



**Australian Government**  
**Civil Aviation Safety Authority**

## DISCUSSION PAPER



Photo courtesy of [Rob Fox](#)

# Maintenance of limited category aircraft

Proposed Subpart 132.M of CASR

Issued for public consultation by  
CASA's Aviation Group

**DP 1618OS – July 2017**  
**Project Number: OS 03/04**

## Audience

This Discussion Paper (DP) will be of interest to:

- owners of limited category aircraft
- maintenance organisations providing maintenance services for limited category aircraft
- individuals carrying out maintenance on limited category aircraft.

**Note:** Limited category aircraft includes ex-military, historic and replica aircraft.

## Response date

The Civil Aviation Safety Authority (CASA) is responsible under the *Civil Aviation Act 1988* for, amongst other functions, developing and promulgating appropriate, clear and concise aviation safety standards. CASA, where appropriate, must consult with government, commercial, industrial, consumer and other relevant bodies and organisations in the performance of this function and the exercise of its powers.

*Civil Aviation Act 1988 Subsection 9(1)(c) and Section 16*

This DP contains options that may be pursued in a future regulatory change proposal e.g. Notice of Proposed Rule Making (NPRM). These documents all form part of the consultation process.

No action will be taken until all responses and submissions have been considered. To ensure clear and relevant safety standards, CASA needs the benefit of your knowledge as an aviator, aviation consumer and/or provider of related products and services.

**You can help by completing the [online response form](#) by 2 August 2017.**

## Foreword

Maintenance of limited category aircraft is regulated under Parts 4 and 4A of the *Civil Aviation Regulations 1988* (CAR) in conjunction with Civil Aviation Orders (CAOs) and a number of legislative instruments. In time, all Australian aircraft will be transitioned to the *Civil Aviation Safety Regulations 1998* (CASR) under the regulatory reform program. On completion of the transition, the CAR will be repealed.

If no change is made to the regulations dealing with maintenance of limited category aircraft, these aircraft would remain subject to existing provisions of CAR until such time as the CAR is repealed. At that time limited category aircraft would come under relevant CASR Parts dealing with maintenance of a wide range of general aviation aircraft.

This Discussion Paper sets out and invites discussion to identify a potentially more suitable option for future regulation dealing with maintenance of limited category aircraft. Three options are offered for consideration and comment, and the advantages and disadvantages of each option are discussed.

CASA recognises the valuable contribution that industry consultation makes to the regulatory development process and issues this paper as the first stage in moving towards creating a unified set of regulations for limited category aircraft.

I would like to thank you in advance for taking time to consider and respond to this DP.

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July 2017

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# 1 Reference material

## 1.1 Acronyms and abbreviations

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

| Acronym / abbreviation | Description                                      |
|------------------------|--------------------------------------------------|
| AMO                    | approved maintenance organisation                |
| CAMO                   | continuing airworthiness management organisation |
| CAO                    | Civil Aviation Order                             |
| CAR                    | <i>Civil Aviation Regulations 1988</i>           |
| CASA                   | Civil Aviation Safety Authority                  |
| CASR                   | <i>Civil Aviation Safety Regulations 1998</i>    |
| COA                    | certificate of approval                          |
| DP                     | discussion paper                                 |
| MOS                    | Manual of Standards                              |
| NFRM                   | notice of final rule making                      |
| NPRM                   | notice of proposed rule making                   |

## 1.2 Definitions

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

| Term                            | Definition                                                                                                                                                                                                                                                                                                                                                                                 |
|---------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| aeronautical product            | Any part or material that is, or is intended by its manufacturer to be, a part of or used in an aircraft, unless excluded by the regulations.                                                                                                                                                                                                                                              |
| approved maintenance program    | For an aircraft, means a maintenance program for the aircraft that has been approved in accordance with this proposed subpart.                                                                                                                                                                                                                                                             |
| certification authorisation     | An authorisation to carry out, supervise and certify for maintenance that is issued to an individual by a limited category organisation or limited category maintenance organisation in accordance with this proposed subpart.                                                                                                                                                             |
| COA holder                      | A person approved under subregulation 30(2A) of CAR to carry out maintenance of aircraft, aircraft components or aircraft materials.                                                                                                                                                                                                                                                       |
| competent                       | To carry out maintenance on an aircraft or aeronautical product, means that an individual has the skills and knowledge to carry out the maintenance to the standard required by the maintenance data for the maintenance.                                                                                                                                                                  |
| continuing airworthiness record | For a limited category aircraft means any record that establishes the continuing airworthiness of the aircraft, including any of the following: <ul style="list-style-type: none"> <li>• a maintenance record for maintenance carried out on the aircraft</li> <li>• a certificate of release to service for an aircraft in relation to maintenance carried out on the aircraft</li> </ul> |

| Term                                      | Definition                                                                                                                                                                                                                                                                                                                                                                                                              |
|-------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                                           | <ul style="list-style-type: none"> <li>• a record made in the flight technical log for the aircraft in relation to continuing airworthiness of the aircraft</li> <li>• a record of a critical control system inspection for the aircraft</li> <li>• a record of a defect that has been deferred for the aircraft</li> <li>• a copy of the design of a modification or repair that is unique to the aircraft.</li> </ul> |
| COR holder                                | A person to whom a certificate of registration has been issued with respect to a limited category aircraft.                                                                                                                                                                                                                                                                                                             |
| exposition                                | For a limited category maintenance organisation, means a document, which sets out how the organisation will carry out its approved activities in compliance with relevant legislation. The exposition would be approved by the responsible limited category organisation.                                                                                                                                               |
| independent maintainer                    | An individual who provides maintenance services, outside an organisation, limited in scope to maintenance that would be specified in the Part 132 MOS                                                                                                                                                                                                                                                                   |
| Independent maintenance                   | Maintenance that would be specified in the Part 132 MOS as maintenance that may be performed outside a limited category maintenance organisation                                                                                                                                                                                                                                                                        |
| limited category aircraft                 | An aircraft mentioned in regulation 21.189 of CASR.                                                                                                                                                                                                                                                                                                                                                                     |
| limited category organisation             | An organisation approved by CASA under subregulation 262AN (1) of CAR to administer operation and/or maintenance of limited category aircraft.                                                                                                                                                                                                                                                                          |
| limited category maintenance organisation | An organisation approved in accordance with the proposed subpart to provide maintenance services on limited category aircraft.<br><br><b>Note:</b> Limited category maintenance organisations are discussed in more detail in paragraph 3.5.                                                                                                                                                                            |
| provide a maintenance service             | <i>For a limited category aircraft:</i> carrying out maintenance on the aircraft, performing maintenance certifications and issuing a certificate of release to service in relation the maintenance.                                                                                                                                                                                                                    |

## 1.3 References

### Regulations

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

| Document                  | Title                                                                            |
|---------------------------|----------------------------------------------------------------------------------|
| Regulation 21.189 of CASR | Special certificate of airworthiness for limited category aircraft               |
| Subpart 42.G of CASR      | Continuing airworthiness management organisations                                |
| Subpart 42.I of CASR      | Airworthiness reviews and airworthiness review certificates                      |
| Subpart 42.L of CASR      | Approval of reliability programs and variations of approved reliability programs |
| Part 66 of CASR           | Continuing airworthiness – aircraft engineer licences and ratings                |
| Part 132 of CASR          | Limited category aircraft                                                        |
| Part 145 of CASR          | Continuing airworthiness — part 145 approved maintenance organisations           |

| <b>Document</b>            | <b>Title</b>                                                                                |
|----------------------------|---------------------------------------------------------------------------------------------|
| Part 132 MOS               | <i>Part 132 Manual of Standards Instrument 2016</i>                                         |
| Part 4 of CAR              | Airworthiness requirements                                                                  |
| Part 4A of CAR             | Maintenance                                                                                 |
| Regulation 30 of CAR       | Certificates of approval                                                                    |
| Civil Aviation Oder 104.0  | Certificates of approval — application, grant and conditions                                |
| Civil Aviation Order 100.5 | General requirements in respect of maintenance of Australian aircraft                       |
| CASA Instrument EX51/15    | Exemption — maintenance on limited category and experimental aircraft                       |
| CASA Instrument EX75/15    | Exemption to allow supervision by holders of an airworthiness authority                     |
| CASA 147/11                | Appointment of authorised persons to issue maintenance releases                             |
| CASA 148/11                | Appointment of authorised persons to endorse or cancel endorsements on maintenance releases |

### **Advisory material**

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

| <b>Document</b> | <b>Title</b>                             |
|-----------------|------------------------------------------|
| AC 21-25        | Limited Category Aircraft - Permit Index |
| AC 132-01       | Limited category aircraft                |

## 2 Industry consultation

### 2.1 Consultation process

CASA is committed to working cooperatively with the aviation community to maintain and enhance aviation safety. Publication of this DP constitutes the first stage of public/industry consultation on issues and proposals related to a proposed Subpart 132.M of CASR, to prescribe requirements for maintenance of limited category aircraft.

### 2.2 What CASA does with your comments

At the end of the response period for public comment, we will review each submission received through the online response form. You will receive an automated acknowledgement of your response with a link to view your submission. We will make all submissions publicly available on the CASA website unless a respondent requests that their submission remain confidential. Information about making a confidential submission is available on the [CASA website](#).

When we have reviewed all feedback we will publish a summary of consultation, which will summarise the feedback received and detail our plans for future policy and consultation on this subject.

We will consider the submissions to this DP before making any plans to change the regulations, other legislative instrument or the AIP. Rule change proposals will usually be issued for subsequent consultation as an NPRM or Consultation Draft.



## 3 Discussion

**Note:** Unless stated otherwise, in this document:

- reference to an aircraft is a reference to a limited category aircraft
- reference to holder of the certificate of registration for an aircraft is a reference to a holder of certificate of registration for limited category aircraft.

### 3.1 Objectives

The objectives of this DP are to:

- provide owners, operators and maintainers of limited category aircraft with the opportunity to provide feedback on potential ways of regulating maintenance of limited category aircraft:
  - continuing to have maintenance of limited category aircraft governed by the current rules
  - moving the maintenance requirements for limited category aircraft to Part 42 of CASR
  - having a dedicated Subpart 132.M of CASR dealing with maintenance of limited category aircraft.

### 3.2 Background

The maintenance of limited category aircraft is currently governed by a mixture of CAR, CASR, CAOs and legislative instruments. An opportunity has arisen to change this with the introduction of Part 132 of CASR. Part 132 sets out the operational requirements for limited category aircraft that were formerly contained in regulation 262AM of CAR. Part 132 of CASR commenced on 28 January 2017 with transition to the new regulation to be completed by 28 July 2017. When Part 132 was drafted, provision was made for a future Subpart 132.M dealing with maintenance.

### 3.3 Key considerations

Maintenance of limited category aircraft is a specialised niche of general aviation that is directly regulated and administered by CASA. The present structure of the legislation dealing with maintenance of general aviation aircraft is complex, being made up of regulations, orders, ADs and a range of legislative instruments. The CAR is mainly structured around civil type certificated aircraft, ranging from light sport aircraft in private operations to medium sized jets engaged in aerial work and charter operations. Those requirements are not the best 'fit' for maintenance of ex-military, historic and replica aircraft, most of which have been designed and manufactured using standards that are not recognised by CASA.

### 3.4 Options for discussion

This DP presents three options to address the issues described in paragraph 3.2:

- retain the present regulatory structure
- incorporate the limited category aircraft maintenance rules into Part 42 of CASR
- create a standalone maintenance Subpart 132.M.

#### 3.4.1 Option 1 – Retain the present regulatory structure

Option 1 would retain the existing mix of CAR, CASR, CAO and legislative instruments that regulate maintenance of limited category aircraft.

Industry is familiar with the existing rules and may feel more comfortable with the status quo than with having to adapt to a new regulatory structure. The main disadvantage of the present system is the complexity brought about by having to cater for a broad range of aircraft and aviation activities. Additionally, the legislative instruments used to supplement the CAR have to be re-issued every 3 years, which offers a lower level of certainty of continuity than would exist if the matters covered by these various instruments were written into legislation.

Finally, if the maintenance rules for limited category aircraft are not moved to an alternative regulatory framework before the CAR is discontinued, they would have to be distributed across a number of relevant CASR Parts that deal with maintenance of general aviation aircraft.

#### 3.4.2 Option 2 – Incorporate maintenance rules for limited category aircraft into Part 42 of CASR

Under this option, CASA could make changes to Part 42 of CASR to accommodate maintenance of limited category aircraft. For example, CASA could specify that Subparts 42.G, 42.I and 42.L do not apply to limited category aircraft. While such an approach is feasible, the underlying difficulties associated with incorporating existing requirements into Part 42 of CASR are as follows:

- Maintenance performance rules in Part 42 are based on type-certificated aircraft and framed to ensure that aircraft are maintained to conform to their approved design.
- Maintenance programs and maintenance data requirements are also based around type-certificated aircraft and a type certificate holder who is responsible for supporting the type certificate.
- Part 42 does not provide for maintenance certification and Certificate of Return to Service (CRS) for an aircraft to be made by an independent maintainer who does not hold an appropriate category of Part 66 aircraft maintenance engineer licence.
- Part 145 of CASR also specifies that a person must hold an appropriate category of Part 66 licence (or a recognised foreign issued equivalent) in order to certify for completion of maintenance of an aircraft within an approved maintenance organisation (AMO).
- Maintenance of warbirds has relied on the use of maintenance authorisations issued by CASA under regulation 33B of CAR. However, with the introduction of Part 66 of CASR in 2011, CASA has effectively phased out the use of maintenance authorisations, leaving warbird maintainers with little access to appropriately competent and qualified certifying staff.

- Warbird operators rely heavily on surplus, used or salvaged parts to ensure the ongoing airworthiness of their aircraft, and the maintenance data is frequently extracted from obsolete military manuals. Part 42 of CASR does not support these practices.
- Engines such as the RR Merlins, Allison V1710, Bristol Hercules, Rolls Royce Merlins and large radials have little or no commercial application, meaning that maintenance training is non-existent. The same applies to the majority of military airframes, such as the Cessna A 37, Soviet bloc trainers and jet combat aircraft.

With very few exceptions, limited category aircraft are neither type-certificated nor supported in any way by their manufacturers. While it would be possible to amend Part 42 of CASR to accommodate non-type certificated aircraft, it would involve significant amendment of the existing Part 42 regulations. Part 42 of CASR currently works satisfactorily for airlines and other operators of large aircraft, and any rewriting of Part 42 to accommodate limited category aircraft would inevitably increase the complexity of the regulations, which may draw criticism from current operators and maintainers.

If Part 42 of CASR were to be amended, additional provisions would be required to:

- exclude certain existing provisions from applying to limited category aircraft. (e.g. excluding requirements to have a continuing airworthiness management organisation (CAMO))
- accommodate the requirements that only apply to limited category aircraft (e.g. an alternative system of maintenance permissions that recognises specialised knowledge, training or experience and does not require certifiers to hold a Part 66 licence).

The rewriting of Part 42 of CASR would not overcome the shortage of competent certifying staff. A remedy for this problem would call for a system of authorisations that recognises the specialist knowledge, training or experience of warbird maintenance specialists and does not require them to hold a Part 66 licence if they can meet specified competency, training and experience requirements.

### **3.4.3 Option 3 – Create a maintenance Subpart 132.M for limited category aircraft**

This option involves tailoring a maintenance Subpart to cover the unique needs of limited category aircraft, and in particular for warbirds and historic and replica aircraft. It would provide for specialised maintenance organisations that are not subject to the same controls and standards as other maintenance organisations currently authorised under regulation 30 of CAR or Part 145 of CASR.

Under such an arrangement, maintenance personnel could be drawn from a pool of non-licenced individuals with the specialist experience, qualifications or skills to maintain limited category aircraft, even if these do not readily translate into an aircraft maintenance engineer licence under Part 66 of CASR.

## **3.5 CASA's preferred option for change**

CASA prefers Option 3 – the creation of a dedicated Subpart 132.M of CASR to deal with maintenance of limited category aircraft.

CASA recognises that the self-administration (co-regulation) model is an efficient and effective alternative to more conventional regulatory approaches of regulating sport and recreational aviation and, given the unique and varied maintenance requirements associated with limited category aircraft, believes that limited category maintenance could be better administered by an approved limited category organisation.

Under this proposal, CASA would retain oversight of industry safety while devolving the specialised administration activities to a self-administering limited category organisation that has the necessary expertise to manage activities of the sector safely and efficiently. This approach is consistent with the policies reflected in The Australian Government Guide to Regulation.

The proposed Subpart 132.M would allow a limited category organisation to approve a range of specialist maintenance providers to provide maintenance services for limited category aircraft. However, a limited category organisation would only be able to authorise a maintenance organisation to provide maintenance services for limited category aircraft and associated aeronautical products that are within the scope of the limited category organisation's approval.

### **3.5.1 Limited category maintenance organisation**

Any of the following organisations would be able to provide maintenance services for a limited category aircraft or an aeronautical product for such aircraft:

- an AMO that:
  - is approved under Part 145 of CASR to provide maintenance services for aircraft or aeronautical products, and
  - has been approved by a limited category organisation to provide maintenance services for the limited category aircraft or the aeronautical product
- an organisation that:
  - holds a certificate of approval (COA) issued under regulation 30 of CAR to provide maintenance services for aircraft or aeronautical products, and
  - has been approved by a limited category organisation to provide maintenance services for the limited category aircraft or the aeronautical product
- an organisation that is neither of the above, but that is approved by a limited category organisation to provide maintenance services for the limited category aircraft or the aeronautical product.

The limited category organisation would be able to accept the expositions and manuals of the AMO or COA holder as satisfying the manual/exposition requirements for a limited category maintenance organisation. However, the limited category organisation would need to ensure that all limited category maintenance organisations are familiar with Subpart 132.M and the Part 132 MOS as it applied to them, and that they have procedures for dealing with certificates of release to service and the use of flight technical logs.

When assessing an organisation other than an AMO or COA holder, the limited category organisation would be required to consider a number of factors in applying the requirements set out in the Part 132 MOS. These factors are the:

- size of the organisation
- scope of maintenance services that the organisation proposes to provide

- extent to which the maintenance services may involve safety critical maintenance activities.

### **3.5.2 Certification authorisation for limited category maintenance**

The proposed Subpart 132.M of CASR would empower a limited category organisation to issue certification authorisations to individuals for the purpose of carrying out and certifying for maintenance provided that the limited category organisation's exposition has procedures that comply with the requirements in the Part 132 MOS for assessing and authorising independent maintainers.

Additionally, the limited category organisation could authorise limited category maintenance organisations to issue certification authorisations to individuals for the purpose of carrying out and certifying maintenance, provided that the limited category maintenance organisation's h exposition include procedures that comply with the requirements in the Part 132 MOS for assessing and authorising maintainers.

The competencies required to obtain a certification authorisation—whether granted by a limited category organisation or limited category maintenance organisation—would be standardised in the Part 132 MOS so that the authorisation would not be tied to a particular organisation. However, it would not permit maintenance to be carried out and certified other than under this proposed Subpart 132.M of CASR.

Certification authorisation holders would be able to carry out and certify for maintenance as independent maintainers outside an organisation, but only for maintenance that is within the scope of their authorisation. The proposed Subpart would allow the Part 132 MOS to specify a wide range of maintenance that could be carried out by appropriately authorised independent maintainers. Additionally, the holder of a B2 licence would not be required to undertake specific aircraft type training for carrying out maintenance of avionics equipment that they may maintain under their existing licence privilege.

### **3.5.3 Other matters**

Other matters that would be covered by the proposed Subpart 132.M of CASR are:

- matters to be included in the Part 132 MOS
- responsibilities of a holder of a certificate of registration
- continuing airworthiness records
- aircraft maintenance program
- flight technical log
- certification for maintenance
- certificates of release to service
- maintenance data
- modifications of aircraft
- life limited aeronautical products
- performance rules for maintenance of aircraft
- performance rules for maintenance of aeronautical products
- maintenance that may be carried out by independent maintainers

- independent inspection of critical control systems after maintenance
- dealing with defects
- requirements for approval of a limited category maintenance organisation
- limited category maintenance organisation exposition
- requirements for issue of a certification authorisation
- maintenance outside Australian territory
- retention and transfer of records.

#### **3.5.4 Transfer of existing requirements v new requirements**

The proposed Subpart 132.M of CASR would draw much of its structure and provisions from Part 42 of CASR and, where relevant, would also draw on existing provisions of CAR. Where applicable, the requirement of the existing regulations would be altered as necessary to give effect to policy specific to limited category aircraft. For example:

- all matters relating to CAMOs, holders of an air operator's certificate and annual review would not be relevant
- proposed maintenance organisation rules would be constructed with the aim of providing simple regulation with minimum compliance burden, consistent with good safety governance.

The proposed Subpart 132.M of CASR would also incorporate the requirements contained in the various exemptions, authorisations and directions relating to maintenance of limited category aircraft.<sup>1</sup>

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<sup>1</sup> Refer to the references provided in section 1.3 of this DP.