Associated limitation(s) shall be also recorded). [See Appendix 1 ICAO Checklist – Scope of the National Licence by Comparison to Certifying Staff & Support Staff Categories.](#)
- Comparison (preferably in a table) of these national privileges with UK Part 66 Certifying Staff and Support Staff privileges (associated limitation(s) shall be also considered). [See Appendix 1 – ICAO Checklist Individual Aircraft Maintenance Licence Holders \(technician/engineer/mechanic\)](#)

For further guidance on how to develop the comparison table, refer to [Section 4 “UK Part-145 Appendix IV C/S Staff”](#) and [“Appendix 1 – ICAO Annex 1 Checklist”](#)

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).
- Aircraft Line maintenance Certifying Staff:
 - Category B1.
 - Category B2.
 - Category A (The tasks each staff is authorised to release, have to be recorded in the individual authorisation).
- 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 145.A.30(j) see section [3.4.4 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), this chapter has to be developed.

The organisation shall have airworthiness review staff qualified and authorised in accordance with point ML.A.904.

- 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 as per AMC 145.A.35 (j):

- Name/forename; UK CAA C/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 UK 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 competent authority (refers to Chapter 1.10, 1.11).

1.7 Manpower Resources.

Part 145.A.70(a)7, 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 UK 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 Form 2 shall remain consistent.

- Splitting of the total staff number in the various staff categories. A summary table is expected
 - ❖ Management personnel
 - ❖ Technical Support Staff
 - ❖ Quality system 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 Facilities.

Part 145.A.25 (a) (b) (c) 1, 2, 3, 4, 5, 6, (d)/ AMC 145.A.25 (a) 1, 2, 3, 4 (b) (d) 1, 2, 3 - 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.

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 (PPB).

The PPB 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 approval certificate together with the main base sites address(es). Further guidance can be found by referring to [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 UK CAA for formal mail communication needs to be clearly identified.

In addition, to ensure an efficient and stable communication channel between the UK 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

➤ Hangar accommodation

- Hangar layout(s) shall 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 shall clarify 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
- Specialised workshops
- Environmental provisions
- Office accommodation for: (planning, technical records, Quality, technical reference area, Storage, etc.)

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

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

The UK CAA may consider Occasional / Temporary Line stations (See [IN-2017/011](#)). 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 may be managed in a separate list as agreed, see [Section 1.11.2 Associated Procedures, Lists and Forms](#)

1.8.5 Engines / APU and Component maintenance facilities.

1.8.6 Layout of premises

Where the accommodation is not owned by the organisation, as in the case of a hangar where space is rented or shared, proof of tenancy/access may be required, and the competent authority may wish to have this included in an Appendix or Supplement to the MOE.

In accordance with AMC 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.*

1.9 Scope of Work.

Part 145.A.20 / AMC 145.A.20 - Part 145.A.42 (c) - Part 145.A.70 (a) 9 - Part 145.A.75 (a) (b) (c) (d) (e) - Part 145.A.80 / AMC 145.A.80

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 C4-203 | Airbus A300 basic model (GE CF6) | Daily check | | X |
| 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 737-500 | Boeing 737-500 (CFM56) | 2A check | | 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 |
| A4 | | NIL | | | | |

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 I to 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 Competent Authority.
- 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 competent authority.
- 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 inspection |
| 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 |

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 UK CAA, reference to the relevant maintenance data shall be made.
- when the maintenance performed under B1 or B3 rating is limited to boroscoping inspections³, 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.

³ 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, AMC145.A.30 (f) Para 8 provides further details.

- 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 UK 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 Competent Authority, reference to the relevant maintenance data shall be made.

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 added⁴.

Example:

| Rating | ATA | P/N | Designation | Reference of the CMM | Level of maintenance | Workshop |
|---------------------|-----|-----|-------------|----------------------|----------------------|----------|
| C1 Air Cond & Press | 21 | | | | | |
| C2 Auto Flight | 22 | | | | | |
| C3 Comms and Nav | 34 | | | | | |
| C4 Doors - Hatches | 52 | | | | | |
| C5 | | | | | | |
| C6 | | | | | | |
| C7 | | | | | | |
| C8 | | | | | | |
| C9 | | | | | | |
| C10 | | | | | | |
| C11 | | | | | | |
| C12 | | | | | | |
| C13 | | | | | | |
| C13 | | | | | | |
| C13 | | | | | | |
| C14 | | | | | | |
| C15 | | | | | | |
| C16 | | | | | | |
| C17 | | | | | | |
| C18 | | | | | | |
| C19 | | | | | | |
| C20 | | | | | | |
| C21 | | | | | | |
| C22 | | | | | | |

⁴ 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 remains empty,
- 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 Level of maintenance: the scope agreed by the Competent Authority
- 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 | |

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 authority or indirectly by the organisation, through a procedure which has been previously approved by the competent authority (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 UK CAA Form 1, the rating D1 is necessary⁵. 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 ⁶ 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) | |

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.

⁵ CAA policy regarding the qualification of non-destructive inspection (NDI) Certifying Staff is set out in EN4179

⁶ Refer to Chapter 3.11 for further details

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).

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

- If applicable, this paragraph shall make reference to the fact that the organisation may perform works away from the approved locations, subject to the condition specified in MOE 2.24 (specific maintenance procedure for works away from the approved locations).
- See also IN 2017/011 - Temporary & Occasional Line Stations

It shall be noted that this privilege, is approved by the competent authority based upon the ability of the Quality System to deal adequately with the Part 145 requirements. This ability cannot be therefore demonstrated at the time of the initial approval. In any case this procedure cannot be detailed in the MOE and therefore approved by the competent before the first 2-year period has been completed.

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

- If applicable, this paragraph shall make reference to the fact that the organisation may fabricate parts in the course of maintenance, subject to the condition specified in MOE 2.9 (where the specific parts fabrication procedure is to be entered).
- The part fabrication 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).

For further guidance on how to develop this procedure, refer to Section 3.

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 competent authority 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 competent authority 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 (e.g., a B1 rated AMO using the AMM, will not take care of circuit breaker deactivation in the cockpit and should not record this task as being done by the AMO)
 - Where applicable, procedure to consult with the Ax rated AMO being responsible for some parts of the task when a Cx or Bx AMO⁷ 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)

⁷ The possibility for a Cx or Bx AMO to work on-wing using AMM data shall be carefully assessed. Those organisations are clearly limited to works respectively at component or engine level carried out on-wing. It is unreasonable and to be 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, shall not perform any deactivation task at aircraft level such as circuit breaker deactivation, etc.)

1.10 Notification Procedure to the Authority Regarding Changes to the Organisation's Activities / Approval / Location / Personnel.

Part 145.A.15 (a) / AMC 145.A.15 - Part 145.A30 (a) (b) - Part 145.A.70 (a) 10 / GM 145.A.70 (a) 9 - Part 145.A.85 / AMC 145.A.85

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 show the process to be used by the organisation to notify the competent authority any change affecting the approval.

1.10.1 Notification

The procedure shall define the changes to be notified directly to the UK CAA using a UK CAA Form 2 and the ones that can be notified directly to the Assigned Surveyor. **EXAMPLE Below**

| | Type of change | Examples of change | MOE Approval process (1.11) | | Documentation to be provided (1.10) | |
|-----------|--|--|---|---|--|---|
| | | | Major Amendment Direct Approval (UK CAA Approval) | Minor Amendment Indirect Approval (Maintenance organisation approval and assigned inspector acknowledgment) | To UK CAA: apply@caa.co.uk | To the assigned AW Surveyor |
| ADDRESSES | Change of Organisation Name | | x | | <ul style="list-style-type: none"> Online Application Certificate of Incorporation | MOE & associated documents as applicable |
| | Change of postal address of the registered organisation without any change of the maintenance site. | | | x | - | MOE & associated documents as applicable |
| | Change to the locations/facilities of the maintenance organisations with or without amendment to the scope or capability | <ul style="list-style-type: none"> PPB address change. Address change of any maintenance site already approved. Additional / Removal of Locations Modification, extension, reduction or re-organisation of an approved maintenance location. (i.e., Addition built working areas such as Hangar, office or workshop within the approved facility). | x | | Certificate of Incorporation in the case of PPB change | MOE & associated documents as applicable |
| | Expansion or transfer of offices / storage facility layout | | | x | - | MOE & associated documents as applicable; |

| Type of change | | Examples of change | MOE Approval process (1.11) | | Documentation to be provided (1.10) | |
|----------------|--|--|--|---|---|--|
| | | | Major Amendment Direct Approval (UK CAA Approval) | Minor Amendment | To UK CAA: apply@caa.co.uk | To the assigned AW Surveyor |
| | | | | Indirect Approval (maintenance organisation approval and assigned inspector acknowledgment) | | |
| PERSONNEL | Change of the Accountable Manager or UK CAA Form 4 (SARG 1705) holders identified in the MOE 1.3 | For examples and guidance on when and UK CAA Form 4 (SARG 1705) is required | x | | <ul style="list-style-type: none"> Online Application UK CAA Form 4 (SARG 1705) | <ul style="list-style-type: none"> MOE & associated documents as applicable. UK CAA Form 4 (SARG 1705) |
| | Reduction or increase of the staff number when the variation: <ul style="list-style-type: none"> Is more than 10% of the total staff number declared in the MOE 1.7 or. Is impacting the fees to be paid to UK CAA, or Is affecting the approval. Note: permanent and contracted staff shall be considered. | <ul style="list-style-type: none"> Reduction of 11 staff when the staff to maintain the UK CAA approval was 100 All Certifying Staff for a certain aircraft type approved under A1 rating leave the organisation; | x | | <ul style="list-style-type: none"> Online Application | MOE & associated documents as applicable |
| CAPABILITY | Any change to the equipment, tools, materials that could affect the approval. | | x | | <ul style="list-style-type: none"> Online Application | MOE & associated documents as applicable |
| | Reduction or increase of the scope of work or scope of approval under Ax rating. | <ul style="list-style-type: none"> Addition/removal of an Ax rating. Addition of a new aircraft to the Ax scope of approval. Extension of the scope of approval from line to base maintenance. Extension of the maintenance level check from daily to A check for an aircraft already included in the approval. Addition of an engine type associated to an A/C type/model inside a rating Ax already approved. | x | | <ul style="list-style-type: none"> Online Application | MOE & associated documents as applicable |

| Type of change. | | Examples of change | MOE Approval process (1.11) | | Documentation to be provided (1.10) | |
|------------------------|--|---|-----------------------------------|--|--|--|
| | | | Major Amendment | Minor Amendment | To UK CAA: apply@caa.co.uk | To the assigned AW Surveyor |
| | | | Direct Approval (UK CAA Approval) | Indirect Approval (maintenance organisation approval and assigned inspector acknowledgement) | | |
| CAPABILITY (continued) | Reduction or increase of the scope of work or scope of approval under Bx, rating | <ul style="list-style-type: none">• Addition/removal of an Bx rating.• Addition of a new engine type to the Bx scope of approval.• Extension of the maintenance level check from repair to overhaul for an engine already included in the approval; | x | | <ul style="list-style-type: none">• Online Application | MOE & associated documents as applicable |
| | Reduction or increase of the scope of work or scope of approval under Cx rating | <ul style="list-style-type: none">• Addition of a P/N to the capability which requires a new Cx rating; | x | | <ul style="list-style-type: none">• Online Application | MOE & associated documents as applicable |
| | Addition or cancellation to the approved capability list where the UK CAA Part-145 “C” rating is held, and any additional component capability is of similar technology & within existing ATA chapter capability (MOE 1.9 refers). | | | x | - | MOE & associated documents as applicable |
| | Addition or cancellation of NDT method under D1 rating | | x | | <ul style="list-style-type: none">• Online Application | MOE & associated documents as applicable |
| | Addition of any specialised services under any rating in the course of maintenance | <ul style="list-style-type: none">• Addition of welding capability under any rating.• Addition of painting capability under any rating.• Addition of heat treatment capability• Addition of tap test | x | | <ul style="list-style-type: none">• Online Application | MOE & associated documents as applicable |
| | | | | | | |
| PROCEDURES | Any change to the procedures that could affect the approval. | | x | | <ul style="list-style-type: none">• Online Application | MOE & associated documents as applicable |
| | Change to the MOE and its associated procedures/lists called out in the MOE 1.11 that do not affect the approval. Changes to No of C/S Staff less than 10% | <ul style="list-style-type: none">• C/S &S/S list• Capability list• List of contracted organisations• List of subcontractors• List of internal forms• MOE typing errors | | x | - | MOE & associated documents as applicable |

In addition, this procedure shall also detail:

- When to notify the change
- How to notify the change (using the UK CAA Form 2 or not).
- Who in the maintenance organisation is in charge of the notification.
- Where to send the notification (apply@caa.co.uk).

1.10.2 Management of the change with the assigned Surveyor

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

- Internal audit by the Quality system
- Composition of the package associated to any of the above listed change (e.g., UK CAA Form 2, MOE, internal audit, C of I, UK CAA Form 4, etc.)
- Who in the maintenance organisation is in charge of monitoring the change with the assigned surveyor?

For initial approval and change of approval applications, the organisation shall conduct an internal audit in accordance with its MOE 3.1 audit procedure, prior to the audit by the competent authority, 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 from the Quality Manager shall be provided to the assigned inspector.

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

1.11 Exposition Amendment Procedures (including delegated procedures).

Part 145.A.70 (a) 11, (b) (c) / GM 145.A.70 (a) 6, 7 - Part 145.A.85

The Engineering Manager is responsible for updating the MOE on a regular basis and amending, if necessary, this includes the associated procedure manuals, and the submission of proposed amendments to the assigned inspector responsible for oversight.

The Quality Manager (or Quality department) are responsible for confirming that any updates to the MOE (and supporting procedures) are in line with the latest regulations and guidance material.

1.11.1 MOE Amendment.

This procedure shall at least address the Exposition amendment procedure.

- Person responsible for amending the Exposition.
- Definition of minor & major amendments to the Exposition and related approval process.
- Definition of criteria for new issue and/or revision (depending on the MOE revision system numbering adopted as described in this user guide, paragraph 1.4.1 “Management control of the MOE”)
- The record of the Part-145 approval certificate and approval of the MOE and subsequent amendment shall be described:
 - Approval letter/email from the CAA
 - Part 145 approval certificate and/or appendix amendments following evolution of the scope of activity and/or evolution of the locations and/or a new issue of the MOE

1.11.2 Associated Procedures, Lists and Forms.

The minimum procedures/lists to be considered are all those identified in AMC 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:

| <i>Type of Document</i> | <i>Document reference</i> | <i>Indirect approval*</i> | <i>Approved by*</i> | <i>Scope of minor amendments to which the indirect approval is limited</i> |
|---|---------------------------|---------------------------|-------------------------------|--|
| Associated Procedures Manual** | APM | ✓ | Quality Manager | Minor amendments Typing errors |
| Certifying Staff and Support Staff list | AMO-DOC-1 | ✓ | Quality Manager | Less than 10% total C/S Staff and do not affect current scope |
| Workshop capability list | AMO-DOC-2 | ✓ | Quality Manager | Addition /removal of part numbers within agreed C rating scope |
| List of Subcontractors | AMO-DOC-3 | ✓ | Quality Manager | Addition/removal of a subcontractor |
| List of Line Maintenance Locations | AMO-DOC-4 | ✓ | Quality Manager | Removal of line stations only |
| NDT Manual | AMO-DOC-5 | ✓ | NDT Lev.3 and Quality manager | n/a |

Note: Table above is for example only and not exhaustive. Indirect approval scope to be determined with assigned surveyor

* When an indirect approval is granted, it is important that the chapter 1.11.3 describes the limits of the indirect approval privilege. Even if a document is subject to indirect approval, in the case of a change affecting the scope of work this document shall be approved by the UK CAA (i.e., amending the capability list to add a P/N belonging to a new C rating)

** when the organisation develops second level procedures (for example to describe the details of maintenance processes in each area/workshop), those procedures shall be collected into 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

Direct approval:

- The procedure shall at least describe the process followed to get the approval from the competent authority.

Indirect approval:

- the list of documents for which an indirect 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 minor & major amendments. In particular, the limits of changes that can be indirectly approved for each document shall be limited to minor amendments (may be directly identified in the table provided in paragraph 1.11.2, refer to the example)
 - 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 example)
 - The notification of such approval to the competent authority
 - The record of such indirect approval.

In case of minor amendment (of the MOE and/or associated procedures and lists) the Quality Manager may be delegated for indirect approval provided the appropriate procedure within this chapter 1.11 of the MOE is approved by the UK CAA. Such a delegation is to be based upon the ability of the Quality System to deal adequately with the Part 145 requirements.

This ability cannot be therefore demonstrated at the time of the initial approval. Therefore, an indirect approval procedure cannot be detailed in the MOE before the first 2-year period has been complete.

After the 2-year period the organisation shall demonstrate its ability to manage the quality system in order to be eligible for such an indirect approval privilege.

In any case the overseeing authority must continue to receive a copy and acknowledge receipt of all such minor changes when “indirectly” approved.

1.11.4 List of applicable regulations and supporting Documents

This paragraph is optional and may be used to describe how the organisation ensures the MOE and associated procedures/lists remain updated with the current regulations and CAA User guides

This paragraph is aimed to list the applicable regulations and user guides, together with their revision status, which have considered for the development of the current revision of the MOE and associated procedures/lists.

The quality system is responsible to assess any revision of the applicable regulations and user guides for possible impact on the organisation's procedures/lists and to amend them, as necessary.

The MOE and associated procedures/lists are expected to be amended before the date of entry into force specified in the applicable regulation or document.

Part 2 – Maintenance Procedures

2.1 Supplier Evaluation & 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) / AMC 145.A.75 (b)

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.

| | |
|----------------------------|--|
| PROVIDER | <p><i>Any source of components, material, maintenance services external to the maintenance organisation. Any provider may fall in one of the following categories:</i></p> <ul style="list-style-type: none"> • <i>SUPPLIER</i> • <i>CONTRACTED ORGANISATION</i> • <i>SUBCONTRACTED ORGANISATION</i> |
| SUPPLIER | <p><i>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.</i></p> <p><i>The list of suppliers is not considered an MOE associated list and can be managed under direct control of the Quality Department.</i></p> <p><i>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.</i></p> |
| CONTRACTED ORGANISATION | <p><i>A UK CAA Part-145 maintenance organisation that conducts maintenance under its own approval for another approved maintenance organisation</i></p> <p><i>The list of contracted organisations shall be included in the MOE section 5.4.</i></p> |
| SUBCONTRACTED ORGANISATION | <p><i>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)</i></p> <p><i>The list of subcontracted organisations shall be included in the MOE section 5.2</i></p> |

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 of the subcontracting organisation and related qualification)
- Types of services (e.g., specialised work, line maintenance, component maintenance, etc.)

2.1.2 Monitoring the Suppliers.

For each category of supplier identified in the previous chapter, the related monitoring and approval process shall be described.

In the case of Subcontractors, the acceptance and monitoring process shall comply with AMC 145.A.75.(b).

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 suppliers information:

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

2.1.3 Monitoring the Contracted Organisations.

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 AMC 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 UK 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 from Outside Contractors.

Part 145.A.42(a)(i)/(ii)/(iii)/(iv)/(v), 145.A.42(b)(i)/(ii)/(iii)/(iv), AMC1 145.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 table](#)

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](#))

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 Release of Aircraft Components and Materials to Aircraft 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:
 - Rotable
 - Perishables, raw material
 - Flammable fluids
 - Engines
 - Bulky assemblies
 - Record of position in the store (s)
- Segregation between serviceable, unserviceable unsalvageable
- 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 lent/ 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 Quality Department. Should be normally 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](#). UKAS are a member of [ILAC](#).

[Click here to search for equivalent agencies](#) 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 Cleanliness Standards of Maintenance Facilities.

- 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

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

Part 145.A.45.(a), 145.A.45.(b)1, 145.A.45.(b)2, 145.A.45.(b)3, 145.A.45(b)4, 145.A.45(b)5, 145.A.45(d), 145.A.45(e), 145.A.45(f), 145.A.45(g), AMC 145.A.45(b), AMC 145.A.45(d), AMC 145.A.45(e), AMC 145.A.45(f), AMC 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 such as TCH, STC holders, the CAA (e.g., instructions for continued airworthiness, AD, SB, etc).

- 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 UK CAA 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 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
- 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 Repair Procedure.

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 manufacturers' 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 UK Part 21 DOA.
 - Repairs already approved by the TC 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.: UK Part 21 DOA, TC 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.

2.9.2 Fabrication of Parts.

A Maintenance procedure shall be established to address requirements of the Part 145.A.42 (c) and its associated AMC. For further guidance on how to develop this procedure, refer to the guidance in [Section 3. Fabrication of Parts](#)

If this chapter is used/is applicable, the parts fabrication permission shall be also specified in the MOE 1.9 "scope of work," paragraph 1.9.4.5

2.10 Aircraft Maintenance Programme Compliance.

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

This chapter only applies to organisations holding Ax ratings and should be otherwise identified as “not applicable.” A procedure is to be included, with intent to explain how the maintenance organisations ensures the operator’s maintenance programme is taken into account to comply with the contract for aircraft maintenance. Additional guidance can be found in Appendix IV to AMC1 CAMO.A.315(c) contracted maintenance.

- 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 Part-4 or is separate interface documents.

2.11 Airworthiness Directives Procedure.

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

The follow up of the airworthiness directives is the responsibility of the owner/operator who is responsible to request their enforcement 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 [CAA Airworthiness Directives](#)

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 Optional Modification Procedure.

Part 145.A.45(d), 145.A.48(d), AMC 145.A.45(d), GM 145.A.48(d)

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 enforcement 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(d).

- *Company policy*
 - *Sources of modification approval (UK CAA Part 21 DOA, TC Holder⁸)*
 - *embodiment of modifications, including the case of STCs*
- *Control of the scope of work (limitations and conditions)*

For further guidance please refer to [Approvals covering design and production of civil aeronautical products](#)

2.13 Maintenance Documentation in use and its Completion.

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

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), and for the issue of any airworthiness review certificate and recommendation.

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.

⁸ Limited to country where a bilateral with the UK CAA is in place

- 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

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 task
- 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-off⁹

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”¹⁰.

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 3.4, mechanics in MOE 3.8, qualifying inspectors in MOE 3.7, etc.)..

⁹ 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.

¹⁰ “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 | Certifying staff ¹¹ |
| | Trainee + authorised person for the task performed under supervision (e.g., C/S, inspector) | |
| Critical Maintenance task (e.g., one engine installation, one flight control rigging, etc.) with error capturing method ¹² 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) or | |
| | 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 | |
| | | |

¹¹ 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.

¹² Refer to MOE 2.23 and 2.25 for the definition of error capturing methods (and priority criteria), critical and identical maintenance tasks.

2.14 Technical Records 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(c)

- Composition of maintenance records retained by the maintenance organisation
 - CRS copy as applicable to aircraft/engines/components/NDT ratings (e.g., ATL, base maintenance release, UK 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

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

- 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 UK 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 Base 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, AMC 145.A.30(j)(5), AMC 145.A.30(j)(5)(i), AMC145.A.30(j)(5)(ii), 145.A.48(a), 145.A.50(a), AMC 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), AMC2 145.A.50(d), GM 145.A.50(d), AMC 145.A.50(e), AMC145.A.50(f), 145.A.80, AMC 145.A.80, 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, AMC 145.A.30(j)(4), GM 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 - S/S individual authorisation number (handwritten or stamped) of the Certifying Staff issuing such a certificate; and
 - the signature of the Certifying Staff issuing such a certificate (may include electronic signature system when approved by the competent authority)
 - 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:

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)

- 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.

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 [CAP 1038](#) Check Flight Handbook)*

- 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.).
- 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 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 an 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), regardless 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 3.4 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 Operator.

Part 145.A.55 (b) - Part 145.A.70 (a) 12

- 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 Reporting of Defects to the Competent Authority/ Operator/ Manufacturer.

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(a), AMC 145.A.60(b), GM 145.A.60(a), GM 145.A.60(c) [UK Reg \(EU\) 376/2014 Mandatory Occurrence Reporting](#)

2.18.1 Internal Occurrence Reporting System.

The internal occurrence reporting system is intended to collect all reports generated internally by the organisation and the ones received from external sources, such as customer operators, etc.

- Process to report and collect occurrences identified internally within the organisation and just culture
- Collection of occurrence reports received from external sources (e.g., maintenance error identified and notified by a customer following maintenance conducted at the organisation, etc.)
- Description of process to record occurrences (e.g., occurrence database, etc.)
- Extraction of occurrences to be reported as per 145.A.60 (which are referred in the following paragraph 2.18.2).
- Evaluation of reports to identify adverse trends.
- 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” process, corrective actions in response to investigation findings, follow-up system, feedback to staff, etc.)
- Maintenance errors identified to be used for internal human factors training and for amendment of the procedure for critical maintenance tasks (may cross refer to MOE chapter 2.23)

2.18.2 Reportable Occurrences as per 145.A.60.

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 AMC 145.A.60(a) and Article 4 of [UK Reg \(EU\) 376/2014 Mandatory Occurrence Reporting](#)
 - Shall 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 competent authority 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 ([CAP 382](#)) and shall be done directly using the Aviation Reporting portal: [Occurrence Reporting](#)
- 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

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 quality system 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, GM 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), AMC 145.A.30(d), 145.A.25(a)1, 145.A.25(a)2, AMC 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"¹³ 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. For the purpose of meeting a specific operational necessity, a temporary increase of the proportion of contracted staff may be permitted to

¹³ "Contracted" means the person is employed by another organisation and contracted by that organisation to the maintenance organisation approved under Part-145.

the organisation by the competent authority, 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.

- Notification to the Quality Manager and Accountable Manager of deviations exceeding 25% between the workload and the man hour availability

2.23 Control of Critical Tasks

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

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 Quality 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(b) for independent inspection

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

The qualification of this personnel is expected in the MOE 3.7 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(b) 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 Maintenance 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), AMC 145.A.48(c), GM 145.A.48(c)

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.

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 system¹⁶ 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 GM 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.

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 | |
| | | | |

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 to the Type Certificate Holder.

Part 145.A.45 (c) / AMC 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 competent authority AD
- 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 Procedures

Part 145.A.47(a), AMC 145.A.47(a), 145.A.47(b), AMC 145.A.47(b), 145.A.10, AMC 145.A.10, 145.A.65(b)1; GM 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 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.
- Procedure for organising maintenance personnel and providing all necessary support during maintenance
- Consideration of human performance limitations (Circadian rhythm / 24 hours body cycle...)

- Planning of critical maintenance tasks

2.29 Airworthiness Review Procedures.

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

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 has to be developed and this capability has to be stated in the MOE chapter 1.9, otherwise this chapter 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

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. 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/ ingredients and 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 / etc.

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

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)

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 Log.

Part 145.A.70 (a) 12, 15 - 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 Loan Parts.

Part 145.A.70 (a) 12, 15 - 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 - 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 – Quality System Procedures

3.1 Quality Audit of Organisation Procedures.

Part 145.A.65(c)1, AMC 145.A.65(c)(1), GM 145.A.65(c)(1), 145.A.65(c)2, AMC 145.A.65(c)(2)

This chapter must explain how the audit of internal procedures is organised and managed i.a.w. regulatory requirements. In particular, this chapter shall describe how the requirements for system/procedure audit are complied with and the methodology of the audit. Small organisation may choose to subcontract 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” audit¹⁴
 - Single exercise audit or subdivided over 12 months
- “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 in the chapter 1.5 of this User Guide 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 Quality 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 quality system procedures. This case does not mean subcontracting the quality 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
 - Follow up of the audit program: scheduled, performed, audit report issued, open/close – link with chapter 3.3

¹⁴ The internal audit plan shall also take into account the applicable Part-M requirements listed in chapter [1.1](#) “Preliminary considerations” of this guidance

- Company Audit Policy including compliance audit:
 - Audit notification.
 - Audit reports (documents used, writer, issue, points checked, and deviations noted, deadline for rectification)
 - Reference can be made to MOE chapter 3.3 detailing the process to manage findings
 - Allocation of resources to the audit (audit team, team leader, etc.)
 - Principles when deviations are noted on a line or product
- Quality 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 shall 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 particular 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 particular 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 particular 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 particular 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 particular 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)

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

EXAMPLE

| 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 | ... |
| | AMC 145.A.25(a) | 2.22 | 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

EXAMPLE

| 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 | |
| ***** | | ***** | ***** | |

3.2 Quality Audit of Aircraft and/or Components.

Part 145.A.65 (c) (1), (2) / AMC 145.A.65 (c) (1)

This chapter must describe the procedures related to the product audits (aircraft, aircraft component, engine, specialized service) according to PART 145.A.65 (c) 1 and AMC 145.A.65 (c).

- Definition of “Product” audit (ref. point (5) to AMC 145.A.65.(c)(1).
- 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, ...)

(Small organisation's may choose to subcontract the audits to another organisation or an outside person with satisfactory technical knowledge and satisfactory audit experience (link to chapter 3.6).

3.3 Quality Audit Corrective Action Procedure.

Part 145.A.65(c)2, AMC 145.A.65(c)(2), 145.A.95(a), 145.A.95(b), 145.A.95(c)

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 competent authority
- Description of the quality feedback reporting system
 - Access to Accountable Manager
 - Review of the Quality 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](#)

Note: The quality feedback reporting system cannot be subcontracted.

3.4 Certifying Staff and Category B1 and B2 Support Staff Qualification and Training Procedures.

Part 145.A.30(e), 145.A.30(f), 145.A.30(g), AMC 145.A.30(g), 145.A.30(h)1, 145.A.30(h)2, 145.A.30(i), AMC 145.A.30(h), 145.A.30(j)1, 145.A.30(j)2, AMC 145.A.30(f), 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(m), 145.A.35(n), 145.A.35(o), AMC 145.A.35(b), AMC 145.A.35(c), AMC 145.A.35(d), AMC 145.A.35(e), AMC 145.A.35(f), AMC 145.A.35(n), AMC 145.A.35(o), Appendix IV

3.4.1 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)
- 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 held by the maintenance organisation) to be used for the demonstration of 6/24 months requirement.

For further guidance please refer to: [CAP 2377 Part 145 - 6/24-month Recency Guidance](#).

- 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 3-14 “Competence Assessment”.

For further guidance please refer to [CAP 1715 Competency Assessment Guidance Document](#).

- 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 held by the maintenance organisation) to be used for the demonstration of 6/24 months requirement.

For further guidance please refer to: [CAP 1742 Continuation Training Guidance](#)

3.4.2 Components/Engines/APU Certifying Staff.

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

The competence assessment process for issuance, extension, renewal of the Part-145 C/S individual authorisation is expected to be described in the MOE 3-14 "Competence Assessment"

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

For further guidance on how to develop this procedure, refer to: [CAP 1742](#) for continuation training guidance.

- Demonstration of 6/24 months maintenance experience including criteria to define similarity of engines /components/APUs (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: [CAP 2377 Part 145 - 6/24-month Recency Guidance](#).

3.4.3 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.

Note: the competence assessment process for issuance, extension, renewal of Part-145 C/S individual authorisation is expected to be described in the MOE 3-14 "Competence Assessment".

For further guidance please refer to [CAP 1715 Competency Assessment Guidance Document](#).

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

For further guidance please refer to the [CAP 1742 Continuation Training Guidance](#)

- Demonstration of 6/24 months maintenance experience

For further guidance please refer to: [CAP 2377 Part 145 - 6/24-month Recency Guidance](#).

3.4.4 Acceptance of maintenance tasks conducted by pilots

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](#)

3.5 Certifying Staff and B1/B2 Support Staff Records.

Part 145.A.35(j), AMC 145.A.35(j), 145.A.35(k), 145.A.35(l), 145.A.35(h) - 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 chapter 1.6)
- Constitution of the records including:
 - Identity, date of birth, Part-145 C/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-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
 - Duration / location
 - Type of documents
- Format of the Part-145 C/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-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-S/S shall be given access on request to their personal records
 - upon request, the maintenance organisation shall furnish C/S-S/S with a copy of their personal record on leaving the organisation

3.6 Quality / Compliance Audit Personnel.

Part 145.A.30 (e)

This chapter must describe how the Quality 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 continuation 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 3-14 "Competency Assessment"

- Independence of quality audit personnel when the organisation uses skilled personnel working within another department than that of Quality
- Retention of records
 - Duration / location
 - Type of documents
- Check that the number of quality 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.

3.7 Qualifying Inspectors.

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 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 Quality 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 UK Part 145 Authorisation is expected to be described in the MOE 3-14 Competence Assessment.

For further guidance please refer to [CAP 1715 Competency Assessment Guidance Document](#).

- Continuation training procedures including
 - Training Programme (MOE and associated procedures, PART 145, HF, special requirements)
 - Training setting up
 - Duration, intervals
- Retention of records
 - Duration / location
 - Type of documents

3.8 Qualifying Mechanics.

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-off¹⁵ 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 roster listing all maintenance personnel formally authorised to sign-off tasks as “Mechanics” is available in the maintenance organisation under the control of the Quality 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*

The competence assessment process for issuance, extension, renewal of the UK Part 145 Authorisation is expected to be described in the MOE 3-14 “Competence Assessment”.

- *Continuation training procedures including*

¹⁵ 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.

- *Training Programme (MOE and associated procedures, PART 145, Human Factors, specific technical requirements, ...)*
- *Training setting up*
- *Duration, intervals*
- *Retention of records*
 - *Duration / location*
 - *Type of documents*

3.9 Aircraft or Aircraft Component Maintenance Tasks Deviation Process Control.

Part 145.A.65(b)1, GM 145.A.65(b)(1)

This chapter must describe the procedures of the organisation regarding exceptional authorisations related to maintenance tasks. As per Appendix IV to AMC1 CAMO.A.315(c), deviations have to be requested by the operator to its competent authority or granted by the operator in accordance with a procedure acceptable to its competent authority. The contract between the operator and the maintenance organisation shall specify the support the Part-145 approved organisation may provide to the operator in order to substantiate the deviation request. This chapter is to be considered applicable only under these circumstances.

- *System for control and processing with the competent authority which includes:*
 - *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 competent authority (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.

3.10 Concession Control for Deviation from the Organisation's Procedures.

Part 145 AMC 145.A.65(b)

This chapter must describe the procedures followed by the maintenance organisation in order 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 Quality system to the CAA

****Note: Any concession must be approved by the CAA****

3.11 Qualification Procedure for Specialised Activities Such as Non-Destructive Testing, Welding

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 3.11 chapter.

3.11.1 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 AMC.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

3.11.2 Other specialised activities personnel (e.g., welders, painters, etc.)

- Identification of the various types of specialised activities personnel in the maintenance organisation

For further guidance please see our [Welder Approvals](#) webpage

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.

3.12 Control of Manufacturers' and Other Maintenance Working Teams.

Part 145.A.75(b), AMC 145.A.75(b), AMC 145.A.10, 145.A.55(a)

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.

3.12.1 External Team Working under their own UK Part 145 Approval.

In this case at the end of the work, the external team will issue their own CRS for the work done (aircraft CRS or UK CAA Form 1, as applicable).

- Segregation between the two maintenance organisations working in the same premises Clear work order provided to the external working team
- 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

3.12.2 External Working Team not holding a UK 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

3.13 Human Factors Training Procedure.

Part 145.A.30(e), AMC2 145.A.30(e), GM1 145.A.30(e)

This chapter shall refer to the human factors training for the organisation personnel¹⁶.

¹⁶ Initial training to Human Factors for Certifying Staff and Support Staff is defined in Chapter 3.4

3.13.1 Initial Training (except C/S and S/S)

- Aims and objectives
- Categories of staff to be trained
- Implementation period¹⁷
- Training methods and syllabus: GM 1 - 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) (AMC 145.A.30 (e) 8).
- 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

3.13.2 All Maintenance staff Continuation Training

- Aims and objectives
- Categories of staff to be trained
- Training methods and syllabus: GM 1 - 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) (AMC 145.A.30 (e) 8).
- 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](#)

¹⁷ Initial training to be provided to personnel within 6 months of joining the maintenance organisation, but temporary staff may need to be trained shortly after joining the organisation (AMC 145.A.30 (e) 6).

3.14 Competence Assessment of Personnel.

Part 145.A.30(a)3, 145.A.30(b)3, 145.A.30(e), AMC 145.A.30(a), AMC1 145.A.30(e), AMC3 145.A.30(e), AMC4 145.A.30(e), GM2 145.A.30(e), GM3 145.A.30(e), 145.A.35(a), AMC 145.A.35(a), Appendix IV to AMC 145.A.30(e)

This chapter 3.14 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 3.4 in case of Certifying/Support Staff, chapter 3.6 for quality auditor, chapter 3.7 for qualifying mechanics, chapter 3.8 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., 3.4 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 quality 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 3.5).
- 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: [AMC 20-22](#)

- 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 [CAP 1715 Competency Assessment Guidance Document](#).

3.15 Training procedures for on-the-job training as per Section 6 of Appendix III to Part-66.

This chapter is limited to the cases where the CAA is responsible for the Part-145 approval and for the UK Part-66 Licence are the same and therefore it is to be considered not applicable to Foreign Part 145 Organisations.

For further guidance please refer to: [CAP 1530 On the Job Training Guidance](#)

3.16 Procedure for the issue of a recommendation to the competent authority for the issue of a Part-66 Licence in accordance with 66.B.105

This chapter is limited to organisations where the CAA, for their Part-66 Licence, has developed and approved an organisation to issue recommendations for the issue of a Part 66 Licence.

Part 4 – Contracted 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 Contracting Operators.

Part 145.A.70(a)13

This chapter must list those operators for whom maintenance is provided, 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 Operator Procedures and Paperwork.

Part 145.A.65(b)1, GM 145.A.65(b)(1), GM 145.A.70(a)

This chapter 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.)

4.3 Operator Record Completion.

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 chapter 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 - Documents

5.1 Sample of Documents.

AMC 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
- Quality Audit Report Form
- Quality Audit Corrective Action Report Form
- Personnel Training Record
- Part-145 C/S-S/S individual authorisation
- Concession Application and Approval

5.2 List of Subcontractors as per Part 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 quality system - linked with MOE chapter 2.2

5.3 List of Line Maintenance Locations as per Part 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 and 1.9 – (airport and addresses)

5.4 List of Contracted Organisations as per 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 authority or by the organisation, through a procedure which has been previously approved by the competent authority (refers to Chapter 1.10, 1.11).

Part 6 – Operators Maintenance Procedures

This section is for those maintenance organisations approved under Part-145 who are also operators.

Part 7 – FAA Supplement

(Only applicable to organisations with their Principal Place of Business within the UK)

Part 8 – TCCA Supplement

(Only applicable to organisations with their Principal Place of Business within the UK)

Part 9 – ANAC Supplement

(Only applicable to organisations with their Principal Place of Business within the UK)

Part 10 – CAAS Supplement

(Only applicable to organisations with their Principal Place of Business within the UK)

Section 3 – Fabrication of parts

1.0 Definitions

AMC to Part 145.A.42 (b)(3) provides the possibility for a maintenance organisation to have the permission to fabricate a restricted range of parts to be used during maintenance, within its own facilities. In this section, the term ‘maintenance organisation’ shall be replaced by ‘fabricating organisation,’ for clarity.

However, it is not the intent of the Part-145 regulation to provide an alternative mean to manufacture parts outside an approved Part-21 production organisation (POA) and to clearly distinguish those activities, the following definitions are adopted:

1.0.1 Fabrication of Parts

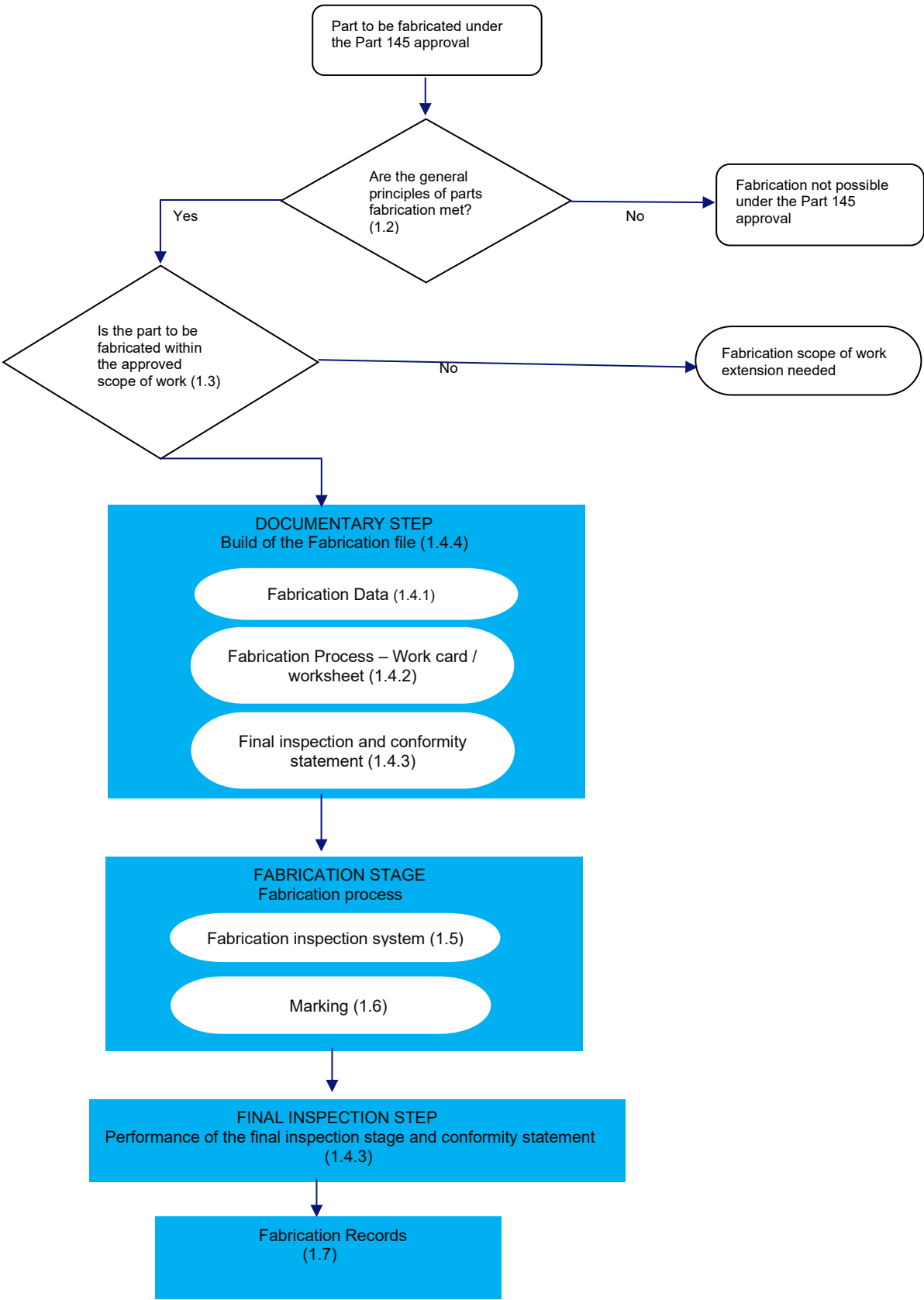
The term “fabrication” is to be used in the Part 145 environment to identify a restricted production under the limitations of AMC to Part 145.A.42 (b)(3).

1.0.2 Production of Parts

The term “manufacture” is to be used in the Part-21 Subpart G and Subpart F (POA) for mass production.

Note: This user guide is only intended to cover the fabrication of parts by a Part 145 maintenance organisation, and it cannot be used in any way to support manufacturing of parts under the Part-21 regulations.

1.1 Process Flow Chart



1.2 General principles for fabrication of parts

When considering fabrication of parts under the Part-145 approval, the following general principles apply:

The permission to fabricate parts is to be agreed by the competent authority through a detailed MOE procedure.

- Each time there is a requirement to fabricate a part or batch of parts, the fabricating organisation must state the justification for not acquiring original parts. The fabricating organisation shall provide evidence of:
 - sufficient data to manufacture the part. This should already exist in the current issue of the approved maintenance data (i.e., the CMM or AMM refers or describes the fabrication process and/or drawings to be used, etc.). Typically, this is the case described in 1.4.1-point A & B.

or

- direct authorisation (or no objection) received from the design approval holder to fabricate those specific parts, which shall also include the identification of the fabrication data (i.e., drawing, etc.) to be used. Typically, this is the case described in 1.4.1-point C.
- The fabrication is to be performed during maintenance. This implies that:
 - fabricated items may only be installed on products and/or components, undergoing maintenance in the fabricating organisation's scope of approval and at its own facilities.
 - the item is fabricated 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).
 - the fabrication of parts shall be done within the fabricating organisation's facilities.
 - the fabricating organisation may subcontract special processes but may not subcontract the overall fabrication process *(see note below).
- The fabricated parts do not qualify for certification with a CAA Form 1. A permission to fabricate does not constitute approval for manufacture, or to supply externally.
- The fabrication of the following type of parts is not permitted:
 - critical parts (as defined by the design approval holder).
 - complete primary structure.
 - prototype parts (conformity only to non-approved data).

Notes: * Subcontracting the entire fabrication of parts as per 145.A.75 (c) may be accepted on the additional condition that the fabricating organisation routinely performs several fabrications, in house, within the scope intended to be conducted. This shall ensure the fabricating organisation maintains the necessary expertise.

1.3 Scope of fabrication of parts

To allow the fabrication of parts, under the Part-145 approval, the related fabrication, inspection, assembly, and test should fall clearly within the technical and procedural capability of the fabricating organisation.

- The capability to fabricate parts shall be defined through the MOE chapter 1.9 “Scope of work,” shall specify if the permission of fabrication of parts is included or is not applicable.
- When the permission is included, the MOE chapter 2.9. “Repair procedure” shall further describe the parts fabrication procedure in compliance with this user guide.

1.3.1 Identification of fabrication groups

According to the examples given in the AMC 145.A.42(c), fabrication under the Part-145 approval can include, but is not limited to, the following “**fabrication groups**”:

- Fabrication of bushes, sleeves and shims.
- Fabrication of secondary structural elements.
- Fabrication of control cables.
- Fabrication of flexible and rigid pipes.
- Fabrication of electrical cable looms and assemblies.
- Formed or machined sheet metal panels for repairs.
- Additional cases as agreed by the competent authority*(see note below).

The “fabrication groups” shall be identified in the MOE 2.9 and is limited to those for which the fabricating organisation is able to demonstrate effective technical capability.

Note: The Competent Authority may agree for additional “fabrication groups” to be identified. Elements of a primary structural part (i.e., skin panels, a bracket for a circumferential frame, etc.) could also be considered, but this may depend on how such elements are being considered by the design approval holder in terms of criticality.

Any such additional fabrication groups shall be carefully assessed by the fabricating organisation with the involvement, when necessary, of the design approval holder to support the agreement with the competent authority to allow fabrication. The CAA shall be informed via the assigned inspector when use is made of 1.3.1(g) option.

1.4 Fabrication file

1.4.1 Fabrication data

All necessary data to fabricate the part, shall be approved by either the CAA or the type certificate holder (TCH) or the Part-21 design organisation approval holder, or supplemental type certificate holder (STCH).

For this user guide, any of the following may be considered acceptable data for fabrication of parts by the fabricating organisation:

- Instructions for continuing airworthiness issued by the TCH, STCH or any other organisation required to publish such data by Part 21 (such as ETSO holder). This case typically includes fabrication procedures directly provided in maintenance data such as AMM, SRM, CMM, Overhaul or Repair Manuals, ESM, SB, etc.
- Modification and/or repair data, involving the fabrication of parts, approved under Part-21 regulation or under the terms of a bilateral agreement. This case typically refers to data in support to repairs or modifications, which are not already included in available approved data (i.e., structural damages outside the limits of the SRM, etc.).
- Manufacturing drawings *(see note below) for items specified in aircraft, engines, component parts lists, directly provided or made available by a TCH, STCH or an approved production organisation, which is not referred to in other maintenance data (such as AMM, SB, etc.). As already specified in paragraph 1.2, in this case a direct authorisation (or no objection) received from the design approval holder to fabricate those specific parts is necessary, shall also include the identification of the fabrication data (i.e., drawing, etc.) to be used.

The maintenance organisation shall ensure that the data to fabricate parts:

- falls within one of the cases identified above **(see note below).
- Is applicable to the part to be fabricated.
- Is up to date, legally obtained and respects the proprietary data protection; the intent of the regulation is specifically to prevent the maintenance organisations from reverse engineering parts when they do not have legitimate access to the approved design data.
- Includes all necessary information of part numbering, dimensions with tolerances, materials, processes, and any special manufacturing techniques, special raw material specification and/or incoming inspection requirement.

Notes:

* A particular case may be un-dimensioned drawings such as “loft drawing.” These are full size drawings of the part to be fabricated (e.g., some older technology aircraft did not have original dimensional drawings. In these cases, where often multiple compound curves are involved, a “loft drawing” of the item was prepared and was the only means to produce parts).

Such fabrication of parts to pattern may be acceptable provided that an engineering drawing of the item is produced, which includes any necessary fabrication processes. However, considering the peculiarity of such cases, the production organisation is expected to support fabrication. The competent authority shall review these on a case-by-case basis.

** TCH communications, such as a Non-Technical Objection cannot be considered maintenance data for the purpose of parts fabrication.

1.4.2 Fabrication process – work card/worksheet system.

The fabrication process shall be included in the work card/worksheet system (i.e., worksheets, process sheets, engineering instructions, etc.). For any given fabrication process, the relevant Part-145 work card/worksheet shall contain:

- References to the fabrication maintenance data, required tooling, part numbering, dimensions with tolerances, incoming inspection requirement, raw material specification, detailed fabrication processes, any special manufacturing techniques, marking instructions, intermediate and final inspections, testing, etc.
- Identification of the processes which are subcontracted and related specific inspections by the maintenance organisation.

Work cards/worksheets will be used to split the data into clear stages of work instructions for maintenance personnel and shall be subject to a control procedure, which shall:

- Define the responsibilities within the fabricating organisation, for the development of instructions, in compliance with the acceptable data for fabrication described in the previous chapter.
- Define the traceability of such instructions to each individual fabricated part.
- Ensure that each fabricated part is unambiguously linked to a specific product or component undergoing maintenance. The receiving assembly shall be clearly identified in the worksheet/work card (i.e., fabricated for a/c MSN, for Landing Gear s/n ZZZZ, etc.).

1.4.3 Composition of the fabrication file

To support and record the fabrication process, a standard “fabrication file” is to be used for each part and will comprise the following:

- Data described in 1.4.1.
- Fabrication process -work card/worksheet system described in 1.4.2.
- Final inspection and conformity statement described in 1.4.4

The fabrication file will constitute the maintenance records specified in chapter 1.7 of this guidance document.

1.4.4 Final inspection and conformity statement.

The work card/worksheet shall include the final inspection and associated conformity statement.

The final inspection stage is required at the completion of the fabrication and shall be conducted independently from the fabrication itself. In addition, the final inspection shall be conducted prior to the installation of the fabricated part.

The final inspection shall consist of the following elements:

Check for compliance to the MOE 2.9 procedure related to the fabrication of parts.

Check completion of the fabrication file (refer to the following chapter).

Physical inspection of the part to confirm the conformance to the approved fabrication data *(see note below).

The results of the final inspection shall be recorded and formalised through a dedicated form (which cannot be a Form 1), or directly inside the work card/worksheet system, provided it is clearly distinguished from the fabrication stages; The final inspection records shall contain reference to the following statement “**part(s) fabricated as per MOE 2.9**”.

Note*: Applicable dimensions or data (critical or relevant for fit, form and function) must be measured and recorded during the final inspection stage, confirming that the part complies with the approved fabrication data. A check box document declaring conformity is not considered acceptable.

1.5 Fabrication inspection system

The fabricating organisation shall establish a Fabrication Inspection System to ensure that all fabrication processes, whether performed by the fabricating organisation or by subcontractors under its control, are conducted strictly in accordance with the specifications required by the fabricating data, ensuring as a minimum:

- The availability of personnel, with defined qualifications, including suitable experience and training, who are formally authorised by the fabricating organisation to:
 - undertake the necessary engineering functions to fabricate the part, such as but not limited to, developing the data described in chapter 1.4.2.
 - sign-off the accomplishment of the fabrication process, including the final inspection stage. Special attention should be paid to tasks requiring specialised knowledge and skill (i.e., NDT/NDI, welding, etc.).
- A system for the control and authorised amendment of all data provided for the fabrication, inspection, and test to ensure that:
 - it is complete and up to date at the point of use, readily available to fabrication and inspection personnel.
 - during execution, all works are accompanied by documentation giving either directly or by means of appropriate references, the description of the works as well as the identification of the personnel in charge of inspection and execution tasks for each of the different work phases.
 - each part is inspected in such a way which identifies the nature of all inspections required and the fabrication stages at which they occur (i.e., fabrication work cards with clear inspection stages, such as dimensional checks, NDT, etc.).
- a system to control the subcontracted fabrication steps, where appropriate.
- procedures to deal with non-conforming parts, identified during the fabrication process. Such parts shall be treated as “unsalvageable” and identified, segregated, and disposed of in such a way as to preclude any further use (i.e., mutilation by grinding, burning, etc.).
- the means to achieve adequate configuration control of fabricated parts, to enable the maintenance organisation to make the final determination and identification for conformity and eligibility status.
- incoming materials used in the finished product are properly identified as specified in the fabrication data.
- Parts in process are fully identified and segregated as being fabricated parts.

1.6 Marking

Any fabricated part shall be marked according to the instructions provided in the approved data for fabrication, including:

- a part number.
- the maintenance organisation's identity.

The main criteria to establish how and by which means the part shall be marked shall be based on the information available in the approved data (i.e., marking field, possible depth and/or means, actual text or symbols to be used, etc.).

By derogation from the above, in cases where it is impractical to mark the fabricated part without compromising the airworthiness (integrity) of the part or not enough space for the marking information is available due to the size/shape issues, the documentation accompanying the part shall include the information that could not be marked on the part. In this case the use of a label is recommended.

1.6.1 Fabrication part number identification

For standardisation and traceability purposes of parts fabricated by maintenance organisations, the following standard is recommended be used to identify the “**fabrication P/N**”:

- original Part Number (mandatory): part number provided in the approved fabrication data.
- maintenance organisation identification (mandatory): UK.145.XXXX*(see note below).
- additional maintenance organisation identification codes (optional): additional digits (number and/or letters) may be added according to criteria specified in the MOE to facilitate the part traceability (i.e., year of manufacture, workshop, location, batch number, etc.).

Therefore, the “**fabrication P/N**” is identified by the digits: A+B+C.

The following is an explanatory example:

| Part number as given in the approved data for fabrication (mandatory) | maintenance organisation Identification (mandatory) | Additional identification (optional) |
|---|---|--------------------------------------|
| Example | UK.145.XXXX | 2015JAN |
| Fabrication P/N = Example UK.145.XXXX 2015JAN | | |

Special attention should be given to the fact that any symbol or digit included in a part number identification (i.e., point, comma, dash, etc.) is to be considered integral part of the P/N and difference shall be made between lowercase and capital letters. Therefore, the P/N identification marked on the part shall exactly reflect the P/N stated in the documentation accompanying the part.

Note: * “XXXX” to be replaced by the Part-145 approval number of the maintenance organisation fabricating the parts.

1.7 Fabrication records

The fabrication records constitute objective evidence that:

- all the prescribed stages of the fabrication process have been satisfactorily completed.
- compliance with the approved data for fabrication has been achieved.
- traceability from the part to the approved data is ensured.

Therefore, the maintenance organisation shall implement a system for the completion and retention of records during all stages of fabrication appropriate to the nature of the part and its fabrication processes.

The record retention procedure shall:

- describe the organisation of the archiving system (i.e., location, paper/electronic format, responsibility).
- clarify conditions for access to the information (e.g., by P/N-batch of the fabricated parts, or by identification of the component/engine/aircraft on which the fabricated part is installed).
- Ensure that, when a subcontractor is used according to 145.A.75 (c), the records retention function is not subcontracted, and the records are duly retained by the maintenance organisation.

The fabrication records are composed by the documents described in the following paragraphs 1.7.1 and 1.7.2.

1.7.1 Fabrication file record

The “**fabrication file**” referred in chapter 1.4.3 shall be kept for each part or batch in compliance with records retention time provided in Part 145.A.55 (c). Particular attention shall be made to the fact that the time retention period is not counted from the date of fabrication but the date of release to service of the product or component on which the fabricated part is installed.

1.7.2 List of parts fabricated

The maintenance organisation shall have a system (i.e., paper register, database, etc.) allowing a listing of all the parts/batches which have been fabricated by the maintenance organisation together with the information of the product/component on which those parts have been installed. The following minimum information need to be recorded.

Template for list of fabricated parts:

| Fabrication group | Part Description | Original P/N | Fabrication P/N* (see note below) | Approved data for fabrication** (see note below) |
|-------------------|------------------|--------------|--------------------------------------|--|
| | | | | |

Note: * For the identification of the Fabrication P/N refer to 1.1.6 “Marking”

Note: ** Refer to 1.4.1 “Fabrication Data”

Section 4 - Part-145 Appendix IV (C/S Staff) and ICAO Annex I check list

0.1 Scope and applicability

The UK CAA is the Competent Authority for maintenance organisations having their principal place of business located within the UK and those who hold UK Part 145 Approvals with their principal place of business outside the UK. The UK CAA is responsible for the approval of these maintenance organisations and for establishing procedures detailing how Part-145 applications and approvals are managed.

This guidance is applicable to Part-145 applicant and Part-145 AMOs' (hereafter referred to as maintenance organisations) holding UK approvals and having their principal place of business located outside the UK and which are not certified under the provisions of a bilateral agreement signed with the UK CAA

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

0.2 Purpose

This guidance is designed to be used by maintenance organisations and the assigned Surveyor when:

The maintenance organisation is:

- Defining the Certifying Staff (C/S) and Support Staff (S/S) qualification procedure in the MOE.
- Assessing each individual Certifying Staff (C/S) and Support Staff (S/S) before granting a Part-145 individual authorisation.

Assigned Surveyor is:

- Evaluating the Certifying Staff (C/S) and Support Staff (S/S) qualification procedure.
- Ensuring by sampling that Certifying Staff (C/S) and Support Staff (S/S) Part-145 individual authorisation issued are compliant with the minimum criteria addressed in this guidance.

0.3 Communication

All documents and correspondences between the maintenance organisation and the UK CAA including allocated Surveyors shall be in the English language unless otherwise agreed by the UK CAA.

A/C Certifying Staff & Support Staff.

1.1 A/C Certifying Staff & Support Staff definition.

This guidance document is only intended to cover the case of aircraft Certifying Staff and Support Staff involved in maintenance of complex motor-powered aircraft. Organisations involved in maintenance of other than complex motor-powered aircraft, are recommended to review and endorse in their exposition the applicable elements of this guidance document and to contact their allocated Surveyor for further guidance.

1.1.1. A/C Certifying Staff (C/S)

A/C Certifying Staff (C/S) means staff authorised by a maintenance organisation to release an Aircraft¹⁸ to service, under the Part-145 approval, following line or base maintenance.

1.1.2. Support Staff (S/S).

Support Staff (S/S) means staff authorised by the Part-145 organisation to support the Category “C” Certifying Staff in managing and releasing the A/C to service after base maintenance activity while not necessarily holding certification privileges¹⁹. 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.

1.1.3. Part-66 AML categories and subcategories

A Part-66 AML can be issued for categories and subcategories as indicated in Part-66.A.3. The privileges associated to each category are indicated in Part-66.A.20.

1.2. Individual authorisation procedures.

A/C C/S and S/S authorisation procedures, (initial and renewal) together with the related qualification criteria, shall be detailed within the Maintenance Organisation Exposition Guidance (CAP 2375).

Part 145.A.30 (g) (h) requires the A/C C/S and S/S to be qualified in accordance with Part-66 regulation. However, paragraph Part 145.30 (j), enables a maintenance organisation, by derogation, to have C/S and S/S qualified according to the Appendix IV to Part-145. Therefore, two cases may apply:

- Staff qualified in accordance with Part 66. This means that the proposed A/C C/S and S/S holds a Part-66 aircraft maintenance licence (refer to check list 1, enclosed in this user guide).
- B. Staff qualified in accordance with Appendix IV to Part-145. This means that the proposed A/C C/S and S/S does not hold a Part 66 licence (refer to check list 2, enclosed in this user guide).

¹⁸ A/C means any machine that can derive support in the atmosphere from the reactions of the air other than reactions of the air against the earth's surface.

¹⁹ This means that B1/ B2 Support Staff may not necessarily hold B1/B2 line maintenance Certifying Staff privileges.

1.3. Aircraft Certifying Staff and Support Staff qualified to Part 66.

1.3.1. Licence and scope.

The proposed C/S and S/S shall hold a valid Part 66 licence issued by the UK CAA.

The organisation shall ensure that the Part-145 C/S - S/S individual authorisation does not exceed the scope addressed in the Part-66 licence.

Any limitation on the Part 66 licence shall be listed on the Part-145 C/S - S/S individual authorisation.

In the case of Part-66 licence in category B1, B2, C, the Part-145 individual authorisation may only be granted for those categories when the relevant aircraft type rating is endorsed on the licence, as specified in Part-66. A.45.

In the case of Part-66 licence in category A, no aircraft type rating endorsement is expected on the licence. In order for the maintenance organisations to issue a category A Part-145 individual authorisation on a certain aircraft type, the related task training requirements shall be met. Further guidance to establish compliance of task training requirement is provided in this User Guide chapter 1.4.5.3

1.3.2. Age.

The A/C C/S and S/S age shall be at least 21 years.

1.3.3. Additional training.

The A/C C/S and S/S shall be able to demonstrate they received, as appropriate, training on:

- the MOE and internal procedures applicable to A/C C/S and S/S (including issue of CRS).
- Initial Human Factor Training According to 145.A.30 (e) and GM 1 145.A.30 (e) syllabus²⁰.
- Fuel Tank Safety phase 2 (refer to Appendix IV to AMC to 145.A.30(e) and 145.B.10(3) for further details).
- Electrical Wiring Interconnection System (refer to AMC 20-22 for further details).
- Customer's operator procedures, such as but not limited to the customer's Aircraft Technical Log (ATL), work cards, work package, list of independent inspection items, deferred items procedures, MEL, etc.
- Any additional training(s) justified during the assessment performed by the organisation (e.g., human factor, aviation legislation, etc..).

²⁰ Having completed a Module 9 HF training does not supersede the need to comply with the initial HF training in accordance with 145.A.30 (e). However, credit may be taken from the module 9 Human Factor training for the topics which are common in both trainings, provided the Module 9 HF training has been completed within the previous two years.

1.3.4. Additional aircraft training.

The Part-145 organisation need to be aware that:

- type training courses covering certain, but not all the models/variants included in a type rating, are valid for the purpose of endorsing the full type rating in the Part-66 aircraft maintenance licence (e.g., a licence endorsed with the rating Airbus A318/A319/A320/A321 (CFM56) after attending type training covering only the Airbus 320 (CFM56)).
- some systems and technology present in the particular aircraft being maintained may not have been covered by the training/examination/experience required to obtain the licence and ratings. (e.g., work being conducted on a model/variant for which the technical design and maintenance techniques have significantly evolved from the original model used in the type training; or specific technology and options selected by each customer which may not have been covered by the type training).

As a consequence, the maintenance organisations ensure that A/C C/S and S/S have 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. This additional training may take various forms depending on the complexity of the differences to be covered (e.g., read and sign document, on the job training, classroom training, etc.). In any case the additional training process shall be detailed in the MOE.

Note: the additional aircraft training described in this chapter must not be confused with the case where the differences that need to be covered are related to different Part-66 aircraft type ratings. In such case the chapter 1.4.5.2 of this guide applies. Such cases also involve an extension of the individual authorisation following an assessment by the maintenance organisations, and in the case of Part-66 licence holders the type of endorsement on the licence remains a pre-requisite.

1.3.5. Maintenance experience.

The maintenance organisations shall ensure that C/S and S/S can demonstrate recent experience on the A/C type intended to be endorsed in the Part-145 individual authorisation.

The recent maintenance experience shall be understood as meeting the requirement of 6 month of experience in two-year period preceding the intended date of issuance of the individual authorisation.

Further guidance is provided in CAP 2377 (demonstration of 6/24 months maintenance experience)

1.3.6. Additional criteria for the renewal of individual authorisation.

The C/S and S/S shall receive continuation training related to 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.

The C/S and S/S shall demonstrate a 6 month of experience during the two-year period preceding the renewal of authorisation.

Further guidance is provided in [CAP 2377 \(demonstration of 6/24 months maintenance experience\)](#)

1.3.7. Assessment.

The aim of the assessment is to ensure compliance of the A/C C/S and S/S with the relevant Part-145 requirements, with the criteria defined in this user guide and to ensure that each A/C C/S and S/S possesses the expected competence(s) associated to their job function (proposed scope of work, authorisation category), before granting then an initial Part-145 C/S - S/S individual authorisation, to renew or to extend the scope of their already existing authorisation. This assessment shall also take into consideration attitude and behaviour.

As a consequence, the organisation shall demonstrate through a competence assessment that the C/S and S/S:

Meets the qualification criteria addressed above.

- Has the relevant knowledge, skills and ability to perform the maintenance tasks related to their job function including the relevant language knowledge.
- Is able to determine when the A/C is ready to release to service and when it shall not be released to service.

In the case of initial authorisation or extension of the scope of an already existing authorisation, the competence assessment must:

- Be specifically tailored to the aircraft type (s) intended to be covered by the Certifying Staff authorisation.
- The competence assessment shall include evaluation of “On the Job Performance” and /or “testing of knowledge” by appropriately qualified personnel.

In addition, 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. A “box-ticking” exercise would be pointless.

1.3.8. Check List 1: Topics to be reviewed before granting / extending / renewing a Part-145 C/S - S/S individual authorisation, for staff qualified to Part-66.

| | | | | | |
|--|--|--|--|--|------------------|
| Certifying Staff Name: | | Purpose of the review <input type="checkbox"/> Initial grant <input type="checkbox"/> Extension <input type="checkbox"/> Renewal | | Intended scope of authorisation under UK CAA approval: A, B1, B2, B2L, B2, L | A/C type: |
| | PART-145 regulation / Requirements | Checked & compliant | Reference of the document provided. | UK additional guidance | |
| Licence & Scope | Does the C/S - S/S holds a valid Part-66 licence? | <input type="checkbox"/> | | | |
| | 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? | <input type="checkbox"/> | | | |
| | 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? | <input type="checkbox"/> | | | |
| | In the case of cat. "A" Part-66 AML was the relevant task training completed? | <input type="checkbox"/> | | | |
| Age | Is the C/S - S/S more than 21 years old? | <input type="checkbox"/> | | | |
| 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. | <input type="checkbox"/> | | | |
| | Has the C/S - S/S received an appropriate training to the MOE and associated procedures/lists? | <input type="checkbox"/> | | | |
| | Has the C/S - S/S received the initial FTS training as per Appendix IV to AMC to Part 145.A.30 (e)? | <input type="checkbox"/> | | | |
| | Has the C/S - S/S received the EWIS training (refer to AMC 20-22 for further details)? | <input type="checkbox"/> | | | |
| | 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.? | <input type="checkbox"/> | | | |
| 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? | <input type="checkbox"/> | | | |
| 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? | <input type="checkbox"/> | | 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? | <input type="checkbox"/> | | | |
| | Has the Certifying Staff/Support Staff demonstrate a 6 month of experience during the two-year period preceding the renewal of the authorisation? | <input type="checkbox"/> | | 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 assess for competence including a language skill evaluation. | <input type="checkbox"/> | | 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? | <input type="checkbox"/> | | | |

1.3.9 Summary of topics to be assessed before granting / extending / renewing a Part-145 C/S - S/S individual authorisation, for staff qualified to Part-66.

| | | |
|--|--|----------------|
| Purpose of the Assessment <input type="checkbox"/> Initial grant <input type="checkbox"/> Extension <input type="checkbox"/> 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 | |
| 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 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: <ul style="list-style-type: none"> • 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. | | |

1.4 A/C Certifying and Support Staff not qualified to Part-66.

The organisation shall ensure that A/C C/S and S/S not qualified to Part-66 are compliant with the following Part-145 requirements.

1.4.1 Appendix IV paragraph 1. (a)

“The proposed A/C C/S and S/S shall hold a valid national licence, or a Certifying Staff authorisation issued under the national regulations.”

The basic licence (national licence) must have been evaluated in all categories by the Part-145 organisation and in particular any differences compared to ICAO Annex I must be addressed (refer to ICAO Annex I check list (see Appendix 1 of this document).

The national licence to be considered depending on the organisation location is summarised in the table “Summary of topics to be assessed for aircraft C/S & S/S not qualified to Part-66” of this user guide.

1.4.2 Appendix IV paragraph 1 (b)

“The organisation shall ensure that the authorisation does not exceed the scope addressed in the national licence.”

The proposed authorisation privileges must have been evaluated to ensure they do not exceed the scope of the national licence. The organisation shall compare the scope of the national licence and the scope of work of the Part 66 “C”, “B1”, “B2” and “A” categories and implement the necessary limitation. The result of the comparison shall be summarised in the MOE Section 1.6.

Any limitation addressed in the national licence or in the A/C C/S and S/S authorisation issued under the national regulations shall be reported in the Part-145 C/S - S/S individual authorisation.

The organisation can also endorse an A/C type in the Part-145 C/S - S/S individual authorisation that is not endorsed on the national licence provided compliance is met with the other Appendix IV requirements.

In the case of national regulations using the same C/S - S/S codes (A, B1, B2 and C) of Part-66, this condition does not release the organisation to compare the scope of the national licence and the scope of work of the Part 66 “C”, “B1”, “B2” and “A” categories and implement the necessary limitation.

1.4.3 Appendix IV paragraph 1 (c)

The A/C C/S and S/S shall be able to demonstrate they received:

- a training on human factors referred to in module 9 of Appendix I to Annex III (Part-66). The organisation shall ensure and be in a position to demonstrate that the human factor training syllabus and the training level are compliant to the syllabus and the level (B1 /B2) of training of Appendix I to Annex III (Part-66). The demonstration process is left to the discretion of the organisation.
- a training on UK aviation legislation as referred to in module 10 of Appendix I to Annex III (Part-66): The organisation shall ensure and be in a position to demonstrate that the UK aviation legislation training syllabus and the training level are compliant to the syllabus and the level (B1 /B2) of training of Appendix I to Annex III (Part-66). The demonstration process is left to the discretion of the organisation.

A proposed A/C C/S or S/S is considered compliant with Appendix IV 1. (c) without further need of investigation, if one of the following evidences is available:

- examination certificate of recognition (CoR) (CAA Form 148) issued by a UK CAA approved Part-147 AMTO for the relevant module 9 or 10, or
- when only a statement issued by a UK CAA approved Part-147 AMTO can be provided, stating that the person has attended the relevant module 9 or 10 according to the corresponding Part-66 syllabus, then the maintenance organisations shall also ensure that the course is carried out according to a detailed syllabus including level of training as per Part-66 Module 9 and/or 10 as applicable (the duration of the course need to be specified to demonstrate the adequacy to cover all subjects).

When selecting a non-Part-147 organisation to provide the human factor training and/or UK aviation legislation, the UK CAA approved Part-145 quality department shall be in a position to demonstrate as a minimum that:

- the course is conducted according to a detailed syllabus including level of training as per Part 66 Module 9 and/or 10 as applicable (the duration of the course needs to be specified to demonstrate the adequacy to cover all subjects).
- the qualification criteria for instructors are defined.
- a maximum number of training hours per day is defined (HF principal to be considered).
- a maximum of trainees per group of trainees (28 person).

1.4.4 Appendix IV paragraph 1 (d)

The A/C C/S and S/S shall be able to demonstrate:

- 3 years of maintenance experience for line maintenance Certifying Staff in category “A”.
- 5 years of maintenance experience for line maintenance Certifying Staff and base maintenance Support Staff in category “B1”, “B2”.
- 8 years for base maintenance Certifying Staff in category “C”.

In addition, the organisation shall ensure that the A/C C/S and S/S can demonstrate recent experience. The recent maintenance experience shall be understood as meeting the requirement of 6 month of experience in two-year period preceding the intended date of issuance of the individual authorisation (refer to 145.A.35.(c) for further details). This concept is the same applicable for the renewal of the authorisation as described in the following chapter related to “additional training” requirements.

Further guidance is provided in [CAP 2377 \(demonstration of 6/24 months maintenance experience\)](#)

1.4.5 Appendix IV paragraph 1 (e) (f)

1.4.5.1 A/C type training for category B1, B2 C/S, S/S and category C c/s

The A/C C/S and S/S shall be able to demonstrate that they received the type training and passed the examination at the relevant category level (depending on the category of authorisation), referred to in Appendix III to Annex III (Part-66) for each aircraft type intended to be endorsed in the Part-145 C/S - S/S individual authorisation.

In the case of category C C/S, for the first aircraft type to be endorsed in the Part-145 C/S - S/S individual authorisation, the type training and examination shall be at the category level B1, B2.

An A/C type training is made up of two parts:

- Theoretical element: composed by theoretical training and examination.
- Practical element: composed by practical training and assessment²¹.

In the case of a maintenance organisations for which the UK CAA is the competent authority, the standard requirement to be met and to be reflected in the MOE 3.4 “Certifying Staff and Support Staff qualification and training procedures” is that the theoretical and practical element of the aircraft type training is completed at a UK CAA approved Part-147 AMTO.

²¹ This point (b) is not applicable to level 1 type training (e.g., category “C” Certifying Staff who has already one A/C type in their authorisation)

1.4.5.2 Type training for differences

In order to meet the requirement of Appendix IV Paragraph 1. (e) (f), a person may also be qualified by a type training for differences (including both the theoretical and practical element) which has been received by a UK CAA approved Part-147 organisation.

The following requirements need to be met:

- The applicant for Part-145 C/S - S/S individual authorisation, needs to cover the differences between two different aircraft type ratings of the same manufacturer as determined by the UK CAA (refer to the aircraft type ratings provided in Appendix I to AMC to Part 66, as amended); For example, a person who already completed a type training on the A320(CFM 56) and needs to be qualified also on the A320 (V2500), does not need to complete a full aircraft type training on the A320(V2500), but may only complete a type training for differences between the two aircraft type ratings (e.g. engine plus aircraft interfaces);
- Differences training shall cover both theoretical and practical elements of type rating training.

A type rating shall only be endorsed on Part-145 C/S - S/S individual authorisation after differences training when the applicant also complies with one of the following conditions:

- having been already endorsed on the Part-145 C/S - S/S individual authorisation the aircraft type rating from which the differences are being identified, or.
- having completed the type training requirements for the aircraft from which the differences are being identified but has not yet been endorsed in the Part-145 C/S - S/S individual authorisation.

1.4.5.3 Tasks training for category A C/S

The persons whose scope of work does not exceed those of a category “A” Certifying Staff may receive task training in lieu of a complete type training.

Task training shall be conducted by a UK CAA approved Part-147 AMTO or a UK CAA approved Part-145 AMO appropriately approved on the specific aircraft type for which the Part-145 C/S individual authorisation is to be issued.

This training shall include practical hands on training and theoretical training for each task authorised. Satisfactory completion of the task training shall be demonstrated by an examination or by workplace assessment conducted by the UK CAA approved Part-147 AMTO or Part-145 AMO which has delivered the training.

It is the responsibility of the maintenance organisations issuing the category “A” Part-145 C/S individual authorisation to ensure that the task training covers all the tasks to be authorised. This is particularly important in those cases where the task training has been provided by an organisation (the UK CAA approved Part-147 AMTO or Part- 145 AMO) different from the one issuing the authorisation.

When the maintenance organisations intend to issue the category “A” Part-145 C/S individual authorisation based upon a complete type training delivered by a UK CAA approved Part-147 AMTO, a demonstration shall be performed and documented that the type training (theoretical and practical elements) covers the tasks to be authorised.

1.4.6 Additional aircraft training.

The UK CAA approved Part-145 organisation need to consider that:

- type training may have covered certain, but not all the models/variants included in a type rating (e.g., A type training on Boeing 747-200/300 (GE CF6) which did not cover the Freighter model).
- some systems and technology present in the particular aircraft being maintained may not have been covered by the training/examination/experience (e.g. work being carried out on a model/variant for which the technical design and maintenance techniques have significantly evolved from the original model used in the type training; or specific technology and options selected by each customer which may not have been covered by the type training).

As a consequence, the maintenance organisations shall ensure that A/C C/S and S/S have 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. This additional training may take various forms depending on the complexity of the differences to be covered (e.g., read and sign document, on the job training, classroom training, etc.).

Note: *the additional aircraft training described in this chapter must not be confused with the case where the differences that need to be covered are related to different Part-66 aircraft type ratings. In such case the chapter 1.4.5.2 of this guidance applies. Such cases also involve necessarily an extension of the Part-145 C/S - S/S individual authorisation following an assessment by the maintenance organisations, and in the case of Part-66 licence holders the type endorsement on the licence remains as a pre-requisite.*

1.4.7 Additional training.

The A/C C/S and S/S shall be able to demonstrate they received, as appropriate, training on:

- Initial Human Factor training according to 145.A.30(e) and GM 1 145.A.30 (e) syllabus²²;
- the MOE and internal procedures applicable to A/C C/S and S/S (including issuance of CRS).
- Fuel Tank Safety phase 2 (refer to Appendix IV to AMC to 145.A.30(e) and 145.B.10(3) for further details).
- Electrical Wiring Interconnection System (refer to AMC 20-22 for further details).
- 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.
- Any additional training(s) justified during the assessment performed by the organisation (e.g., human factor, aviation legislation, etc.).

²² Having completed a Module 9 HF training does not supersede the need to comply with the initial HF training in accordance with 145.A.30.(e). However, credit may be taken from the module 9 Human Factor training for the topics which are common in both trainings, provided the Module 9 HF training has been completed within the previous two years.

1.4.8 Additional criteria for the renewal of individual authorisation.

The C/S and S/S shall receive continuation training that covers up-to-date information on relevant technologies, Human Factors, FTS, EWIS, organisation procedures (including changes in aviation legislations), as applicable to the organisation scope of approval and individual authorisation held.

The C/S and S/S shall demonstrate a 6 month of experience during the two-year period preceding the renewal of the Part-145 C/S - S/S individual authorisation.

The 6 months maintenance experience in 2 years shall be understood as consisting of two elements duration and nature of the experience.

Further guidance on this subject is provided in [CAP 2377 - demonstration of 6/24 months maintenance experience.](#)

1.4.9 Assessment.

Refer to paragraph 1.3.7 "Assessment."

1.4.10 Check List 2: Topics to be reviewed before granting / extending / renewing a Part-145 C/S - S/S individual authorisation, for staff not qualified to UK Part-66.

| | | | | | | | |
|--------------------------------|--|--|-------------------------------------|---|--|------------------------------|--|
| Certifying Staff Name: | | Purpose of the review <input type="checkbox"/> Initial grant <input checked="" type="checkbox"/> Extension <input checked="" type="checkbox"/> Renewal | | Intended scope of Part-145 C/S - S/S individual authorisation: <i>Category A, "B1", "B2" or "C"</i> | | 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? | | <input checked="" type="checkbox"/> | | Part-145 Appendix IV and ICAO Annex I check list | | |
| | Are there any differences between national licence that need to be addressed? | | <input checked="" type="checkbox"/> | | | | |
| 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? | | <input checked="" type="checkbox"/> | | 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? | | <input checked="" type="checkbox"/> | | | | |
| 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)? | | <input checked="" type="checkbox"/> | | | | |
| | 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)? | | <input checked="" type="checkbox"/> | | | | |
| | 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)? | | <input checked="" type="checkbox"/> | | | | |
| 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. | | <input checked="" type="checkbox"/> | 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? | | <input checked="" type="checkbox"/> | | CAP 2377 - demonstration of 6/24 months maintenance experience. | | |

| | | | | | | | |
|--|---|--|--|---|---|------------------------------|--|
| Certifying Staff Name: | | Purpose of the review <input type="checkbox"/> Initial grant <input type="checkbox"/> Extension <input type="checkbox"/> Renewal | | Intended scope of Part-145 C/S - S/S individual authorisation: <i>Category A, "B1", "B2" or "C"</i> | | 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 <input type="checkbox"/> N <input type="checkbox"/> | | | |
| | Is the practical element of the training provided by an approved Part-147 organisation? | | | Y <input type="checkbox"/> N <input type="checkbox"/> | | | |
| | Is the task training provided by an approved Part-145 or Part-147 organisation? | | | <input type="checkbox"/> | | | |
| 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 | | | <input type="checkbox"/> | | | |
| 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. | | | <input type="checkbox"/> | | | |
| | Has the C/S and S/S received an appropriate training to the MOE and associated procedures/lists? | | | <input type="checkbox"/> | | | |
| | Has the C/S and S/S received the initial FTS training as per Appendix IV to AMC to Part 145.A.30 (e)? | | | <input type="checkbox"/> | | | |
| | Has the C/S and S/S received the EWIS training (refer to AMC 20-22 for further details). | | | <input type="checkbox"/> | | | |
| | 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? | | | <input type="checkbox"/> | | | |
| In addition to the above points, the following applies for renewal of existing Part-145 individual authorisation | | | | | | | |

| | | | | |
|---|--|--|---|--|
| Certifying Staff Name: | Purpose of the review <input type="checkbox"/> Initial grant <input type="checkbox"/> Extension <input type="checkbox"/> Renewal | Intended scope of Part-145 C/S - S/S individual authorisation: <i>Part 66 Category A", "B1", "B2" or "C"</i> | | A/C type: |
| | PART-145 regulation / Requirements | Checked & compliant | Reference of the document provided | UK 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? | <input type="checkbox"/> | | |
| | 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? | <input type="checkbox"/> | | 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 assess for competence including a language skill evaluation? | <input type="checkbox"/> | | Refer to the table 'Summary of topics to be Assessed for A/C Certifying Staff' |
| | Is any additional training justified following the internal assessment? | <input type="checkbox"/> | | |

1.4.11 Summary of topics to be assessed before granting / extending / renewing a Part-145 C/S - S/S individual authorisation, for staff not qualified to UK Part-66.

| Purpose of the Assessment: <input type="checkbox"/> Initial grant <input type="checkbox"/> Extension <input type="checkbox"/> 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: <ul style="list-style-type: none"> Understand UK Airworthiness directives. Communicate with UK operator not using the language of the state of registry. | |
| <p>Note: This list shall not be considered as exhaustive. It remains the responsibility of the maintenance organisation to adjust it.</p> <p>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.</p> | | |

1.4.12 National licence(s) to be considered for a UK CAA approved Part-145 organisation.

| UK Part 145 organisation (PPB ²³ 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 | | | | | | |

²³ 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

1.5 Management of the Part-145 C/S - S/S individual authorisation.

1.5.1 List of A/C Certifying Staff and Support Staff.

The management of the list of A/C C/S and S/S shall be detailed within the MOE chapter 1.6 and approved by the UK CAA

1.5.2 Part-145 C/S - S/S individual authorisation.

The organisation is responsible to ensure that:

The national licence or a Certifying Staff authorisation issued under the national regulations remains valid.

The A/C C/S and S/S has followed the continuation training within the two-year period.

As a consequence, the organisation must align the validity of Part-145 C/S - S/S individual authorisation accordingly.

1.6 One-off authorisations.

1.6.1 Applicability.

This chapter is intended to clarify the applicability of the one-off certification authorisation privilege as per Part 145.A.30 (j) (5).

| Regulation text | clarification on applicability and limitations |
|---|---|
| <p>145.A.30 (j) (5) states: “In the following unforeseen cases, where an aircraft is grounded at a location other than the main base where no appropriate certifying staff are available, the organisation contracted to provide maintenance support may issue a one-off certification authorisation to</p> | <p><i>The applicability is limited to the following cases:</i></p> <ul style="list-style-type: none"> • <i>The maintenance organisations have a maintenance contract with the customer operator (*), and</i> • <i>an AOG condition occurs outside the maintenance organisations main base</i> <p><i>(*) in the case of large aircraft and aircraft used for commercial air transport the maintenance organisations, “contracted to provide maintenance” and issuing the one-off authorisation, is intended to be the maintenance organisation directly contracted by the CAMO Operator as per M.A.201.(h).2 and holding a contract as outlined in Appendix XI to AMC to Part-M.</i></p> |
| <p>145.A.30 (j) (5) (i) states: “.....one of its employees holding equivalent type authorisations on aircraft of similar technology, construction and systems; or...”</p> | <p><i>In order to establish when two aircraft can be considered as similar, refer to AMC 66.A.20.(b).2</i></p> |
| <p>145.A.30 (j) (5) (ii) states: “.....to any person with not less than five years maintenance experience and holding a valid ICAO aircraft maintenance licence rated for the aircraft type requiring certification provided there is no organisation appropriately approved under this Part at that location and the contracted organisation obtains and holds on file evidence of the experience and the licence of that person.”</p> | <p><i>Only an aircraft maintenance licence issued in accordance with ICAO Annex I and (in addition) with the appropriate aircraft type endorsed in the licence is eligible for meeting the requirement.</i></p> |
| <p>All such cases as specified in this subparagraph shall be reported to the competent authority within seven days of the issuance of such certification authorisation.</p> <p>The organisation issuing the one-off authorisation shall ensure that any such maintenance that could affect flight safety is re-checked by an appropriately approved organisation.</p> | <p><i>In addition to the notification to the competent authority, it is the responsibility of the maintenance organisations to establish a coordination with the customer operator, to ensure the CAMO is informed of:</i></p> <ul style="list-style-type: none"> • <i>the issuance of a one-off authorisation.</i> • <i>the need of a maintenance task performed under a one-off authorisation to be re-checked by an appropriately approved maintenance organisation</i> |

1.6.2 MOE.

In the case this privilege is intended to be used, procedures need to be endorsed in the MOE, addressing in particular the following aspects:

In the MOE 3.4:

- process in place and involvement of the Quality Manager in issuing the one-off authorisation.
- minimum records to be associated with the issuance of the one-off authorisation in order to allow a verification that the regulatory requirements are met.

In the MOE 2.16:

- records of the maintenance conducted under the one-off authorisation.
- notification process to assigned Surveyor within 7 days.
- How the organisation will make sure that any maintenance release under a one-off authorisation that could affect flight safety will be re-checked by an appropriately approved organisation.

1.7 Privileges of C/S and S/S

The fact that a person was previously holding a Part-145 C/S - S/S individual authorisation in another maintenance organisations does not automatically authorise the receiving organisation to grant the same privilege to such staff. Privileges are not transferable.

In the case of an A/C Certifying Staff (C/S) and/or Support Staff (S/S) moving from one Part-145 organisation to another, the receiving organisation is required to assess such staff based on its approved MOE procedures for granting a Part-145 C/S - S/S individual authorisation. This also includes an assessment of all trainings, with particular attention to type training not followed in a Part-147 organisation²⁴

As highlighted in the instructions, the level of the assessment is different depending on whether the person is holding a Part-66 AML or holding a national licence issued under the national regulations.

1.8 Records.

The quality system shall review and archive, in an exhaustive manner, the relevant files resulting from the implementation of this procedure.

This means that the organisation shall keep records of all evidence associated to the A/C Part-145 C/S - S/S individual authorisation (certificates, experience logbook, diploma, continuation training evidence (which includes demonstration of type training when not followed in an approved Part-147 organisation), and assessment evidence (including assessment results which could be in a form chosen by the organisation).

²⁴ In this case the receiving organisation intending to nominate the A/C Certifying Staff (C/S) and/or Support Staff (S/S) is required to demonstrate compliance of the type training as per Part 147.A.300. The fact that the person was already approved in another maintenance organisations for the related aircraft type does not replace the need of such demonstration, which may be difficult if the detailed training records are not accessible by the receiving organisation.

Appendix 1 – ICAO Annex 1 Checklist

1. Scope and applicability

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

This check list is applicable to Part-145 applicant and Part-145 AMOs' (hereafter referred as maintenance organisations) having their principal place of business located either within the UK, or outside the UK and which are not certified under the provisions of a bilateral agreement signed with the UK CAA

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

The provisions addressed in this document are only applicable to a maintenance organisation which:

- is applying or is approved for an Ax (Aircraft Maintenance) rating and,
- is using the privilege of Part-145 Appendix IV, to use staff not qualified in accordance with Annex III (Part-66) referred to in points 145.A.30 (j) 1 and 2, meaning Certifying Staff or Support Staff holding a national licence not being a UK Part-66 Aircraft Maintenance Licence.

In case both conditions above identified are met, the maintenance organisation is required to complete this document and to present it for the review by the assigned Surveyor at the following circumstances:

- initial Part-145 approval, and/or.
- change of a Part-145 approval, limited to the case when the maintenance organisation is adding Certifying Staff using a national licence not already in use by the maintenance organisation.
- continuation of a Part-145 approval.

2. Communications

All documents and correspondences between the maintenance organisation and the UK CAA shall be in the English language unless otherwise agreed by the UK CAA.

3. Purpose

The intent of this document is to facilitate the demonstration of compliance and the collection of evidence for acceptance by the competent authority of Certifying Staff and/or Support Staff which is granted or intended to be granted a Part-145 certification authorisation, based on the compliance with the UK Part-145 Appendix IV. The check list for demonstration of compliance of the C/S & S/S with UK Part-145 requirements is already detailed in this guidance and it can be easily reviewed during the oversight. However, demonstration of compliance with Appendix IV (a) and (b) requiring respectively to ensure that the national licence is ICAO Annex I compliant and that the scope of the Part-145 C/S - S/S individual authorisation does not exceed those of the national licence remains difficult to be reviewed as evidence are not fully accessible to the assigned Surveyors or not fully within the remit.

For this reason, the topics below shall be appropriately documented by the **maintenance organisation**:

- the comparison of the scope of the national licence to Certifying Staff categories shall be established. This aspect intends to clarify the correlation of the national privileges and to ensure compliance with UK Part-145 Appendix IV (b), as described in paragraph 6 “Scope of the National Licence by Comparison to Certifying Staff & Support Staff Categories” of this document.
- compliance of the national licence with ICAO Annex I Chapter 5 “format of the ICAO licence” shall be established. This aspect intends to cover UK Part-145 Appendix IV (a) requirements but is limited to the content of the national licence itself, as described in paragraph 8 “Aircraft Maintenance Licence ICAO Annex I format compliance”, of this document.
- compliance of the national licence with ICAO Annex I Chapters 4.1 and 4.2 shall be established. This aspect intends to cover UK Part-145 Appendix IV (a) except for the content of the national licence which is addressed above. Compliance with these requirements could be considered as demonstrated by the statement received from the foreign country National Civil Aviation Authority; However, when compliance of the Certifying Staff with UK Part-145 requirements (Part-145.A.30 & Appendix IV) has been established, the following ICAO Annex I provisions can be considered as met, as described in paragraph 9 “Compliance check list of selected C/S - S/S with UK Part-145 requirements (Part 145.A.30 & Appendix IV) and relevant ICAO provisions” of this document:
 - Age of the C/S and S/S - ICAO Annex I Chapter 4 Std. § 4.2.1.1 “Age”.
 - Knowledge of Human Factor and air law and airworthiness requirements - ICAO Annex I Chapter 4 Std § 4.2.1.2 “Knowledge”.
 - Maintenance experience - ICAO Annex I Chapter 4 Std § 4.2.1.3 “Experience”.
 - Training - ICAO Annex I Chapter 4 Std § 4.2.1.4 “training”.
 - Skill/ Assessment - ICAO Annex I Chapter 4 Std § 4.2.1.5 “Skills”.

Licence Privileges and Recent Experience - ICAO Annex I Chapter 4 Std § 4.2.2 “privileges of the holder”. Due to the fact that national licensing regulations may vary due to amendments, it is important that this demonstration is provided during the UK CAA initial approval of a Part-145 organisation, but it is also provided during the continuation of the approval, to avoid that any eventual change to the national licensing regulation may jeopardize the UK CAA Part-145 approval.

4. Completion instructions.

Considering the fact that a maintenance organisation having the principal place of business in one country (country A) and additional line maintenance locations in other countries (e.g. country B and C), may employ staff holding different foreign country national licences (e.g. country A=PPB, country B=Line station 1 and country C=line station 2), the maintenance organisation shall:

- complete the table in paragraph 6 “Scope of the National Licence by Comparison to Certifying Staff & Support Staff Categories”, for each of the national licence in use in the maintenance organisation (the table shall be duplicated as necessary).
- for each national licence in use in the maintenance organisation, select at least one C/S - S/S per each possible category of the national licence and record the information related to each individual selected in the table of paragraph 7 “Individual Aircraft Maintenance Licence Holders (technician/engineer/mechanic)”.
- for each individual selected, verify compliance of the national licence format by using the check list in paragraph 8 “Aircraft Maintenance Licence ICAO Annex I format compliance”. One single check list is to be used to record the results of all the verification.
- for each individual selected, attach a copy of the check lists referred in paragraph 9 “Compliance check list of selected C/S-S/S with Part-145 requirements (Part 145.A.30 & Appendix IV) and relevant ICAO provisions”

• provide to the assigned inspector all the above-mentioned documentation, including copy of the national licence for each individual selected.

The assigned inspector will perform a review to verify that the information provided is correct. In addition, the assigned Surveyor is entitled to make additional samples by selecting any C/S - S/S included in the Part 145 C/S - S/S list.

5. Maintenance organisation data.

The maintenance organisation is required to record the information related to the organisation and also to record the name and the function of the maintenance organisation representative having recorded the information and also the date this analysis has been conducted. By signing the document, the maintenance organisation representative attests the correctness of the filled information.

The assigned inspector is required to record his/her name, the date the review has been conducted. By signing they attests that the sample C/S S/S are compliant with the Appendix IV requirements.

| | | | |
|--|-----------------|-----------|------|
| Name of the maintenance organisation | | | |
| UK CAA Part-145 Approval number | | | |
| Country of the Principal Place of Business | | | |
| | Name / Function | Signature | Date |
| Completed by: | | | |
| Assigned Surveyor reviewing: | | | |

6. Scope of the National Licence by Comparison to Certifying Staff & Support Staff Categories.

The information required in the table below is normally already part of the current MOE § 1.6 but shall be detailed in this paragraph to facilitate the assigned inspector analysis.

When the maintenance organisation is qualifying C/S & S/S based on different national licences this table shall be duplicated for each of the national licence in use.

| Country ²⁵ issuing the licence: | | | |
|---|--------------------------------|---|--|
| General reference of the current national licensing Regulation: | | | |
| Date of the current Regulation: | | | |
| National licence | | Corresponding UK Part-145 C/S- S/S privileges | |
| Title / category of licence | Privileges per type of licence | C/S & S/S Category A, B1, B2 or C | limitation ²⁶ to the privileges given in Part-66 (66.A.20) |
| | | | |
| | | | |
| | | | |
| | | | |

Example of information to be recorded

When recording the above information, the maintenance organisation representative shall remove the examples shown in this paragraph.

| | | | |
|--------------------------|---|----|--|
| Airframe and power plant | Release Airframe & power plant following line maintenance | B1 | |
| Radio | Release radio tasks performed by himself only | B2 | Limited to Radio ATA 23 and works performed by himself |

²⁵ The country issuing the licence which is under verification has to be entered.

²⁶ Any limitation on an individual licence required by the national authority shall also be considered at the level of the Part-145 C/S - S/S individual authorisation, to ensure compliance with Appendix IV to UK Part-145.

7. Individual Aircraft Maintenance Licence Holders (technician/engineer/mechanic²⁷).

For each national licence in use (refer to previous paragraph), the maintenance organisation shall select at least one C/S - S/S per each possible category of the national licence and record for each individual the information required below.

| Name of licence holder | National licence | | | | Corresponding UK Part-145 C/S- S/S privileges | | |
|------------------------|--------------------------|-----------------------------|------------------|-----------------------------|---|--|--|
| | Reference of the licence | Country issuing the licence | date of validity | Title / category of licence | Part-145 C/S - S/S individual authorisation | Part-145 C/S - S/S individual authorisation category | Part-145 C/S - S/S individual authorisation Limitation (If applicable) |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |

Example of information to be recorded

When recording the information in the above table, the maintenance organisation representative shall remove the examples shown in this paragraph.

| | | | | | | | |
|---------|--------|-----------|------------|-------|---------|----|--|
| M. XXXX | XXCCDD | Country A | 15/05/2016 | Radio | SD 4444 | B2 | Limited to Radio ATA 23 and works performed by himself |
| M. ZZZZ | CCDDXX | Country B | 15/05/2016 | Radio | SD 4444 | B2 | Limited to Radio ATA 23 and works performed by himself |

²⁷ According to ICAO Annex I, Chapter 4.2, the terms in brackets are given as acceptable additions to the title of the licence. Each Contracting State is expected to use in its own regulation terms, the one it prefers.

8. Aircraft Maintenance Licence ICAO Annex I format compliance

If difference to ICAO requirement is identified the maintenance organisation shall identify it in the column compliance with “N” and record in the same row the name of the corresponding licence holder.

| 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. | | |
| <i>Note. — Item headings may be arranged in such order as may best suit the convenience of the Contracting State issuing the licence</i> | | |
| 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. | | |

9. Compliance check list of selected C/S - S/S with Part-145 requirements (Part 145.A.30 & Appendix IV) and relevant ICAO provisions.

It has to be noted that when the compliance of the Certifying Staff with Part-145 requirements (Part 145.A.30 & Appendix IV) has been established, the ICAO provisions listed in paragraph 3 “purpose” of this document can be considered as compliant. To provide this demonstration, the maintenance organisation shall fill in the following check lists for each of the C/S and S/S selected in paragraph 7 “Individual Aircraft Maintenance Licence Holders (technician/engineer/mechanic”.

- The “Check List 2: Topics to be reviewed before to grant /extend/ renew a Part-145 C/S - S/S individual authorisation, for staff Not qualified to Part-66”.
- The table “Summary of topics to be assessed before to grant /extend/ renew a Part-145 C/S - S/S individual authorisation, for staff not qualified to Part-66”.

The completion of the two above mentioned check lists shall have been already performed by the maintenance organisation as part of the initial, renewal, extension of the Part-145 C/S - S/S individual authorisation. Therefore, there is no need to duplicate these check lists and the maintenance organisation could attach a copy of the one already completed.