

FINAL REPORT

AAIU Synoptic Report No: 2006-021

AAIU File No: 2006/0058

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In accordance with the provisions of SI 205 of 1997, the Chief Inspector of Accidents, on 15 July 2006, appointed Mr. Frank Russell as the Investigator-in-Charge to carry out an Investigation into this occurrence and prepare a Synoptic Report.

Aircraft Type and Registration:	Robinson R-22 BETA 2, EI-EHB.
No. and Type of Engines:	1 x Lycoming 0360- J2A.
Aircraft Serial Number:	3569.
Year of Manufacture:	2004.
Date and Time (UTC):	15 July 2006 @ 1505 hrs.
Location:	Cork Airport (EICK).
Type of Flight:	Aerial Work (Training).
Persons on Board:	Crew - 1 Passengers - None.
Injuries:	Crew - None Passengers - N/A.
Nature of Damage:	Minor, bent rear cross tube on the skid assembly.
Commander's Licence:	Student Pilot Licence.
Commander's Details:	Male, aged 44 years
Commander's Flying Experience:	62.2 hours.
Information Source:	Reported by Operator. AAIU Incident Report Form submitted by Pilot.

SYNOPSIS

Following the activation of the low rotor RPM warning horn, the Pilot carried out a heavier than normal landing on the grass adjacent to the runway.

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1. FACTUAL INFORMATION

1.1 History of the Flight

The student Pilot was preparing to undertake a solo x-country exercise, Cork Airport - Mallow - Cappoquin - Cork Airport. The weather conditions were favourable. The Pilot recalls carrying out all the required pre-flight and after start checks, including a hover check and a spot turn. On calling ATC that he was ready for departure, he was told to “*Hold Position*”. He turned his aircraft slightly to the right to view the runway and other traffic.

While awaiting departure clearance the low rotor RPM alarm sounded and its associated warning light came on. The Pilot immediately lowered the collective lever and made a harder than normal landing on the grass surface. He shut down and exited the helicopter safely. The aircraft was grounded by the Operator.

1.2 Damage to Aircraft

The Operator reported that the only damage sustained by EI-EHB was a bent rear cross tube on the skid assembly, the result of the hard landing, on the grass. The Operator added that, after an engineering examination, there was no mechanical explanation for the loss of power, i.e. no evidence of stuck valves, magneto failure, etc.

1.3 Conclusions

1. The Pilot may have inadvertently rolled off the throttle resulting in an RPM drop. The R 22 Pilots Operating Handbook is quite explicit on this point. Safety notice SN-10 states, “*no matter what causes the low rotor RPM, the pilot must roll on the throttle and lower the collective simultaneously to recover RPM before investigating the problem. It must be a conditioned reflex*”
2. This training incident was likely the result of the Pilot’s inexperience on type, as there was no technical issue that would account for the loss of rotor RPM.

2. Safety Recommendations

This Report does not sustain any Safety Recommendations.

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