

ACCIDENT

Aircraft Type and Registration:	Robinson R22 Beta, G-BYCF	
No & Type of Engines:	1 Lycoming O-360-J2A piston engine	
Year of Manufacture:	1998 (Serial no: 2866)	
Date & Time (UTC):	29 March 2014 at 1734 hrs	
Location:	Elstree Aerodrome, Hertfordshire	
Type of Flight:	Training	
Persons on Board:	Crew - 1	Passengers - None
Injuries:	Crew - 1 (Minor)	Passengers - N/A
Nature of Damage:	Substantial	
Commander's Licence:	Student pilot	
Commander's Age:	45 years	
Commander's Flying Experience:	39 hours (of which 39 were on type) Last 90 days - 15 hours Last 28 days - 5 hours	
Information Source:	Aircraft Accident Report Form submitted by the pilot	

Synopsis

The student pilot was attempting a solo lift from a grass surface. Whilst applying left cyclic input to correct a right side low condition, the helicopter rolled rapidly to the left in what was reported as a dynamic rollover incident.

Description of the event

The student pilot completed a dual lesson, in fine weather conditions, before his instructor vacated the aircraft so that the student pilot could fly a solo circuit. It was to be the student's second solo on type. The student began raising collective to lift from the grass surface, but felt the helicopter was right side low. He attributed this to the absence of the instructor in the left seat. He corrected with left cyclic input and continued to raise the collective. The helicopter suddenly and rapidly rolled to the left, causing the main rotor blade to strike the ground. Once the helicopter came to a rest on its side, the student made the helicopter safe before vacating. The student pilot's instructor commented that the accident had been caused by dynamic rollover.

AAIB comment

Dynamic rollover occurs when a sideways force, provided by a horizontal component of the total rotor thrust, is applied at the rotor mast while a skid or wheel is touching the ground or other fixed object. The helicopter pivots around the fixed point and rolls. Any attempt to raise the collective to fly away from the problem increases the horizontal component and exacerbates the situation.