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Civil Aviation Safety Authority

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Maintenance of amateur built aircraft

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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:

- Owners, builders and maintainers of amateur built aircraft registered under Part 47 of the *Civil Aviation Safety Regulation 1988 (CASR)*.

Purpose

The purpose of this CAAP is to provide information and guidance about the maintenance requirements for amateur built experimental (ABE) and amateur built aircraft acceptance (ABAA) aircraft. This CAAP also includes the maintenance procedures training requirements for owner-builders that were previously published as an annex to the Civil Aviation Safety Authority (CASA) Instrument 146/11.

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
v1.2	December 2022	Administrative review only.
v1.1	May 2016	This is the second issue of this CAAP, which updates references to CASA instruments 15/16 (authorisation) and EX 51/15.
v1.0	January 2013	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
ABAA	Amateur-Built Aircraft Acceptance
ABE	Amateur Built Experimental
AC	Advisory Circular
AD	Airworthiness Directive
AIP	Aeronautical Information Publication
CAAP	Civil Aviation Advisory Publication
CAO	Civil Aviation Order
CAR	<i>Civil Aviation Regulations 1988</i>
CASA	Civil Aviation Safety Authority
CASR	<i>Civil Aviation Safety Regulations 1998</i>
IFR	Instrument Flight Rules
LAME	Licensed Aircraft Maintenance Engineer
RO	Registered Operator
VFR	Visual Flight Rules

1.2 Definitions

Terms that have specific meaning within this CAAP are defined in the table below. Where definitions from the civil aviation legislation have been reproduced for ease of reference, these are identified by 'grey shading'. Should there be a discrepancy between a definition given in this CAAP and the civil aviation legislation, the definition in the legislation prevails.

Term	Definition
administering organisation	an organisation approved by CASA to administer certain civil aviation activities.
amateur built aircraft acceptance (ABAA)	an aircraft for which a special certificate of airworthiness has been issued under regulation 21.190 of CASR.
amateur built experimental aircraft (ABE)	an aircraft for which an experimental certificate has been issued for a purpose mentioned in paragraph 21.191 (g), (h) or (j) of CASR.
appropriately rated licensed aircraft maintenance engineer (LAME)	their licence is endorsed with an appropriate subcategory for the aircraft without exclusions that would prevent the performance of the maintenance. For example, a LAME with E10 exclusion could not maintain a wood aircraft structure.

Term	Definition
approved maintenance organisation	(for the purpose of this CAAP) an organisation that holds a CAR 30 or CASR Part 145 approval to carry out the type of maintenance on the aircraft.
authorised person	a person who has been authorised by CASA under regulation 201.001 of CASR or regulation 6 of CAR, and wherever mentioned in this CAAP means a person authorised
eligible owner-builder	the current owner of an aircraft, which they have constructed and that has: <ul style="list-style-type: none"> met the maintenance procedures training requirements set out in Appendix A satisfied the major portion requirement.
licensed aircraft maintenance engineer	a person who holds an aircraft maintenance licence issued by CASA under Part 66 of CASR 1998 and whose licence permits the maintenance and/or certification for maintenance on the aircraft.
maintenance procedures training requirements	a course of training described in 14.2.6Appendix AAppendix A, which results in the issue of a certificate of completion of the course by a person authorised in 0.
major portion requirement	the requirement set out in subregulation 21.191 (g) of CASR that more than half of an amateur-built aircraft must be constructed by an amateur builder in order to qualify for an ABE certificate. The requirement also applies to an owner-builder with respect to the granting of certain maintenance privileges.
owner-builder	a person who has constructed an aircraft for their own use.
primary builder	can be categorised as either: <ul style="list-style-type: none"> that member of a group of builders who has fabricated and assembled more than half of an amateur-built aircraft; or if no one member has fabricated more than half of the aircraft, the member of a group who has been nominated in writing by the group as the primary builder.
registered operator (RO)	the person mentioned in regulation 47.100 of CASR.

1.3 References

Legislation

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

Document	Title
<i>Civil Aviation Act 1988 (the Act)</i>	
CAO 20.18	
CAO 100.5	
CAO 108.56	
Subregulations 179A (1) and (2) of the <i>Civil Aviation Regulations 1988 (CAR)</i>	
Subregulation 41 (2) of	

Document	Title
CAR	
Subregulation 42ZE (1) of CAR	
Regulation 42W of CAR	
Subregulation 43 (7) of CAR	
Schedule 6 of CAR	
Subregulation 207 (2) of CAR	
Subpart 21.M of CASR	

Advisory material

CASA's advisory materials are available at <https://www.casa.gov.au/publications-and-resources/guidance-materials>

Document	Title
AC 21-29	Commercial Assistance During Construction of Amateur-Built Experimental Aircraft and Amateur-Built (ABAA) Aircraft
AC 21-35	Calibration - Inspection and Test equipment
AC 21-46	Airworthiness Approval of Avionics Equipment

Other documents

Document	Title
Aeronautical Information Publication – General (AIP – GEN)	General
Federal Aviation Administration AC 43.13-1B	Acceptable Methods, Techniques, and Practices – Aircraft Inspection and Repair

2 Introduction

2.1 Background

- 2.1.1 Subsection 20AB (2) of the *Civil Aviation Act 1988 (the Act)* prescribes a penalty of 2 years imprisonment for any person performing maintenance on an Australian aircraft or aeronautical product if they are not permitted by the regulations to do so.
- 2.1.2 Unless otherwise permitted, supervision and certification of maintenance of aircraft should be carried out by a licensed aircraft maintenance engineer (LAME). The LAME licence is issued under Part 66 of the *Civil Aviation Safety Regulations 1998 (CASR)* and must contain the appropriate category and subcategory. However, the maintenance may also be carried out by a person holding either:
- an airworthiness authority under regulation 33B of the *Civil Aviation Regulation 1988 (CAR)*, or
 - a welding authority under regulation 33D of CAR.
- 2.1.3 Paragraph 42ZC (4) (e) of CAR makes provision for CASA to authorise a person other than a LAME or airworthiness/welding authority holder to undertake maintenance. It is under this provision that CASA authorises individuals to maintain amateur-built aircraft. The authorisation is provided by means of an Instrument that is published by CASA (currently Instrument number CASA 15/16).
- 2.1.4 An amateur-built experimental (ABE) aircraft is a Class B aircraft and is therefore subject to the maintenance regulations in Part 4A of CAR (excludes CASA exemption or other directions).
- 2.1.5 Subregulation 41 (2) of CAR requires the registered operator (RO) to have a maintenance schedule for the aircraft.
- 2.1.6 An exemption (currently CASA Instrument EX 51/15) allows the use of unapproved aeronautical products in ABE aircraft subject to certain conditions. The exemption also exempts the RO and maintainer from the requirement to have modifications approved under Subpart 21.M of CASR.

2.2 Aircraft covered by this CAAP

- 2.2.1 The following aircraft types are covered in this CAAP:
- an amateur-built aircraft acceptance (ABAA) aircraft that is mentioned in regulation 21.190 of CASR
 - an ABE aircraft that is mentioned in subregulation 21.191 (g) of CASR
 - a kit-built aircraft that is mentioned in subregulation 21.191 (h) of CASR
 - an experimental light sport aircraft that is mentioned in subregulation 21.191 (j) of CASR.

2.3 Maintenance and related activities covered by this CAAP

2.3.1 This CAAP covers the following activities:

- scheduled inspections
- rectifications and modification
- maintenance certifications
- issue of maintenance release.

3 Who may perform maintenance on amateur built aircraft?

- 3.1.1 Maintenance may be performed on ABE aircraft (including kit-built aircraft) by:
- an appropriately rated LAME
 - a member of a group of owner-builders who has met the maintenance procedures training requirements (each member of the group may only maintain those parts of the aircraft that they have fabricated)
 - an eligible owner-builder; or
 - the current sole owner of an amateur-built aircraft who:
 - o is able to satisfactorily demonstrate that they have previously fabricated and assembled the major portion of an aircraft of a similar type
 - o has met the maintenance procedures training requirements.
- 3.1.2 Some examples of a similar type or model of an aircraft would be:
- Vans RV4 and RV8
 - Jodel D11 and Piel Emeraude
 - Rutan Varieze and Q200.
- 3.1.3 A person who has previously been authorised as the owner-builder of a fixed undercarriage aircraft may not subsequently maintain a retractable undercarriage aircraft unless the person has fabricated or assembled the major portion of that aircraft.
- 3.1.4 In order to qualify for a maintenance authorisation and in addition to completing an approved course of training, an amateur builder must provide CASA or an authorised person with approval material such as sufficient documentary, photographic and physical evidence that the person or group has constructed the major portion of the aircraft. This evidence must be provided as the aircraft construction progresses to allow CASA or the authorised person to be assured that the major portion requirement prescribed in subregulation 21.191 (g) of CASR is being complied with, and that the builder has acquired sufficient skills and knowledge to be able to safely maintain the aircraft when completed.
- 3.1.5 This provision does not apply to partnership or syndicate owned aircraft that were not built by the partnership or syndicate.

4 What is the major portion requirement?

- 4.1.1 The major portion requirement refers to the amount of work performed by an amateur builder when constructing an aircraft.
- 4.1.2 In order to qualify for an experimental certificate under subregulation 21.191 (g) of CASR, a person must fabricate and assemble more than half of the aircraft.
- 4.1.3 If a kit-built aircraft is to be certificated under subregulation 21.191 (h) or (j) of CASR, the major portion requirement does not apply for certification purposes.
- 4.1.4 The fabrication/assembly work may be carried out by a single individual, a group of individuals or a series of builders, whether individuals or groups.

4.2 Eligibility for amateur builder maintenance authorisation

- 4.2.1 An amateur builder must fabricate and/or assemble the major portion of the aircraft in order to qualify for a maintenance authorisation regardless of whether the aircraft is certified under subregulation 21.191 (g), (h) or (j) of CASR.
- 4.2.2 The aim of this requirement is to establish that a builder has constructed the aircraft to a sufficient extent that they can be reasonably expected to:
 - understand the construction of the aircraft and any special processes involved, such as:
 - o scarfing and gluing of wood joints
 - o vacuum bagging of composite components
 - o riveting or bonding of metal construction;
 - o or application of fabric covering, etc.
 - have assembled and installed the various systems to a sufficient extent that they have a sound understanding of the systems, how they work and how to ensure that they will continue to meet required performance standards
 - have acquired sufficient relevant hand skills to be able to safely maintain the aircraft to at least the same standard to which it was constructed.
- 4.2.3 A person who solely constructed a plans-built aircraft will easily meet the major portion requirement.
- 4.2.4 If an aircraft is built by a group of individuals such as a syndicate, a co-operative, or a class training project, the individual members of the group are authorised to maintain those parts of the aircraft that they have constructed provided that they have met the maintenance procedures training requirements.
- 4.2.5 A person who maintains a portion of an aircraft under the provisions mentioned in paragraph 4.2.4 must certify for the completion of that maintenance work in the aircraft maintenance records.
- 4.2.6 When an aircraft is constructed by a group, and no single individual has personally completed more than half of the project, then a primary builder must be nominated from that group to coordinate the maintenance, issue the maintenance release and manage the maintenance records. This would normally be the person who co-ordinated the project or performed the most significant portion of the building work.

4.3 Aircraft component kits - case-by-case assessment

- 4.3.1 An aircraft kit that comes with a pre-welded fuselage frame or with spars and ribs prefabricated, but not pre-assembled as wings, would still meet the major portion requirement and a builder would be eligible to qualify as a maintainer.
- 4.3.2 An aircraft that comes with major components prefabricated and ready for bolt-together assembly will not likely meet the major portion requirements. That does not mean that such an aircraft is not entitled to a certificate for the purpose of subregulation 21.191 (h) or (j) of CASR, however, the builder will not qualify to be the maintainer.
- 4.3.3 Aircraft kits that fall between these two parameters should be discussed with CASA or the Sport Aircraft Association of Australia before purchase as they could fall outside the major portion requirements.
- 4.3.4 Advisory Circular (AC) 21-29 discusses commercial assistance during construction of amateur-built aircraft and provides a convenient checklist for assessing whether an aircraft meets the major portion requirement.

5 Who may issue a maintenance release for amateur-built aircraft?

5.1.1 A maintenance release may be issued by one of the following:

- An appropriately rated LAME;
- An eligible owner-builder;
- A person who meets the training requirements set out by CASA in a legislative instrument and:
 - o who solely owns the aircraft and has previously constructed the major portion of a similar aircraft; or
 - o has contributed to the construction of a group-built aircraft and has been nominated in writing by that group as the primary builder for the purpose of issuing maintenance releases.

6 Maintenance responsibilities of the owner-builder

- 6.1.1 If the maintenance is being carried out by an eligible owner-builder, then the owner-builder must be the person performing the maintenance and the certifications. This does not preclude the owner-builder from obtaining assistance from others, particularly if they feel that a particular task is better suited to the skills, expertise or qualifications available from another individual.
- 6.1.2 The owner-builder must manage, oversight, record and certify for the work performed by others and is ultimately the person responsible for the proper completion of all maintenance on the aircraft.
- 6.1.3 The primary builder of a group or a syndicate must ensure that all required maintenance work is carried out, and that each maintenance task is carried out and certified by a person authorised in accordance with paragraphs 4.2.4 and 4.2.5.

7 Use of replacement aeronautical products (parts)

- 7.1.1 ABE aircraft are exempt from the requirements in paragraphs 42W (2) (b), 42W (4) (a) and 42W (4) (c) of CAR to use approved replacement parts, provided that no approved replacement part is available. The RO may use parts that have been made or maintained outside of the requirements of regulation 42W of CAR or salvaged from any source, but not if, for example, a replacement piston is required for a certified engine.
- 7.1.2 If a part is available from the manufacturer of a non-certified factory produced engine (i.e. a Jabiru Aircraft Pty Ltd or Superior Air Parts Inc. engine) then the RO would be required, under the terms of the exemption, to use it.

8 Welded repairs

- 8.1.1 Welded repairs to an Australian registered aircraft or to an aeronautical product for an Australian registered aircraft may only be performed by a person who holds a welding authorisation issued under regulation 33D of CAR.
- 8.1.2 Legislative CASA Instrument 146/11 states that if a welded component needs to be repaired or replaced, and the person maintaining the aircraft is the person who built the aircraft; and is also the person who welded the original part, then that person may perform the welding necessary to repair or fabricate a replacement part for the aircraft.

9 Responsibilities to inspect aircraft

- 9.1.1 A condition inspection is normally required to be carried out annually, and the person completing the inspection is required to certify in the aircraft maintenance records that the aircraft has been inspected in accordance with its maintenance program and found to be in a condition for safe flight. It is an offence under subregulation 43 (7) of CAR to issue a maintenance release if all required maintenance has not been completed and properly certified.
- 9.1.2 In order to properly inspect an aircraft and determine that it is in a condition for safe flight, the owner-builder or LAME must be able to access all:
- control runs
 - structural attach points where wings, empennage, undercarriage and engines are attached (including any internal or external bracing struts or wires)
 - where applicable, glue joints in load bearing structural members (i.e. spars and rib attachments).
- 9.1.3 Failure to adequately inspect the aircraft prior to making a certification is an offence under subregulation 42ZE (1) and Subpart 4.6 of Schedule 6 of CAR.
- 9.1.4 If an owner-builder does not make adequate provision for access to those parts of the aircraft during construction, it should be kept in mind that access panels, and in some cases, inspection rings will be required to be fitted to the aircraft in order for an annual or condition inspection to be carried out.
- 9.1.5 Provision of access panels or inspection rings after the aircraft has been completed could require extensive alterations to be made at a later date. It is in the interests of the builder to ensure that proper access for inspection purposes is provided for during the construction phase.

10 Maintenance schedule for amateur-built aircraft

- 10.1.1 The RO of the aircraft must ensure that the aircraft has maintenance schedule in place that adequately provides for the continuing airworthiness of the whole aircraft and its systems.¹
- 10.1.2 The maintenance schedule may be based on CASA's Maintenance Schedule (Schedule 5 of CAR) or may be a system developed by the owner-builder, which is based on the minimum requirements set out in Schedule 5 of CAR. However, it should be noted that Schedule 5 of CAR is only a schedule and will require additional maintenance instructions to make it a complete maintenance program for the aircraft. Maintenance instructions may be sourced from an engine manufacturer's instructions, a kit manufacturer's instructions or more generic material such as the Federal Aviation Administration AC 43.13-1B.
- 10.1.3 The maintenance schedule must also provide for compliance with the requirements of Civil Aviation Order (CAO) 100.5, CAO 108.56 and any relevant Airworthiness Directives (ADs). A list of Australian ADs can be found on the [CASA website](#).
- 10.1.4 The maintenance schedule will normally be specified in the annex of the experimental certificate issued for an aircraft. If a registered operator of an experimental aircraft makes a change to the maintenance schedule, the changes must be notified to CASA or an authorised person before being implemented, for a determination as to whether the change to the maintenance schedule will require changes to operational limitations.

¹ In accordance with regulation 41 of CAR,

11 Maintenance records

- 11.1.1 An aircraft, regardless of certification basis, must have a set of continuing airworthiness records. This is typically in the form of an aircraft log book to keep a permanent record of maintenance and modification work that is carried out on the aircraft, its engine(s) and its propeller(s). Maintenance releases are required to be kept as a permanent part of the aircraft continuing airworthiness records. The records must be retained for the life of the aircraft, and if the aircraft is sold they must be passed on to the new owner.²
- 11.1.2 The maintainer must make a written record of all maintenance that is performed on the aircraft in the continuing airworthiness record system. Including details of inspections, rectifications, modifications and component changes.³
- 11.1.3 For minor rectifications, the maintenance record may be made on the maintenance release.
- 11.1.4 When larger or more complex maintenance tasks are carried out, the maintenance record should be comprehensively recorded in the aircraft log book. An outline of the maintenance carried out and a return to service certification should also be entered on the aircraft maintenance release.
- 11.1.5 When maintenance is carried out that involves disturbance of, or adjustments to, any of the aircraft's control systems, an additional inspection is required to be carried out in accordance with regulation 42G of CAR.

² In accordance with regulation 50A of CAR.

³ In accordance with Schedule 6 of CAR.

12 Maintenance certifications

- 12.1.1 Each person carrying out maintenance on the aircraft must make a certification in the aircraft maintenance release and/or the aircraft log book stating that all maintenance has been correctly carried out the aircraft is airworthy.
- 12.1.2 The maintenance certification must be signed, dated and include the licence number (if being made by a LAME) or the Instrument number under which an owner-builder is carrying out the maintenance.⁴
- 12.1.3 If an independent inspection has been carried out in accordance with regulation 42G of CAR, the certifications must be made in the aircraft log book in accordance with Schedule 6 of CAR.
- 12.1.4 Regulation 42G of CAR requires the person who carried out the maintenance task to inspect the work and certify that the work was carried out in accordance with the relevant approved data and that all systems function correctly.
- 12.1.5 Subregulation 42G (5) of CAR requires an independent person to inspect the work and certify that the work was carried out in accordance with the relevant approved data and that all systems function correctly.
- 12.1.6 An independent inspection must be carried out by a person who did not carry out the work and who:⁵
- is the builder of the aircraft and authorised to maintain it
 - is a partial builder of the part or system being maintained and is therefore authorised to maintain it
 - holds an aircraft maintenance engineer licence that covers the type of maintenance; or
 - is a pilot (other than a student pilot) who is licensed to fly the aircraft.

⁴ In accordance with Schedule 6 of CAR.

⁵ In accordance with regulation 42G of CAR.

13 Major repairs and modifications

- 13.1.1 If a repair or modification carried out on an experimental aircraft is not a major design change, it is exempt from the approval requirements in regulation 42U of CAR. If a repair or modification is a major design change, the owner-builder or RO must not allow the aircraft to be flown until the repair or modification has been assessed by CASA or an authorised person who has then advised the RO in writing that they are satisfied that the aircraft can reasonably be expected to be safe when operated under the conditions limiting its intended use in its repaired or modified condition.
- 13.1.2 This assessment process may involve one or more of the following actions:
- a flight test program
 - amendments to the maintenance schedule
 - additional operating conditions being imposed on the certificate.

14 Operation related maintenance requirements

14.1 Aircraft to be operated under visual flight rules

- 14.1.1 Subject to paragraphs 14.2.3 and 14.2.5, the eligible owner-builder may maintain and certify for all electrical, instrument and radio communication and navigation systems provided that they are in possession of, or have access to, all necessary testing equipment and such equipment is calibrated in accordance with a recognised standard.
- 14.1.2 The information in paragraphs 14.2.1 and 14.2.2 is included to provide guidance to owner-builders and authorised persons as to what additional equipment and special maintenance may be required if an aircraft is to be operated under instrument flight rules (IFR). Compliance with the requirements does not automatically entitle an aircraft to be flown under IFR or night visual flight rules (VFR). Each operational approval (night VFR or IFR) is specifically granted by CASA or an authorised person.

14.2 Aircraft to be operated under IFR

- 14.2.1 Operations under IFR impose special requirements on certain instruments, and navigation and communications equipment in order to ensure that all airspace users are able to accurately determine their altitude, speed and position at all times and to report the information as required to ensure that safe separation from other aircraft and from terrain is always maintained. The requirements apply equally to aircraft certified in experimental or with standard category certificates of airworthiness.
- 14.2.2 The standards that apply to flight instruments, navigation equipment and communications equipment for operations under IFR are set out in regulations, orders and circulars, which are:
- regulation 179A of CAR - provides a regulatory power under which CASA specifies navigation requirements for aircraft
 - regulation 207 of CAR - requires that instruments and equipment fitted to an aircraft must be approved by CASA
 - CAO 20.18 - specifies which flight instruments and equipment must be fitted to an aircraft
 - CAO 20.18 and Aeronautical Information Publication General (AIP-GEN) - sets out what navigation and communication equipment must be fitted or carried
 - AC 21-46 – sets out performance standards or certification requirements for instruments and radio communications and navigation systems and AIP-GEN
 - AC 21-35 - Information about calibration standards. Testing equipment that is used for establishing the accuracy of IFR equipment must be regularly tested for correct calibration.
- 14.2.3 Required aircraft instrument systems, radio navigation and communication systems to be carried in an aircraft for operations under IFR must be tested and certified as meeting the required standards of performance and accuracy by a LAME who holds a B2 subcategory licence.
- 14.2.4 The remaining maintenance may be performed by the owner-builder and the maintenance release may be issued by the owner-builder once all required

maintenance has been completed and the certifications made in the maintenance records.

- 14.2.5 If maintenance is required by an AD to be performed in order to verify that any item of equipment meets required performance standards, then that maintenance must be certified by a LAME who holds a B2 subcategory licence.
- 14.2.6 A LAME is not required to certify for matters other than the accuracy and performance standards of the specified equipment at the time of testing. Structural attachments of components, integrity of interwiring and system design remain the responsibility of the owner-builder.

Appendix A

Maintainer knowledge syllabus – amateur built aircraft

Item	Topics and standards	Knowledge levels
1	ICAO and CASA's obligations to ICAO	1
2	CASA priorities	1
3	Role of self-administering organisations	1
4	Australian Aviation Law overall structure	1
5	CARs that apply to maintenance by owner-builders	1
6	CASRs that apply to maintenance by owner-builders	1
7	Responsibility of registered operator	3
8	Responsibilities of maintainer	3
9	Guidance material for operators and maintainers	1
10	Type Certificates	1
11	Special Certificates — amateur-built experimental (ABE) and amateur-built aircraft acceptance (ABAA)	2
12	Maintenance Authorities, and CASR Part 66 Licences	1
13	Systems of Maintenance (SOM) — General	1
14	CASA SOM	2
15	Owner generated SOM	2
16	Log book statement	3
17	Minimum Equipment Lists (MELs)	1
18	Flight manuals and placards	2
19	Maintenance data sources	2
20	CAR 2A approval of data	1
21	Automatic approvals of data from foreign NAAs	1
22	Generic data	1
23	Airworthiness Directives (ADs)	3
24	Service Bulletins, Instructions and Notices	2
25	Major Defect reporting	2
26	Safety Management Systems	1
27	Human factors affecting maintenance	1

MAINTENANCE OF AMATEUR BUILT AIRCRAFT

Item	Topics and standards	Knowledge levels
28	Safety in the aircraft workplace	1
29	Drugs and alcohol in safety sensitive aviation activities	1
30	Fuelling of aircraft	1
31	Continuing Airworthiness records	2
32	Weight and balance records	2
33	Recording of maintenance	3
34	Coordination of maintenance	2
35	Certification of maintenance	3
36	Independent inspections of control systems after maintenance	2
37	Maintenance work sheets	2
38	Aircraft log book	3
39	Maintenance release	3
40	Modifications of aircraft	1
41	Approval of modification and major repair data	1
42	Use and care of calibrated equipment	2
43	Fabrication in the course of maintenance (FITCOM)	2
44	AD/ENG/4 Engine condition report	3
45	Authorised Release Certificate	1

Appendix B

Knowledge outcome requirements

Level 1

A familiarisation with the principal elements of the topic such that the following objectives are met.

Objectives:

- The applicant must be familiar with the basic elements of the topic.
- The applicant must be able to give a simple description of the topic, using common words and examples.
- The applicant must be able to use typical terms.

Level 2

A general knowledge of the theoretical and practical aspects of the topic and an ability to apply that knowledge, such that the following objectives are met:

Objectives:

- The applicant must be able to understand the theoretical fundamentals of the topic.
- The applicant must be able to give a general description of the topic using, as appropriate, typical examples.
- The applicant must be able to demonstrate awareness of practical applications of the topic.

Level 3

A detailed knowledge of the theoretical and practical aspects of the topic, and a capacity to combine and apply the separate elements of knowledge in a logical and comprehensive manner, such that the following objectives are met:

Objectives:

- The applicant must be able to describe the underlying intent and implications of the topic.
- The applicant must be able to give a detailed description of the topic using theoretical fundamentals and specific examples.
- The applicant must be able to explain in detail the theoretical and practical application of the topic.

Appendix C

Training course and training organisations recognised by CASA for the purpose of this Instrument

Training course and training organisations recognised by CASA for the purpose of this Instrument:

- Sport Aircraft Association of Australia Maintenance Procedures Course as approved by CASA.
- A CASR Part 147 Maintenance Training Organisation that is approved by CASA to provide basic maintenance licence training.