



SUMMARY OF PROPOSED CHANGE



Manned free balloons and hot air airships

Civil Aviation Legislation Amendment (Part 131) Regulation 2019

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Introduction

CASA has been progressively transitioning the *Civil Aviation Regulations 1988* (CAR) to the *Civil Aviation Safety Regulations 1998* (CASR). Following the making of the flight operations CASR Parts (Parts 91, 119, 121, 133, 135 and 138) and Part 149 (Approved Aviation Administration Organisations) in 2018, CASA has prioritised the finalisation of the proposed Parts 103, 105 and 131 of CASR in 2019.

Part 131 will apply to tethered gas balloons and balloons that are intended for free flight under the control of a pilot including hot air balloons, hot air airships, gas balloons and mixed gas/hot air balloons.

The new rules are intended to enhance operational flexibility and aviation safety by being more outcome based and less prescriptive. Part 131 also aims to improve the focus of Australian balloon transport operators on the potential for human and organisational factors to cause accidents, and in so doing, further improving the system of aviation safety for operators and the travelling public.

A Manual of Standards (MOS) will support Part 131 and will contain complex and technical requirements potentially subject to change.

The proposed new regulation establishes the structure of Part 131 and specifies:

- the certification and management responsibilities of AOC holders conducting passenger carrying flights for hire and reward (currently charter operations and to be called balloon transport operations)
- the operational and flight rules unique to Part 131 aircraft
- the approval requirements for the new concept of specialised balloon operations (some of which currently require an aerial work AOC)
- the requirements for Part 131 recreational activities to be authorised by a Part 131 Approved Self-Administering Aviation Organisation (ASAO) and other miscellaneous measures.

It is proposed that Part 131 will commence on 25 March 2021, in line with the introduction of new rules for parachuting ([Part 105](#)), sport and recreational activities ([Part 103](#)) and the suite of [flight operations regulations](#) (CASR Parts 91, 119, 121, 133, 135 and 138).

Purpose and scope of the proposed amendments

Part 131 largely consolidates existing requirements contained in the *Civil Aviation Regulations 1988* (CAR) and *Civil Aviation Orders*. It also works together with Part 91 of CASR to describe all the general operating and flight rules for manned free balloons and hot air airships.

Part 91 (General Operating and Flight Rules) was made into law in December 2018 and commences in March 2021. It includes rules that apply to manned free balloons and hot air airships (Part 131 aircraft).

Part 131 modifies the Part 91 rules where appropriate to create operational and flight rules unique to Part 131 aircraft.

Some new provisions will be introduced to be consistent with other CASR Parts, such as systems and key personnel required for small aircraft air transport operators. Part 131 will

require balloon AOC holders to have an exposition detailing their administration and operational procedures. CASA is proposing to give operators more time to implement more complex requirements such as:

- a safety management system (SMS) tailored to the size and complexity of the operation
- a training and checking system (tailored to the size and complexity of the operation).

Other topics we are seeking feedback on include:

- flights over water
- basic equipment requirements
- loading requirements
- pilot and operational safety-critical personnel qualification and training requirements for balloon transport operators.

Some additional requirements are intended to be introduced through the Manual of Standards, and the Part 131 regulations create provisions for this to occur. We will seek feedback on these topics during the MOS consultation in 2020. These are envisaged to include:

- hot air balloon endorsements for size and design features
- recognition of overseas pilot authorisations
- maintenance and continuing airworthiness of Part 131 aircraft
- training of balloon maintenance personnel.

Balloon pilot licensing including instructor and examiner rating will also be a separate body of policy work to be addressed and consulted in the future. In the meantime, the relevant parts within existing CAR 1988 rules on licensing matters and continuing airworthiness will continue to apply beyond 25 March 2021.

Part 131 aircraft

Hot air airships will be regulated alongside hot air balloons under Part 131.

Part 131 does not apply to unmanned balloons which are regulated under Part 101 of CASR.

Further information about Part 131 aircraft follows:

Balloon: an unpowered, lighter-than-air aircraft.

Tethered gas balloon: a type of manned gas balloon that is permanently moored and used as a viewing platform in popular scenic locations in Europe and other places. Such balloons are not intended for free flight but ascend on cables to heights of up to 400 feet carrying passengers in a gondola to admire the view. The balloon is controlled by an operator rather than a pilot, nonetheless CASA wishes to approve and oversight such balloon operations and has therefore included a provision for tethered gas balloons in Part 131.

Manned free balloon: a free balloon capable of carrying one or more persons and is equipped with controls that enable the altitude of the balloon to be controlled.

Hot air balloon: a kind of manned free balloon.

Airship: a powered, lighter-than-air aircraft. An airship may be gas-filled and regulated like fixed or rotary wing aircraft (see Part 61 of CASR flight crew licensing rules) or a hot air airship,

although powered and somewhat steerable, derives lift from hot air and operated like a hot air balloon.

Linkage to Part 149 – Self-Administering Aviation Organisations

Proposed Part 131 of CASR provides the complementary operational requirements for manned free balloon and hot air airship activities that will be administered by Approved Self-Administering Aviation Organisations (ASAOs) approved under CASR Part 149 as Part 131 ASAOs.

CASA expects that members of these organisations will continue to follow their existing practice of complying with the relevant organisations' manual suite.

Key proposals for the Part 131 regulations

Application and definitions (Subpart 131.A)

Subpart 131.A describes the aircraft, individuals and organisations that Part 131 applies to and contains definitions of terms (such as new concepts) required in Part 131 specifically. Additional definitions will be inserted as an amendment to the CASR dictionary. This subpart empowers CASA to issue a MOS and approvals under Part 131.

Air operator certification and management (Subpart 131.B)

An Air Operator's Certificate (AOC) will continue to be required under section 27 of the Civil Aviation Act 1988 for balloon operators wishing to operate a balloon transport operation (which is currently regulated as a charter AOC operation).

Note: Activities currently defined as aerial work in regulation 206 of CAR will be redefined as *specialised balloon operations* (with the exception of balloon flying training that will continue to be regulated under regulation 206 of CAR and Part 5 of CAR until the Part 131 licensing rules are developed, consulted and finalised). See the section below for details of these operations.

The requirements for an AOC will be broadly consistent with current requirements however the wording of the requirements looks different as they have been aligned with the regulatory drafting used in CASR Part 119.

CASR Part 131 will continue the application of a common yet scalable standard for balloon transport operations that accommodates all sizes of balloons from the smallest to the largest. Similar to current charter rules, the new rules are not intended to require small non-complex operators to possess sophisticated and detailed systems, but rather maintain similar conceptual frameworks and headline systems appropriate for all operators. The implementation of these systems will be scaled to the size and complexity of the balloon transport operator's operations.

CASR Part 131 aims to improve the focus of Australian balloon transport operators on the potential for human and organisational factors to cause incidents and accidents, and in so doing, enhancing aviation safety for the travelling public.

An AOC balloon transport operator will be required to have the following:

- An exposition - this could be a single document in chapters OR (at the discretion of the operator - not CASA) a suite of related documents that describes the operation. This is not intended to be significantly different to the current requirements for an operator's manual suite although there are some new requirements that are subject to a transition

period for existing operators. It is planned that a sample exposition will be available in CASA's Manual Authoring and Assessment Tool (MAAT). The exposition would contain information detailing:

- the company structure, head office location, operating areas, facilities, key personnel, administrative procedures and statements of intent and compliance;
 - the operator's standard operating procedures (SOPs);
 - the operator's emergency procedures;
 - the operator's drug and alcohol management plan (DAMP) in accordance with CASR Part 99;
 - the operator's fatigue risk management procedures;
 - *(once delayed commencement period has ended)* the operator's training and checking procedures for pilots and operational safety-critical personnel such as ground crew; and
 - *(once delayed commencement period has ended)* the operator's simple Safety Management System (SMS) including a management commitment, risk management plan, hazard identification, risk mitigation and continuous improvement procedures.
- Key personnel (in a small organisation one person may occupy all these positions except that the CEO and Safety Manager cannot be the same person) include the:
 - Responsible manager or CEO by whatever title known (similar to current rules);
 - Head of Flying Operations (HOFO) (currently known as the chief pilot);
 - *(once delayed commencement period has ended)* Head of Training and Checking (HOTC); and
 - *(once delayed commencement period has ended)* Safety Manager.

Operational procedures - General operating and flight rules (Subpart 131.D)

Balloon general operating and flight rules are a combination of CASR Part 91 rules and this Subpart of Part 131. This avoids unnecessary repetition in CASR Part 131.

In relation to Part 91, four broad scenarios apply in relation to the operation of Part 131 aircraft.

- The first scenario is that a Part 91 rule has been entirely turned off and has not been replaced with a Part 131 version of the rule, because the Part 91 rule topic is inappropriate to the operation of Part 131 aircraft.
- The second scenario is that a Part 91 rule has been entirely turned off but has been replaced by an appropriate Part 131 rule on that topic.
- The third scenario is that the existing Part 91 rule has been modified to incorporate elements relevant to Part 131 aircraft. An example is that the Part 91 rule (91.270) relating to unauthorised entry into prohibited or restricted areas has been modified to reflect the realities of balloon operations.
- The fourth scenario is that the Part 91 rule so clearly wouldn't apply to a Part 131 aircraft that it has been left alone to avoid unnecessary legislative changes. An example is that the Part 91 rule regarding supersonic flight (91.075) has not been legally turned off as there is no practical necessity to do so.

The rules within Part 91 that have been turned off are identified in the attached consultation draft of the proposed regulations.

CASR Part 91 also contains some new rules compared to the current equivalent regulations that are potentially relevant to some operations involving Part 131 aircraft. These new Part 91 rules were publicly consulted in 2018 and, in some cases, modified due to feedback from the public consultation. CASA does not anticipate significantly different impacts on the operation of Part 131 aircraft compared to Part 91 aircraft. To avoid the necessity for readers of this consultation to examine multiple Part 91 public consultation documents, the list below represents CASA's assessment of the new or significantly modified rules in Part 91 that are relevant to the operation of Part 131 aircraft:

- a. 91.160 (Carriage of firearms) – this regulation removes the need for CASA approval for someone to carry firearms on aircraft for flights not regulated for this purpose under the Aviation Transport Security Act 2004. This change aims to remove red tape by authorising the operator or pilot in command (where not regulated by the Aviation Transport Security Act 2004) to allow firearms on board aircraft. Discharging a firearm from an aircraft remains an aerial work activity and will be authorised via Part 138.
- b. 91.170 (Operation of portable electronic devices) – this change removed the prescriptive list of permitted portable electronic devices (PEDs) on flights in order to provide greater discretion for the pilot in command to determine which PEDs may be used by passengers and when.
- c. 91.175 (Operation of PEDs by crew members) – this new regulation recognises technological changes and the common usage of PEDs by crew members. It restricts crew members from operating PEDs where that would be distracting to the performance of their duties. Specific rules about crew member usage of PEDs at other times is subject to the general PED rule.
- d. 91.275 (Air defence identification zone flights) – this new regulation clarifies that it is legal requirement to comply with Air Defence Identification Zones (ADIZ) procedures, as currently outlined in the Aeronautical Information Publication (AIP).
- e. 91.520 (Crew members to be fit for duty) – this change creates a broader requirement for fitness for duty, introduces blood alcohol level requirements consistent with Part 99 and maintains the prescriptive eight-hour rule for alcohol consumption.
- f. 91.620 (Carriage of animals) – this regulation significantly simplifies the rules for the carriage of animals and removes the need for CASA permission for certain assistance animals and provides greater discretion when applying the rules.

In relation to Part 131, the proposed regulations (noting the Part 131 MOS will be separately consulted) do contain some new requirements relating to electronic documents, specialised balloon operations, flights over water and tethered gas balloons (see Subpart 131.Z for details of the tethered gas balloon proposal).

Electronic documents (131.255)

This proposal explicitly permits the carriage of documents electronically and modernises the carriage of documents requirements in line with common industry practice. This regulatory provision has been repeated across the future regulatory suite.

Flights over water (131.280)

The current requirements specified in regulation 258 of CAR and CAO 95.54 have been modified or included to ensure appropriate limits for balloon operations over water. Noting that a lower risk tolerance is applied to balloon transport operations, it is proposed to limit these

operations to no more than 200m from shore unless the requirements to be specified in the Part 131 MOS have been met. For non-balloon transport operations, the existing rule from CAO 95.54 limiting operations to no more than 1km from shore without all occupants being fitted with life jackets is proposed.

Specialised balloon operations (131.290)

CASA is proposing to define the following activities as specialised balloon operations:

- Where specialised instruments, indicators, items of equipment or systems are fitted to, or carried on, the aircraft. Note that guidance material will be provided well in advance of commencement to further outline this concept.
- Carrying or towing a load outside the aircraft.
- Operating the aircraft for the sole purpose of advertising or making a film or television production.
- Conducting a flight into or out of Australian territory.
- Conducting an activity prescribed by the Part 131 Manual of Standards for the purposes of this subparagraph. This last provision is intended to provide future regulatory flexibility and it should be noted that if it were to be used, any new MOS provisions would be subject to public consultation except in rare circumstances outlined in CASR Part 11.

The benefit of defining these operations as specialised balloon operations is that CASA can legally separate these activities from the current CAR concepts of charter and aerial work, the proposed Part 131 concept of balloon transport operations and the future Part 138 aerial work operations.

All operators conducting a specialised balloon operation will require an approval from CASA under regulation 131A.030. Critically, neither an aerial work AOC (as per CAR) or an aerial work certificate (as per Part 138) will be required, thereby significantly reducing the administrative burden for operators but still maintaining a level of safety appropriate to the complexity and risks associated with these types of operation.

Pilots conducting a specialised balloon operation will also be required to hold a commercial pilot (balloon) licence or a Part 131 ASAO authorisation depending on the kind of specialised balloon operation being conducted.

Performance (Balloon loading requirements) (Subpart 131.F)

Subpart 131.F includes provisions related to maximum and minimum loading weights, acceptable methods for calculating those weights and the carriage of passengers. The circumstances under which weights must be calculated and the methods to be used to conduct these calculations will be specified in the future Part 131 MOS. The MOS will also specify the requirements related to the carriage of passengers.

An additional provision relates only to balloon transport operators and requires these operators to include loading procedures in their exposition.

Balloon instruments and equipment (Subpart 131.K)

Subpart 131.K states that the MOS is to specify the equipment that may be fitted or carried in a balloon and for any requirements that may be prescribed for the use of equipment. There will be

little change in this subpart that is not already in legislation, except that, for some equipment, CASA may move to an outcome based rule that requires operators to have a means of meeting the prescribed standard or achieving the outcome instead of CASA specifying the exact method of satisfying a requirement.

Continuing airworthiness (Subpart 131.M)

Subpart 131.M is reserved for potential future use pending the outcome of existing continuing airworthiness projects and any future proposals related to balloon continuing airworthiness.

Flight crew (Subpart 131.N)

Balloon pilot licence requirements have not been changed. In Part 131, the term "Part 131 pilot authorisation" is used to refer to a commercial pilot (balloon) licence that is granted under Part 5 of CAR, or a certificate of validation under Part 5 of CAR, or an authorisation from a Part 131 ASAO (this being a private pilot certificate (balloon)).

This new regulation provides an ability for the Part 131 MOS to specify pilot training and checking requirements in the Part 131 MOS which will be publicly consulted in 2020.

Other operational safety-critical personnel (Subpart 131.P)

Subpart 131.P specifies provisions intended in part to "future proof" the Part 131 regulations. For example, the cabin crew rules provide appropriate consistency with other CASR Parts if a balloon operator decided to utilise cabin crew or, if balloons increased in size and capacity such that the carriage of cabin crew became necessary, the regulations were already in place. Similar provisions are in place in relation to air crew. The definitions of "cabin crew member" and "air crew member" are contained within the legislative instrument titled *Civil Aviation Safety Amendment (Operations Definitions) Regulations 2019*.

Division 131.P.4 contains provisions related to personnel conducting ground support duties and provides an ability for the Part 131 MOS to contain requirements related to the number of these personnel required and the training and checking these personnel must undertake.

Part 131 Recreational activities (Subpart 131.R)

Part 131 recreational activities are those activities that are not balloon transport operations or specialised balloon operations. Subpart 131.R requires persons to hold an authorisation (for example a private pilot certificate (balloons)) from a Part 131 ASAO before conducting a Part 131 recreational activity.

Balloon flight crew licensing (Subpart 131.S)

Subpart 131.S is reserved for future use pending the outcome of any future work related to the modernisation of Part 5 of CAR and the movement of balloon pilot licensing into the CASR.

Tethered gas balloons (Subpart 131.Z)

A type of gas balloon that is permanently moored and used as a viewing platform is popular in scenic locations in Europe and other places. Such balloons are not intended for free flight but ascend on cables to heights of up to 400 feet, carrying passengers in a gondola to provide an elevated view. The balloon is controlled by an operator rather than a pilot, however CASA intends to oversight such balloon operations (because fare-paying passengers are carried) and

has therefore included provisions for *tethered gas balloons* in Part 131. To avoid doubt, no other rules in Part 131 apply to tethered gas balloons, except for this standalone subpart within Part 131.

CASA is proposing to require operators conducting these operations to obtain an approval under regulation 131A.030. There is also a provision to enable requirements for these types of operations to be specified in the Part 131 MOS.

Other relevant matters

Parachute descents from balloons will be set out in in [Part 105 Sport and recreational parachuting from aircraft](#) of CASR and the Part 105 MOS. No changes to current requirements are proposed.

Timeline for change and transitional arrangements

The commencement date for Part 131 is 25 March 2021 to align with the commencement of CASR Parts 91, 119, 121, 133, 135 and 138 and the associated repeal of many of the *Civil Aviation Regulations 1988*.

As outlined earlier in this document, it is intended to delay the requirements for a balloon transport operator, that was previously a charter operator, to have a training and checking system (and therefore a head of training and checking) and a safety management system (and therefore a Safety Manager). CASA seeks specific feedback in relation to an appropriate delay period for these requirements.

Where necessary, CASA intends to develop detailed transitional arrangements sufficiently in advance of the proposed 25 March 2021 commencement date.

Previous consultations

A Notice of Proposed Rule Making (NPRM 0706OS) - Balloons used for Non-recreational Operations was released for consultation in February 2008. At that time, Part 131 was intended to detail the regulations and standards for Balloons used for Non-Recreational Operations including Flight Rules, Operator Certification, Flight Crew Licensing, Flying Training, Maintenance, Maintenance Organisations, and Maintenance Personnel Licensing and Training.

The rules for balloons used for recreational operations were intended to be eventually detailed in Part 103 Sport and Recreational Aviation Operations under a CASA “parallel path”.

Consultation on the Part 131 NPRM was conducted with representatives from the Australian Balloon Federation (ABF), the Professional Ballooning Association of Australia (PBAA), CASA SMEs and the public. The NPRM was closed for comment on 7 April 2008.

Subsequently the project was postponed because of a lack of resources. The PBAA which represented the commercial operators was disbanded in 2012.

In 2015 CASA revived the Part 131 project and decided to revise the scope and application of Part 131 to include all manned free balloon activities both recreational and commercial. To do otherwise would have meant Part 103 would have to repeat many of the regulations and standards from Part 131; many of the legislative provisions are common to all manned free balloon activities regardless of the purpose of the flight.

Since 2008 CASA's regulatory philosophy has been refined and the policies for Part 131 now reflect CASA's determination to produce appropriate, simple, outcome-based regulation. This is consistent with the approach of other National Aviation Authorities around the world.

In 2019 CASA decided to define manned free balloons and hot air airships as Part 131 aircraft and to rely on some of the CASR Part 91 General operating and flight rules where appropriate. This approach reflects Australian Government best legislative drafting practice and reduces the administrative burden of maintaining the regulatory suite. Appropriate guidance material will be developed to assist industry to understand the regulatory scheme applicable to Part 131 operations. CASA also introduced the concept of specialised balloon operations to differentiate these operations from aerial work conducted under CASR Part 138.

Impact on industry

The changes in the operational rules are expected to maintain safety even though some of the administrative and system safety requirements associated with some aerial work operations becoming specialised balloon transport operations have been modified.

Some changes are proposed for holders of AOCs for balloon transport operations which are consistent with the requirements for all AOC holders. These changes are expected to enhance safety by encouraging operators to comply with regulations in a way that is acceptable, but which suits their own operation. Recent incidents in the balloon transport sector and CASA surveillance of the sector have identified that implementation of safety systems will help operators identify latent failures within their operational systems and procedures.

Significant proposals within CASR Part 131 that CASA requests specific feedback on include:

- The requirement for balloon transport operators (current charter) to have a safety management system scaled to the operator's size and complexity of operations. Fundamental elements of safety management systems are the same across all sizes of operators however the implementation of the safety management system would vary dependant on the size and scale of the operator.
- The requirement for balloon transport operators (current charter) to have a Safety Manager. This person does not have to be full-time (the operator can assess this as part of their development of the SMS and it is likely to be dependent on the operator's size, scale and complexity) and could be a contractor. CASA intends to provide Acceptable Means of Compliance and/or Guidance Material.
- The requirement for balloon transport operators (current charter) to have an appropriately scaled and documented training and checking system for flight crew and operational safety-critical personnel such as ground crew.

CASA's observations are that many current AOC holders already have these systems in place in fact if not in name.

CASA intends to ameliorate industry impacts by providing comprehensive guidance material and sample manuals for operators that offer clarity regarding the ability for these systems to be scaled to the operator's size and complexity. While every operator is required to meet the same fundamental regulatory requirements, exactly how these requirements are met and outlined in an operators' exposition is scalable to the operation. A small, non-complex operator flying in one location is not expected to possess an SMS equivalent to a larger operator with multiple bases.

Regulation impact statement (RIS)

In line with normal practice, CASA will submit a RIS to the Office of Best Practice Regulation (OBPR) for their assessment once the feedback from this consultation has been assessed and any necessary policy changes have been determined.

Related regulations

The following CASR Parts also apply to Part 131 aircraft and their activities where appropriate:

- Part 11 - Regulatory Administrative Procedures
- Part 13 - Enforcement Procedures
- Part 21 - Certification and airworthiness requirements
- Part 31 - Airworthiness standards for manned free balloons
- Part 39 - Airworthiness directives
- Part 45 - Display of nationality marks, registration marks and aircraft registration identification plates
- Part 47 - Registration of aircraft and related matters
- Part 67 - Medical certificates
- Part 91 - General Operating and Flight Rules
- Part 92 - Consignment and carriage of dangerous goods by air
- Part 99 - Drug and alcohol management plans and testing

Closing date for comment

CASA will consider all comments received as part of this consultation process and incorporate changes as appropriate. Comments on the draft Civil Aviation Legislation Amendment (Part 131) Regulations 2019 should be submitted through the online response form by 30 September 2019.