



Civil Aviation Authority

SAFETY NOTICE

Number: SN-2017/004



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Balloon Operations – Safety Matters

This Safety Notice contains recommendations regarding operational safety.

Recipients must ensure that this Notice is copied to all members of their staff who need to take appropriate action or who may have an interest in the information (including any 'in-house' or contracted maintenance organisations and relevant outside contractors).

Applicability:	
Aerodromes:	Not primarily affected
Air Traffic:	Not primarily affected
Airspace:	Not primarily affected
Airworthiness:	Not primarily affected
Flight Operations:	All Balloon AOC Holders
Licensed/Unlicensed Personnel:	All Commercial Balloon Pilots

1 Introduction

- 1.1 The purpose of this Safety Notice (SN) is to provide balloon operators and pilots with the latest guidance concerning balloon operations with particular emphasis on passenger-related matters and advice on pilot training and pilot decision-making.
- 1.2 This SN supersedes SN-2011/018.

2 Protection of Balloon Passengers During the Landing Phase

- 2.1 Following an Air Accidents Investigation Branch (AAIB) Recommendation, the CAA, in conjunction with the British Balloon and Airship Club (BBAC), were asked to require balloon baskets certified for Public Transport flights, where practicable, to contain dense foam seating blocks and additional padding to reduce the effect of impact with the basket structure during landing. Following this recommendation the CAA engaged with the European Aviation Safety Agency (EASA) concerning an associated recommendation made to the Agency and had discussions with the BBAC, the British Association of Balloon Operators (BABO), UK balloon operators and UK balloon manufacturers, culminating in a well-attended stakeholder meeting in February 2010.
- 2.2 The overall consensus from the February 2010 meeting and earlier discussions was that the computer simulation used in the scientific study had produced inconclusive results and that dense foam seating blocks and extra padding may not reduce the effects of impact with the basket structure during a balloon landing. Nevertheless, it was agreed that reasonable space

in balloon baskets should be provided for all occupants, with regard to both comfort during the flight and safety during the landing phase.

- 2.3 A number of operators are now using larger balloon baskets equipped with dense foam seating blocks and extra padding. If fitted, it is essential that these items are supplied through the balloon manufacturer and are fitted and operated in accordance with the manufacturer's flight manual and relevant supplements.
- 2.4 The passenger landing position is of vital importance. In accordance with **CAP 611** AOC – *Operation of Balloons*, Chapter 4, detailed instructions for pilots must be contained within the passenger briefings appendix to an Air Operator Certificate (AOC) holder's operations manual and be in accordance with the instructions contained in the manufacturer's flight manual. Where dense foam seating blocks are used, specific instructions for their use must be in the operations manual. If the passenger landing position for open baskets and that for compartmented baskets are different, again clear instructions must be written in the operations manual.
- 2.5 Operators are requested to undertake a further review of company balloon baskets taking due regard of the above guidance and of the maximum permitted number of occupants within each basket, as detailed in the operations manual.

3 Passenger Briefings

- 3.1 Article 73 of the Air Navigation Order (ANO) 2016 requires the pilot of a balloon to ensure that a passenger briefing is given. This briefing must be delivered in a clear and concise manner. The pilot should check that all passengers have heard and understood the briefing.
- 3.2 This briefing should be given when the full attention of all passengers can be guaranteed, for example prior to the commencement of the cold inflation of the balloon. Some operators prefer embarking the passengers in the upright basket at this stage for the safety briefing. This can then facilitate the allocation of passengers to specific compartments and help with the assessment as to which passengers can easily climb into the basket and which may need a little more time or assistance.
- 3.3 The briefing should start with the statement "This is an important safety briefing". It must cover embarkation, and routine and emergency evacuation procedures. The landing position(s) must be clearly demonstrated by a competent person. The briefing must finish with a check that all have understood it and questions should always be invited.
- 3.4 If any passengers are to be pre-loaded in the basket prior to the hot inflation of the balloon envelope, the briefing should explain how and when to embark with the basket on its side and the emergency evacuation procedure during the inflation period. If any passengers are invited to assist with the inflation of the balloon, again a separate briefing must be given and appropriate safety clothing (e.g. gloves) provided.
- 3.5 When the balloon is inflated and passengers loaded a practice of the landing position should be carried out. This should be repeated at the point in the flight when the commander starts to look for a suitable landing location. However, if any practice approaches are carried out during the flight, the passengers should be instructed to be ready to adopt the landing position(s) without delay.
- 3.6 The importance of the pilot making a visual check during each final approach to make sure that all passengers are complying with the landing briefing cannot be over-emphasized. Balloon examiners have reported that during Proficiency Checks they have frequently observed that pilots have given excellent passenger briefings, practice landing positions, etc,