ACCIDENT

Aircraft Type and Registration:	Robinson R22 Beta, G-ODJB
No & Type of Engines:	1 Lycoming O-360-J2A piston engine
Year of Manufacture:	2003
Date & Time (UTC):	16 April 2009 at 1525 hrs
Location:	Nottingham City Airport, Tollerton, Nottinghamshire
Type of Flight:	Training
Persons on Board:	Crew - 2 Passengers - None
Injuries:	Crew - 1 (Minor) Passengers - N/A
Nature of Damage:	Extensive
Commander's Licence:	Commercial Pilot's Licence
Commander's Age:	29 years
Commander's Flying Experience:	1,011 hours (of which 742 were on type) Last 90 days - 86 hours Last 28 days - 29 hours
Information Source:	Aircraft Accident Report Form submitted by the instructor

Synopsis

The student, on a dual training flight, lost control of the helicopter whilst hover-taxiing downwind in challenging wind conditions. The instructor was unable to intervene in time and the helicopter struck the ground and rolled over.

History of the flight

The helicopter was flown by the student with an instructor to Nottingham City Airport for a training exercise on hovering and hover-taxiing. After a one-hour training detail, the helicopter was hover-taxied to the parking area and shut down for a break of approximately 30 minutes. This was followed by a further, similar training exercise. The helicopter was started up and the student hover-taxied towards the Runway 09 threshold, with the instructor following through on the controls. After about 15 minutes they repositioned towards the grass to the south of the runway. At the time of the accident the student was hover-taxiing the helicopter slowly downwind at a height of about 5 ft, with the instructor continuing to follow through on the controls. In the instructor's opinion the student was performing reasonably well for the conditions. The student then began over-controlling and, without warning, made a sudden large forward cyclic control input. Before the instructor could intervene, the helicopter adopted a pronounced nose-down attitude and the front of the skids struck the ground. It then rolled onto its left side, sustaining considerable damage. Both occupants were able to exit unassisted.

The surface wind at the time of the accident was variously reported to be $030^{\circ}/15$ kt and $030^{\circ}/10-20$ kt.

Comments

The requirements to which the R22 is certificated call for controllability to be demonstrated in a 17 kt wind from any direction. Although the wind speed was below this figure, hover-taxiing light helicopters in a 15 kt tailwind can be a demanding exercise for students. The student's sudden application of forward cyclic control gave the instructor little time to intervene and he was unable to prevent the helicopter from striking the ground.