

ACCIDENT

Aircraft Type and Registration:	Robinson R44 Raven, G-CDXB
No & Type of Engines:	1 Lycoming O-540-F1B5 piston engine
Year of Manufacture:	2006
Date & Time (UTC):	7 October 2009 at 1132 hrs
Location:	Culter Helipad, Aberdeenshire
Type of Flight:	Training
Persons on Board:	Crew - 1 Passengers - None
Injuries:	Crew - 1 (Minor) Passengers - N/A
Nature of Damage:	Aircraft damaged beyond economic repair
Commander's Licence:	Private Pilot's Licence ¹
Commander's Age:	39 years
Commander's Flying Experience:	220 hours (of which 106 were on type) Last 90 days - 19 hours Last 28 days - 10 hours
Information Source:	Aircraft Accident Report Form submitted by the pilot

Synopsis

During the after-start checks the aircraft became unexpectedly airborne. This was probably a result of the collective lever being raised excessively, or the throttle being set too high, as part of completing the low rotor RPM check. The aircraft landed again on its right skid before rolling on its side.

History of the flight

The pilot was undertaking a refresher course to renew his type rating on the R44, his previous rating having expired the month before. He was due to undertake a training flight as part of this course and had been briefed by his instructor to start the aircraft on his own after which the instructor would join him. The aircraft was started and after allowing some time for the engine

to warm up, the instructor was approaching the aircraft when it suddenly became airborne. The right skid then contacted the ground and the aircraft rolled onto its right side. The pilot isolated the fuel and was assisted out of the aircraft with minor injuries.

Parts of the main rotor were found up to 90 metres from the aircraft but there were no injuries to anyone on the ground.

Footnote

¹ The 'commander' details in this section refer to the pilot on board at the time of the accident; not the instructor.

Post-accident inspection

The training organisation carried out a post-accident inspection of the aircraft and reported that the governor was off, collective friction was off but cyclic friction on and the hydraulic switch was on.

Analysis

If the switches were undisturbed as a result of the accident, it would appear, from the post-accident inspection, that the after-start checklist had not been completed. For the aircraft to have become airborne, it is most likely that the collective had been raised. If this was a deliberate action, the check which calls

for this to be done only calls for a small movement of the lever, just sufficient to check the low rotor RPM warning horn and light. It is possible that either the lever was inadvertently raised excessively or that, with the governor switched off, the rotor RPM had been set excessively high at the point the lever was raised.

Once the aircraft became airborne, the pilot would have had additional difficulty in trying to control it, both as a result of surprise and the fact that the cyclic friction was still applied. This is likely to have contributed to the subsequent loss of control leading to the aircraft rolling over.