

ACCIDENT

Aircraft Type and Registration:	Cameron A-300 hot air balloon, G-SNIF
No & Type of Engines:	Not Applicable
Year of Manufacture:	2005
Date & Time (UTC):	7 August 2008 at 1915 hrs
Location:	Croxton, Staffordshire
Type of Flight:	Commercial Air Transport (Passenger)
Persons on Board:	Crew - 1 Passengers - 14
Injuries:	Crew - None Passengers - 1 (Serious)
Nature of Damage:	None to balloon
Commander's Licence:	Commercial Pilot's Licence
Commander's Age:	43 years
Commander's Flying Experience:	2,064 hours (of which 1,800 were on type) Last 90 days - 50 hours Last 28 days - 16 hours
Information Source:	Aircraft Accident Report Form submitted by the pilot and further enquiries by the AAIB

Synopsis

After a firm landing in a field, the balloon bounced twice before coming to rest on its side. During the landing one of the passengers was injured. She later discovered her knee suffered a fracture in the landing. Two Safety Recommendations have been made.

History of the flight

Prior to the flight the pilot stated that he briefed all the passengers on the correct takeoff and landing positions to be adopted, which included a visual demonstration by him, in the basket. He added that as five of the passengers were not English speakers he ensured that their group leader, who was an English speaker, checked that they all understood the briefing.

After an uneventful flight and about 10 mins before landing, the passengers practised the landing position. As he prepared for the landing in a field of stubble, the pilot instructed the passengers to adopt the landing position. He normally has a 'cursory glance' of the passengers to check that they are in the correct position but does not remember if he did so on this occasion.

After a firm landing, at approximately 8 kt¹ groundspeed, the balloon bounced twice before coming to rest on its side. The pilot noticed that a lady, in a compartment of three passengers, appeared to be injured. The lady was

Footnote

¹ As measured on the pilot's GPS.

lifted out of the basket and her leg was inspected by the pilot and another passenger, who was a nurse. The nurse was unable to determine if her leg was broken but advised her to get it x-rayed as a precaution. After the injured lady had been taken back to her car at the launch site, her husband drove her to hospital where it was discovered that she had a fracture to her left knee and tissue damage to her right leg.

Injured passenger's comments

The injured passenger stated that one of the foreign passengers, who was in her compartment, failed to adopt the correct landing position, as she was only holding onto the rope with one hand. She believed this caused the foreign passenger to fall onto her causing her to lose her balance.

CAA Paper 2006/06; Evaluation of Possible Improvements to Current Measures for Protecting Hot Air Balloon Passengers During Landings

During the period January 1993 to January 2003 there were 31 UK hot air balloon landing accidents reported to the CAA. As a result the CAA commissioned an independent scientific study into improving the protection offered to hot air balloon passengers during landing. The study considered a variety of landing basket configurations and passenger landing positions, including having the passengers sit on dense foam blocks. The testing involved a combination of physical tests and detailed computer simulations.

This report was summarised in Balloon Notice to Balloon AOC holders 1/2007, issued in February 2007, which included several recommendations. The notice states the following:

'Foam Seating Blocks

Dense foam seating blocks can offer benefits especially if used in conjunction with additional padding to reduce the effect of head impact with the basket structure. Their use is recommended where practicable.'

Discussion

During the landing a lady was dislodged from the correct landing position and subsequently suffered a fracture of her knee. A study has shown that there may be improved protection from leg injuries by using dense foam blocks in baskets that are large enough to take them. The use of these blocks may have prevented the passenger from being dislodged from the correct landing position.

A similar accident involving the balloon G-CDDC, reference EW/C2008/07/06, is also published in this bulletin. The AAIB has therefore made the following Safety Recommendations:

Safety Recommendation 2009-011

It is recommended that the Civil Aviation Authority, in conjunction with the British Balloon and Airship Club 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.

Safety Recommendation 2009-012

It is recommended that European Aviation Safety Agency require new balloon baskets certified for Public Transport flights, to contain dense foam seating blocks and additional padding to reduce the effect of impact with the basket structure.