Robinson R22 Beta, G-EPAR

AAIB Bulletin No: 5/2000 Ref: EW/G99/12/16 Category: 2.3

Aircraft Type and Registration:	Robinson R22 Beta, G-EPAR
No & Type of Engines:	1 Lycoming O-360-J2A piston engine
Year of Manufacture:	1998
Date & Time (UTC):	22 December 1999 at 1547 hrs
Location:	Blackpool Airport, Lancashire
Type of Flight:	Aerial Work (Training)
Persons on Board:	Crew - 1 - Passengers - 1
Injuries:	Crew - None - Passengers - None
Nature of Damage:	Substantial
Commander's Licence:	Airline Transport Pilot·s Licence
Commander's Age:	60 years
Commander's Flying Experience:	9,000 hours (of which 484 were on type)
	Last 90 days - 54 hours
	Last 28 days - 13 hours
Information Source:	Aircraft Accident Report Form submitted by the pilot plus telephone enquiries

At the conclusionof an instructional flight with a new student the instructor demonstrated theprocedure for recovery from an engine failure whilst hover taxiing. Hesimulated the engine failure from a height of about four feet whilst the 15 ktsurface wind was from the helicopters 5 oclock. When the instructor closedthe throttle he was unable to prevent the aircraft from yawing to the leftdespite applying full right yaw pedal. The helicopter sank to the grass withforward motion and right sideslip. The right landing skid dug into the softground and the instructor was unable to prevent the machine from rolling overonto its right hand side. The airport emergency services arrived quickly butthere was no fire and neither occupant was injured. Damages to the main rotorblades, tailboom and cockpit structure were sufficient to render the helicopteran insurance write-off.

The Chief FlyingInstructor explained that the narrow landing gear track and unusually high mainrotor system make the R22 prone to dynamic rollover. These factors coupledwith the low inertia rotor blades make demonstrating an engine-off landingwhilst hover taxiing a high-risk manoeuvre. The risk is increased if themanoeuvre is demonstrated with a tailwind component because of the likelihoodof running out of yaw pedal authority.