AAIB Bulletin No: 10/93 Ref: EW/C93/8/6 Category: 2.3

Aircraft Type and Registration: Bell 206L-1 LongRanger II, G-OSIB

No & Type of Engines: 1 Allison 250-C28B turboshaft engine

Year of Manufacture: 1980

Date & Time (UTC): 28 August 1993 at about 1615 hrs

Location: Near Noke, Oxfordshire

Type of Flight: Private

Persons on Board: Crew - 2 Passengers - 5

Injuries: Crew - 1 Serious Passengers - 2 Serious 1 Minor 2 Minor

Nature of Damage: The helicopter was destroyed

Commander's Licence: Airline Transport Pilot's Licence (Helicopters) with

Instructor Rating

Commander's Age: 57 years

Commander's Flying Experience: 7,000 hours (of which 350 were on type)

Information Source: AAIB Field Investigation

The helicopter had been hired by a qualified private pilot for the purpose of a cross country navigational exercise and the accident occurred during the return leg of that flight.

As the conditions of hire included an insurance requirement that the pilot should have a greater number of flying hours than this pilot had accrued, he asked the company from which he hired the helicopter to provide an instructor to be the helicopter commander. The instructor provided had carried out most of the pilot's training and two of the passengers intended to take up flying training at the same flying school.

The intended route was from Oxford Kidlington to Battersea, Welshpool (re-fuel), Caernarvon, Welshpool (re-fuel), Wycombe Air Park and back to Oxford and the helicopter took off at 0930 hrs. On the return journey from Caernarvon, they took off from Welshpool at 1530 hrs and by 1600 hrs they were passing over the authorised 'helicopter training area' of the Oxford flying training school. As they did so, the pilot asked the instructor to descend and show the two potential students

the area where he had learned to fly. The weight of the helicopter at this time was about 3750 lb, some 300 lb below the maximum allowable.

When the instructor had flown some gentle 'S' turns at about 200 feet agl, in a general overview of the area, the pilot asked him to perform one "Quick-stop" transition from forward flight to the hover. The instructor agreed to demonstrate a very gentle version of this manoeuvre. The previous landings which had been made that day had been conducted in a light southerly wind and so, as the wind appeared to be light and variable, the instructor decided to carry out an "Into Wind Quick-stop" in the direction of his intended departure from the area to the southeast. Subsequent investigation, however, showed that the wind was north westerly at about 6 kt.

At about 100 feet agl and 80 kt, the instructor initiated a gentle flare but, during the early stages of pitch-up and power reduction, realising that the helicopter was not decelerating as quickly as he had anticipated, he progressively increased the flare angle. Approaching the hover, as he levelled the attitude, the helicopter began to sink, obliging him to raise the collective lever thus applying more blade pitch and power. The whole manoeuvre had covered a considerably greater distance than he had planned or allowed for and the option of a straight ahead recovery to forward flight was consequently precluded by the presence of trees. The helicopter then began to yaw to the right and at about this time the instructor saw and heard the LOW ROTOR RPM warning. As the application of left pedal did not correct the yaw, he applied a little right yaw pedal in an attempt to regain tail rotor control. This had no effect on the spinning motion but the reduction of the power required by the tail rotor caused the helicopter to climb momentarily before it again began to descend, still spinning to the right. The instructor was able to cushion the vertical impact with the ground, using the remaining power available.

Because of the immediate danger of fire, the instructor assisted the pilot and passengers out of the helicopter in order of easiest access. By the time he went back for the last passenger, the danger of fire had passed and he deemed it better, because of the obvious severity of her injuries, to leave her in place lying along the back seat. Though injured himself, he then ran a mile over rough terrain to the nearest farm to call for help.

The accident was attended by all three Emergency Services together with the police helicopter from Kidlington and an SAR Sea King from Portland. The police helicopter took the most seriously injured passenger to hospital and the remainder were taken there by ambulance.