



ADVISORY CIRCULAR AC 21-05 v2.1

Limited category aircraft - certification

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Advisory Circulars are intended to provide advice and guidance to illustrate a means, but not necessarily the only means, of complying with the Regulations, or to explain certain regulatory requirements by providing informative, interpretative and explanatory material.

Advisory Circulars should always be read in conjunction with the relevant regulations.

Audience

This Advisory Circular (AC) applies to:

- owners of, or persons interested in historic, replica and ex-military aircraft
- owners of, or persons interested in other types or classes of limited category aircraft
- persons engaged in restoration of limited category aircraft
- authorised or appointed persons involved in the certification of limited category aircraft.

Purpose

This AC explains the process for certifying a limited category aircraft under Subpart 21.H of the *Civil Aviation Safety Regulations 1998 (CASR)*.

This AC also provides information for owners of warbird, historic and replica aircraft about the requirements related to restoring and modifying the aircraft for the purpose of obtaining a Certificate of Airworthiness (CofA).

For further information

For further information on this AC, contact Civil Aviation Safety Authority's (CASA's) Self-Administering Sport Aviation Organisations section (telephone 131 757).

Unless specified otherwise, all subregulations, regulations, divisions, subparts and parts referenced in this AC are references to the *Civil Aviation Safety Regulations 1998 (CASR)*.

Status

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

Note: Changes made in the current version are annotated with change bars.

Version	Date	Details
v2.1	August 2017	<p>This version:</p> <ul style="list-style-type: none"> incorporates minor terminology changes and some typographic corrections includes additional clarification about modifications to limited category aircraft.
v2.0	January 2017	<p>This is a comprehensive rewrite of the original AC. The AC has been amended to explain the changes that have been brought about by the introduction of Part 132 of CASR.</p> <p>The changes relate to:</p> <ul style="list-style-type: none"> persons who may issue a special CofA in the limited category (limited certificate) purposes for which experimental certificates may be issued to ex-armed forces aircraft. <p>Note: Information of an operational nature has been deleted and has been included in AC 132-01.</p>
(0)	November 1998	Initial release

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1 Reference material

1.1 Acronyms

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

Acronym	Description
AC	advisory circular
AD	airworthiness directive
CAO	Civil Aviation Order
CAR	<i>Civil Aviation Regulations 1988</i>
CASA	Civil Aviation Safety Authority
CASR	<i>Civil Aviation Safety Regulations 1998</i>
CofA	certificate of airworthiness
ICAO	International Civil Aviation Organization
MOS	Manual of Standards
MTOW	maximum take-off weight
NAA	National Airworthiness Authority
WHR	warbird, historic or replica aircraft

1.2 Definitions

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

Term	Definition
Administering authority	For a limited category aircraft means: (a) a limited category organisation in relation to the aircraft; or (b) if there is no limited category organisation in relation to the aircraft, CASA.
Appointed person	(1) A person who is appointed, in writing, by an administering authority to assess an application and issue a special CofA on the authority's behalf. The appointed person may also apply a permit index number to an aircraft and place any conditions on a special certificate of airworthiness in accordance with the approved procedures set out in the administering authority's exposition (2) A person who has been approved by the administering authority in accordance with regulation 132.185 for the purpose of assessing a warbird that has: <ul style="list-style-type: none"> • exceeded its approved airframe life • exceeded the service life limit of a safety critical component of the aircraft; or • had a major modification made to it that is not an approved modification.

Term	Definition
Approved airframe life	<p>the airframe life stated in the most recent of the following:</p> <ol style="list-style-type: none"> a. the aircraft's approved design; b. a variation (if any) of the airframe life by the national aviation authority of the country of the aircraft's manufacture; c. if the aircraft is an ex armed forces aircraft—a variation (if any) of the airframe life by the armed force that operated the aircraft or for which the aircraft was manufactured; d. a certificate (if any) stating an airframe life for the aircraft's airframe given by the administering authority for the aircraft. <p>Note: Airframe life may be expressed in a number of ways, including the amount of operating time, the number of operating cycles or a calendar period.</p>
Approved modification	<p>A modification to an aircraft that has been approved (however described) by any of the following:</p> <ul style="list-style-type: none"> • the aircraft's manufacturer • the administering authority • the NAA of a foreign country under a law of the foreign country • if the aircraft is an ex-armed forces aircraft—an armed force that operated the aircraft or for which the aircraft was manufactured
Authorised person	<p>A person who has been authorised by CASA to perform certain functions on behalf of CASA. An authorised person will have been authorised by means of a CASA Instrument of Authorisation under regulation 6 of <i>Civil Aviation Regulation 1988 (CAR)</i> or regulation 201.001.</p>
Ex-armed forces aircraft	<p>Either:</p> <ol style="list-style-type: none"> a. a version of an aircraft that has been manufactured in accordance with the requirements of, and accepted for use by, an armed force of any country (whether or not it has been used by such a force) <p style="text-align: center;">or</p> <ol style="list-style-type: none"> b. a particular aircraft: <ol style="list-style-type: none"> i to which paragraph (a) does not apply; and ii that has been operated by an armed force of any country
Historic aircraft	<p>Can be any of the following:</p> <ol style="list-style-type: none"> a. an aircraft that was manufactured before 1 January 1960 <p style="text-align: center;">or</p> <ol style="list-style-type: none"> b. an Australian manufactured aircraft of a type that is no longer being manufactured <p style="text-align: center;">or</p> <ol style="list-style-type: none"> c. a replica of an aircraft mentioned in paragraph (a) or (b) <p style="text-align: center;">or</p> <ol style="list-style-type: none"> d. an aircraft prescribed by the Part 132 Manual of Standards for this paragraph.
Maintenance release	<p>CASA Form 918. The requirements for a maintenance release are set out in Division 9 of CAR and Civil Aviation Order (CAO) 100.5.</p>

Term	Definition
Major modification	A modification or combination of modifications that has a significant effect on a characteristic affecting the aircraft's airworthiness, including any of the following: <ul style="list-style-type: none"> • the weight and balance of the aircraft • the structural strength of the aircraft • the reliability of the aircraft • the performance of the aircraft • the operational characteristics of the aircraft.
Replica aircraft	For the purpose of Part 132 and paragraph 21.189 (3) (f), an aircraft is a replica aircraft if it is built to the same proportions as the original aircraft and its design and construction is based on the original design standards and construction methods. This does not preclude the use of substitute engines or materials if required in the interest of improved safety, or if original engines or materials are no longer procurable.
Warbird	Ex-armed forces aircraft are commonly referred to as warbirds and for reader convenience, where the term warbird is used in this AC, it refers to an ex-armed forces aircraft.
Weight control officer	A person who has been issued an authorisation under paragraph 33B (1) (e) of CAR.

1.3 References

Regulations

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

Document	Title
the Act	<i>Civil Aviation Act 1988</i>
Regulation 21.189	Special certificate of airworthiness for limited category aircraft
Regulation 21.191	Experimental certificates
Part 45	Display of nationality and registration marks and aircraft registration identification plates
Part 47	Registration of aircraft and related matters
Part 66	Continuing airworthiness – aircraft engineer licences and ratings
Part 132	Limited category aircraft
Part 145	Continuing airworthiness – Part 145 approved maintenance organisations
Part 132 MOS	Part 132 Manual of Standards
Division 9 of <i>Civil Aviation Regulations 1988</i> (CAR)	Maintenance releases
Regulation 33B of CAR	Airworthiness authorities
Regulation 42G of CAR	Flight control system: additional requirements

Document	Title
Subregulation 43 (9) of CAR	Maintenance releases in respect of Australian aircraft
Subregulation 42ZC (4) of CAR	Maintenance on Australian aircraft in Australian territory
Aircraft noise regulations	<i>Air Navigation (Aircraft Noise) Regulations 1984</i>
Regulation 262AN of CAR	Approved organisations
Schedule 7 of CAR	Maintenance that must not be carried out on a Class B aircraft by a person referred to in paragraph 42ZC(4)(b)
Schedule 8 of CAR	Maintenance that may be carried out on a Class B aircraft by a person entitled to do so under subregulation 42ZC(4)
Civil Aviation Order (CAO) 100.5	General requirements in respect of maintenance of Australian aircraft

Advisory material

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

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

Document	Title
AC 21-10	Experimental Certificates
AC 21-25	Limited Category Aircraft Permit Index
AC 21-47	Flight Test Safety
AC 132-01	Limited Category Aircraft Operation
CAAP 43-1	Maintenance Release

Other reference material

Document	Title
	Annex 8, Airworthiness of Aircraft to the Convention on International Civil Aviation (the Chicago Convention).
General information about warbirds	CASA Warbirds web page

1.4 Forms

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

Form number	Title
918	MAINTENANCE RELEASE (includes flight and technical records)

2 Introduction

For reader convenience, the terms 'limited certificate' and 'limited category aircraft' will be used throughout this document when referring to a special certificate of airworthiness in the limited category or an aircraft that is certified in the limited category, respectively.

2.1 CASA liability

2.1.1 Limited category aircraft operators should note the content of regulation 201.003, which states:

Neither the Commonwealth nor CASA is liable in negligence or otherwise for any loss or damage incurred by anyone because of, or arising out of, the design, construction, restoration, repair, maintenance or operation of a limited category aircraft or an experimental aircraft, or any act or omission of CASA done or made in good faith in relation to any of those things

Note: This does not include reference to an authorised person.

2.2 Overview

2.2.1 Civil aircraft are designed in accordance with certification standards and criteria that have been developed by civil authorities with the focus being on safety and reliability. The guiding document is Annex 8, Airworthiness of Aircraft to the Convention on International Civil Aviation (the Chicago Convention).

2.2.2 Aircraft produced for the armed forces are normally designed to meet specific military operational specifications and the design standards used to achieve these requirements are generally not known to civil authorities.

2.2.3 In order to safely manage these unknowns, CASA has made provision for military aircraft to continue in civil use once their military life has ended by operating under a limited certificate. The aircraft in civil use may be subject to a range of safety based operational restrictions. These restrictions are framed to ensure that risks to the general public are minimised. The conditions and operational limitations are set out in the regulations (see Part 132).

2.2.4 Any aircraft which does not have a standard Certificate of Airworthiness (CofA) cannot be operated unless it has been issued with a special flight permit or a special CofA, such as a limited certificate.

2.2.5 Regulation 21.189 allows an administering authority to issue a limited certificate for an aircraft that is:

- an ex-armed forces aircraft
- a historic or replica aircraft
- an aircraft that meets the airworthiness requirements for the issue of a standard CofA, except for any requirements that the administering authority considers to be inappropriate for the special purpose operation for which the aircraft is to be used.

- 2.2.6 The limited certificate allows operation of such aircraft for one or more of the special purpose operations that are set out in subregulation 21.189 (3), and listed for convenience in section 2.4.

2.3 General information

- 2.3.1 The limited category provisions in Part 21, in conjunction with Part 132 permit a wide range of civil operations to be carried out in a warbird or historic aircraft, ranging from personal use to adventure flights.
- 2.3.2 Type certificates or type acceptance certificates are not required for limited category aircraft.
- 2.3.3 A limited category warbird, historic or replica (WHR) aircraft is not required to comply with any specific civil airworthiness standards or design codes.
- 2.3.4 Non-WHR aircraft are required to comply with appropriate civil airworthiness standards for standard aircraft except those that are considered inappropriate for the special purpose operation.
- 2.3.5 The aircraft can be of any shape, weight, engine configuration or size, but are limited to the carriage of six occupants (meaning passengers and crew) or less, unless specifically approved by the administering authority to carry more persons (safety case required).
- 2.3.6 Limited category aircraft may only be operated in accordance with conditions placed on their CofA and the limitations, procedures and requirements as set out in Part 132.

2.4 Prescribed purposes

- 2.4.1 The limited category certification regulations are specifically intended to allow otherwise ineligible aircraft to be certificated for any one or more of the following special purposes:
- adventure style operations (historic or ex-military aircraft only)
 - aerobatic flights
 - aerobatic training
 - exhibition flights
 - mock combat
 - operating replica aircraft
 - carrying people for parachute jumping (excluding tandem jumps or training jumps)
 - any other operation in which the only use of the aircraft is to carry people taking part in a recreational activity that is intrinsically hazardous.

Note: A limited category aircraft may be certificated for more than one of the purposes listed above.

- 2.4.2 In addition to one or more of the special purposes that may be listed on a limited certificate via its annex, Part 132 also permits a range of authorised operations.¹

¹ For further information, refer to Advisory Circular (AC) 132-01.

2.5 Discussion of administering authority

- 2.5.1 While always retaining the power to process applications for licences, certificates or approvals, CASA is not required to process applications if there is already an organisation or individual in place who is approved to process a particular application. Wherever this AC states that an application must be made to an organisation, such as an administering authority, CASA will not normally provide itself as an alternate venue for the processing of that application.

3 The certification process

3.1 Eligibility

- 3.1.1 The basic eligibility requirement for certification of an aircraft in the limited category is that it is one of a type that has, at some stage, undergone a formal airworthiness acceptance process by either a civil or a military authority.
- 3.1.2 If the aircraft type is of military origin, then it must have been produced in accordance with the requirements of, and accepted by, an armed force of any nation. It is not a requirement that an aircraft had been put into service having passed through the development, flight testing and acceptance stages. It is possible for an aircraft to be made redundant by changed requirements or circumstances after acceptance, but before it entered service.
- 3.1.3 If the aircraft is of civil origin, then the administering authority must be satisfied that the aircraft meets the airworthiness requirements (present or past) applicable to an aircraft for which a standard CofA has been issued. Except for any requirements that are inappropriate for the special purpose for which the aircraft is to be used.
- 3.1.4 Examples of aircraft that could be eligible to operate in the limited category are:
- ex-military aircraft (e.g. Hawker Hunter, Sabre, MIG-17, MIG-21, T-28, Winjeel, Harvard, Spitfire, Kittyhawk, B-17, C-47)
 - historic aircraft of civil origin (e.g. Comper Swift, Yakovlev Yak 18T)
 - replica aircraft (e.g. Me-109 replica; the Southern Cross replica)
- 3.1.5 Aircraft designed specifically for research or experimental purposes (e.g. the Avro 707 series) or prototype aircraft are not eligible for certification in the limited category. However, they may be eligible for an experimental certificate under subregulation 21.191 (i) private operations of a prototype aircraft.
- 3.1.6 A warbird, historic or replica aircraft will be issued with a limited certificate if the administering authority is satisfied that the aircraft can be reasonably expected to operate at an acceptable level of safety if flown in accordance with any limitations or conditions that the administering authority may place upon the aircraft's limited certificate. The conditions could be:
- speed restrictions
 - reduced maximum take-off weight (MTOW)
 - reduced passenger numbers
 - aerobatic limitations
 - geographic restrictions.

3.2 Airframe life

- 3.2.1 It may be difficult to determine whether or not a particular WHR aircraft has reached or exceeded its approved airframe life (if applicable). Factors that could make such a determination difficult could include:
- loss or destruction of service records

- an aircraft that has been constructed using major assemblies from a number of donor aircraft
- an aircraft that has been restored from 'basket case' condition and includes many new major parts that have been manufactured in the course of maintenance, and in some cases, by reverse engineering.

- 3.2.2 If an ex-armed forces aircraft has exceeded its approved airframe life, or if its airframe life status is unable to be determined, it will still be eligible for a limited certificate if an appointed person authorised by the administering authority has assessed the aircraft and determined that it can be safely flown beyond the approved airframe life. This determination is subject to any conditions that the engineer may specify for the aircraft (i.e. weight, speed, aerobatics or G-loadings). The assessing engineer may also specify additional inspections and maintenance requirements, and may place a limitation on the further use of the aircraft in terms of total flight hours, landing cycles or engine starts.
- 3.2.3 For the purposes of adventure flights, the appointed person may approve a new airframe life either during initial issue of a limited certificate or at a later time.

3.3 Time-expired aeronautical products (components)

- 3.3.1 An aircraft may have a number of components that have a service life limit prescribed by the manufacturer of the aircraft or of a particular component of an aircraft. A military user or a national airworthiness authority (NAA) (including CASA) could also specify a service life limit for some components based on operational experience. The life limit could be expressed in terms of flight hours, operation cycles, or calendar time and may require that at the expiry of the specified time in service, the component must be overhauled, remanufactured or scrapped.
- 3.3.2 It may not always be feasible to source replacement components or the necessary spare parts to complete an overhaul. However, an aircraft that has time-expired components may still be issued with a limited certificate if:
- the administering authority has determined that the life limited component is not an item of equipment that is essential for the safe operation of the aircraft in a non-military role
 - an appointed person has assessed the aircraft and determined that it can be safely flown with the time-expired component subject to any special conditions that may be applied²
 - an aircraft that has a safety critical aeronautical component which has exceeded its life limit, may not be operated for adventure flights or flown over a populous area unless an administering authority has determined that the component is not safety critical.³

² Refer to the Part 132 Manual of Standards (MOS).

³ In accordance with paragraph 132.175 (1) (d).

3.4 Modifications

3.4.1 If modifications have been made to a limited category aircraft, the modifications do not require approval for the purpose of issuing a limited certificate. However, it is a requirement that the person issuing the certificate must be satisfied that the aircraft can reasonably be expected to be safe when it is operated under the conditions limiting its intended use.⁴

3.4.2 Major modifications that are not covered by approved data should be assessed by the person issuing the certificate. They will make a determination as to whether any conditions or limitations should be imposed on the aircraft's limited certificate.

Note: If a limited category aircraft has a major modification that is not covered by approved data, then it will be subject to operational restrictions under Part 132.

3.4.3 Changes to a limited category aircraft, such as modifications and repairs that meet the definition of a major modification (see section 1.2) for which there is no approved data, must be assessed by an administering authority if the aircraft is to be operated for adventure flights⁵ or over a populous area.⁶

3.4.4 The aircraft may have conditions applied to the limited certificate if the assessing person feels that the modification may have a negative effect on the safety or performance of the aircraft. This means that a warbird that was originally powered by an engine that is no longer available, may be fitted with a substitute engine without penalty, if the modification does not adversely affect the aircraft's:

- performance
- safety
- reliability
- structural integrity
- weight and balance.

3.4.5 In all cases, the final decision of whether or not to issue a limited certificate will rest with the administering authority. It is in the owner's interest to ensure that any engineering analysis is sufficiently comprehensive to assist the administering authority to arrive at a decision as to whether or not to issue a certificate. During assessment, the administering authority will either:

- issue a certificate with appropriate conditions attached
 - refuse to issue a certificate
- or
- request further engineering analysis.

3.5 Restoration

3.5.1 Restoration in this context means the work required to allow the aircraft to:

- be operated in accordance with the Flight Manual/pilot's notes

⁴ In accordance with paragraph 21.189(1)(c).

⁵ In accordance with regulation 132.105.

⁶ In accordance with paragraph 132.075 (8) (c).

- be in a state that, as far as can be determined, an authorised person or CASA is satisfied that the aircraft can reasonably be expected to be safe when operated under the conditions limiting its use.
- 3.5.2 Restoration of a warbird can vary widely in scope and complexity depending on the aircraft's type, age and physical state (at commencement of the project). For example, an aircraft that has been operating just prior to shipment to Australia may require little or no restoration before CofA issue, whereas, a non-operational warbird (i.e. has been parked in the open for decades) may require thousands of hours of restoration work.
- 3.5.3 Where an aircraft has, until recently, been in use by an armed service and is still essentially fully serviceable (apart from being dismantled for shipping) the aircraft may only require a normal post-maintenance air test to demonstrate its serviceability. In such cases, the appointed person may consider it appropriate to by-pass the need for an experimental certificate and issue the limited certificate. This is subject to an endorsement on the maintenance release that states the aircraft must first complete a satisfactory air test.⁷
- 3.5.4 The restoration work must be carried out by an approved maintenance organisation whose scope of approval permits the work.⁸ This does not prevent work being carried out by the owner or some work being done by specialists, provided that it is carried out under the control and supervision of the maintenance organisation and the work is properly certified by the maintenance organisation.

3.6 Restoration by the owner

- 3.6.1 Under subsection 20AB (2) of the Act, it is an offence that carries a penalty of imprisonment for up to 2 years if a person carries out maintenance on an aircraft in Australia and is not permitted by regulations to do so. This also applies to maintenance of an aeronautical product for an Australian aircraft. If an owner performs restoration work on a warbird and does not meet the regulatory requirements, they are at risk of being charged under the Act.
- 3.6.2 A person who carries out maintenance on an aircraft (other than pilot maintenance allowed under Schedule 8 of CAR) must:
- hold a CASA aircraft maintenance engineer licence
 - hold a maintenance authority issued by CASA under regulation 33B of CAR
 - if the maintenance is specified in Schedule 7 of CAR, the person must be employed by an organisation that holds an approval to provide maintenance services under regulation 30 of CAR or Part 145
- or
- work under the supervision of one of the above.
- Note:** Subregulation 42ZC (4) of CAR makes provision for an individual to carry out maintenance work under the supervision of an approved maintenance organisation.
- 3.6.3 Warbird, historic or replica aircraft owners who have purchased an aircraft with the intention of doing some or all of the restoration work themselves should ensure that

⁷ Refer to subregulation 43 (9) of the *Civil Aviation Regulations 1988* (CAR).

⁸ In accordance with subsection 20AB (2) of the Act.

before work commences, they have in place a documented arrangement with an approved maintenance organisation.

3.7 Documentation

3.7.1 When carrying out a restoration project on a WHR aircraft, it is important that the restorer makes comprehensive records of the work including details of each maintenance task carried out, the maintenance data used, materials used and any other information which will assist the person issuing the limited certificate and permit index number. Photographs should be used wherever possible, particularly for recording work that will not be easily visible when the aircraft is completed. A poorly documented restoration will result in a more restrictive permit index number.

3.8 Registration and marking

3.8.1 Before application for issue of the limited certificate, the aircraft must be registered.⁹

3.8.2 As well as the nationality and aircraft registration marks, the following markings are required:⁴

- an aircraft registration identification plate must be attached to an accessible location near an entrance
- an aircraft data plate with specific information that identifies the aircraft imprinted on it must be fixed to the aircraft
- the word 'LIMITED' must be displayed on the outside of the aircraft near each entrance to the cabin or cockpit in letters not less than 5 cm or more than 15 cm in height. The letters must be in block capitals of a style that is conspicuous, legible and easily read by each person entering the aircraft
- for other than single-seat aircraft, subparagraph 132.050 (2) (e) requires that a warning placard must be displayed in the cabin or cockpit at a location in full view of all passengers, with the wording:

WARNING

PERSONS FLY IN THIS AIRCRAFT AT THEIR OWN RISK

**THIS AIRCRAFT WAS NOT DESIGNED FOR AIR TRANSPORT OPERATIONS AND IS NOT
REQUIRED TO BE OPERATED TO THE SAME SAFETY STANDARDS AS AN AIRCRAFT
USED FOR AIR TRANSPORT OPERATIONS**

⁹ Refer to Parts 45 and 47.

4 Application for the limited category CofA

4.1 Overview

- 4.1.1 Application should be made to the administering authority, details of which can be found at the CASA Warbirds web page.
- 4.1.2 The following documents should accompany the application form:
- a written statement that establishes the purposes for which the aircraft is to be used. This should include details of aircraft basing, areas of operation, approximate hours per year, intentions for passenger carriage/payment
 - sufficient data to identify the aircraft (e.g. photographs, three-view drawings)
 - a maintenance schedule for the aircraft that adequately provides for the continuing airworthiness of the aircraft.
- 4.1.3 Depending on the size, condition, age and complexity of the aircraft involved, and the purposes for which the limited certificate is being sought, the administering authority may require other documentation to be provided in support of the application (e.g. the completed restoration schedule worksheets, airframe life substantiation).

4.2 Aircraft inspection

- 4.2.1 If no restoration has been involved and no experimental certificate has been issued, then the appointed person will inspect the aircraft to assess as far as can reasonably be determined:
- that the aircraft is in a good state of preservation and repair, and in a condition for safe operation
 - if work has been carried out on control systems - an independent inspection of the control system has been carried out and certified by a person described in subregulation 42G (5) of CAR. This is normally a licenced aircraft maintenance engineer whose licence covers the type of maintenance or a pilot whose licence is valid for the type of aircraft.
- 4.2.2 If the aircraft has been extensively restored, the appointed person may also decide to inspect work records to ensure that the required certifications have been made by appropriately qualified persons.
- 4.2.3 The final inspection by the appointed person should take place before the first test flight. The range of tests conducted during the test flight period will vary, depending on the:
- elapsed period since last flight
 - degree of disassembly and reassembly involved for shipment (if any)
 - degree of engine/system inhibition/de-inhibition involved
 - extent and complexity of any restoration carried out

Note: The appointed person carrying out the inspection is not responsible for the integrity of the design or construction of the aircraft, or for the identification of any structural design or construction deficiencies.

4.2.4 The aircraft should be complete and ready to fly, except that cowlings, fairings and panels may be opened for the inspection. The aircraft should have completed the:

- weight and balance exercise
- airframe and control rigging checks
- aircraft flight control duplicate checks
- fuel system checks
- full power runs
- compass swing
- undercarriage retraction test
- taxi tests (as applicable).

4.2.5 The aircraft cannot be issued with a maintenance release before it is issued with a CofA.¹⁰ However, there should be a certification in the aircraft maintenance records stating that a maintenance release inspection has been satisfactorily completed. Once the CofA has been issued, the maintenance release must be issued before the aircraft is flown.¹¹

Note: The appointed person may wish to observe an engine run during the inspection.

4.2.6 The aircraft may be taxied, and carry out high-speed runs (if required) on a runway prior to the experimental certificate being issued. However, it is illegal for the aircraft to lift off from the runway under these conditions unless it has been issued with a CofA and has a valid maintenance release.

4.2.7 The scope of the inspection is limited to ensuring:

- the aircraft is registered and marked in accordance with requirements discussed in section 3.8
- the completion of the relevant inspection requirements, as described in this AC
- the aircraft has been weighed and the weight and balance data has been compiled under the supervision of a weight control officer
- the engine(s) and flight controls operate correctly
- the pitot-static system and associated instruments operate correctly
- all applicable Australian ADs have been complied with
- all maintenance has been properly certified by appropriately qualified persons.

4.2.8 If the appointed person deems flight testing to be necessary, an experimental certificate issued in accordance with subregulation 21.191 (b) will be required before the aircraft can be test flown.¹²

4.3 Maintenance release

4.3.1 Under regulation 139 of CAR, a pilot commits an offence if a flight is made and a maintenance release is not carried in the aircraft. A maintenance release can only be issued for an aircraft that is registered, has a valid CofA and has completed a maintenance release inspection.

¹⁰ In accordance with subregulation 43 (6) of CAR.

¹¹ In accordance with paragraph 139 (1) (c) of CAR.

¹² For further information, refer to AC 21-10 and 21-47.

- 4.3.2 Before the first flight of a newly-certificated warbird, the owner must ensure that the maintenance release inspection has been completed and a maintenance release issued by a maintenance organisation that holds the appropriate approvals.^{13 14}

4.4 Pilot qualifications

- 4.4.1 A pilot must hold a valid Part 61 licence, including any ratings or endorsements that are applicable to the type of aircraft being flown.¹⁵

¹³ In accordance with paragraph 139 (1) (c) of CAR.

¹⁴ For further information on the issue and use of a maintenance release, refer to CAAP 43-1.

¹⁵ Details of required ratings can be found in *Legislative Instrument - CASR 1998 - Prescription of aircraft and ratings - CASR Part 61*.

5 Issue of the limited category CofA

5.1 Overview

- 5.1.1 After final document checks are completed, and the appointed person is satisfied that the aircraft is in a safe condition for the intended operations, the appointed person will complete the outstanding sections of the application form, and then issue a limited certificate, together with an annex detailing the limitations associated with long-term operation of the aircraft.
- 5.1.2 The range of conditions/limitations that may be selectively applied to the limited certificate include:
- the standard operating limitations listed at Appendix B – (a) to (f)
 - the additional operating limitations – numbers (g) to (p).

Note: Nothing precludes the appointed person adding further conditions/limitations as they see fit to minimise risks to other airspace users and persons on the ground or water.

- 5.1.3 The geographical operating limitations are based on the permit index.¹⁶

5.2 Duration

- 5.2.1 The limited certificate would normally be issued without an expiry date, meaning that it remains in force until cancelled, or until the aircraft ceases to be registered, whichever occurs first.

5.3 Cancellation/suspension

- 5.3.1 CASA has the power to suspend or cancel a limited certificate if CASA considers that the action is warranted in the interests of safety.
- 5.3.2 A suspended certificate will be reinstated on a date prescribed by CASA or when any required rectification action is completed.
- 5.3.3 If the limited certificate has been cancelled, either on safety grounds or because the aircraft ceases to be on the Australian register, then a new certificate would have to be applied for. There is no provision for a 'reissue' in the regulations.

5.4 Surrender

- 5.4.1 If a limited certificate is suspended or cancelled, the holder of the certificate must surrender it to CASA on written request from CASA.¹⁷

¹⁶ For further information on permit indexes, refer to AC 21-25.

¹⁷ In accordance with regulation 21.195B.

6 Associated matters

6.1 Noise certification

- 6.1.1 Noise certification for aircraft is not regulated by CASA, however, it is required before the aircraft can legally be operated in Australian territory. Aircraft noise is regulated through the *Air Navigation (Aircraft Noise) Regulations 1984* (introduced in 1984 under the *Air Navigation Act 1920*).
- 6.1.2 Noise certification (or the lack of) has no legal impact on the individual special CofA issue. If an individual aircraft does not meet the Australian noise requirements, then it is illegal for that aircraft to operate in Australian territory, even though the aircraft may have a valid special CofA.¹⁸

6.2 Aircraft import

- 6.2.1 The formalities of importing an aircraft are not directly associated with the application for issue of a limited certificate. These matters do not involve CASA, other than as an interface for issue of documentation that might be used to facilitate ferry of the aircraft to Australia. The owner is advised to contact the Australian Customs Service for further advice (refer to Appendix A for contact details).

6.3 Unpaved runway certification

- 6.3.1 Individual aeroplanes with an MTOW of less than 5,700 kg may operate on unpaved runways in Australia without the need for formal certification. Aeroplanes with a MTOW above 5,700 kg are required to be certificated (by aircraft type) for such operations, with appropriate flight manual supplements or integrated data in the aircraft flight manual.

¹⁸ Aircraft noise certification is administered by Airservices Australia and further information may be obtained on the Airservices Australia website. Refer to Appendix A for contact details.

Appendix A

Contact details of advisory organisations

Australian Customs

Website: www.customs.gov.au

Email information@customs.gov.au

Phone: 1300 363 263

Australian Warbirds Association Limited

Website: <http://www.australianwarbirds.com.au/>

Email: admin@australianwarbirds.com.au

Civil Aviation Safety Authority

Website for 'Delegate search and/or an authorised person':

<https://www.casa.gov.au/standard-page/delegate-search-andor-authorised-person>

CASA Test Pilot

C/- CASA

GPO Box 2005

Canberra ACT 2601

Telephone: 131 757

Airservices Australia

Website: <http://www.airservicesaustralia.com/services/aircraft-noise-certification/>

Email: noise.assessment@airservicesaustralia.com

Flight Test Society of Australia

Website: www.ftsa.org.au/

Appendix B

Sample operating limitations

Standard Limitations

- a. All operations in this aircraft must be carried out in accordance with the limitations and special requirements that are set out in this appendix.
- b. Operation of this aircraft is limited to the following purposes:

.....

and those authorised operations mentioned in regulation 132.055.

- c. If the aircraft has a permit index of 0:
 - this aircraft has a permit index of 0: No restrictions apply to flights over populous areas
 - if the aircraft has a permit index number of one 1:
 - o this aircraft has a permit index of 1 and must not be flown over a populous area except for taking off and landing at aerodromes not described in Part 132 MOS as being unsuitable for permit 1 operation.
 - o flights over populous areas other than for taking off or landing in accordance with subregulation 132.075 (4) must approved in writing by an administering authority.

or

- if the aircraft has a permit index of 2:
 - o this aircraft has a permit index of 2 and must not be flown over a populous area unless approved in writing by CASA

or

- if the aircraft has a permit index of 3:
 - o this aircraft has a permit index of 3 and is prohibited from flying over a populous area

additionally:

- if the aircraft has a permit index other than 0:
 - o when operating instrument flight rules and/or in controlled airspace, the pilot-in-command of this aircraft must notify Air Traffic Control of the limited category nature of this aircraft and of the restrictions that apply to flights over populous areas.

- d. No person may operate this aircraft unless the CofA and its annex are available to the pilot and the pilot has familiarized themselves with the limitations and restrictions that apply to operations in this aircraft.
- e. If the aircraft is not equipped and certified for night operations the aircraft must be flown only by day.
- f. If the aircraft is not equipped and certified for instrument flight the aircraft must be flown under visual flight rules only.

Additional operating limitations

- g. The aircraft is prohibited from aerobatic flight such as, any intentional manoeuvre involving an abrupt change in the aircraft's attitude, an abnormal attitude, or abnormal acceleration not necessary for normal flight.

or

- h. The aircraft may only conduct the following aerobatic flight manoeuvres:
- i. A parachute must be worn for..... (flights/hours/operations)
- j. The aircraft may only be flown by..... (name of pilot).
- k. The following restrictions are applied:
 - (speeds)
 - (weights)
 - (altitudes)
 - (attitudes)
 - (load factors)
 - (CG limitations)
- l. The aircraft has exceeded its approved airframe life.
Flights over populous areas are not permitted and passengers must not be carried for payment.
- m. The aircraft contains components that are essential for safe flight and that have exceeded their approved operating life limitations.
Flights over populous areas are not permitted and passengers must not be carried for payment.
- n. The aircraft has had modifications incorporated that have not been approved in accordance with regulation 132.030.
Flights over populous areas are not permitted and passengers must not be carried for payment.
- o. If adventure flights are conducted:
- p. Adventure flights may only be conducted in accordance with the VH-XXX adventure flight procedures.