

SERIOUS INCIDENT

Aircraft Type and Registration:	Aerospatiale SA365N Dauphin, G-HEMS	
No & Type of Engines:	2 Turbomeca Arriel 1C turboshaft engines	
Year of Manufacture:	1982	
Date & Time (UTC):	17 June 2010 at 1840 hrs	
Location:	En-route to Durham Tees Valley Airport	
Type of Flight:	Commercial Air Transport (Passenger)	
Persons on Board:	Crew - 1	Passengers - 3
Injuries:	Crew - None	Passengers - None Others - 1 (Minor)
Nature of Damage:	Right rear cabin door damaged	
Commander's Licence:	Commercial Pilot's Licence	
Commander's Age:	33 years	
Commander's Flying Experience:	3,213 hours (of which 155 were on type) Last 90 days - 48 hours Last 28 days - 20 hours	
Information Source:	Aircraft Accident Report Form submitted by the pilot and additional information provided by the operator	

Synopsis

Shortly after takeoff the helicopter's right rear cabin quarter-door opened. A number of articles fell out, including a stationery folder that hit a person on the ground, rendering him unconscious. The operator stated that all crew members will be re-trained on the closing, locking and opening of all doors.

on each of the right door handles to confirm that they were closed and locked. During the Pre-Take Off checks the three crew members responded "all secure" to a challenge from the pilot. No captions were displayed on the central warning panel to indicate that a door might be unlocked.

History of the flight

After delivering a patient to hospital in Middlesbrough the pilot observed the doctor return to the helicopter and close the right rear cabin quarter-door, secure the upper and lower locks and close the passenger door. The pilot then made a visual inspection of the aircraft and pulled

Approximately 3 min after takeoff at approximately 700 ft amsl, while en-route to the helicopter's base at Durham Tees Valley Airport, a loud bang was heard and the paramedic seated in the rear of the aircraft remarked that the right rear cabin quarter-door had opened. A number of objects were seen to fall from the aircraft but

the door, though fully open, remained attached. The pilot reduced speed to 70 kt and advised ATC of the problem, and the flight continued the short distance to its destination without further incident.

Later it was reported that a plastic A4 stationary folder that had fallen from the helicopter hit a person on the ground, rendering him unconscious. He was assisted by paramedics.

Engineering inspection

The operator's engineers inspected the door and its locking mechanism and found some deformation of the door and other minor damage consistent with it having opened in flight. The locks, however, were serviceable. The engineers commented that as the pilot had checked the door was shut by pulling on it, it was likely that the bolts were at least partially engaged. They added that the quarter-door pins could not be seen from outside the helicopter and were difficult to see from inside the cabin when a stretcher was installed, as on this flight.

Safety actions

It is likely that the door was not secure before takeoff and that the door pins were either not located or only partially located. As a result the operator issued a Safety Bulletin, 'Security of Helicopter Emergency Medical Service's (HEMS) Dauphin Doors', which states, in part:

1. As soon as possible all HEMS Crewmembers will be re-trained on the closing/locking/opening of all the doors. Unqualified passengers are not to close/lock aircraft doors.

2. The first item on the Before Taxi Checklist is:

Doors.....Closed and locked

Pilots are to ensure that either they check all doors are locked themselves or get confirmation from a HEMS Crewmember that this is so before continuing with the checklist.

The use of the question "All secure?" before take-off is ambiguous. The question "Are all seat belts fastened?" removes this ambiguity and ensures compliance with the ANO and OM obligations.'