

Robinson R22 Beta, G-DRAI

AAIB Bulletin No: 5/98 Ref: EW/G98/02/11 Category: 2.3

Aircraft Type and Registration:	Robinson R22 Beta, G-DRAI
No & Type of Engines:	1 Lycoming O-320-B2C piston engine
Year of Manufacture:	1988
Date & Time (UTC):	6 February 1998 at 1630 hrs
Location:	Wycombe Air Park, Buckinghamshire
Type of Flight:	Private
Persons on Board:	Crew - 1 - Passengers - 1
Injuries:	Crew - None - Passengers - None
Nature of Damage:	Damage to main rotor blade and tailboom
Commander's Licence:	Private Pilot's Licence with Night and Instructor Rating
Commander's Age:	47 years
Commander's Flying Experience:	2,400 hours (of which 800 were on type) Last 90 days - 44 hours Last 28 days - 8 hours
Information Source:	Aircraft Accident Report Form submitted by the pilot

The pilot had planned to fly the helicopter from a private landing site near Biggleswade to Wycombe Air Park following some scheduled maintenance. During the pre flight checks he noted that the fuel contents, as indicated on the fuel gauges, were approximately 7 to 8 US gallons in the main tank and 2 US gallons in the auxiliary tank. After refuelling with 22 litres of fuel (5.8 US gallons) the fuel gauges indicated approximately 12 US gallons in the main tank and 3.5 US gallons in the auxiliary tank. The planned flight time was 40 minutes for which approximately 10 US gallons would be required.

The flight to Wycombe Air Park was uneventful and all engine temperatures and pressures were normal as the helicopter entered the hover in the helicopter training area, 'November', located in the northwest quadrant of the airfield. ATC then directed the helicopter to holding point 'Romeo' via point 'Zulu'. The final leg of this transit was flown in a hover taxi at an estimated height of 6 feet on a track of about 160_. The surface wind was from the south west at 16 to 18 kt with gusts to 25 kt.

The pilot reported that a sudden, strong gust of wind caused the helicopter to sink. He applied power in an attempt to arrest the sink but there was a momentary loss of power and, despite an attempt to run the helicopter onto the ground in a controlled manner, the aircraft bounced slightly. During the ground contact, and possibly as a result of 'bladesailing' in the gusty wind conditions, one of the rotor blades made contact with the tailboom. The pilot noticed the damage immediately, shut down the engine and contacted ATC.

Once stationary on the ground the pilot noticed that the 'low fuel' light was illuminated, although he was sure that it had not illuminated during the flight. The fuel tanks were drained and approximately 0.5 US gallons was recovered. Functional checks on the fuel gauges revealed that when the tanks were empty the gauges indicated 5 US gallons in the main tank and 1.5 US gallons in the auxiliary tank. The main fuel tank contents indicator was found to be sticking and a new transmitter was installed. The fuel contents indications were then checked and found to be satisfactory. The 'low fuel' light system was checked and found to be serviceable. A satisfactory air test has since been completed.