

flown to the left of the track¹ which I normally encourage my students to follow in order to comfortably make the fields on the right of the crosswind leg in the event of an engine failure.” However, the instructor did not correct the flightpath. The student believed he followed the line of the track as taught. Between approximately 90 and 150 ft agl, the aircraft suffered a marked power loss, and the instructor took control. In his view there was no option to land ahead and so he initiated a turn to the right, intending to land along the furrows of a potato crop in an adjacent field (Figure 1).



Figure 1

Approximate flight path of aircraft.

As the aircraft turned right, the intended approach path crossed a line of trees. The instructor stated: “I commenced a turn between two trees with the intention of landing between them, but the skidding of the aircraft was drawing us nearer to the tree to port. I had to increase the rate of turn to avoid the tree and we lost height rapidly.” In doing so, he applied an angle of bank (AOB) of between 45° and 60°, with a consequent significant increase in the rate of descent.

The recollection of the impact sequence differed between the occupants. The student recalled the aircraft striking the ground while still banked to the right. The instructor recalled that, when he believed the aircraft would clear the tree, he levelled the wings at approximately 20 ft agl and then began to flare for landing. As the aircraft struck the ground the landing gear dug in, decelerating the aircraft rapidly. Looking at the accident site later, the instructor believed the left wing struck the tree and caused the aircraft to yaw left. The instructor estimated that the aircraft only covered six metres during the impact sequence, and the time elapsed from engine failure to impact was approximately 15 seconds.

The aircraft came to rest pointing back towards the airfield, and the forward fuselage was badly damaged (Figure 2). The student suffered serious injuries, but the instructor suffered minor injuries and was able to extract himself from the aircraft. He asked some passers-by to call an ambulance and he remained with the student until the emergency services arrived to effect a rescue.

Footnote

¹ The track referred to is the access track shown by the white line in Figure 1.



Figure 2

Aircraft after the forced landing

Aircraft information

The Mainair Blade is a two-seat flex-wing microlight powered by a two-stroke Rotax 582 engine (Figure 3).

Personnel

The instructor had conducted all bar two lessons of the student's training. This had consisted of 52 hours 45 minutes dual instruction and 10 hours 45 minutes of supervised solo flight. Of this time, 24 hours 5 minutes had been flown in the accident aircraft.

Analysis

The engine failed shortly after takeoff, so the aircraft was at low altitude and low speed and there was very little time to consider options. The student had been taught forced landing techniques and his instinct was to land ahead when the engine failed. The instructor, as commander, took control immediately the engine failed. In his view there was insufficient clear distance to land safely ahead or to the left, so he initiated a turn to the right intending to land in a crop field. The intended approach path to that field crossed a line of trees but to avoid the closest tree the instructor used up to 60° AOB. The high AOB increased the rate of descent and the instructor's workload significantly.

As a result of the increased rate of descent, the aircraft could not reach the intended touchdown point and was extensively damaged during the impact sequence. As a result of the fuselage disruption, the student suffered serious injuries and had to be rescued by the emergency services.

The cause of the engine failure was not determined.



Figure 3

Mainair Blade microlight

Conclusion

The engine failed, for an unknown reason, at very low altitude. The instructor flew a right turn to attempt a forced landing in an adjacent crop field. The aircraft struck the ground and decelerated rapidly causing extensive damage. The student in the front seat was seriously injured.