Enstrom 280FX, G-BXRD

AAIB Bulletin No: 7/2000 Ref: EW/G2000/05/13 Category: 2.3

Aircraft Type and Registration:	Enstrom 280FX, G-BXRD
No & Type of Engines:	1 Lycoming HIO-360-F1AD piston engine
Year of Manufacture:	1986
Date & Time (UTC):	16 May 2000 at 1444 hrs
Location:	Shoreham Airport, West Sussex
Type of Flight:	Positioning
Persons on Board:	Crew - 1 - Passengers - None
Injuries:	Crew - None - Passengers - N/A
Nature of Damage:	Main rotor blade bent
Commander's Licence:	Private Pilot's Licence (H)
Commander's Age:	69 years
Commander's Flying Experience:	1,200 hours (of which 9 were on type) Last 90 days - 15 hours Last 28 days - 7 hours
Information Source:	Aircraft Accident Report Form submitted by the pilot

The pilot was undertaking his first flight in the helicopter since completing an Enstrom type conversion. During the training the instructor had noted that the throttle was stiff and the collective/ throttle correlation was incorrectly set. The Exhaust Gas Temperature (EGT) was also rather high. The rectification work had been undertaken by a local company and, on collecting the helicopter, the pilot found the throttle was very much freer. He was advised that the mixture was slightly lean but provided he kept the EGT below 165°F it would not be harmful. The ADF was also unserviceable.

The pilot departed from Shoreham airfield at 1428 hrs for a private site at Little Stoughton to the north north east of Shoreham. During the climb he noted that the EGT seemed high for the manifold pressure set and in view of the unserviceable ADF as well as difficulties in obtaining service from the NKS80 VOR receiver he decided to abandon the flight.

The weather at Shoreham at 1450 hrs was: - wind: 200°/10kt., visibility: 8,000 meters, cloud: few at 400 feet and scattered at 2,500 feet. the pilot was passed the relevant traffic information and

cleared to approach to Helicopter Training Area (HTA) Whiskey. Another helicopter was approaching HTA November, which was to the north of whiskey and in order to retain safe separation the pilot of the Enstrom routed to the west. When clear of the traffic he made his approach to Whiskey but found himself high and decided to allow the helicopter to drift past Whiskey to the south, coming to a high hover at approximately 12 feet and close to the western edge of Runway 21. ATC asked the pilot to 'hold due to departing traffic' on Runway 21. The pilot considered that he was too close to the runway and initiated a spot turn to the left in order to hover taxi sideways to the west. At that point the pilot lost control of the situation and realised that the helicopter was slowly losing height. He raised the collective pitch lever but this did not prevent the helicopter from sinking.

Whilst it was clear that the helicopter could not be prevented from landing, the rate of descent onto the rough grass would not be damaging. However, the pilot was not aware that the rough grass was covering a deep water filled ditch. Whilst the descent into the ditch was quite gentle, being cushioned by the dense vegetation, the aircraft suffered damage to the main rotor blades. The pilot switched off the fuel and electrical power and remained with the helicopter until the airfield RFFS attended and used ladders to effect his evacuation from the ditch.

The pilot considered that when he brought the helicopter to the hover he inadvertently reduced power when making collective pitch control changes due to the much freer throttle and the increased workload. It is also probable that in making the spot turn to the left he had positioned the helicopter downwind, thus compounding the reduced power problem.