Australian Government
Civil Aviation Safety Authority

SUMMARY OF CONSULTATION

Amendments to CAOs 40.7 and 82.7 to align with regulation 5.01 of CAR 1988

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Overview

CASA published proposed amendments to CAO 40.7 *Aircraft endorsements (balloons) and flight instructor (balloons)* and CAO 82.7 *Air Operators' Certificates authorising aerial work operations and charter operations in balloons* on the CASA Consultation Hub from 15 February to 15 March 2019.

The proposed amendments to CAO 40.7 intend to:

- make the references to balloon classes in the order consistent with the definition of "class" in regulation 5.01 of the *Civil Aviation Regulations 1988* (CAR)
- prescribe the requirements for a person to gain an endorsement for each of the three defined classes – two hot air classes and one gas class
- introduce a Class 1 (Restricted) and Class 2 (Restricted) endorsement on initial issue of the Class endorsement
- permit the restriction to be removed when a pilot has completed the required flying as pilot in command under supervision (PICUS) and is assessed as competent
- prescribe minimum hours of line supervision for pilots flying as pilot in command under supervision (PICUS), under regulation 5.40 of CAR, after initial qualification for Class 1 or Class 2 balloons
- prescribe the maximum number of passengers that may be carried in a Class 1 balloon by a newly qualified CP(B)L holding a Class 1 (R) endorsement until he or she has undertaken the required supervision and been assessed as competent
- prescribe the minimum aeronautical experience required for a pilot wishing to be endorsed to fly a class 2 balloon
- prescribe the maximum envelope size a pilot newly qualified to fly Class 2 balloons can fly until he or she has undertaken the required supervision and been assessed as competent
- require competency-based assessment
- ensure chief pilots take responsibility for the competency of rostered pilots
- ensure CASA is kept informed of a pilot’s class endorsements.

The proposed amendments to CAO 82.7 intend to:

- make the references to balloon classes in the order consistent with the definition of "class" in regulation 5.01 of the CAR
- prescribe the minimum experience and qualifications for a chief pilot of an AOC holder with reference to balloon classes that are consistent with the definition of balloon classes in regulation 5.01 of CAR.

CASA invited industry and the public to comment via a short survey on each specific proposal in the amendments.

Each comment and submission has been reviewed and a summary of the feedback is provided below.

Respondents

There were ten respondents to the consultation. Seven respondents consented to having their submission published. Three respondents represented an organisation and seven were individuals. All respondents identified as balloon pilots and three were also AOC holders. One respondent also identified as an Authorised Balloon Testing Officer (ABTO). No CASA officer submitted a response. Nine respondents answered most or all the questions and one respondent, the Australian Balloon Federation (ABF), representing the private balloon sector, made a general comment without answering the technical questions in the survey.

Key feedback

Most respondents agreed with all the proposals without comment. Some respondents made suggestions that CASA agreed with and were worth considering for the amendments to CAO 40.7.

Amendments to CAO 40.7

Q1. Do you agree with a proposed restricted (R) endorsement for an initial Class 1 commercial pilot (balloon) licence CP(B)L?

- Seven respondents agreed without comment.
- One respondent broadly agreed with the change but suggested the Class 1 (Restricted) should be up to 180 000 cu/ft.
- One respondent broadly disagreed with the changes and suggested:

  This should be a simple Class 1. Class 2 should be the unrestricted. The process outlined is messy and confusing. It seems just a work around of CASA's premature removal of the 4 Class system in the CAR's many years ago without sufficient consideration and with no consultation.

CASA response/action

In 2014 CASA reduced the balloon class size definitions from five to three in response to previous industry requests to reduce the number of different balloon sizes that an operator was required to maintain to facilitate a line pilot progressively transitioning to the bigger balloons. The industry had requested the removal of the old class 2 (balloons up to 180 000 cu/ft) and the old classes 1 to 3 were combined into a new class 1 being balloons of up to 260 000 cu/ft. This reflects the Australian and international trend of the use of bigger balloons for charter operations and is defined in regulation 5.01 of CAR.

CASA determines the standards are suitable and intends to publish an explanatory document on its website that will clearly describe the endorsement process in plain English and remove any possible confusion.

Q2. Do you agree that the holder of a Class 1 (R) endorsement should be limited to carrying no more than six passengers?

- Seven respondents agreed without comment.
- Two respondents agreed with changes:

  One respondent suggested the Class 1 (Restricted) should be up to 180 000 cu/ft.

> One respondent suggested the restriction to 6 passengers is correct but that this class (class 1(R)) should be a Class 1 (as per the response in Q1) and not a restricted Class 1.

CASA response/action

CASA considers that prescribing a maximum number of passengers rather than a balloon size provides operators with more flexibility of fleet composition.

Changes to the definitions of balloon class within regulation 5.01 of CAR would require implementing a change to the regulations which is an administratively extensive process. Amending the CAO provides a quicker solution to resolving the current confusion. CASA will consider the feedback raised in this consultation as part of its development of Part 131 Manned Free Balloons.

Q3. Do you agree that a minimum five hours of PICUS in AOC operations and a proficiency check are appropriate for assessing a pilot's competency for a Class 1 (U) unrestricted endorsement?

- Seven respondents agreed without comment.
- Two respondents agreed with changes:

> 25 Hours PIC (Class 1 Restricted) + 5 Hours PICUS (Class 1 Unrestricted) + 1 Hour Proficiency Check with ATO Class 1 (Unrestricted) up to 260,000cu/ft
>
> The hours is (sic) probably correct but the ability to do the PICUS with a line pilot does not provide certainty that there will be a sufficient level of training with regard to larger balloons and number of passengers. It may not be abused but more than likely will be. This should be a progression to Class 2.

CASA response/action

CASA notes that there are very few active ABTOs and therefore restricting the proficiency check to only being carried out by ABTOs is an unreasonable burden on industry. From a safety perspective, CASA considers that an instructor or chief pilot should be able to assess the competency for a class 1 (U) endorsement. The CAO will require that where a proficiency check is *not* carried out by an ABTO, the flight proficiency report will be reviewed by an ABTO prior to the completion of CASA notification form 214.

Q4. Do you agree that a minimum of 175 hours as PIC and 80 hours of charter are appropriate requirements for a pilot to be eligible for a Class 2 (R) endorsement?

- Seven respondents agreed without comment.
- One respondent disagreed with the following comment:

  50 hours PIC (Class 1 Unrestricted) + 5 Hours PICUS Class 2 (Restricted) + 1 Hour Proficiency Check with ATO Class 2 (Restricted) up to 400,000cu/ft

- One respondent agreed with changes as follows:

  Hours correct except that there is nothing stopping all those hours being in the smallest of balloons such as a 90 on romantic specials flights. This should be progression to Class 3.

CASA response/action

CASA considers the minimum hours of experience are appropriate. The chief pilot of an AOC holder will be responsible for certifying that a pilot is competent for rostered duties.

CASA agrees that, where possible, an initial class 2 endorsement should be conducted by an ABTO or person authorised by CASA such as a qualified CASA FOI. If none of these are available, application may be made to CASA for permission for an instructor to conduct the proficiency check for Class 2 (R).

Q5. Do you agree that the holder of a class 2 (R) endorsement should be restricted to flying a balloon with a maximum envelope volume of 400 000 cu ft?

- Eight respondents agreed without comment.
- One respondent agreed but commented that the endorsement should be Class 3.

CASA response/action

CASA notes that it is not possible to define a new class 3 within CAO 40.7 as it would conflict with the definition of class 3 (gas balloons) in regulation 5.01 of CAR.

Q6. Do you agree that a minimum five hours of PICUS in AOC operations and a proficiency check are appropriate for assessing a pilot's competency for Class 2 (U) unrestricted endorsement?

- Seven respondents agreed without comment.
- One respondent disagreed with the following comment:

  There should be some hours experience requirement in the 'Class 3' size. 5 hours PICUS and no additional experience is insufficient to move from the smallest balloon in the Class - 260 to 525s and 530s. A line pilot is not necessarily sufficiently qualified to provide training.

- One respondent agreed with changes as follows:

  50 hours PIC (Class 2 Restricted) + 5 Hours PICUS Class 2 (Unrestricted) + 1 Hour Proficiency Check with ATO.

CASA response/action

The proposed requirements for pilots are based on the premise that the operational control manipulation skills required to fly a balloon are the same regardless of the size. The differences are that inertia and momentum increase with the envelope volume and that bigger balloons carry more passengers, and the increased risk must be managed. The proposed requirements are minimums only and operators may require additional line supervision at any time. The chief pilot is responsible for assessing the competency of pilots for all rostered flights.

Q7. Do you agree that ABTOs, balloon flight instructors, chief pilots and approved line pilots are all appropriate persons to conduct line training and proficiency checks (except line pilots) for pilots acting in command under supervision?

- Seven respondents agreed without comment.
- One respondent disagreed with the following comment:

  Line pilots do not necessarily have the skills to provide useful training during the PICUS stage. Some pilots might but the reason for a qualification such as Flight Instructor is to ensure some minimum standardised skill level. The line pilots almost certainly will have the flying skills but may not possess appropriate training and communication skills. They have not been trained or been interested in being trained to a level where there are rated as competent to impart those skills. Chief Pilots also do not necessarily have the training skills but are far more likely to understand what is required.

- One respondent agreed with changes as follows:

  1 Hour Proficiency Check with ATO.

CASA response/action

CASA noted the concerns raised regarding line pilot supervisory and communications skills. Following further evaluation, CASA agrees that it would be difficult to reliably ensure line pilots were sufficiently experienced to confidently provide instruction and supervision for a pilot acting in command under supervision.

Therefore, CASA will restrict the non-ABTO personnel permitted to conduct these PICUS flights to instructors and chief pilots. Noting the limited number of ABTOs, an ABTO may not always be available to conduct proficiency checks and therefore permitting an appropriately limited wider pool of personnel is appropriate. At all times, an AOC holder retains the ability to require that, in their organisation, all class endorsement proficiency checks are conducted by an ABTO or a person authorised by CASA.

Q8. Do you agree that pilots conducting line training should have at least 25 hours as PIC on the balloon type?

- Eight respondents agreed without comment.
- One respondent agreed but commented that type should be replaced by a balloon of the same envelope volume size or bigger.

CASA response/action

CASA agrees that the PIC must have 25 hours on a balloon of the same or bigger envelope volume but notes that the PIC must also be endorsed on the type. The implemented version of CAO 40.7 will make this clear.

Q9. Do you agree that the hours of tether experience for a balloon flight instructor should be reduced from 10 hours to five hours?

- Eight respondents agreed without comment.
- One respondent disagreed as follows:

  10 hours is not a lot of tether time. At least with 10 hours there is a chance of experiencing some adverse weather whilst on tether rather than just adding a few ropes in a field on a flat calm day. Ideally some of the tether time should be in a commercial or promotional environment but its difficult to see how to require that without creating unnecessary hurdles to becoming a Flt Instructor.

CASA response/action

CASA considered this comment and notes that most commercial passenger transport pilots do very little or no tethering. Pilots must learn and conduct tethering as part of ab initio training and log another 5 hours for the CP(B)L. Requiring more tethering experience for an instructor rating seems to be an unnecessary requirement for little or no benefit.

Q10. Do you agree that a Class 3 endorsement for gas balloons will only be considered on application to CASA?

- Six respondents agreed without comment.
- Two respondents had no opinion.
- One respondent disagreed and commented:

  Agree it's unlikely that there will be commercial gas ballooning in the short term BUT the way it is worded has the potential to make it almost impossible to obtain permission. It is very personality driven and open to huge variations depending on the CASA staff involved. We may not always be in a position where the responsible CASA have the level of expertise in ballooning that is currently in place.

CASA response/action

CASA notes that in the absence of any commercial gas balloon operation in Australia a decision on the requirements for a CP(B)L for gas balloons must be reserved. If such a licence is required in the future CASA would carefully consider the application, make a risk assessment and potentially consider foreign regulatory requirements prior to making a determination.

Amendments to CAO 82.7

Q1. Do you agree that the experience requirements for a chief pilot in Table 5.2 are appropriate?

- Seven respondents agreed without comment.
- Two respondents did not answer.
- One respondent agreed but suggested the following change:

The employment status (part time, full time, casual) of an aspiring Chief Pilot within the organisation he or she wishes to become Chief Pilot of isn't relevant and shouldn't be a determining factor.

CASA response/action

CASA considers that the role of chief pilot, where two or more balloons are operated at the same time so that at least one other pilot is employed, is normally a full-time job. A single balloon operation is more likely to be a part-time activity. However, CASA may approve in writing variations to the minimum qualifications if an applicant makes a suitable safety case.

CASA will proceed with the amendment to CAO 82.7.

Additional comments

Q1. Do you have any additional comments about the proposed policy?

- Six respondents had no additional comment.
- Four respondents had comments and agreed to their comments being published.
- The chief pilot of Balloon Joy Flights commented:

  There are numerous references to the use of Form 214 in triplicate with a sticky strip to be glued into a pilot's log book. As a Chief Pilot please advise how I can obtain the form 214? Is this a purchasable item?

- A senior pilot from Beyond Blue Ballooning commented:

  Class 1 (Restricted) up to 180,000cu/ft 25 Hours PIC (Class 1 Restricted) + 5 Hours PICUS (Class 1 Unrestricted) + 1 Hour Proficiency Check with ATO Class 1 (Unrestricted) up to 260,000cu/ft 50 hours PIC (Class 1 Unrestricted) + 5 Hours PICUS Class 2 (Restricted) + 1 Hour Proficiency Check with ATO Class 2 (Restricted) up to 400,000cu/ft 50 hours PIC (Class 2 Restricted) + 5 Hours PICUS Class 2 (Unrestricted) + 1 Hour Proficiency Check with ATO Class 2 (Unrestricted) above 400,000cu/ft

  Notes:

  • After a pilot has done 75-100 hours private flying the Class 1 (Restricted) needs to be minimal just to gain some charter experience (Exclusives and 6 pax etc in a 180) but then get them into a 240-260 where there can be of benefit to a business and keep them flying more often and progressing onto the further endorsements.
  • Class 2 (Unrestricted) I feel should be open as 425's are now flying 24 passengers in some locations the same amount as a 450 or 525 so same pax management just with a slightly larger balloon.
  • I believe endorsements proficiency checks and certification should be done by an ATO to maintain a higher standard than just a line pilot checking off and the ATO merely certifying the documents.
  • This system effectively realigns the sizing categories to what the Australian ballooning industry operates with at this time.
  • Compared with the old 4 class system requiring 150 hours into class 4, this system would be at 125 hours to the highest class but would be achieved quicker as pilots can get into 240-260 that is flying more on a more regular basis in most businesses.
  • I haven't added totals in for each progression but this general is only a few more hours than what is required PIC

- An AOC holder and ABTO commented:

  The most important single element of the draft 40.7 is to allow upgrade training on commercial flights. This is long overdue, safer and more useful than carrying ballast.

  However this is a de facto 4 Class system which is presumeably (sic) is a work around of the CARs that never should have been changed to 2 Classes in the first place without proper consideration of 40.7.

  Form 214 Stickers and Checks are required 4 times just as for 4 classes but the end result is considerably more confusing.

  The original concept behind two Classes and progression through sizes within those Classes was a steady increase in size with experience or training. This now appears lost. For example a person could (I think – and happy to be corrected)

  Obtain a CPL and Class 1 restricted in a 90 with 75 hours plus 8 hours training After 5 hours training in a 140 with 7 POB

  Obtain an unrestricted Class 1 with a proficiency check in a 140 Fly the 90 for a further approx. 100 hours including 80 in charter – exclusives etc

  Obtain a Class 2 Restricted with a proficiency check in a 300

  After 5 hours training in a 425

  Obtain an unrestricted Class 2 with a proficiency check in a 425

  Then start flying a 530 with around 90 hours total charter and only 13 hours in anything bigger than a 90.

  It is important to provide a reasonable pathway to bigger balloons but does this provide adequate experience safeguards?

  i. Separate comment:

  5.2 d says ‘pass a proficiency check in a Class 2 balloon of the type for which the person is seeking a Class 2 balloon endorsement’. Why is ‘type’ mentioned? Class Endorsements are not type specific.

- The ABF commented:

  The ABF is responsible for the administration & management of private ballooning and is not involved in commercial operations. As such, the ABF is not able to comment on the introduction of Restricted / Unrestricted class endorsements or their potential impact on a commercial pilot's progression to flying larger balloon sizes.

  The ABF is, however, able to appreciate the confusion encountered by commercial pilots (especially new ones) due to the lack of alignment between the balloon class change in CAR 5.01 that was introduced with Part 61 and CAO 40.7 which was not updated at the time. The proposed updates to CAO 40.7 will clarify the steps for commercial balloon pilots to follow as they develop their skills and progress towards flying larger balloons.

  The fact that the proposed changes are being made is appreciated and acknowledged.

CASA response/action

Form 214 is the Certification of Aircraft Endorsement, Approval and Rating form used by ABTOs or CASA authorised delegates such as FOIs. The top copy of the form is sent to CASA so that the pilot database can be updated, and a Form 214 sticky label is placed in the pilot’s logbook as

proof of the privilege being granted. Only ABTOs or CASA authorised balloon examiners can use the Form 214.

CASA acknowledges that there are multiple ways to design an endorsement scheme for increasing balloon envelope volumes. The commercial balloon industry has requested to be able to legally train pilots for endorsement onto bigger balloon sizes on commercial passenger transport flights for many years and these amendments will facilitate this.

The previous aeronautical experience requirements are out-of-date considering the increasing sizes of balloons used in charter operations. In Australia, there are now many balloon pilots with thousands of hours of experience flying large balloons over many years. Technological advances have provided pilots with the ability to more precisely control balloons both in-flight and when landing, as well as the tools to make better decisions based on their knowledge of local weather conditions.

CASA expects chief pilots to take an interest in the competency of every pilot in their operation and expects that he or she will not roster a pilot to a duty if the pilot has not been assessed and found competent for each required task. CASA intends to monitor the application of the CAO amendments during the surveillance activities of ABTOs and AOC holders.

CASA agrees that it would be difficult to consistently ensure that a line pilot had the skills to supervise a PICUS flight. Therefore, CASA will restrict the supervision of PICUS flights to instructors and chief pilots in addition to ABTOs.

The proposed amendments to CAO 40.7 will be modified as outlined above. The proposed amendments to CAO 82.7 will proceed without changes.

Future direction

Overall, respondents have strongly supported the proposals.

CASA will now implement the CAO amendments outlined in this document.