

ACCIDENT

Aircraft Type and Registration:	Robinson R44 II, G-CDJZ	
No & Type of Engines:	1 Lycoming IO-540-AE1A5 piston engine	
Year of Manufacture:	2005	
Date & Time (UTC):	16 October 2006 at 0930 hrs	
Location:	Denham Airfield	
Type of Flight:	Training	
Persons on Board:	Crew - 1	Passengers - None
Injuries:	Crew - None	Passengers - N/A
Nature of Damage:	Tail boom severed, rotor blades destroyed	
Commander's Licence:	Student pilot	
Commander's Age:	44 years	
Commander's Flying Experience:	240 hours (of which 7 were on type) Last 90 days - 20 hours Last 28 days - 20 hours	
Information Source:	Aircraft Accident Report Form submitted by the instructor	

Synopsis

The helicopter inadvertently became airborne while the student, who was alone in the helicopter at the time of the accident, was carrying out the start checklist. He was unable to regain control and the tail boom was severed by the main rotor.

Note

The commander's details referred to above relate to the student who was alone at the controls of the aircraft at the time of the accident. Legally, the commander of the aircraft for the intended flight was the flying instructor, although he was not on board the aircraft when the accident happened.

History of the flight

The flight was planned as part of a training exercise and the student was briefed to start the helicopter in preparation for the flight. The instructor had intended to board the helicopter after the engine was started, and with the rotors running. The student started the engine without difficulty, but then continued with the 'starting engine and run-up' checklist. The final item in the checklist was to set the rotor rpm to between 101-102%, then lift the collective lever and reduce the rpm in order to check operation of the low rotor rpm warning light and horn at 97%. As the student lifted the collective lever the helicopter began to move and the student's response resulted in violent control inputs which led to the tail boom being severed by the main rotor. The helicopter

remained upright and the instructor joined the student to shut down the helicopter. The student was uninjured.

Discussion

Although the student had experienced a number of starts, this was the first occasion that he had carried out the entire process alone. It is normal practice for students to build confidence in starting up a helicopter on their own prior to flying solo. However, in this case the student continued with the checks beyond the point briefed by the instructor. The student also held a fixed wing Private Pilot's Licence.

A helicopter has the capability of becoming airborne once its rotors are running with sufficient speed. It is important therefore that anyone at the controls at this time is competent to control the aircraft should it start to move, for whatever reason. A similar previous

incident occurred to Robinson R22 Beta, G-DELT on 16 October 2003, where during the pre-flight low engine rpm warning horn check the aircraft suddenly yawed to the left and became airborne. The student pilot, who was on his own at the controls, was unable to regain control of the aircraft before it rolled over.

As a result of that accident the CAA introduced an amendment to the Air Navigation Order, which came into effect on 15 March 2007, to add after article 50(4) the following:

'(5) An operator shall not permit a helicopter rotor to be turned under power for the purpose of making a flight unless there is a person at the controls entitled in accordance with article 26 of this Order to act as pilot-in-command of the helicopter.'