Robinson R22 Beta, G-DLDL

AAIB Bulletin No: 6/2003	**Ref: EW/G2003/03/09**	**Category: 2.3**
INCIDENT		
Aircraft Type and Registration:	Robinson R22 Beta, G-DLDL	
No & Type of Engines:	1 Lycoming O-320-B2C piston engine	
Year of Manufacture:	1991	
Date & Time (UTC):	16 March 2003 at 1200 hrs	
Location:	Cambridge Airport	
Type of Flight:	Training	
Persons on Board:	Crew - 2	Passengers - None
Injuries:	Crew - None	Passengers - N/A
Nature of Damage:	Slight deformation of mast fairing and possible main rotor blade deformation	
Commander's Licence:	Airline Transport Pilot's Licence with Instructor Rating	
Commander's Age:	61 years	
Commander's Flying Experience:	8,585 hours (of which 300 were on type)	
	Last 90 days - 25 hours	
	Last 28 days - 19 hours	
Information Source:	Aircraft Accident Report Form submitted by the pilot and further AAIB telephone enquiries	

The instructor and student were conducting general revision training in preparation for a forthcoming Licence Skills Test for the student. The student had flown approximately 65 hours, all on the Robinson R22. The aircraft was operating on Runway 28 at Cambridge Airport where the weather was good, with a surface wind from 100° to 110° at 7 to 10 kt.

The instructor gave a full briefing on the technique to be used in the event of engine failure in the hover, and carried out a demonstration by closing the throttle while hovering into wind over the runway number markings. He then discussed the procedure with the student, highlighting the common faults of yawing and drifting to the left and the tendency, on occasion, for the collective lever to be raised too early and/or too rapidly. He ascertained that the student felt ready to attempt the exercise and control was handed over to the student, with the instructor following through on the controls. The instructor then gave the standard warning and closed the throttle.

The instructor reported that the student over-controlled by applying too much right yaw pedal and too much right cyclic stick and then raised the collective too rapidly. The instructor attempted to correct the manoeuvre and landed the helicopter. Both he and the student considered that the landing was a little heavy, but not excessively so, and the exercise was repeated twice more, with improved results. It was only after shutdown at the end of the training sortie that the instructor noticed slight distortion damage to the lower left side of the main rotor mast fairing. Inspection by a maintenance organisation revealed slight crinkling of the mast fairing and possibly slight main rotor blade deformation.

The student noted afterwards that he felt he had over-reacted to the instructor's briefing on the faults commonly made in carrying out the exercise.