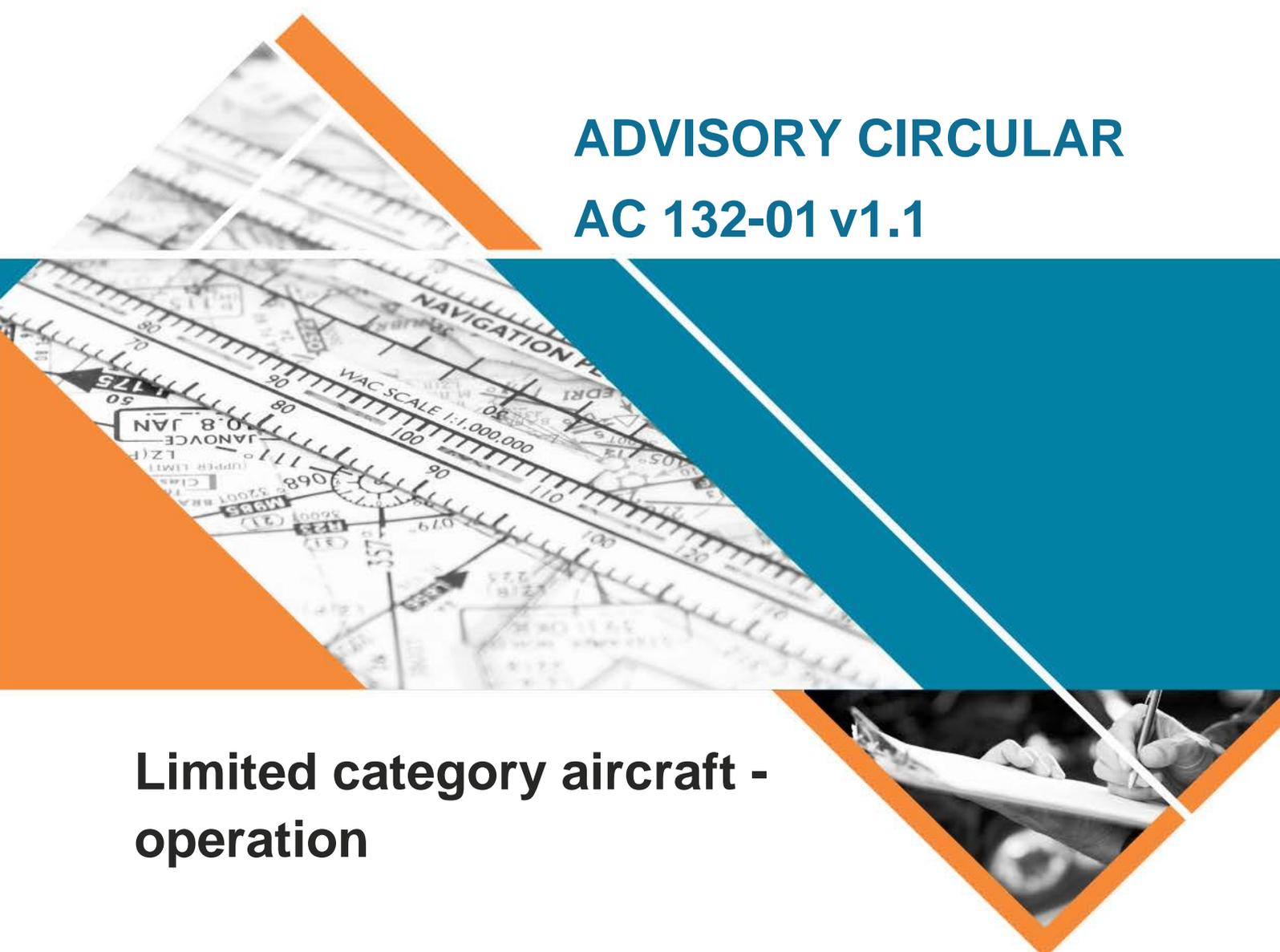




ADVISORY CIRCULAR

AC 132-01 v1.1



Limited category aircraft - operation

Date	May 2018
File ref	D17/105699

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:

- persons interested in owning or operating historic, replica or ex-military aircraft
- persons interested in owning or operating other types of limited category aircraft
- persons interested in restoring historic or ex-military aircraft
- pilots involved in operations of replica, historic or ex-military aircraft
- persons engaged in parachute jumping from limited category aircraft.

Purpose

This AC describes the operations that are permitted using limited category (historic, replica and ex-armed forces) aircraft and the limitations that apply to the operations and the obligations that apply to owners, operators and pilots of limited category aircraft.

For further information

For further information on this AC, contact CASA's Flight Standards Branch (telephone 131 757).

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
v1.1	May 2018	Minor amendments incorporated to: <ul style="list-style-type: none"> • rectify incorrect information about the scope of a recreational pilot licence • clarify requirements for approval of modifications to limited category aircraft.
v1.0	January 2017	Initial version.

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

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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
AWAL	Australian Warbirds Association Limited
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
COA	Certificate of Approval
MOS	Manual of Standards
MRB	Maintenance Review Board
MTOW	maximum take-off weight
NAA	National Aviation Authority
RPL	recreational pilot licence
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: <ol style="list-style-type: none"> 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	<ol style="list-style-type: none"> 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;

Term	Definition
	<p>or</p> <ul style="list-style-type: none"> • had a major modification made to it that is not an approved modification.
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 in accordance with one of the methods described in regulation 132.030.</p>
Authorised person	<p>A person who has been authorised by CASA to perform certain functions, such as issuing a Certificate of Airworthiness (CofA). 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 1988)</i> or regulation 201.001.</p>
Cost-sharing	<p>A flight is a cost-sharing flight if:</p> <ul style="list-style-type: none"> • the flight is conducted using an aircraft with a maximum seat configuration of not more than six, including the pilot's seat • the pilot-in-command is not remunerated for the flight • the pilot-in-command pays an amount of the direct costs of the flight that is at least equal to the amount that would be paid by each person if the direct costs were evenly divided between all persons on board • the flight is not advertised to the general public.
Ex-armed forces aircraft	<p>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) or a particular aircraft that has been operated by an armed force of any country.</p> <p>Ex-armed forces aircraft are commonly referred to as warbirds, and any reference to warbirds in this AC is a reference to ex-armed forces aircraft but does not include replica or historic aircraft.</p>
Major modification	<p>A modification or repair, or combination of modifications or repairs, that has a significant effect on the aircraft's:</p> <ul style="list-style-type: none"> • weight and balance • structural strength • reliability • performance • operational characteristics.
Warbird Historic and Replica aircraft	<p>Civil Aviation Order (CAO) 104.0 collectively describes limited category aircraft other than those mentioned in subparagraph 21.189 (1) (a) (i) as warbird historic and replica aircraft.</p>

1.3 References

Regulations

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

Document	Title
Part 21	Certification and airworthiness requirements for aircraft and parts
Part 45	Display of nationality marks, registration marks and aircraft registration identification plates
Part 61	Flight Crew Licensing
Part 61 MOS	Part 61 Manual of Standards
Part 132	Limited category aircraft
Part 132 MOS	Part 132 Manual of Standards.
Regulation 2A of <i>Civil Aviation Regulations 1988</i> (CAR)	Approved maintenance data
Regulation 30 of CAR	Certificates of approval
Regulation 42CA of CAR	Maintenance schedule--primary, intermediate, restricted or limited category aircraft
CAO 104.0	Certificates of approval - application, grant and conditions

Advisory material

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

Document	Title
AC 21-05	Limited category aircraft – certification
AC 21-25	Limited category aircraft - permit index

Other reference materials

Title	Site
AWAL Home Page	http://www.australianwarbirds.com.au/
CASA Home Page	https://www.casa.gov.au/landing-page/about-us

2 Introduction

2.1 Overview

- 2.1.1 Many post-war military aircraft are retired from service long before their useful life (in airworthiness terms) is finished. This is usually because of changes in military requirements or the aircraft type has been made redundant by new technology. Once retired from military service, the aircraft are keenly sought by warbird enthusiasts and collectors who use them for a wide range of purposes in the civil aviation field.
- 2.1.2 As discussed in AC 21-05, civil aviation authorities play no role in the design, manufacture, operation or maintenance of military aircraft during their life. Military aircraft are normally designed to meet a set of performance or role specifications issued by a military customer and the design standards that underpin a particular type of aircraft may be unique to that aircraft type. Because the aircraft, their design standards, and performance standards are not known to civil authorities, ex-military aircraft are not eligible for a standard Certificate of Airworthiness (CofA) and the associated freedoms from operational limitation, which accompany such a certificate.
- 2.1.3 The special CofA in the limited category (limited certificate) has been developed by the CASA to permit the use of these aircraft in a civil environment and Part 132 sets out the regulations that prescribe how, where and by whom these aircraft may be operated in order to ensure that public safety is not compromised by their civil operations.

Note: Part 132 also applies to historic aircraft or replica aircraft for which a limited certificate is in force.

2.2 Regulations

- 2.2.1 Regulation 21.189 allows a limited category organisation or CASA to issue limited certificates for certain aircraft.
- 2.2.2 The special purpose operations for which a limited certificate may be issued are set out in subregulation 21.189 (3). Refer to paragraph 4.1.1 for the list.
- 2.2.3 Part 132 sets out the regulations that apply to operation of limited category aircraft and the penalties that apply for non-compliance. Part 132 also lists a number of authorised operations for which a limited category aircraft may be flown. These are listed in paragraph 4.1.2 and are additional to the special purpose operations listed in regulation 21.189.

2.3 Administering authority

- 2.3.1 CASA has approved Australian Warbirds Association Limited (AWAL) to administer a number of functions related to the operation of warbird historic and replica aircraft (WHR).
- 2.3.2 The matters for which AWAL is the administering authority include:
- issuing of limited and certain experimental certificates for WHR aircraft
 - imposing conditions and limitations on limited and experimental special certificates of airworthiness that it has issued

- assignment of permit index numbers to WHR aircraft
- issue of special flight permits for WHR aircraft
- approval of adventure flights in which passengers are able to pay for warbird or historic aircraft experience flights
- approval of adventure flight procedures
- approval of an aeronautical engineer for the purpose of assessing WHR aircraft modifications and other matters
- approval of limited category WHR aircraft maintenance programs
- approval of maintenance data and maintenance instructions for WHR aircraft
- approval of flights over populous areas by aircraft having a permit index of 1
- application of conditions to any approval granted for flight over a populous area
- cancellation of permission to fly over a populous area.

2.3.3 If a person owns, or is contemplating the purchase of a WHR aircraft, they would need to make an application to AWAL for any of the matters that are listed above. AWAL may be contacted at: admin@australianwarbirds.com.au.

3 General guidelines

3.1 Certification

- 3.1.1 The limited certificate is the only form of certification under which a warbird (other than a civil certified aircraft that has been operated by an armed force or a restricted category aircraft) may be flown for any of the purposes specified in section 4.¹
- 3.1.2 A warbird may be issued with a short duration experimental certificate for the purpose of research and development, and post-restoration flight testing, in order to show compliance with regulations. Warbirds that have been extensively modified for air racing may only be flown under an experimental (air racing) certificate.²
- 3.1.3 A warbird will not be permitted to fly over populous areas and carry passengers for hire or reward if:
- the aircraft has exceeded its approved airframe life
 - the aircraft has one or more time expired safety critical components fitted to it.
- 3.1.4 If a WHR has undergone a major modification or repair (refer to section 1.2 for definitions) and the design of the modification or repair has not been approved in a manner described in paragraph 3.1.5, it will require an engineering assessment before further flight. Until the modification or repair has been assessed and approved, the aircraft will not be permitted to be flown over populous areas or used to carry passengers for hire or reward. Refer to Chapter 4 for further details.
- 3.1.5 An accepted manner of modification approval is:
- aircraft manufacturer's approval
 - approval by an engineering branch of a military authority that was using the aircraft
 - approval by a controlling competent NAA
 - approval by an administering authority.
- 3.1.6 Aircraft mentioned in sections 4.10 to 4.12 may have other conditions applied by the person who carried out the engineering assessment. These conditions may include:
- restrictions to the airspeed at which the aircraft may be flown
 - a limit on the number of passengers that may be carried
 - the type of flight manoeuvres that may be flown
 - the weight at which the aircraft may be flown.
- 3.1.7 The conditions may also impose special inspections and maintenance procedures to be followed. All of the conditions that apply to the operation of the aircraft must be entered on the limited certificate or its annex³ and any pilot who flies the aircraft must be made aware of the requirements.⁴

¹ In accordance with subregulation 21.189 (3).

² Restrictions apply to the issue of experimental certificates to ex-armed forces aircraft - refer to AC 21-05.

³ In accordance with subregulation 21.176 (3).

⁴ In accordance with subregulation 132.050 (2).

- 3.1.8 Engineering assessments referred to in paragraphs 4.9 to 4.11 may be carried out by a qualified person approved by the administering authority in accordance with regulation 132.050.⁵

3.2 Requirements – limited category

- 3.2.1 WHR aircraft may be used for private operations provided that any passengers who are carried are given a safety briefing as set out in regulation 132.105 (refer to Appendix A). The safety briefing is required to ensure that a person flying in the aircraft is fully informed of the risks associated with the aircraft and is given the opportunity to make a properly informed decision to accept the risks. The normal cost-sharing requirements apply and the pilot must contribute a share of the costs (refer to section 1.2).⁶
- 3.2.2 Warbird and historic aircraft may carry passengers for hire or reward (adventure flights) subject to specific conditions including passenger briefings as set out in regulations 132.180, 132.185 and those conditions described in Chapter 4. The briefing requirements for adventure flight passengers are intended to ensure that a person is made fully aware of the risks associated with the flight, and given ample opportunity to decide whether or not to accept the risks before committing to the flight.
- 3.2.3 Part 132 requires that a limited category aircraft must be assigned a permit index number that is a whole number between 0 and 3. The Part 132 Manual of Standards (MOS) sets out the requirements for assignment of a permit index number and specifies populous area restrictions that apply to each permit index number (refer to paragraphs 4.6.1 to 4.6.9).
- 3.2.4 Limited category aircraft may be operated for one or more special purposes for which the limited certificate is in force and any of the authorised operations referred to in Part 132 (see Chapter 4).

⁵ For further information about the certification process for a limited category aircraft refer to AC 21-05.

⁶ In accordance with subregulation 7A of CAR.

4 Authorised special purposes

4.1 Overview

4.1.1 The limited category certification regulations are specifically intended to allow otherwise ineligible aircraft to be certificated for any of the following special purposes:

- adventure style operations (warbirds or historic aircraft only)
- aerobatic flights
- aerobatic training
- exhibition flights
- mock combat
- operating replica aircraft
- carrying people for parachute descents (excluding tandem or training descents)
- 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: Mock combat may include operations carried out for payment in support of Australian Defence Force activities, such as simulated attacks on Naval vessels.

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

4.1.2 A limited category aircraft may also be used for any or all of the following authorised operations, in addition to a special purpose operation for which the limited certificate was issued:

- personal use of the aircraft
- a cost-sharing flight
- glider towing
- training for a rating or endorsement
- flight tests or reviews
- air racing subject to modification status (see paragraph 4.8)
- an activity necessary to conduct an authorised special purpose operation (including training for the operation)
- an activity that is stated in the administering authority operations manual at the time as an activity in support of an authorised special purpose operation in accordance with subparagraph 132.020 (1) (g) (iii)
- an activity listed in the Part 132 MOS
- other flights that may be approved by CASA under regulation 132.050.

4.2 Required pilot qualifications

4.2.1 The minimum pilot licence required for operations in a limited category aircraft that are not adventure flights is a recreational pilot licence (RPL). RPL holders are only permitted by regulations to fly aircraft that are not turbine or rocket powered and do not have a certified maximum take-off weight (MTOW) of greater than 1,500 kg⁷.

⁷ Subregulation 61.460 (b)

- 4.2.2 Part 61 requires that the pilot must hold a private pilot licence in the appropriate category and a Class 2 medical certificate for the following flights:⁸
- flights in aircraft that are turbine powered or have an MTOW greater than 1,500 kg
 - flights that are not adventure flights.

The pilot licence must be endorsed for the aircraft type if it is listed as a type rated aircraft.^{9 10}

Note: These requirements also apply to flights in limited category aircraft.

- 4.2.3 For adventure flights, the minimum licence requirement is a commercial pilot licence in the appropriate category and a Class 1 medical certificate. Type rating requirements may also apply.

4.3 Carrying passengers

- 4.3.1 Limited category aircraft may carry passengers in a private flight, a cost-sharing flight or an adventure flight. Adventure flights are a popular tourist attraction and can offset the, sometimes considerable, costs of operating and maintaining a warbird or historic aircraft.
- 4.3.2 No more than six persons (including crew) may be carried on a WHR aircraft, regardless of the seating capacity of the aircraft.
- 4.3.3 If a WHR aircraft has a seating capacity in excess of six, an application may be made in writing, or as otherwise directed, to an administering authority for approval to carry a greater number than six. The outcome will depend on the type of aircraft involved and a comprehensive risk assessment that would be required as part of the consideration of such an application. Any approval granted will not exceed the aircraft's designed seating capacity.

4.4 Risk management

- 4.4.1 Civil operation of ex-armed forces aircraft is based around two pillars of risk management, which are regarded by CASA as critical to public safety. These pillars are:
- protection of persons not directly involved in the flight in the air and on the surface and protection of property
 - informed acceptance of risk by persons undertaking a flight in a limited category aircraft.

4.5 Protection of persons in the air and on the ground

- 4.5.1 When WHR aircraft are issued with a limited certificate, the appointed person that assessed the aircraft will enter operational restrictions and conditions on the annex that forms part of the limited certificate. The number and severity of the restrictions will depend on the appointed person's assessment of the level and range of risk elements that require mitigation.

⁸ In accordance with regulation 61.460.

⁹ In accordance with regulation 61.065.

¹⁰ For a list of type rated aircraft, refer to the Part 61 MOS.

4.5.2 In conjunction with this process, the appointed person will also allocate a permit index number by following a comprehensive risk assessment protocol, which is set out in the Part 66 MOS.¹¹ The conditions and restrictions that apply to each permit index number are described in the paragraph below and are additional to any conditions or restrictions that may be entered on the annex to the aircraft's limited certificate.

4.6 Permit index

4.6.1 Each aircraft is assessed against a set of risk identifiers and is allocated a permit index number between 0 and 3. Each permit index number has an associated set of geographic restrictions attached to it and the higher the number, the more restrictive the conditions that are imposed.

4.6.2 If a limited category aircraft has a permit index number 0, then it is not subject to any geographic restrictions and may be flown over populous areas subject to any airspace restrictions that may apply.

4.6.3 If a limited category aircraft has a permit index number 1 it may only be flown over a populous area for the purpose of taking off and landing or otherwise, as approved by an administering authority. The pilot must comply with any conditions that are placed on the approval:

- some landing areas require an administering authority's approval for permit index 1 operations (these airports are listed in the Part 132 MOS).
- the applicant should provide an administering authority with maps and/or aerial photographs showing the proposed track to be flown, safe landing areas along the way with diagrammatic evidence that a landing could be achieved at a safe landing area at any stage during the flight if an engine failure occurs.

4.6.4 If a limited category aircraft is assigned a permit index number 2 it may only be flown over a populous area if approved by CASA.

4.6.5 An application for approval to fly a permit index 2 aircraft over a populous area would require the preparation of a supporting safety case, which must demonstrate how the aircraft can be safely flown over the areas in question and detail such things as:

- tracks
- heights
- speeds
- safe landing areas along the proposed track.

4.6.6 Permit index 2 aircraft are regarded as high-risk aircraft and any such approvals should not be taken for granted.

4.6.7 The pilot of a permit index 2 aircraft that is approved to be flown over a populous area must only do so in accordance with any route, speed or height limitations specified in the approval from CASA.

4.6.8 If a limited category aircraft does not have a permit index, or has a permit index number 3, it must not be flown over any populous areas. This means that the aircraft may only take-off from or land at a location where the pilot is able to remain clear of populous

¹¹ For further detail on the permit index number, refer to AC 21-25.

areas at all stages of the flight. The pilot must also remain clear of populous areas when flying cross-country.

- 4.6.9 There are no provisions in the regulations for approving permit index 3 aircraft to fly over a populous area. CASA may, under exceptional circumstances, consider an exemption for a permit index 3 aircraft to be flown over a populous area if, for example, an aircraft has particular relevance to a ceremonial occasion. However, due to the high risk levels involved, such exemptions would not be given lightly.

4.7 Informed acceptance of risk

- 4.7.1 Limited category aircraft are required to clearly display the word LIMITED on the outside of and near each entrance to the aircraft.¹² and must also display a safety warning placard in a position where it can be easily read by each occupant other than the pilot.¹³ This placard must state:

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

- 4.7.2 Additionally, Part 132 requires that each passenger must be given a safety briefing before donning any flight apparel or safety equipment in preparation for an adventure flight or being taken to the aircraft for a flight.
- 4.7.3 The briefing, which may be given orally, audio-visually, in print or in any combination thereof, must be given in a language that the passenger understands.
- 4.7.4 Adventure flights are often sold by a third party (i.e. travel agent, tour operator) and the person purchasing the ticket may not necessarily be the person making the flight. In order to ensure that the risks are understood by all parties involved, Part 132 requires that a preliminary briefing must be given to the person purchasing the ticket or arranging the flight in addition to the pre-boarding briefing that must be given to the passenger on the day of the flight. This preliminary briefing is not required if the person who will be taking the flight makes the payment on the day of the flight.
- 4.7.5 The operator or pilot-in-command of an adventure flight must obtain a signed acknowledgement (in a language that the passenger understands) from each adventure flight passenger. This must state that the passenger has received the briefing and understands and accepts the risks involved. The required contents of the briefings are set out at Appendix A.
- 4.7.6 If a passenger on an adventure flight is under 18, a parent or guardian must sign the acknowledgment in the presence of the operator or the pilot-in-command, who must then witness the signature. If the passenger is a member of an organised group activity, it is sufficient if the group organiser is in possession of an acknowledgement that is signed by the parent or guardian.

¹² In accordance with regulation 45.125.

¹³ In accordance with regulation 132.095.

- 4.7.7 If an adventure flight passenger cannot understand a safety briefing the parent, guardian or carer must sign the acknowledgement for the passenger and must accompany the passenger on the flight.¹⁴

4.8 Air racing

- 4.8.1 Ex-armed forces aircraft are popular for air racing due to their high structural strength, manoeuvrability and high performance. Any ex-armed forces aircraft that is certified in the limited category may participate in air races subject to any conditions that may be endorsed on its limited category certificate.
- 4.8.2 An ex-armed forces aircraft that has undergone major modifications for the purpose of air racing is not eligible for a limited certificate. These highly modified air racing aircraft, sometimes referred to as 'unlimiteds' may only be flown under an experimental certificate issued for air racing and may only be operated for that purpose, and for any supporting operations set out in the annex to its experimental certificate.
- 4.8.3 Due to the highly modified nature and specialised use of the modified racing aircraft, day-to-day use for personal transportation unrelated to an air racing event, or carriage of passengers is not permitted in these aircraft.
- 4.8.4 Experimental (air racing) aircraft are not administered by an administering authority under Part 132. An ex-armed forces aircraft that is modified for air racing purposes is not administered under Part 132. Applications for experimental certificates for this purpose must be made to CASA or an authorised person who is approved to issue experimental certificates for this purpose.¹⁵

4.9 Adventure flights

- 4.9.1 Adventure flight is the term used to describe a flight in a historic or warbird aircraft, in which a passenger is being carried for hire or reward or a flight that is publicly available. A flight that is given to a person as a prize or an award is publicly available and is classed as an adventure flight.
- 4.9.2 An adventure flight may only be made if the aircraft's limited category certificate includes 'operating historic or ex-military aircraft in adventure style operations' as a special purpose operation.
- 4.9.3 These types of flights are not permitted to be made in an aircraft that is not an ex-armed forces or historic aircraft (refer to regulation 132.145) and must not be made in conjunction with a training, exhibition or scenic flight.
- 4.9.4 Adventure flights must be unbroken round trips only.¹⁶ That does not prevent pilots performing touch-and-go landings at the take-off airport as part of the adventure experience.
- 4.9.5 Although an air operators certificate is not required for the carriage of paying passengers in a warbird, an adventure flight operator is required to have written adventure flight procedures approved by the administering authority.¹⁷

¹⁴ In accordance with regulation 132.140.

¹⁵ A list of CASA authorised persons may be found on the [CASA web site](#).

¹⁶ In accordance with regulation 132.125.

4.10 Airframe life

- 4.10.1 If an aircraft has exceeded its approved airframe life or the owner/operator is unable to substantiate that it has not exceeded its airframe life, the aircraft may be flown for personal use, but will not be permitted to carry passengers for payment or fly over populous areas. These restrictions do not apply if the airframe life has been extended by an administering authority. For further conditions that may apply, refer to paragraph 3.1.6.

4.11 Life limited aeronautical products

- 4.11.1 If an aircraft has life limited components that are time expired (i.e. a hydraulic flight control servo that is due for overhaul), it may continue to be operated normally if the administering authority determines that a failure of the aeronautical product will not affect the safe operation of the aircraft in its non-military role.
- 4.11.2 If the administering authority determines that the aeronautical product is part of a flight safety critical system, the aircraft will require an assessment. This assessment may be completed by an appointed person who is authorised for the purpose. They may determine that the aircraft can continue to operate within the confines of any limitations that the approved person may apply to the aircraft, such as one or more of the following:
- reduced MTOW
 - reduced maximum airspeed
 - restrictions on aerobatic manoeuvres.
- 4.11.3 If an aircraft continues to operate under these conditions it must not be used for carriage of paying passengers or flights over populous areas, regardless of its permit index number.¹⁸

4.12 Modifications

- 4.12.1 If an aircraft has had a major modification incorporated that has not been approved by one of the methods described in paragraph 3.1.5, it will not be permitted to be used for adventure flights and it will not be approved to fly over a populous area regardless of its permit index number. Minor modifications or modifications that are determined by the administering authority to have no significant effect on the safety, structural integrity, handling or performance of the aircraft do not require approval.
- 4.12.2 Major modifications and repairs do not require approval if the aircraft is not to be operated for the purpose of:
- adventure flights
 - flights over populous areas.

¹⁷ In accordance with regulation 132.090.

¹⁸ In accordance with paragraph 132.075 (8) (b).

4.13 Parachute operations

- 4.13.1 Carrying people for parachute descents is a special purpose operation that can be included on a limited certificate. Under regulation 132.110, parachute training and tandem descents are not permitted from limited category aircraft.

5 Maintenance of warbirds

5.1 General

- 5.1.1 Warbirds are Class B aircraft. Therefore, maintenance may be provided by a holder of a Certificate of Approval (COA)—issued under regulation 30 of CAR—whose certificate scope includes the category of aircraft being maintained.
- 5.1.2 All piston engine powered warbirds are non-type rated aircraft and maintenance may be certified by a licensed aircraft maintenance engineer who holds the applicable category or subcategory of licence.
- 5.1.3 Turbine powered warbirds are listed as Part 1 WHR aircraft in Civil Aviation Order (CAO) 104.0 and may only be maintained by employees of a COA holder who have been trained and authorised in accordance with the requirements of CAO 104.0.
- 5.1.4 Aircraft such as the Lockheed P2V Neptune, which have both piston and turbine power plants, may be maintained as if they are a piston powered aircraft however, a person carrying out maintenance on the turbine engine must hold a B1.1 subcategory of licence and a certification authorisation issued by the COA holder in accordance with section 8 of CAO 104.0.

5.2 Maintenance schedule

- 5.2.1 The registered operator is required under subregulation 42CA (2) of CAR to have a maintenance schedule for the aircraft that is developed in consultation with AWAL. The association holds a library of master schedules for most Australian warbird aircraft. If a warbird aircraft is placed on the Australian register, for which a master schedule has not been approved, the registered operator must apply to AWAL for approval of a master schedule for the aircraft. AWAL will empanel a Maintenance Review Board (MRB) to develop the master schedule and may include the applicant as a member of the MRB.

5.3 Maintenance data

- 5.3.1 The COA holder would be required to hold or have access to the relevant approved maintenance data for the aircraft as specified in its maintenance schedule.
- 5.3.2 If no approved maintenance data exists, the registered operator of the aircraft must make an application to AWAL for approval under regulation 2A of CAR. This application must contain the data that is proposed to be used for the aircraft. The data could be sourced from military archives, supplied by AWAL or adapted from approved data for a similar type of aircraft.

5.4 Specialist maintenance

- 5.4.1 Where applicable, a COA holder would be required to have arrangements in place to maintain and safely operate features such as:
 - ejector seats
 - liquid or gaseous oxygen systems

- explosive and pyrotechnic systems
- externally mounted fuel tanks
- maintenance of airframe parachutes.

5.4.2 Additionally, pilot's emergency parachutes are required to be maintained either:

- in accordance with standards approved by the Australian Parachute Federation or
- by a person who holds an Australian Qualification Framework (AQF) competency (MEA505 - Maintain and pack parachutes).

5.5 Modifications and repairs

5.5.1 Modifications and repairs are addressed in paragraphs 3.1.4 and 3.1.5. For further information, a registered operator should contact AWAL. Warbird operators are subject to less regulatory rigor than operators of standard category aircraft and modifications or repairs only require approval if:

- the modification or repair is a major modification or repair, and
- the aircraft is to be operated for adventure flights or flown over populous areas.

5.5.2 Major modifications or repairs may be approved by a person who is authorised, in writing, by AWAL to do so.

Note: Approval by CASA or a Subpart 21.J or 21.M approval is not required for modifications or repairs to a limited category aircraft.

5.5.3 If a modification or repair is approved under Subparts 21.J or 21.M, further approval by a limited category organisation is not required. The Part 132 MOS provisions do not apply to approvals granted under Subparts 21.J or 21.M, or approvals granted by CASA, a foreign NAA, the aircraft manufacturer or a former military user of the aircraft.

Appendix A

Safety briefings

A.1 At time of sale of ticket

- A.1.1 The safety briefing that is given at the time of selling a ticket or arranging a flight must include the following information:
- a. information about the aircraft not being required by CASA to be operated to the same safety standards as an aircraft used for air transport operations
 - b. statements to the effect that:
 - i. the design, manufacture and airworthiness of the aircraft are not required to meet any standard recognised by CASA
 - ii. travel in the aircraft is done at the passenger's own risk
 - iii. a more detailed briefing about the safety of the aircraft will be given to the passenger before the passenger boards the aircraft.

A.2 Pre-boarding

- A.2.1 The pre-boarding information that must be given prior to the passenger 'suiting up' or entering the airside of the aerodrome to participate in a flight must include:
- a. information comparing the safety of the aircraft with aircraft used for air transport operations - including that CASA does not require the aircraft to be operated to the same degree of safety as an aircraft used for air transport operations
 - b. information about the design, airworthiness and type certification of the aircraft, including that the design, manufacture and airworthiness of the aircraft are not required to meet any standard recognised by CASA
 - c. a statement of the risks associated with undertaking the flight
 - d. a statement to the effect that travel in the aircraft is done at the passenger's own risk
 - e. any other information that the passenger will need to make an informed decision about whether the passenger wishes to participate in the flight.