

Gazelle Mk 1, G-PAGS

AAIB Bulletin No: 11/2004	Ref: EW/G2004/08/06	Category: 2.3
Aircraft Type and Registration:	Gazelle Mk 1, G-PAGS	
No & Type of Engines:	1 Turbomeca Astazou IIIA turboshaft engine	
Year of Manufacture:	1974	
Date & Time (UTC):	14 August 2004 at 0830 hrs	
Location:	High Roding, Essex	
Type of Flight:	Private	
Persons on Board:	Crew - 1	Passengers - 2
Injuries:	Crew - None	Passengers - None
Nature of Damage:	Landing skids, fuselage and tail boom damaged	
Commander's Licence:	Private Pilot's Licence	
Commander's Age:	57 years	
Commander's Flying Experience:	220 hours (all on type)	
	Last 90 days - 13 hours	
	Last 28 days - 4 hours	
Information Source:	Aircraft Accident Report Form submitted by the pilot	

The Gazelle helicopter was departing from a private site just inside Stansted's Control Zone, on a flight to Cornwall. The visibility was good, there was no significant weather and the cloudbase was at 2,000 feet; the pilot described the wind as a light northerly. The Gazelle took off heading north, turned eastwards to avoid over flying a village and crossed Stansted's Control Zone boundary. Half a minute later, while G-PAGS was in a right hand turn and climbing through a height of about 700 feet at approximately 60 kt, the pilot and his two passengers heard a distinct bang. The helicopter then seemed to 'wobble' in what the pilot described as a fishtail-like motion, yawing left and right in quick and small movements. He also reported that the flying controls felt light and unresponsive.

The helicopter was within 70 kg of its maximum take-off weight and, although the pilot was uncertain of the nature of the problem, he feared that something in the drive train might have failed or that he may have overtorqued the transmission. Consequently, he elected to enter autorotation and land in a field of corn, which lay straight ahead. At the time the helicopter was on a southerly heading, which meant that it was flying downwind. However, the pilot did not believe that he had the height or the time to turn through 180° and choose a suitable landing spot ahead. He did not carry out any emergency shutdown checks during the descent and began a progressive flare at about 80 feet agl, before levelling the helicopter and, as he reported, bringing it to a 'stop', both vertically and horizontally, level with the top of the corn. He does not recall making any further control inputs and the helicopter then dropped two to three feet through the crop and sustained a heavy landing. The engine was still running and the rotors were turning but the pilot did not notice at what speed. He

Gazelle Mk 1, G-PAGS

completed the normal shutdown checks and he and his passengers exited the aircraft uninjured. Although the aircraft had been damaged in the landing there was no fire.

The cause of the bang has yet to be discovered. The pilot estimated that he was pulling about 90% torque when he heard the bang. He did not look at the instruments during the descent but he could hear that the engine was still running. He concluded that he must have used the top of the corn as his reference for ground level because he was surprised that the Gazelle then dropped further.

Examination of the helicopter has revealed no signs of a mechanical failure or evidence of a bird strike. The helicopter now requires extensive repair, which will provide the opportunity to confirm the serviceability of the other components. Another pilot has reported that the pilot's door sometimes 'pops' in flight. It seems that under certain flight conditions the top of this door can pop open making a significant noise as it does so.