AAIB Bulletin No: 6/94 **Ref: EW/G94/04/15** **Category: 2.3**

Aircraft Type and Registration:	Robinson R22 Beta, G-DIRE
No & Type of Engines:	1 Lycoming O-320-B2C piston engine
Year of Manufacture:	1991
Date & Time (UTC):	19 April 1994 at 0905 hrs
Location:	Wycombe Air Park, Buckinghamshire
Type of Flight:	Private (Training)
Persons on Board:	Crew - 1 Passengers - None
Injuries:	Crew - None Passengers - N/A
Nature of Damage:	Damage to main and tail rotors and drives, vertical tail fin and left skid extension
Commander's Licence:	Private Pilots Licence (Aeroplanes) Student Pilot (Helicopters)
Commander's Age:	56 years
Commander's Flying Experience:	392 hours total (of which 49 were on type) Last 90 days - 4 hours Last 28 days - 2 hours
Information Source:	Aircraft Accident Report Form submitted by the pilot and subsequent AAIB enquiries

The student pilot had been briefed, by his flying instructor, for a dual into solo training exercise. He was told to carry out the pre-flight checks and the instructor was to join him once the engine had been started, and the checks had been completed. The aircraft was parked on a hard standing, heading approximate west; the surface wind was north westerly at 5 kt.

The student pilot carried the appropriate checks and started the engine; 75% engine rpm was set and all parameters were normal. In order to carry out the magneto check he opened the throttle to give 100% engine rpm and held the collective lever fully down with his left hand; the cyclic was held central between his knees. Before his right hand had reached the magneto switch, the helicopter began to vibrate and started to yaw to the left. It completed two to three rotations before it came to rest in the upright position, heading south west, on the grass next to the hard standing. The tail rotor guard

touched the edge of the hard standing, bending the ventral fin and allowing the tail rotor to impact the ground. It broke up and parts of it struck the main rotor. The student pilot shut down the aircraft and escaped without injury.

In hindsight the pilot considered that he had not fully appreciated how important it was to keep the yaw pedals in the neutral position during the power check; he thought that he may have had a significant amount of left pedal applied when he increased the engine rpm to 100%.