

ACCIDENT

Aircraft Type and Registration:	Hughes 269A Hughes 300, G-SHPP	
No & Type of Engines:	1 Lycoming HIO-360-B1A piston engine	
Year of Manufacture:	1968	
Date & Time (UTC):	28 July 2008 at 16:20 hrs	
Location:	Near Peacehaven, East Sussex	
Type of Flight:	Private	
Persons on Board:	Crew - 1	Passengers - 1
Injuries:	Crew - None	Passengers - None
Nature of Damage:	Helicopter damaged beyond economic repair	
Commander's Licence:	Private Pilot's Licence	
Commander's Age:	47 years	
Commander's Flying Experience:	92 hours (of which 91 were on type) Last 90 days - 9 hours Last 28 days - 2 hours	
Information Source:	Aircraft Accident Report Form submitted by the pilot	

Synopsis

A downwind, out of ground effect transition, resulted in overpitching of the main rotor. The subsequent reduction of rotor rpm caused a loss of tail rotor authority and a descending turning flightpath below a height from which recovery could be effected. The helicopter hit a fence on ground impact and rolled over.

History of the flight

The pilot intended to carry out a low-level reconnaissance of a possible landing site before returning to Redhill Airfield. He made two orbits of the site to assess the safest approach. Having considered the wind direction and obstructions, he approached the field from the north-west and entered an into wind hover at approximately 100 feet agl.

The into-wind departure would have passed close to a group of horses and so the pilot conducted a pedal turn, intending to depart along the same ground track as his arrival. Aware that he was departing downwind, the pilot attempted a slow transition to forward flight from the hover. During the transition, G-SHPP developed a gentle sink which the pilot counteracted by raising the collective lever. G-SHPP subsequently yawed to the right which the pilot attempted to counter with left pedal. The pilot stated there was not enough left pedal available to stop the yaw and G-SHPP continued to sink and yaw right. He looked at the rotor rpm (rrpm) gauge and noticed that the rrpm had reduced although he cannot recall the exact reading. The pilot realised he had to lower the collective lever to recover the rrpm

but there was insufficient height remaining to do so. G-SHPP touched down at the top of a small slope where the aircraft clipped a fence and rolled over to the left.

Both occupants, who were wearing full harnesses, were uninjured and able to vacate the helicopter by the right door.

The pilot believed that overpitching of the main rotor caused the loss of rpm. This subsequently caused the loss of tail rotor authority.

Weather

The 1550 hrs weather report for Shoreham was a surface wind of 110°/6 kt, a temperature of +25°C and a QNH of 1011 mb.

Overpitching

Overpitching is a condition where the pilot applies pitch to the blades without sufficient engine power to compensate for the extra rotor drag. This can be due to

a limited power condition or a fixed throttle setting due to a malfunction. Overpitching is a hazardous condition requiring the collective to be lowered to allow rpm to recover.

It is likely that the following four factors contributed to the overpitching event on G-SHPP:

1. The relatively high temperature would have reduced available engine power.
2. The aircraft was operating close to maximum gross weight.
3. The power required for a downwind transition is greater than that required for an into-wind transition.
4. The main rotor on the H269A rotates anti-clockwise so the use of left pedal requires additional power from the engine.