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Civil Aviation Safety Authority

CIVIL AVIATION ADVISORY PUBLICATION CAAP 30-04 v3.0

Certificates of approval – Maintenance organisations

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This Civil Aviation Advisory Publication (CAAP) provides guidance, interpretation and explanation on complying with the Civil Aviation Regulations 1988 (CAR) or a Civil Aviation Order (CAO).

This CAAP provides advisory information to the aviation industry in support of a particular CAR or CAO. Ordinarily, the CAAP will provide additional 'how to' information not found in the source CAR, or elsewhere.

Civil Aviation Advisory Publications should always be read in conjunction with the relevant regulations/orders.

Audience

This Civil Aviation Advisory Publication (CAAP) applies to any person holding, or intending to apply for, a certificate of approval (COA) under Regulation 30 of CAR 1988 for maintenance of aircraft, aircraft components or aircraft materials.

Purpose

This CAAP provides guidance to applicants when applying for a COA or any changes to an existing certificate. It also describes acceptable procedures for holders of COA to maintain their certificates and includes International Civil Aviation Organization and internationally recognised terminology for practice in maintenance.

For further information

For further information on this CAAP, contact CASA's Airworthiness and Engineering Branch (telephone 131 757).

Status

This version of the CAAP is approved by the Branch Manager, Airworthiness and Engineering.

Note: Changes made in the current version are not annotated. The document should be read in full.

Version	Date	Details
v3.0	August 2020	The following changes have been made to the document: <ul style="list-style-type: none"> • Updated list of definitions appropriate to this document. • Updated list of reference material relevant to this document. • Updated CASA contact information. • Updated references to guidance material. • Clarification of NDT method for LAME privileges in Note in Appendix H.
(1.4)	August 2015	This version of the CAAP has been revised to include: <ul style="list-style-type: none"> • an update to CASR Part 145 approval information within section 1 - General • relocation of the list of references previously contained in Appendix 9 to section 3 at the front of the document • amended information on extension of calibration intervals to harmonise with AC 21-35 within Appendix 3 • update to and transfer of information previously contained in a Note under paragraph 8 into the main body of paragraph 8 of Appendix 9 – Approved Data for MITCOM • continuing airworthiness requirements for defect reporting of MITCOM parts added to Appendix 9.
(1.3)	June 2015	This version of the CAAP has been revised to update information contained in a Note in Appendix 9 for MITCOM.
(1.2)	May 2015	This CAAP has been revised to: <ul style="list-style-type: none"> • remove information contained in Appendix 5 for calibration of precision test equipment. This information is now found in AC 21-35 – Calibration of inspection and test equipment • update the Non-Destructive Testing information contained in Appendix 8 • correct typographical errors.
(1.1)	March 2015	This CAAP has been revised to update the Manufacturing in the Course of Maintenance (MITCOM) Appendix, include information about a Part 145 approval to carry out CAR 1988 aircraft maintenance, and correct typographic errors.
(1)	March 2012	This CAAP has been revised to update the Non-Destructive Testing information.
(0)	April 2002	Initial CAAP.

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1 Reference material

1.1 Acronyms

The acronyms and abbreviations used in this CAAP are listed in the table below.

Acronym	Description
AC	Advisory Circular
AD	Airworthiness Directive
AMO	Approved Maintenance Organisation
APMA	Australian Parts Manufacturer Approval
ARC	Authorised Release Certificate
ARN	Aviation Reference Number
AS	Australian Standard
CAAP	Civil Aviation Advisory Publication
CAR	<i>Civil Aviation Regulations 1988</i>
CASA	Civil Aviation Safety Authority
CASR	<i>Civil Aviation Safety Regulations 1998</i>
CAO	Civil Aviation Order
DAMP	Drug and Alcohol Management Plan
LAME	Licensed Aircraft Maintenance Engineer
MITCOM	Manufacture In The Course Of Maintenance
MOS	Manual of Standards
NANDTB	National Aerospace Non-destructive Testing Board
NDT	Non-destructive testing
STC	Supplemental Type Certificate
TC	Type Certificate
TSN	Time Since New
TSO	Time Since Overhaul

1.2 Definitions

Terms that have specific meaning within this CAAP are defined in the table below.

Term	Definition
AC	Means an Advisory Circular
The Act	Means the Civil Aviation Act 1988.
COA	Means a Certificate of Approval issued under CAR 30 for the carrying out of maintenance.
COA holder	For the purpose of this publication, means the holder of a CASA issued COA to certify that maintenance, overhauls, repairs, modifications, replacements, inspections and tests of aircraft, engines and components thereof, have been carried out in conformity with specified airworthiness standards.
Certifying employees	Means those personnel holding appropriate qualifications, and where relevant, CASA authorisations and licences, who are authorised by the COA holder in accordance with a procedure acceptable to CASA.
CAO	Means Civil Aviation Orders (CAOs).
CAR 1988	Means the Civil Aviation Regulations 1988.
CASR 1998	Means the Civil Aviation Safety Regulations 1998.
CASA website	Means the website of the Civil Aviation Safety Authority of Australia located at http://www.casa.gov.au
Employees	In relation to a COA holder, means all persons performing duties for the COA holder that require access to the legislation.
Legislation	Means the Act, CAR 1988, CASR 1998, MOS, CAOs, ADs and legislative instruments e.g. exemptions and permissions.
MOS	Means a Manual of Standards.
MITCOM	Or 'manufacture in the course of maintenance' means the making (manufacturing) of a part or component by the holder of a COA in circumstances where: <ul style="list-style-type: none"> • the part/component is to be used by that COA holder as a modification or replacement part/component on an aircraft/aircraft component/aircraft material upon which the COA holder is presently carrying out maintenance • the COA holder is not otherwise authorised to manufacture the part/component.
Maintenance	Means any task required to ensure, or that could affect, the continuing airworthiness of an aircraft or aeronautical product, including any one or combination of overhaul, repair, inspection, replacement of an aeronautical product, modification or defect rectification (see s.3 of the Act).
NDT	Means Non Destructive Testing.

1.3 References

Regulations

Regulations are available on the Federal Register of Legislation website <https://www.legislation.gov.au/>

Document	Title
Regulation 30 of CAR 1988	Certificates of approval
Regulation 30A CAR 1988	Changes to certificates of approval
CAR 42V	Maintenance: approved maintenance data
CAR 42Y	Time-lifed aircraft components — exemption from supply under cover of document requirements
CAR 42Z	Removable items of radiocommunications equipment in VFR aircraft — exemption from certification requirements
CAR 42ZC	Maintenance on Australian aircraft in Australian territory
CAR 42ZD	Maintenance on Australian aircraft outside Australian territory
CAR 42ZE	Certification of completion of maintenance on aircraft in Australian territory
Car 42ZN	Certification of maintenance outside Australian territory
CAR 42ZP	Certification not to be made
CAR 51	Reporting of defects in Australian aircraft - general
CAR 52	Defects discovered in aircraft components
CASA Schedule 6	CASA system of certification of completion of maintenance
CASR Part 21.321	Export airworthiness approvals — Applicability
CAO 100.5	General requirements in respect of maintenance of Australian aircraft
CAO 104.0	Certificates of Approval - application, grant and conditions

Advisory material

CASA's Advisory Circulars are available at <http://www.casa.gov.au/AC>

CASA's Civil Aviation Advisory Publications are available at <http://www.casa.gov.au/CAAP>

Document	Title
AC 20-03 v1.0	Identification and management of aeronautical products
AC 20-06 v1.0	Defect Reporting
CAAP 33-02 v1.0	Non-destructive testing
CASA AWB 02-045	Using FAA AC 43.13-1B Change 1 - as approved maintenance data for repair of aircraft

1.4 Forms

CASA's forms are available at <http://www.casa.gov.au/forms>

Form number	Title
019	Certificate of Approval Application Form
692	Application for the subsequent issue of an COA without changes

2 Introduction

2.1 General

- 2.1.1 This CAAP sets out the criteria that CASA would expect an applicant for a COA to meet prior to certification as a COA holder. Meeting these criteria should ensure that the applicant will have the procedures, equipment and employees necessary to ensure that aviation safety is not compromised, thus satisfying government, CASA and public expectations¹.
- 2.1.2 Section 20AB of the *Civil Aviation Act 1988* (the Act) states a person must not carry out maintenance unless the person is permitted by or under the regulations to carry out that maintenance.
- 2.1.3 Regulation 30 of the *Civil Aviation Regulations 1988* (CAR) sets out requirements in relation to an application for the grant of a Certificate of Approval (COA) and Regulation 30A of CAR 1988 sets out requirements in relation to change(s) to a COA. The regulation also provides standards for ongoing compliance which must continue to be met if a COA holder wishes to maintain the certificate.
- 2.1.4 A person may apply to CASA for a COA to engage in maintenance of aircraft, aircraft components or aircraft materials. A COA may be granted for any or all of the following activities:
- On-wing maintenance of aircraft—on-wing maintenance requires all certifications to be made in the aircraft records. This does not prevent a part being removed or replaced on the aircraft.
 - Maintenance of aircraft airframes or engines.
 - Maintenance of aircraft radio, electrical or instrument systems.
 - Maintenance of aircraft components—off-wing maintenance requires all certifications to be made in the component maintenance records.
 - Maintenance of aircraft materials—while aircraft materials are not generally maintained, in some instance material life after maintenance in the form of an inspection or check is carried out.

¹ Compliance with the requirements of Regulation 30 of CAR 1988 does not remove the responsibility of the applicant from complying with other Commonwealth, State and Territory or Local Government regulations. See paragraph 3.2 of this CAAP for an overview of CASA's Drug and Alcohol Management Plan (DAMP).

2.2 Approved maintenance organisations approval

- 2.2.1 Part 145 of the *Civil Aviation Safety Regulations 1998* (CASR) Approved Maintenance Organisations (AMOs) who have adjusted their expositions to describe provision of maintenance for aircraft for which Part 42 of the *Civil Aviation Safety Regulations 1998* (CASR) is not applicable (CAR maintenance), can be approved to do so under Part 145 of CASR. These aircraft remain covered by CAR but a Part 145 AMO can gain the permission to carry out maintenance on these aircraft when CASA approves the change to the AMO's procedures.
- 2.2.2 Once approved by CASA, such organisations will no longer need to maintain their CAR 30 certificate of approval. This is especially beneficial to an AMO that is providing aircraft and aeronautical product maintenance services to Part 42 and non-Part 42 aircraft. Further information is on the CASA website <<https://www.casa.gov.au>>

3 Steps to obtain a certificate of approval

3.1 The application phase

- 3.1.1 The application process is outlined in the COA Process Manual which is an interactive version that provides a view of the overall process as well as the relevant information at each step along the way.
- 3.1.2 To make an application for the initial issue or variation of an existing COA requires the completion of [Form 019 - Certificate of Approval Application Form](#). Form 019 and its associated completion guidance can be obtained by contacting the Permissions Issue Team by email at: regservices@casa.gov.au or the [CASA website](#). A variation would only require submission of the varied information – not a complete resubmission of information already held by CASA.
- 3.1.3 For renewal of an existing COA, you will need to complete [Form 692 - Application for the subsequent issue of an COA without changes](#), and to remove authorisations from an existing COA, you will need to complete [Form 019](#). The assessment criteria and assessment methods that CASA use can be found in the [COA Handbook](#).
- 3.1.4 Offline applications may be made by applying to the Permissions Issue Team at:
- Civil Aviation Safety Authority
Permissions Issue Team
GPO Box 2005
CANBERRA ACT 2601
- Phone: 131 757
Email: regservices@casa.gov.au

Notes:

1. For re-issue of a COA that has an expiry date, where there are no changes to the current approval, only page one of the completed application form needs to be submitted.
 2. If an application is received less than 30 days prior to the expiry date of the current certificate, CASA does not guarantee the new certificate will be issued before the current certificate expires.
- 3.1.5 To assist CASA in assessment of the application and to ensure that the certificate is issued to a legal entity, the application should include the following information and supporting documents, as applicable:
- the organisation's details:
 - o evidence of the legal entity (corporation or individual) CASA will not accept applications from business names that are not recognised as a legal entity
 - o Australian Corporation Number (ACN)
 - o evidence of legally registered trading name, if intended to be used
 - o Aviation Reference Number (ARN) if known
 - o registered business address.
 - formal identification for an individual
 - details of scope of activities to be undertaken
 - details of any other permanent locations away from the main facility

- statement detailing the number of appropriately qualified and experienced personnel employed and evidence of relevant qualifications and experience of technical employees employed²
 - a description of the organisational structure, specifically indicating any people appointed by the COA applicant to control each of the activities under the certificate
 - layout and description of facilities at each location, including documentary evidence of ownership, lease, rental or acceptable arrangement of premises/property or special equipment details³
 - a documented system of quality control in accordance with subregulation 30 (2D) of CAR 1988⁴
 - for maintenance of class A aircraft, a procedures manual in accordance with paragraph 30 (2) (c) of CAR 1988
 - list of tools and equipment available to the applicant⁵
 - list of pertinent airworthiness data and evidence of amendment arrangements⁶
 - evidence of sharing arrangements for personnel, facilities, equipment, tools and data, as applicable.
- 3.1.6 A description of the entire COA application process, broken down by phase (e.g. pre application visit, application etc), can be seen within the CASA [COA Handbook](#). The handbook also contains information about assessment criteria and assessment methods that CASA will use:
- 3.1.7 During the application CASA will confirm the application meets the required standards. The following appendices to this CAAP describe standards acceptable to CASA:
- Appendix 1 – Premises and facilities
 - Appendix 2 – Personnel requirements
 - Appendix 3 – Tools and equipment
 - Appendix 4 – Airworthiness data
 - Appendix 5 – Documented procedures and/or procedures manual
 - Appendix 6 – Contracting
 - Appendix 7 – Computerised maintenance records
 - Appendix 8 – Non-destructive testing
 - Appendix 9 – Manufacture of parts during maintenance.
- 3.1.8 To determine the applicant's suitability for the issue of a COA, re-issue or a change to an existing certificate will require one or more visits to the applicant's premises.
- 3.1.9 During these visits CASA will verify the information contained in the application and the supporting documents. This verification will include, but is not limited to, ensuring that:

² Appropriate qualifications issued under the National Vocational Education and Training system (and aligned to the Australian Qualifications Framework standards for educational qualifications in Australia) by Australian colleges, Universities and the military are mostly acceptable to CASA depending on the type of COA being applied for.

³ An applicant who has access to facilities such as mobile workshops etc. may also apply for a COA.

⁴ Australian Standards (AS) ISO 9000 to ISO 9004 provide guidance for the content of a system of quality control. The AS guidance does not meet all requirements and would need to be supplemented by amendment procedures, employee lists, and register of personnel appointments.

⁵ This may include tools owned by the applicant's technical employees.

⁶ Web addresses (URL) for airworthiness data are acceptable.

- the applicant has in place a suitable documented system of quality control covering the scope of activities
- the applicant employs sufficient personnel to plan, perform, supervise, inspect and certify the activities to be undertaken
- the qualifications held by certifying personnel engaged in maintenance adequately cover the scope of activities to be undertaken
- the applicant's premises are of a suitable size, construction and layout for the approval being sought
- the applicant has an adequate technical library, including amendment services
- adequate procedures for procurement, acceptance/inspection of aircraft components and aircraft materials and storage thereof are in place
- adequate procedures for initial and refresher/continuation training for personnel engaged in maintenance, quality, supervision, planning, stores and technical records are in place
- the applicant has an approved system of certification
- adequate procedures to control any contracted activities are in place.

3.1.10 If CASA is satisfied that the applicant's organisation meets the requirement of Regulation 30 of CAR 1988 and it has the ability to carry out the activity applied for in a satisfactory manner, CASA will issue a COA to the applicant.

Note: An initial issue of a COA may be subject to a calendar limitation.

3.2 CAR 30 - COA Drug and Alcohol Management Plan (DAMP)

- 3.2.1 Under Part 99 of CASR 1998, certain organisations and individuals within the aviation industry are required to develop and implement a drug and alcohol management plan (DAMP) to address drug and alcohol issues in relation to their potential effect on aviation safety.
- 3.2.2 COA holders under Regulation 30 of CAR 1988 are required to have a DAMP and provide DAMP reports. Information and guidance on CASR Part 99 can be found on CASA's website.

4 Continued validity of approval

4.1.1 CASA will subsequently confirm that the COA holder complies with both its documented procedures and the applicable regulatory requirements, by means of scheduled and special purpose audits and inspections. Frequency and depth of these audits will vary depending on:

- the size and complexity of the scope of activity being undertaken
- type of aircraft/equipment maintained by the organisation
- performance of the organisation as measured by the audit program
- stability of the organisation or any significant change to its personnel or activities.

4.1.2 Unless the approval has been surrendered, superseded, suspended, revoked or expired, the continued validity of approval is dependent upon the COA holder remaining in compliance with the regulatory requirements.

5 Limitations on the Approved Maintenance Organisation

- 5.1.1 The COA holder may only maintain aircraft, aircraft components or aircraft materials for which it is approved when all necessary facilities, tools, equipment, aircraft materials, approved technical data and certifying employees are available.

6 Privileges of the Certificate of Approval holder (COA holder)

6.1 Privileges

6.1.1 A COA holder can only carry out the following tasks as permitted by the approval and in accordance with the documented procedures:

- maintain any aircraft, aircraft component or aircraft material for which it is approved at locations identified on the certificate or attached to the certificate
- arrange for maintenance of any aircraft, aircraft component or aircraft material for which it is approved at another non-certificated organisation that is under the quality control of the COA holder. The COA holder must have a controlled list of their contractors
- maintain any aircraft for which it is approved at any place subject to the need for such maintenance arising only from unserviceability of the aircraft
- maintain any aircraft for which it is approved at a location identified as a line maintenance location if the COA holder's procedures and quality system both permit such an activity and list such locations
- issue Authorised Release Certificates (ARC) or a Maintenance Release on completion of maintenance in accordance with the applicable regulations, the quality system and documented procedures.

6.2 Approval to manufacture in the course of maintenance

6.2.1 CASA's current policy is to state explicitly on a COA that the holder is approved to carry out MITCOM or is not approved to carry out MITCOM (and specify the scope of that approval or non-approval).

6.2.2 For an existing COA CASA may not have explicitly provided an approval/non approval to MITCOM in writing. In such cases the COA authorising specified maintenance activities will ordinarily include an implied approval to engage in activities incidental to the maintenance such as MITCOM. Any implied approval is reliant on the holder having the approved design data, procedures, facilities and expertise to manufacture components identical to the replaced component to the required standard.

6.2.3 An approval (expressed or implied) on a COA to carry out MITCOM does not displace other requirements in the legislation, including the requirements of CAR 42W, relating to the installation of aircraft components during maintenance.

6.2.4 Components manufactured in the course of maintenance will usually need to comply with subparagraph 42W (2) (b) (i) of CAR 1988 i.e. the manufactured component must be identical (conforms to the approved design data) to the component that is to be replaced.

6.2.5 Appendix 9 of this CAAP provides guidance on the way in which MITCOM can safely be accomplished by a COA holder with an express or implied approval to carry out MITCOM.

Note: Sub-regulation 21.303 (2) (a) of CASR 1998 Replacement and modification of parts does not apply to MITCOM and is not to be used to authorise it.

7 List of Appendixes

- Appendix 1 Premises and facilities
- Appendix 2 Personnel requirements
- Appendix 3 Tools and equipment
- Appendix 4 Airworthiness data
- Appendix 5 Documented procedures and/or procedures manual
- Appendix 6 Contracting
- Appendix 7 Computerised maintenance records
- Appendix 8 Non-destructive testing
- Appendix 9 Manufacture of parts during maintenance

Appendix A

Premises and facilities

A.1 Introduction

A.1.1 This Appendix has been prepared in general terms with the aim of providing an acceptable standard for premises used for maintenance. An applicant who requires further guidance regarding suitability of premises should consult CASA. In addition, the COA holder will also need to comply with other Commonwealth, State, Territory or Local Government regulations relating to workplaces and environment.

A.2 Premises

A.2.1 The COA holder's premises need to be of suitable size, construction and layout to permit the maintenance activity to be carried out.

A.2.2 Buildings and areas shared with other organisations or persons should have provision to ensure that each organisation's activities and administration do not interfere with those of the other.

Note: This does not mean a fence or a white line down the centre of the hangar, just that each organisation should be able to control their activities without interfering with the activities of the other.

A.2.3 To prevent contamination, the premises need to be kept in a clean and tidy condition. This should include the provision of suitable floors and may require dust locks, air-conditioning or extractor fans commensurate with the level of cleanliness required for that particular activity.

A.2.4 Lighting needs to be of such a standard that the quality of work is not impaired. Any special lighting requirements specified by an aircraft or component manufacturer should be observed.

A.2.5 Ventilation, as necessary, should be provided to ensure that the ability of the employees to carry out maintenance is not impaired and that contamination of the aircraft, components and aircraft materials do not occur.

A.2.6 In the case of activities such as maintenance of special aircraft materials, composite structures or sensitive components requiring application of special environmental conditions, such conditions should be observed. These special conditions are usually identified within the approved maintenance data. Where no such special conditions exist, a national or international standard should be observed. In certain cases, CASA may also develop and promulgate these standards.

A.3 Accommodation

A.3.1 Accommodation should be provided for:

- the work to be carried out including disassembly, cleaning, inspection, re-assembly and testing
- required equipment, including hand tools, machine tools and associated benches, trays and work stands
- the administrative support of work including, the management of quality, planning, technical records and airworthiness data

- segregation of certain tools or activities where required to avoid contamination or damage of aircraft, aircraft components, aircraft materials, equipment or processes.
For example:
 - o machine tools
 - o battery charging
 - o fabric work
 - o composite structure maintenance or manufacture
 - o painting or spraying
 - o grit or bead blasting
 - o fluids
 - o cleaning.

A.4 Storage facilities

- A.4.1 The COA holder should provide satisfactory storage for aeronautical products. There should be suitable quarantine areas for the storage of aeronautical products awaiting inspection or classified as unserviceable, bonded store, and storage for commercial products.
- A.4.2 Incoming aeronautical products should be inspected by the COA holder, on receipt, for shipping damage and correct identification. For more information refer to AC 20-3 - Identification and management of aeronautical products.
- A.4.3 Aeronautical products should be segregated from commercial products, correctly identified and protected from deterioration or corrosion.
- A.4.4 The storage arrangements should provide for special facilities as necessary for proper housing of the type of aeronautical products concerned, e.g. storage of rubber items in a cool place, timber or plywood in suitable racks, refrigeration control of 'prepreg' composites, shockproof storage for delicate instruments etc.
- A.4.5 A system should be established to provide for the recording of part number, identification and incoming inspection of all aeronautical products.
- A.4.6 The storage area should be secure, clean, dry and well ventilated and should meet the recommendations of the product manufacturer.
- A.4.7 All aircraft materials of an inflammable nature, such as dope, thinners, paint, etc. should be kept in an inflammable storage facility.
- A.4.8 There should be satisfactory systems to ensure proper control of all shelf-life items.
- A.4.9 When necessary adequate facilities should be provided for handling and storage of Electrostatic Sensitive Devices and sensitive instruments.

Note: The manufacturer's recommendations for the storage of specific items should be followed.

A.5 Borrowed tools

- A.5.1 The COA holder cannot rely on the system of tool control from another organisation (including confirmation of tool calibration status). Borrowed tooling must be assessed and controlled by the COA holder who uses the borrowed tooling. The COA holder needs to document how they intend assessing, introducing and recording the use of borrowed tool and equipment.

Appendix B

Personnel requirements

B.1 Introduction

B.1.1 Qualified management and technical personnel are essential to ensure effective control within the organisation and to maintain quality control and safety.

B.2 Appointed persons

B.2.1 The holder of the COA will normally have overall responsibility for the organisation. However, he or she may appoint suitably qualified and experienced employees to control various functions of the organisation. These activity controllers will represent the technical management structure of the organisation.

B.2.2 Where the applicant is a body corporate the applicant will be required to nominate a person to be identified as the manager. This person must have the ultimate authority, including financial authority, within the organisation. The manager will ensure that all necessary resources are available to provide the services for which the organisation is certified.

B.2.3 The manager may appoint activity controllers as necessary. The titles and responsibilities of these activity controllers will vary from organisation to organisation depending on the size and scope of its activities. Irrespective of the title used or the number of persons appointed, the activities in the following areas should be allocated where they are applicable to the organisation:

- Aircraft maintenance activities
 - o responsibility for ensuring that all aircraft maintenance carried out by the COA holder is carried out in accordance with the standards specified in the documented procedures and the regulations
 - o responsibility for ensuring that any corrective action relating to aircraft maintenance resulting from any audit activity is fully actioned in a timely manner.
- Workshop or component maintenance activities
 - o responsibility for ensuring that all work on aircraft components is carried out in accordance with the standards specified in the documented procedures and the regulations
 - o responsibility for ensuring that any corrective action relating to workshop or component maintenance resulting from any audit activity is fully actioned in a timely manner.
- Procurement and storage of aircraft components and aircraft materials activities
 - o responsibility for ensuring that all activities for the procurement and storage of aircraft components and aircraft materials are carried out in accordance with the standards specified in the documented procedures
 - o responsibility for ensuring that any corrective action resulting from any audit activity is fully actioned in a timely manner.
- Quality activities
 - o responsibility for the monitoring and auditing of the organisation's compliance with regulatory requirements and its documented procedures

- o responsibility for ensuring the adequacy of the documented procedures in meeting the regulatory requirements and in reflecting the scope of the certificate
- o responsibility for ensuring that corrective actions in respect of any deficiencies revealed during compliance with the above paragraphs are carried out
- o responsibility for applying for any exemption required by the COA holder and for ensuring compliance with any conditions which apply to any such exemption
- o responsibility for ensuring that any corrective action resulting from any audit activity is fully actioned in a timely manner.
- Training activities. Responsibility for ensuring that personnel meet the initial and ongoing training and qualification criteria defined in the documented procedures and the regulations
- Personnel authorisation. Responsibility for authorising appropriately qualified employees for specific functions
- Data and records management activities:
 - o responsibility for ensuring that all necessary data is available to employees when required
 - o responsibility for ensuring that all maintenance records are kept in accordance with the documented procedures and that the records are retained for the required periods
 - o responsibility for ensuring compliance with any computer control requirements where the computer is used as an aid to aircraft maintenance or certification.
- Liaison with CASA. Responsibility for all liaisons with CASA, including responding to CASA for any discrepancies found during audits.

B.3 Maintenance personnel

B.3.1 Staffing level

- B.3.1.1 A COA holder must show that it has sufficient employees to complete all its planned maintenance activities. A method of achieving this would be by use of a labour-hour plan to illustrate the sufficiency of adequately qualified employees. Labour hours dedicated to the quality activities must also be considered when assessing employee requirements.
- B.3.1.2 In addition to the activity controllers, the applicant should have sufficient qualified employees at each location. Qualifications that meet the Australian Qualifications Framework Standards appropriate to the work being carried out are mostly acceptable to CASA. CASA may also accept some military qualifications.
- B.3.1.3 If appropriately qualified contract employees are utilised, evidence of the arrangements by which the contractor will provide the services, should be evident.

B.3.2 Training of personnel

- B.3.2.1 Paragraph 30 (2C) (d) of CAR 1988 requires the COA holder to ensure that each person employed or working under arrangement with the holder receives adequate training. Training for employees covers work performed by such employees for the

purposes of the activities covered by the certificate and the use of equipment used in connection with that work. The training is not necessarily required to lead to the issue of an Aircraft Maintenance Engineer (LAME) licence or other technical qualifications. The training of employees may be carried out by the COA holder, contracted to an external training body or a combination of these options.

Note: Unqualified employees must be directly supervised by appropriately qualified employees.

Note: Guidance for inhouse training of specially qualified personnel for composite structure maintenance can be found in Advisory Circular [\(AC\) 66-04 - Maintenance of aircraft composite structures in a maintenance organisation](#).

B.3.2.2 Continuing training should include instruction on any new aircraft types, aircraft components, equipment, materials or changes to the documented procedures.

B.3.2.3 It is recommended that procedures be established to assess personnel for fitness to perform their duties, including visual acuity, fatigue, alcohol and drugs, as appropriate.

Note: For further information and guidance in this area refer to the latest Commonwealth, States, Territory or Local Government Occupational Health and Safety legislation.

B.4 Competency assessment

B.4.1 Technically qualified and competent employees are necessary for ensuring the quality of work carried out thus ensuring that the COA holder meets its safety obligations. The COA holder's procedures for assessing the competency of employees should include the levels of basic training, qualifications held and experience necessary to accomplish the various tasks. For example, to be acceptable all employees including planners, supervisors, certifying persons and other technical and administrative employees should be assessed for competence by on-the-job evaluation or by examination relevant to their particular role within the organisation.

B.4.2 It is essential that employees have an adequate knowledge of the COA holder's procedures and processes, which affect their role in the organisation.

B.5 Register of appointed persons

B.5.1 The following details of appointed persons should be entered in a register of appointed persons. If part of this information is contained in other documentation then a reference to that documentation should be included in the register:

- full name, current position or title within the organisation
- date of appointment
- business and after hours contact details
- duties and responsibilities
- qualifications
- company approvals.

Appendix C

Tools and equipment

C.1 General

C.1.1 Maintenance must be carried out in accordance with approved data (refer Regulation 42V of CAR 1988). That data will identify special tools or equipment that need to be used for specific functions. This means, to comply with Regulation 42V of CAR 1988, those tools and equipment must be used. However, alternate tools or equipment may be used if it is approved by having the approved data amended via subregulation 2A (4) or Regulation 42ZS of CAR 1988. These alternatives must show equivalency to the manufacturers' standards.

C.1.2 An applicant for a COA for maintenance of aircraft, aircraft components or aircraft materials must show that all tools and equipment, specified in the manufacturers' technical documentation, are readily available to meet the intended scope of the certificate.

Note: If any tool or item of equipment is so rarely needed that its permanent availability is considered unnecessary, it must be shown that the tool or equipment is available when required.

C.1.3 A COA holder should provide sufficient access equipment, inspection platforms and, where applicable, aircraft servicing docks to properly maintain the aircraft, aircraft component or aircraft material.

C.1.4 A COA holder should provide all the tools, equipment, including test equipment necessary to measure, calibrate, or test an aircraft, aircraft system or aircraft component it intends to maintain. Where qualified employees use personal tools requiring calibration the COA holder should include those tools in its records.

C.1.5 Tools and equipment should be controlled so that their location is always known. There should be a procedure to ensure that at shift changes, or when aircraft leave the organisation, all tools and equipment are accounted for.

C.1.6 A procedure should be in place to ensure serviceability of all tools and equipment used by the organisation and its employees.

C.1.7 A procedure should be in place to ensure that use of alternate tools and equipment is approved. A clear system of identification for all such tools and equipment should be provided.

C.1.8 A procedure should be in place to ensure that all tools and equipment requiring calibration are calibrated. There must be a means of indicating to users when the next inspection, service or calibration is due. The identification method should also have a means to show whether the item is unserviceable for any reason, which may not be obvious to the user.

C.1.9 A register and a record of calibrations needs to be maintained for all tools and equipment requiring calibration. Service or calibration periods specified by the equipment manufacturer should be followed, see [AC 21-35](#) on the CASA website for further information on varying calibration intervals.

Note: Appendix B of AC 21-35 has information regarding determination of equivalency of tooling and test equipment.

Appendix D

Airworthiness data

D.1 General

- D.1.1 An organisation must hold or have access to copies of all relevant airworthiness data necessary to maintain the types of aircraft or aeronautical products for which it is approved. This should include applicable data issued by CASA, any other relevant National Airworthiness Authority, the Type Certificate (TC) holder, Supplemental Type Certificate (STC) holders, Regulations 21.006A, 21.009 or Subpart 21.M of CASR 1998 authorised persons, or other applicable approved organisations or authorisations (for example, Australian Parts Manufacturer Approval, Australian Technical Standard Order Authorisation).
- D.1.2 Airworthiness information may be available through various sources, including ownership, leasing, sharing arrangements, access through web address (URL), or supplied by another person (i.e. an aircraft owner). Where information is subject to any loan agreement evidence of the arrangement that gives the COA holder access to such information must be available. Where the airworthiness data is accessed from a source other than that controlled by the COA holder, the COA holder must have a process in place which ensures that the data is current and applicable. The COA holder may not rely on another organisations system of maintaining data and must carry out their own processes for data validation, introduction and recording such data use.
- D.1.3 An organisation should provide, to its maintenance employees, all relevant airworthiness data required to carry out their activities. The data should be readily available to employees. When computer or electronic viewing systems are used, the number of terminals should be adequate for the number of employees required using the systems.
- D.1.4 Examples of airworthiness data that should be held or accessed through URL are:
- Civil Aviation Act 1988
 - Civil Aviation Regulations 1988
 - Civil Aviation Safety Regulations 1998
 - Civil Aviation Orders
 - Civil Aviation Advisory Publications (as appropriate)
 - Airworthiness Bulletins
 - Airworthiness Directives
 - TC Data Sheets
 - Manufacturers' Maintenance Manuals
 - Repair Manuals
 - Overhaul Manuals
 - Illustrated Parts Catalogues
 - Supplementary Structural Inspection Manuals
 - Service Bulletins
 - Aircraft Maintenance Programs
 - Non-Destructive Testing and other specialised process manuals.

D.2 Amendments to airworthiness data

- D.2.1 There should be a procedure to control the amendment and distribution of the controlled data and where appropriate uncontrolled data. Where an amendment service is available it should be subscribed to, and the associated procedure should ensure that all amendments are received, assessed and incorporated as necessary.

Appendix E

Documented procedures and/or procedures manual

E.1 General

- E.1.1 This appendix is intended to cover a range of size and complexity of organisations and number and size of aircraft or aircraft components that may be maintained.
- E.1.2 The applicant for a COA is required by Regulation 30 of CAR 1988 to produce a documented system of quality control and/or a procedures manual (Note: the system of quality control and procedures document may be a single document). For the maintenance of a class A aircraft a procedures manual is required. These should be acceptable to CASA. They should contain the quality control procedures the organisation has in place to ensure all work carried out is in compliance with the regulatory requirements. If contained within a manual or manuals, the organisation may include any additional information in relation to the organisation's maintenance activities.
- E.1.3 The COA holder is to ensure that all persons involved in the maintenance of aircraft, or those having need to be aware of the contents, have access to those parts of the manual or documented procedures, including the latest amendments, appropriate to that person's responsibilities or needs. A copy of the manual, appropriate parts of the manual or documented procedures is to be provided for each location and, as a condition placed on the certificate, CASA unless alternative arrangements have been agreed with CASA.
- E.1.4 The documented procedures or procedures manual should provide clear guidance to personnel on:
- a general description of the scope of work authorised under the COA
 - how the activities included in the CASA approval are managed
 - how the work is carried out
 - their personal responsibilities
 - how compliance with the appropriate continuing airworthiness requirements is achieved.
- E.1.5 Each page of the documented procedures or manual should be identified with:
- the organisation name
 - the original or revision date, as appropriate
 - the section and page number.

E.2 Procedures manual

- E.2.1 Where a procedures manual is developed the manual should also identify:
- the manual title
 - the name of the organisation
 - the COA number
 - the physical address of the organisation
 - the manual control number
 - the holder of the copy of the manual.

E.2.2 Control of procedures manual

- E.2.2.1 The manual control section should contain procedures to control the original issue of the manual and subsequent revisions. This part of the manual includes:
- A Table of Contents
 - o This part should show each subject and its specific location within the manual.
 - A List of Effective Pages:
 - o This list is used to control the revision of each page in the manual. Each page of the manual should be listed with the original or current revision date, as appropriate. The list of effective pages should be revised at each revision.
 - A Record of Revision page:
 - o This page should be used to record each revision when it is placed in the manual. It should have provision for recording the revision number, date inserted and details of the person making the revision.

E.2.3 Introduction section

- E.2.3.1 The Introduction Section should explain:
- the purpose of the manual, including scope of work
 - a general statement on the contents of the manual
 - who has responsibility for the manual and how that is managed
 - the COA holder's philosophy regarding the operation of the organisation (corporate commitment by the Manager)
 - that all personnel are required to follow procedures contained in the manual
 - administrative procedures, including:
 - o notification to CASA of any change that will affect the approval, including:
 - the holder's identity
 - the holder's place of business or location where activities relating to the certificate are carried out
 - the holder's registered office address
 - the postal address to which communications may be sent
 - application for variations to the certificate.

E.3 Revising documented procedures or procedures manual

- E.3.1 The COA holder's system for revising procedures should include the following:
- submitting all the revisions requiring prior acceptance to CASA for review and before distribution
 - distributing revisions, including the identification of the person responsible for distributing the revisions and steps to ensure each manual holder receives each revision
 - the identification of each particular revision in the text of each page. This may be by a vertical bar or other method
 - maintaining a distribution list - controlled by name and/or position.

E.4 Register of locations

- E.4.1 This register should contain the details of all permanent locations where approved activities are normally performed and a general description of the facilities at each location. The details should include the address and telephone number of the locations and the specific activities performed at those locations.
- E.4.2 The register should include or identify the procedures to be followed to control any maintenance activities carried out away from a permanent location.

E.5 Management and personnel

- E.5.1 This section should describe the personnel structure of the organisation and the related duties and responsibilities of the management, key supervisory and certifying personnel and should include:

E.5.2 Organisational chart

- E.5.2.1 An organisation chart showing:
- the management structure of the organisation
 - the title of all supervisory and certifying personnel, if appropriate, explaining the chain of responsibility
 - the separation between maintenance and quality department.

E.5.3 Register of appointed persons

- E.5.3.1 The Manager may appoint certain qualified employees to perform or control various functions within the organisation e.g. Stores Manager, Chief Engineer etc.
- E.5.3.2 This register should detail all persons appointed by the Manager to be responsible for all or any of the functions specified in Appendix 2 of this CAAP. The following details of the appointed persons should be recorded in this register:
- name or position of the appointee
 - date of the appointment
 - contact information of the appointee
 - location of the appointment
 - responsibilities of the appointee.
- E.5.3.3 Where any of the information listed above is held in other records there need only be a reference to those records.

E.5.4 COA holder appointed persons

- E.5.4.1 the procedures for designating and controlling the COA holder's appointed persons should be established and should include:
- the method of recording scope and limitations of the authorisations issued
 - the method of notifying each authorised person of the scope of their authorisation

- the method of determining the minimum experience, training and competency requirements for authorised persons
- the method of recording the experience and training of authorised persons; and
- the method of identifying each authorised person by:
 - o the name
 - o COA holder authorisation number
 - o the type of licence(s) held, if applicable
 - o licence(s) number
 - o signature, initials or stamp
 - o the privileges and limitations of each authorisation
- a procedure for ensuring the duties and responsibilities of supervisory and certifying personnel are taken over by others in their absence.

E.6 Quality system

E.6.1 The quality system should detail the COA holder's quality control activities and contain:

- a clear definition of the level of quality the organisation intends to achieve
- a procedure that sets out the level and frequency of the internal reviews
- a procedure to ensure that audits are conducted by personnel independent from the particular maintenance activity
- a procedure to ensure that personnel conducting audits are appropriately qualified and competent
- a procedure to record the findings and communicate them to the management
- a list of activity controllers for quality activities
- procedures for monitoring the other quality indicators such as facility malfunction reports, incidents, occurrences, maintenance errors, complaints and defects
- a procedures for management analysis and overview
- a procedure for rectifying any deficiencies which may be found
- procedures for documenting the complete review process from the inspection to the satisfactory management review to be available to CASA during a safety audit.

E.6.2 The procedures should ensure that checks are carried out, as applicable, on the COA holder's activities, including, but not limited to:

- aircraft or aircraft components whilst undergoing maintenance
- the adequacy of facilities and employees
- the adequacy of defect rectifications and maintenance release (technical logs) for deferred defects and repetitive defect control
- the stores receipt procedures, shelf-life and storage conditions
- the accuracy and control of worksheets or cards to ensure that these adequately reflect the requirements of the approved maintenance program
- the accuracy and completeness of technical records, and on confirmation that certifications have been made by person holding the required authority
- procedures for defect reporting, the technical assessment of incidents and accidents and co-ordination with the operator
- amendment standards and amendment procedures of technical publications

- test equipment, for periodic calibration check records and storage
- hangar and ramp equipment, for cleanliness, state of repair, correct functioning and maintenance of mobile units, such as ground power units
- the COA holder's procedures, for effectiveness and compliance with the regulatory requirements, including Airworthiness Directive (AD) compliance and major defect reporting
- storage conditions, records and inspection control at the premises of stock holders and contractors (where applicable)
- procedures for the control of contractors
- the procedures for liaison with CASA on matters governing airworthiness.

E.7 Maintenance procedures

- E.7.1 These procedures should describe the system for controlling and documenting work in progress and must contain all other information necessary to ensure that the completed work meets all airworthiness requirements.
- E.7.2 The information is normally contained within work packages identifying the maintenance tasks required to be carried out on the aircraft or aircraft components. These work packages may be supplied by an Air Operators Certificate holder or internally developed.

E.7.3 Control of work packages

- E.7.3.1 The COA holder should have systems to ensure the control of work packages, including the raising, completing and retaining functions of those packages.
- E.7.3.2 The work package and associated procedures should provide means of documenting all work associated with the maintenance activities (technical record control).
- E.7.3.3 The completed work package should contain details of all work carried out and all additional documentation and should include copies of all tags and forms issued to the customer.
- E.7.3.4 The COA holder's maintenance record system should contain procedures and documentation for the following:
- the responsibility and instructions for controlling the work package and any associated internal documents
 - the sequential numbering or other positive control of documentation
 - ensuring any work cards raised by the COA holder include the following information:
 - o identification of persons responsible for ensuring complete and correct inspections
 - o identification of persons responsible for ensuring that all work is performed in accordance with the current manufacturer's technical specifications or other approved data
 - o what is to be inspected
 - o identification of where on the aircraft or components the inspection is to be carried out

- o how the inspection is to be carried out including instructions for:
 - the documentation of each inspection
 - special testing requirements
 - component and appliance calibration
 - the recording of all defects and corrective action taken
- the COA holder's identification including:
 - name, as on the certificate
 - CASA certificate number
 - the customer's name and address
- the aircraft's identification to include:
 - o aircraft manufacturer
 - o aircraft model
 - o serial number
 - o registration marking
- the aircraft component's identification to include:
 - o manufacturer name
 - o manufacturer model
 - o component name
 - o part number
 - o serial number (if applicable)
- any technical data or reference to the data required to perform the tasks
- a method to record a detailed description of the work carried out including a record of all inspections. The following is the type of information that should be included in the work record, if applicable:
 - o a record of AD compliance
 - o a record of repairs and modifications
 - o identification of the scheduled aircraft inspection
- a record of specialised tests, inspections, processing and calibration, such as non-destructive testing (NDT), special plating and radio instrument calibrations that includes the identification of any process specification used to carry out any special task
- details of all components changed including:
 - o part number
 - o serial number
 - o ARC details
- any other relevant information such as Time Since Overhaul (TSO), Time Since New (TSN) etc.
- a record of:
 - o the person doing the work
 - o the person signing for the work, including licence number, if applicable
 - o the date of the work completed
- control and accountability of all additional related paperwork including:
 - o internal company workshop orders (routing documents)
 - o workshop work sheets and work cards
 - o special test reports
 - o calibration reports

- o defect and corrective action forms
- o ARC and release notes
- o special NDT and plating processes etc.
- issue of a maintenance release or ARC, including when and the conditions under which a release may be issued
- providing, to the customer, owner, or operator, as applicable, a record, of all work carried out, including the following documents, as required:
 - o the maintenance release or ARCs
 - o a record of all maintenance performed including repairs and modifications
 - o the original or a copy of all ARCs and release notes for aeronautical products repaired or overhauled outside the COA holder
 - o documentation of all life limited parts showing history and source of parts
 - o documentation of all special tests, such as engine test after overhaul, altimeter calibration or any other calibrations, etc
 - o a record of all replacement parts.
- ensuring that the computer maintenance record systems meet the airworthiness requirements
- retention of records by the COA holder.

E.8 Additional maintenance procedures

E.8.1 In-progress maintenance

E.8.1.1 There should be a system or method for inspection, testing and calibration, during and after disassembly and at various stages while the work is in progress. The system should also ensure continuity of maintenance during shift changeovers at various stages of work.

E.8.2 Final inspection

E.8.2.1 Final inspection procedures should include identification of:

- the qualified person designated to inspect and certify the work carried out
- the method of co-ordination of the maintenance and certification for all work
- major repair and modification release requirements
- the final check of completion of the maintenance work package.

E.9 Certification procedures

E.9.1 Aircraft maintenance

E.9.1.1 There should be a description of the COA holder's system of completion of maintenance, including the requirements for signing and issuing the Maintenance Release. This could be Schedule 6 of CAR 1988 or a CASA approved alternative.

E.9.2 Component maintenance

E.9.2.1 Should include a description of the COA holder's system of completion of maintenance, including requirements for signing and issuing the ARC. For further information refer to CAAP 42W-2(6) 'Authorised Release Certificate'.

E.10 Major repair and modification procedures for aircraft and aircraft components

E.10.1 These procedures should contain information to enable the COA holder employees to:

- recognise major or minor repairs
- recognise major or minor modifications
- recognise sources of approved data including:
 - o Australian ADs
 - o manufacturers' service bulletins or service letters identified as approved by the certifying National Airworthiness Authority's
 - o structural repair manuals and other manufacturers' manuals
 - o data identified as approved by an approved Design Organisation
 - o component manufacturers' manuals and instructions
 - o TC and STC
 - o data approved by Regulations 21.006A, 21.009 or a Subpart 21.M of CASR 1998 authorised person
- apply for the approval of data to CASA or an authorised person
- complete documentation requirements for major repairs and modifications to aircraft and aircraft components including:
 - o major repair and modification
 - o COA holder work orders including:
 - applicable release document, such as ARCs
 - a detailed description of the work performed with reference to the approved data
 - a record of parts used, with appropriate documentation showing the source of the parts, including where necessary, TSO, TSN etc.
 - the date when the work was completed
 - the signature, name and identification number of person who carried out the work
 - o identify documentation required to ensure that all the COA holder engineering authorisations and deviations from standards are supported by approved data
 - o accomplish the distribution and retention of records.

E.11 Handling of parts undergoing maintenance

E.11.1 These procedures should describe the COA holder's system for handling parts undergoing maintenance. The system and procedures should cover:

- the identification and segregation of parts including:
 - o a tag identification system for:
 - serviceable parts

- unserviceable parts
- repairable parts
- condemned or scrap parts
- general identification
- o confirmation that all parts will always be properly tagged and identified and
- o the identification of parts and details of the associated documentation on the tag
- the control of parts including:
 - o parts issued to a job
 - o ensuring segregation requirements are maintained during various stages of maintenance including:
 - disassembly and assembly
 - cleaning, inspection, repair and modification
 - storage awaiting further work
 - parts finishing, including painting
- the storage facilities and parts identification for:
 - o standard aircraft parts
 - o quarantine parts
 - o customer parts
 - o parts used for test purposes
 - o parts used as special tools
 - o salvaged parts
- the preservation of parts
- the control of shelf-lived items to include:
 - o inspection and control
 - o special storage
 - o special labelling
 - o climate and environmental control
- the control of life limited parts
- overall stock control.

E.12 Control of technical data

- E.12.1 These procedures should describe the COA holder's procedures for maintaining and distributing all technical data including the COA holder's manuals, drawings, engineering orders, shop work sheets and other documents held by the organisation.
- E.12.2 There should be procedures for control of all technical data including procedures to ensure:
- distribution of the latest version throughout the organisation
 - availability to employees
 - amendment procedure
 - revision status control
 - segregation of controlled and uncontrolled data.
- E.12.3 There should be procedures for ensuring that the translation of all foreign technical data is timely and accurate, including:

- who performs translations
- the quality control of translations to ensure they are accurate and complete
- final approval of translations
- ensuring that translations are maintained in a current condition when manufacturer's manuals instructions are revised.

E.13 Calibration of precision test equipment

E.13.1 Regulation 30 of CAR 1988, among other things requires the COA holder to have a system for controlling and performing calibration of precision test equipment. The COA holder is responsible for the calibration program whether calibration is carried out in-house or is contracted to outside agencies. Information regarding control and calibration requirements of precision test equipment can be found in CASA [AC 21-35 – Calibration - Inspection and test equipment](#).

E.14 Handling and storage of aircraft parts

E.14.1 These procedures should describe the COA holder's procedures for the acceptance, inspection, identification, tagging, storage and issue of each aircraft part. It should also describe the procedures to properly evaluate each supplier and should include:

- procedures for receiving parts, including:
 - o the title of person who is authorised to inspect each item
 - o where and when the inspection takes place
 - o how and on what form(s) the inspection is recorded
 - o the disposition and retention of each recorded inspection
 - o inclusion into inventory
 - o the disposition and action taken on each item when it fails inspection, including:
 - the control, segregation and quarantine of each item
 - the further investigation as necessary
 - the procedures for reporting suspected unapproved parts to CASA
- procedures for the inspection of new parts and aircraft materials for:
 - o shipping damage
 - o traceability of life limits, if applicable
 - o identification and tagging of parts to manufacturers invoices
 - o special handling and storage instructions for items such as composite aircraft materials, paints, adhesives and other similar aircraft materials
 - o to ensure that proper documentation is available for determining the authenticity of that part
- procedures to inspect overhauled or repaired parts from CASA approved organisations for:
 - o shipping damage
 - o traceability of life limits, if applicable
 - o traceability of overhaul record and airworthiness release tag
- procedures to inspect items sent out for contracted maintenance for:
 - o shipping damage

- o conformity to specifications, including type of aircraft materials and state of preservation
- procedures to inspect items of unknown origin for:
 - o conformity to specifications, to include type of aircraft materials and state of preservation
 - o airworthiness status including AD compliance and traceability of life limits, if applicable
 - o functional tests
- procedures for the storage of repaired parts, should include:
 - o identification and tagging
 - o shelf life limits
 - o protection of parts from dust, moisture and other contaminants
 - o climate control as necessary
 - o procedures for inspection, control and identification of items maintained by contract maintenance facilities
- procedures to ensure, throughout the organisation, that only approved and authentic parts are used on Australian aircraft and components. Procedures should address or consider the following:
 - o incoming inspection of parts
 - o installation of parts by appropriately qualified maintenance personnel
 - o procedures to ensure that each item meets all current AD requirements
 - o procedures for ensuring that proper documentation of CASA approved parts is included in work-order package and that appropriate documentation is given to the customer
 - o method of identifying and reporting suspected unapproved parts to CASA.

E.15 Contracting

E.15.1 The procedures for the control of contractors who do not hold their own COA should consider the following:

- An assessment of the contractor's compliance with the regulatory requirements to the extent that the COA holder will use the contractor. This should include audits of the contractor
- The audit of the COA holder's contracting activities
- Where the contractor does not meet the regulatory requirements, the COA holder should ensure corrective action are taken prior to commencement of work
- The control of contractors, including recording audits of the contractors by the COA holder, corrective action follow-up plan and to record when contractors are used
- The use of tools, equipment and personnel from the contractor as long as such tools, equipment and personnel are acceptable to the COA holder's quality system
- Where the contractor is permitted by the COA holder to use its own paperwork, maintenance instructions, aircraft materials and spares parts:
 - o the product should be fully inspected on receipt, and the release documentation to be issued by the certifying employees of the COA holder

- o if the product cannot be inspected on receipt, procedures for inspection during maintenance at the contractor's facility should be established and the release documentation to be issued by the certifying employees of the COA holder.

E.16 Manufacture of parts during maintenance

E.16.1 These procedures should, where the COA holder has facilities, equipment and qualified employees, describe the COA holder's procedures for the manufacture of aircraft parts during the course of maintenance. See Appendix 9 for details of the required MITCOM procedures.

E.17 Defect reports

E.17.1 These procedures should describe the COA holder's procedures for handling aircraft defects, including:

- the identification of a major defect or recurring unairworthy condition
- the reporting requirements to the Certificate of Registration holder and to CASA.

Note: For further information on defect reporting refer to AC 20-06 - Defect reporting.

E.18 Maintenance forms

E.18.1 These procedures should provide detailed instructions to the COA holder's employees for the use of maintenance forms and should contain:

- a collection of samples of all relevant inspection forms, tags and labels in use by the COA holder
- a description of the method to execute each form, tag and label, including:
 - the purpose of each item
 - the procedure for its use
 - instructions to complete each item
 - the disposition of each item
- reference to detailed checklists and other shop inspection forms with procedures to ensure their currency and proper disposition.

Appendix F

Contracting

F.1 Introduction

- F.1.1 This appendix provides guidance on acceptable means of complying with the requirements of Regulation 30 of CAR 1988 when work is carried out for the COA holder by a contracted organisation not certificated in accordance with Regulation 30 of CAR 1988 (a non COA holder). For example, specialist welding, specialised plating, specialised machining, painting or other specialised tasks.
- F.1.2 The CAR 1988 allow a COA holder to use contractors to perform activities authorised under the COA. In those circumstances, the COA holder is responsible for ensuring that adequate procedures are in place to supervise the work performed by the contractor as required under Regulation 42ZC of CAR 1988. Contract work is considered to be an extension of the work carried out by the COA holder and under the control of its quality system. The responsibility for providing the necessary documentation for all maintenance carried out and authorisation of employees certifying that maintenance rests with the COA holder.

F.2 General conditions

- 7.1.2 The following general conditions apply for contracted maintenance:
- When contracted maintenance is carried out, the COA holders quality system is considered extended to include the contractor for that maintenance. Those parts of the contractor’s facilities, personnel, and procedures, involved with a COA holder’s product, must meet requirements of Regulation 30 of CAR 1988 for that time.
 - Any COA holder may contract maintenance to a non-certificated organisation provided that there is provision in its documented procedures for such contracting.
 - A COA holder does not need to have its own facilities to carry out all maintenance that it wishes to contract. It does need to have its own expertise to confirm that the contractor meets the necessary standards and that any maintenance can be carried out to the approved maintenance data.
 - A COA holder is responsible for all maintenance carried out by its contractors. Where a COA holder fails to control a contractor it may put at risk part or its entire COA.
 - The extent of contracting is only limited by the expertise and documented procedures of the COA holder.
 - The COA holder should have procedures to control all contracted activities.

Appendix G

Computerised maintenance records

G.1 General

- G.1.1 This appendix gives guidance on the use of computerised maintenance record systems. It provides information on the matters to be considered when writing procedures for the use and control of computer maintenance records and to maintain the integrity of maintenance records when computers are used to record information.
- G.1.2 The following should be considered when developing a computerised maintenance record system.

Note: AC 11-3 - Electronically formatted certifications, records and management systems, provides further guidance on the use of computer based record systems.

G.2 Data loss

- G.2.1 To avoid data loss in the case of power interruptions the computer system must be protected by design features, which can recover data lost by such power interruptions. The design features may be hardware (for example uninterruptible power supplies), software or may be part of procedures for use.
- G.2.2 Software procedures should be documented to make allowance for the effects of power surges and complete shutdowns. Some re-entry of data may be allowed in the recovery procedures.

G.3 Unauthorised access

- G.3.1 The data contained within the system should be protected from unauthorised access. This system should prevent unauthorised access to the database software and the computer hardware or both. The software security system should record and report unauthorised access or attempts at access. Such recording would normally be software based but it may be a procedural item for the users. The security system may be physical security where an individual computer is used which can be locked away.

G.4 Audit trail

- G.4.1 The database should incorporate an audit trail, which records all program and data manipulation. Where an audit trail facility is not built-in the procedures should include instructions to maintain data integrity.

G.5 Record retention

- G.5.1 Copies of all data records should be retained in a secure location for the period equal to a paper based system.

G.6 Data verification

- G.6.1 The process of entering data should be verifiable against the original record. Such verification could be as simple as the operator being able and required to validate the screen image or as complex as independent quality control procedures. The verification procedures should be stricter for larger systems.

G.7 System operational manual

G.7.1 A system operational manual should be made available to all persons authorised to operate the system. The manual should nominate the person within the organisation who has responsibility for the management of the computer system. The manual should have a technical reference to the hardware and the software and detailed operating procedures, based on daily operations, for every keyboard operation or other input. The manual should detail and standardise all abbreviations and acronyms used.

G.8 Historic record

G.8.1 The system should include provision for the recording of amendments. This historic record should, upon retrieval, provide a complete chronological history of the maintenance and recording. Failing that, a backup of the operating system and the data is to be made and held for the required life of the associated recorded data.

G.9 Backup

G.9.1 A backup disk or tape of the data should be produced, as a minimum, once every day that the system is operated. Those systems, which record every keystroke, may be able to justify a lesser backup frequency. When changes to the operating system software are made, the old system backup is to be kept for the life of the recorded data that was associated with that operating system.

G.9.2 The backup disk or tape should be stored in a secure location remote from the system installation. Access to the backup should be controlled. It is recommended that the data be backed up daily and held for 14 days. The backup for each of the 13 days can then be overwritten in order. The backup for the 14th day must be kept for at least two weeks before reuse.

G.10 Computerised work cards

G.10.1 Work cards produced by the system should:

- identify the level of authorisation required for certification purposes
- be identified and controlled individually
- be controlled and accounted for by the end of the maintenance activity.

G.11 Testing period

G.11.1 The normal testing period for a new computer system will depend on the complexity of the system. During the testing period the traditional hard copy documentation should be maintained concurrent with the computer system.

G.11.2 A register should be established containing a list of all:

- problems
- subsequent actions

- solutions encountered during the life of the computer system. During the testing period the entries in the register should be used to evaluate the validity of the predetermined end of the testing date.

G.12 Electronic signatures

- G.12.1 Before the introduction of the Electronic Transaction Act 1999, which permitted the use of electronic signatures, a handwritten signature was the primary means by which an individual could comply with the requirement for a signature on any required record, record entry, or document. Although an electronic signature may be essentially a new form of signature, its purpose is identical to that of a handwritten signature or any other form of signature currently accepted by CASA.
- G.12.2 An electronic signature may be in the form of a digital signature, a digitised image of a paper signature, a typed notation, an electronic code, or any other unique form of individual identification that can be used as a means of authenticating a record, record entry or document.
- G.12.3 The scope of information being attested to via electronic signature should be made clear to the signatory and to subsequent readers of the record, record entry or document. It is therefore important to clearly delineate the specific sections of a record. In addition, the system should notify the signatory that the signature has been affixed.
- G.12.4 The security of an individual's handwritten signature is maintained by ensuring it is difficult for another person to duplicate or alter it. An electronic signature should maintain an equivalent level of security. Due to the reproduction capability inherent in an electronic system, an electronic system used to produce a signature should restrict the ability of any person to cause another individual's signature to be affixed to a record, record entry or document. The signatory must also know who else holds the privilege for access to the electronic authentication key.
- G.12.5 An electronic signature should provide positive traceability to the individual who signed a record, record entry or any other document.
- G.12.6 Organisations intending to use electronic signatures should consult CASA before implementing an electronic signature system. A written description of how electronic signatures will be used in maintenance or other activities should be submitted for CASA review.

G.13 Subregulation 30(2B) of CAR 1988 requirements - in relation to access to legislation

G.13.1 CASA Website

- G.13.1.1A COA holder will, at a particular location, comply with the requirement of paragraph 30 (2B) (c) of CAR 1988 (to provide legislation) by providing access to the CASA website at that location. The access would need to be provided such that:

- access to the CASA website is available at the location at all times when employees of the COA holder require access to the legislation for the purpose of their duties
- employees of the COA holder have been confirmed as sufficiently competent to access the legislation on the CASA website via training or assessment.

G.13.1.2A COA holder may breach Paragraph 30 (2B) (c) of CAR 1988 if employees of the COA holder are unable to access the CASA website at any particular time when the employees require access to the legislation for the purpose of their duties. This is a risk associated with relying on on-line services.

G.13.1.3Downloads of the legislation through links available on the CASA website onto a computer or computer network that is maintained by the COA holder is a way of complying with the Paragraph 30 (2B) (c) of CAR 1988 requirement. If a COA holder 'downloads' the legislation from the CASA website, the COA holder must ensure that the downloaded legislation is regularly updated to incorporate changes to the legislation and in addition ensure that outdated versions of the legislation are rendered inaccessible.

G.13.1.4Whether or not a COA holder updates a downloaded version of the legislation with sufficient regularity will depend on the circumstances. Since COA holders can readily identify 'recent legislative changes' on the CASA website, CASA takes the view that the legislation must be updated with little delay.

G.13.1.5To secure compliance with Paragraph 30 (2B) (c) of CAR 1988, a COA holder may choose to provide access to the CASA website at some locations and to provide hard copies of the legislation at other locations.

Appendix H

Non-destructive testing

H.1 General

H.1.1 In addition to the requirements specified in the body of this publication, this appendix outlines guidelines for the applicant for a COA to engage in maintenance that requires the use of NDT methods.

Note: Category training for the B1 LAME (as per Appendix IV of the Part 66 MOS) only provides the competency to carry out Type II colour contrast dye penetrant NDT inspections only– (also known as liquid penetrant inspection) under competency unit MEA365, as was a previous privilege under the CAR 31 licence system, but not the competency to perform fluorescent dye penetrant inspections. The conduct of liquid penetrant inspections by a LAME is not covered in this appendix.

H.2 Definitions

H.2.1 The NANDTB (National Aerospace Non-Destructive Testing Board) is an independent national aerospace organisation representing a nation's aerospace industry that is chartered by the participating prime contractors and recognised by the nation's regulatory agencies to provide or support NDT qualification and examination services in accordance with a recognised NDT Standard. Such services may include participation in approval.

H.2.2 **NDT method** means a method of inspection covered by this appendix, including the following:

- o **Eddy Current** - The method in which eddy current flow is induced and monitored in the product under test.
- o **Magnetic Particle** - The method which generates a magnetic flux within magnetic materials, and identifies discontinuities by the aggregation of ferromagnetic particles at locations of flux leakage on the surface of the product under test.
- o **Radiography** - The method utilising penetrating radiations such as X and gamma rays to produce an image of relative material densities of the product under test.
- o **Liquid Penetrant** - The method of detecting the presence of residual penetrating liquids at surface discontinuities of the product under test.
- o **Ultrasonic** - The method of detecting reflected and transmitted inaudible sound waves to indicate the presence of a discontinuity in the product under test.
- o **Thermography** - The method which utilises a detection and display medium, to correlate variations of heat radiation as variations of visible radiation.
- **NDT technique** means a particular way in which a method may be used e.g. through transmission ultrasonic as distinct from pulse-echo ultrasonic.
- **NDT procedure** means a detailed written description of the way in which a particular component is to be inspected.
- **Responsible level 3** means a level 3 qualified person designated by the COA holder with the responsibility and authority to ensure that the requirements of the Standard are met and to certify qualified individuals.

H.3 Australian Standard AS 3669 – Non-destructive testing – Qualification and approval of personnel – Aerospace (the Standard)

- H.3.1 Australian Standard AS 3669 – Non-destructive testing – Qualification and approval of personnel – Aerospace, was formulated to assist the Australian aerospace industry in standardising the training and qualification of NDT personnel. AS 3669 describes requirements for a company based NDT training and qualification system whereby qualification acceptance of personnel to any level of NDT can be made by the employer.
- H.3.2 The 2006 version of the Standard merged the NDT personnel approval requirements of the EN 4179 (European) and NAS 410 (American) Standards and AS 3669, effectively resulting in a uniformity with the rest of the world and introduced the concept of a National Aerospace NDT Board (NANDTB).
- H.3.3 The role for a national NDT board has been specified as being:
"An independent national aerospace organisation representing a nation's aerospace industry that is chartered by the participating prime contractors and recognised by the nation's regulatory agencies to provide or support NDT qualification and examination services in accordance with a recognised NDT Standard. Such services may include participation in approval."

H.4 The National Aerospace NDT Board of Australia

- H.4.1 The National Aerospace NDT Board of Australia, (the NANDTB) was established to satisfy the requirements of AS 3669; which is recognised by CASA as the standard for the qualification and approval of NDT personnel for the Australian aerospace industry.
- H.4.2 The NANDTB is recognised by CASA to provide oversight and recognition of employer based NDT qualification and examination programs, in accordance with EN 4179, NAS 410 and AS 3669, and to provide support to CASA to advance and promote aircraft safety through the correct application of NDT in aircraft maintenance.
- H.4.3 An objective of the NANDTB is the provision of guidance to industry, training organisations and NDT technicians to help them understand the requirements of EN 4179, NAS 410 and AS 3669 as they are applied to the training and qualification of NDT technicians. The NANDTB does this via its website <http://www.ndtboard.com/>.
- H.4.4 The NANDTB can be contacted via their website or via one of the following emails:
NANDTB Chairman
Email: chairman@ndtboard.com
Deputy Chairman
Email: deputychair@ndtboard.com
NANDTB Secretary
Email: secretary@ndtboard.com

H.5 Organisations

H.5.1 COA holder

- H.5.1.1 All COA holders that carry out NDT during the course of maintenance must have procedures in place that ensure that the NDT activities are carried out in accordance with the requirements outlined in AS 3669.
- H.5.1.2 There is a difference between the requirements for carrying out NDT on aircraft to carrying it out on components. When NDT is carried out in a component workshop, the person who physically performs the NDT, signs for the NDT stage of the overall maintenance task. When maintenance is carried out on an aircraft the person who physically performs the NDT signs for the maintenance task and a LAME must review the NDT report and make airworthiness determinations as required and certify for the requirements in the aircraft maintenance record.

H.5.2 Personnel

- H.5.2.1 COA holders who carry out NDT must have an adequate number of authorised employees, employed or contracted, to physically carry out the work.
- H.5.2.2 For component maintenance these employees can be authorised:
- under Regulation 33B of CAR 1988 (Airworthiness Authority) or
 - under subregulations 42ZC (5) and (6) of CAR 1988.

Note: The holder of a Regulation 33B of CAR 1988 authority to conduct non-destructive testing of aircraft and aircraft components/materials is authorised by CAO 100.27 for the purpose of subregulation 42ZC (5) of CAR 1988 i.e. it is not necessary for the holder of an NDT airworthiness authority to then gain another authorisation from CASA for subregulation 42ZC (5) of CAR 1988 purposes.

- H.5.2.3 For aircraft maintenance these employees can be authorised:
- under Regulation 33B of CAR 1988 (Airworthiness Authority) or
 - under subregulations 42ZC (6) or (7) of CAR 1988.

Notes:

1. The authorisation under subregulation 42ZC (7) of CAR 1988 above may be issued by an employee of the COA holder so authorised by CASA.
2. A person being employed under either Regulation 33B of CAR 1988 or subregulations 42ZC (6) or (7) must be trained and assessed in accordance with the requirements of AS 3669.

- H.5.2.4 Personnel using NDT methods to test and/or accept materials, products, components, assemblies or sub-assemblies shall be certified to the requirements of AS 3669. Personnel responsible for the technical adequacy of NDT methods shall also be certified. Trainees, NDT auditors and training instructors shall also be qualified to this Standard. Specialised inspections using direct readout instruments do not require qualification or approval to AS 3669.

H.5.3 Work procedures

- H.5.3.1 COA holders should, specifically in respect of NDT, have written procedures to cover the following:

- procedures for record keeping that include ensuring the traceability of inspection results, tests and recordings and radiographs
- records of inspection, personnel training, qualifications, experience, and visual acuity testing
- procedures for check viewing of radiographs on a sampling basis.

H.5.3.2 COA holders that wish to internally authorise their employees to carry out NDT are required to employ a person who holds a delegation under subregulation 42ZC(6) of CAR 1988 and have written procedures that include the following:

- the appointment of a person by the COA holder to control NDT (the responsible level 3 – formerly the NDT Controller)
- to ensure that the responsible level 3's qualifications and experience are recognised by the NANDTB as a certified NDT Level 3 qualified person in accordance with the requirements of AS 3669 and who is responsible for the following:
 - o ensuring that the requirements of AS 3669 are met
 - o establishing NDT acceptance and rejection criteria
 - o maintaining NDT records
 - o certifying qualified individuals, including approving the COA holder's NDT training, assessment, and examination of persons permitted to carry out NDT
 - o maintaining records of training and experience for NDT persons
 - o setting up and testing NDT test equipment
 - o interpreting test results
 - o internal surveillance of NDT tasks.
- the COA holder authorises persons to perform specific NDT tasks who:
 - o are recommended by the responsible level 3 person for the task
 - o have completed a training program that has been checked by the responsible level 3 person as meeting the requirements for the task. This must be as a minimum to NDT Level 1 course as described in AS 3669
 - o have been assessed as being competent to carry out the specific tasks by the responsible level 3 person
 - o have passed an annual visual acuity test – as required by AS 3669.
- the persons approved by the COA holder to perform and certify the results of the NDT tasks are:
 - o authorised in writing, under subregulation 42ZC (6) of CAR 1988, to carry out the maintenance
 - o only responsible for performing specific tests on nominated parts, in accordance with defined processes and procedures that have unambiguous acceptance and rejection criteria.
- re-approval requirements – include the employer's requirements for the suspension, revocation and reinstatement of approval.

H.5.4 COA holder's responsibility

H.5.4.1 The COA holder is responsible for the implementation of, and compliance with the AS 3669 Standard and for certifying qualified personnel. This responsibility may be met

through the COA holder's use of either the NANDTB, a designated level 3 qualified individual, or through the use of an outside agency, each of which is described below:

National aerospace NDT board

H.5.4.2 If the COA holder chooses to use the NANDTB, the NANDTB shall administer the procedures for qualification and approval of NDT personnel according to the requirements of the AS 3669 Standard. In addition, the NANDTB may, in combination with the COA holder, recognise equivalencies of qualification and approval and may provide general guidelines in accordance with the Standard regarding facilities for training, course outlines, examination questions and exam procedures.

Responsible level 3

H.5.4.3 The COA holder can identify in writing an individual responsible for the implementation of the AS 3669 Standard and the overall administration of the qualification and approval program. This individual will be certified as a level 3 and be known as the 'responsible level 3'. The responsible level 3 shall be knowledgeable of the specifications, standards, codes, techniques and products associated with the aerospace industry and used by the COA holder. Where the responsible level 3 is not certified an all NDT methods used by the COA holder, additional level 3 personnel shall be identified in writing as necessary to provide coverage.

Outside agency

H.5.4.4 If the COA holder chooses to use an outside agency, that agency will develop an approval program, train and examine the COA holder's NDT personnel and perform any other level 3 function. An outside agency may qualify, but not certify NDT personnel. The COA holder shall document in their 'written practice' document (procedures manual), details of the suitability of any outside agency selected to perform any function to meet the requirements of the AS 3669 Standard, including sufficient detail to justify the agency's ability to perform the required level 3 functions.

H.5.5 Qualification and approval of personnel

H.5.5.1 In accordance with the requirements outlined in the AS 3669 Standard, COA holders shall develop and maintain a 'written practice' that describes the control and administration procedures they will use for the qualification and approval of their NDT personnel. This written practice shall include:

- levels of qualification – include identification of the levels of qualification and approval used by the employer
- personnel duties and responsibilities – include identification of duties and responsibilities for the different levels of qualification
- training program – include an outline or reference of the instruction provided by the COA holder, NANDTB or outside training source(s) recognised as being responsible for administering qualification and approval of NDT personnel
- experience requirements – include the minimum amount of experience required for each NDT method and, when applicable, the techniques within the method

- examination practices – include the designation of the individual(s) or organisation(s) that will administer the examination as well as the number of questions, grading, vision requirements and the specific visual acuity tests to be used
- records and administration – include a description of details to be recorded for each certified individual and identification of the individual(s) or organisation(s) responsible for developing, administering, and maintaining the employer's approval program.

H.5.6 Recording of NDT test results

H.5.6.1 The person fitting the component or aircraft materials to a higher assembly or an aircraft must be aware of the extent and results of NDT testing carried out. In addition to normal COA holders recording requirements, the following information should be provided:

- the NDT method and procedures used
- approved data relating to the test, including any applicable ADs
- results of the test
- name and identifying number of the person who certified for the NDT.

H.5.7 Visual acuity

H.5.7.1 Persons who physically carry out NDT inspections must ensure that they have appropriate visual acuity to carry out any particular NDT task.

H.5.7.2 The visual examination specification for all NDT qualification levels is contained within the AS 3669 Standard and shall ensure that all NDT qualified individuals near vision and colour perception meet the requirements of Table 4 of the AS 3669 Standard. Near vision tests shall be administered annually and colour perception test shall be administered prior to approval or reapproval of an individual's NDT qualification.

H.5.7.3 Table 4 provides that the acceptable level of visual acuity for NDT near vision is indicated by the person's ability to read the Jaeger No. 1 letters of a standard Jaeger Test Chart at a distance of not less than 30 cm with at least one eye, either corrected or uncorrected; or near vision acuity shall permit reading, a minimum of Times Roman N4.5 or equivalent letters, at not less than 30cm with one or both eyes, either corrected or uncorrected.

H.5.7.4 These tests shall be administered by personnel designated by the responsible level 3, NANDTB, or outside agency utilised for the qualification examination of NDT personnel. Any limitations in colour perception shall be evaluated by the responsible level 3 prior to approval, and this shall be documented.

Note: Further guidance on NDT inspections and processes may be found in CAAP 33-02.

Appendix I

Manufacture of parts during maintenance

I.1 Application

- I.1.1 This Appendix is relevant to any COA holder seeking or holding a formal (or implied) approval to manufacture a required aircraft part through a process identified as - Manufacture In The Course of Maintenance (MITCOM).

I.2 Definitions

- I.2.1 The term MITCOM is used to clearly distinguish between a part manufactured in the course of maintenance and a part manufactured under a CASR 21 manufacturing approval (APMA). Parts manufactured in the course of maintenance will need to comply with 42W(2)(b)(i) of CAR 1988. The MITCOM part must be either identical to the part it replaces, or conform to the approved design data for that part.
- I.2.2 A Class III product is any part or component which is not a Class I or Class II product and includes standard parts (for example, those designated as AN, NAS or SAE).
- I.2.3 MITCOM does not provide for the serial production of a large number of parts and its use is limited to the making of Class III parts (as defined in CASR 21.321) for an aircraft or aeronautical product being maintained at the COA holder's facility. The scope of the approval is typically limited to include items such as:
- bushes, sleeves and shims
 - secondary structural elements and skin panels
 - flight control cable assemblies
 - flexible hoses and rigid pipes
 - electrical cable looms and assemblies
 - formed or machined sheet metal panels for repairs.

I.3 Purpose

- I.3.1 This Appendix provides guidance to COA holders regarding the manufacturing of parts, which are identified by a part number, and are to be fitted, while the aircraft or aeronautical product is being maintained by the COA holder's facility.

I.4 Background

- I.4.1 Aircraft maintenance organisations may need approval to manufacture a part during the course of maintenance of an aircraft or aeronautical product covered by their COA.
- I.4.2 MITCOM is currently formalised by the inclusion of the approval to do so on the CAR 30 COA capability list, which will also identify the scope of MITCOM activities controlled by the COA holder's procedures manual. The approving officer will check that:
- the organisation has the capability to manufacture certain parts by having appropriate facilities, tools, data and trained/qualified personnel
 - appropriate procedures for the manufacture of certain parts are contained in the organisation's system of quality control

- the part is to be used by that COA holder as a replacement of a part to the aircraft upon which the COA holder is currently carrying out maintenance.

I.5 Maintenance organisation capability

- I.5.1 The manufacture, inspection, assembly and test (if required) of parts under MITCOM should be clearly defined within the technical and procedural capability of the COA holder's organisation. If a COA holder has MITCOM approval and capability, it may only manufacture parts for an aircraft or aeronautical product identified in its certificate of approval, or included on their capability list.
- I.5.2 The capability to manufacture a particular part is determined by their capability in regard to appropriate facilities, approved data, tools and trained and competent employees.

I.6 Distribution of MITCOM Parts

- I.6.1 MITCOM parts cannot be sold or supplied outside the organisation that is approved to conduct MITCOM. This prohibition also applies to the bulk transfer of surplus inventory of any MITCOM part.
- I.6.2 Importantly, these parts do not qualify for individual certification on an Authorised Release Certificate (ARC), also known as the CASA Form 1.
- I.6.3 If a COA holder maintains a fleet of aircraft or a particular type of aeronautical product, it is acceptable to manufacture and stock parts for a known need relating to future maintenance requirements by the COA holder but only for those aircraft or aeronautical products of a fleet being maintained by that COA holder. MITCOM parts are to be physically segregated and identified.

I.7 Subcontracted MITCOM

- I.7.1 If a COA holder having MITCOM capability is unable to perform certain specialist processes such as welding, plating, machining or other specialist processes in order to manufacture a part, the COA holder may subcontract another organisation, including an organisation not certificated in accordance with CAR 30, to perform such operations, provided there is a provision in the COA holders procedures for such subcontracting.
- I.7.2 The COA holder's organisation must have the expertise to ensure that the sub-contractor meets the necessary standards before subcontracting any MITCOM task.
- I.7.3 The subcontractor's facilities, personnel, and procedures involved in the manufacture of a MITCOM part must meet the requirements of Regulation 30 of CAR 1988 and the COA holder's quality system is considered to include the subcontracted organisation for that time. The COA holder remains responsible for all the work done by the subcontractor to produce the aeronautical product.

I.8 Approved data

- I.8.1 A COA holder is responsible to ensure that all parts manufactured under MITCOM are manufactured in accordance with all the approved data required to manufacture the

part. Only where the data on such parts is sufficient to facilitate such manufacture and is both current and applicable, may the aircraft part be manufactured.

- I.8.2 Approved data may be provided in the type certificate (TC) holders overhaul or repair manuals, modification schemes, service bulletins, a supplemental type certificate (STC) holders drawings, or otherwise approved by CASA or authorised person, such as under Subpart 21.M of CASR 1998, or FAA AC43.13-1B if applicable and adequate.
- I.8.3 As a general rule, it is not acceptable to manufacture any item 'to pattern' using a template or sample, unless all the necessary data is available. This necessary data includes the manufacturing processes required and other relevant approved specifications/standards required to manufacture the part.
- I.8.4 For the manufacture of parts such as flight control cables, rigid pipes and flexible hoses using aircraft standard hardware throughout, and which replicate the component being replaced, it is acceptable to manufacture these "to sample" with regard to length, provided the installed cable assembly is "in safety" and permits adequate adjustment to achieve correct control surface movement and cable tension. The length of a flexible hose should permit correct installation with regard to routing, clearances, stress relief and security, in accordance with the applicable approved maintenance data.
- I.8.5 Another example where use of a template or sample to manufacture "to pattern" is considered acceptable may be instances where a new aircraft sheet metal skin is to be made using the removed skin as a template. This is acceptable providing that the removed skin is in a reasonable condition for use as a template and the necessary approved design data is available to confirm that material type/specifications/temper etc meets the original design.
- I.8.6 Whenever special processes or inspection procedures that are defined in the approved data are not available at the organisation, the organisation cannot manufacture the part unless the competent authority or the TC holder or a Part 21 authorised person provides an approved alternative.
- I.8.7 Care should be taken to ensure that the data includes details of part numbering, dimensions, materials, processes and any special manufacturing techniques, including heat treatment, special raw material specification and/or incoming inspection requirements.

I.9 Traceability of MITCOM parts

- I.9.1 The COA holder responsible for manufacturing the part is responsible to maintain a record (or register) of all parts made under MITCOM and the COA holder's procedures and aircraft technical log should identify when, what and where parts manufactured under MITCOM have been installed.

I.10 MITCOM part identification

- I.10.1 All MITCOM parts, except those having not enough space, will be marked on the part for traceability purposes. Those parts too small to be marked may be identified by a tag

until installed. Thereafter the identification marking should be included in the maintenance records of the aircraft or component.

- I.10.2 A MITCOM part number will consist of the original manufacturer's part number plus the COA holder's identification or COA number that clearly relates the part to the organisations identity and manufacturing/inspection data.

I.11 Internal release inspection /certification

- I.11.1 The COA holders internal parts release to service procedures will ensure that any locally manufactured aircraft part is subjected to a quality control inspection following manufacture and before installation. The inspection will establish if full compliance with the relevant manufacturing approved data has been achieved and the results of the inspection are to be recorded. Parts manufactured under MITCOM will be unambiguously identified as fit for use by stating conformity to the approved data in the aircraft technical records including certification for the completion of the maintenance.

I.12 Certification for installation / release to service

- I.12.1 MITCOM is aircraft maintenance that needs to be certified in accordance with Regulations 42ZE or 42ZN of CAR 1988 as relevant. Internal release procedures for the recording and control of parts manufactured in the course of maintenance must clearly differentiate between parts maintained and parts manufactured and must preclude the possibility of an ARC being issued for a part manufactured under MITCOM at any time, or the supply of the MITCOM part to another organisation in the future.
- I.12.2 While parts manufactured under MITCOM cannot be released with an ARC, they can be installed on other higher level assembly products, such as an engine, a pump, a propeller or a gearbox for example, which may subsequently be issued an ARC Form 1. Any MITCOM parts should be clearly identified in the engine propeller or gearbox or other higher level assembly product release documentation, as well as the aircraft technical records and the COA approval holder's records. If a COA holder uses an approved system of internal release documentation for parts that it maintains for its own use, the COA holder may utilise that system for release and control of MITCOM parts.

I.13 Continuing airworthiness of MITCOM parts

- I.13.1 Parts manufactured under MITCOM continue to be the responsibility of the Registered Operator. The Registered Operator is responsible for parts manufactured under MITCOM and is responsible for reviewing the existing maintenance program and amending the maintenance program for the aircraft or aeronautical product, as is necessary, to provide for the continuing airworthiness of the parts manufactured under MITCOM and respond to defects in relation to parts manufactured under MITCOM.
- I.13.2 The COA documentation for the release and control of MITCOM parts should provide for the MITCOM part remaining in the records of the COA holder carrying out the maintenance. It should also include consideration or assessment of any continuing airworthiness control requirements.

I.13.3 Any defects discovered with aircraft components require investigation and possible reporting in accordance with regulation 52 of CAR 1988. After an investigation, if there are safety implications, a report is made to CASA through the CASA Service Difficulty Reporting system.

Note: Refer to [AC 20-06 - Defect Reporting](#) on the CASA website for further information on reporting a defect.