

Cessna F150H, G-AVXX

AAIB Bulletin No: 5/98 Ref: EW/G97/12/05 Category: 1.3

Aircraft Type and Registration:	Cessna F150H, G-AVXX
No & Type of Engines:	1 Continental O-200-A piston engine
Year of Manufacture:	1967
Date & Time (UTC):	12 December 1997 1130 hrs
Location:	Franklins Field, near Wells, Somerset
Type of Flight:	Private
Persons on Board:	Crew - 1 - Passengers - 1
Injuries:	Crew - None - Passengers - None
Nature of Damage:	Impact damage to both wings, tailplane and rudder
Commander's Licence:	Private
Commander's Age:	50 years
Commander's Flying Experience:	157 hours (of which 37 were on type) Last 90 days - 2 hours Last 28 days - Nil
Information Source:	Aircraft Accident Report Form submitted by the pilot

Franklyn's Field is a private grass strip orientated 05/23. Its dimensions are 570 by 17 metres and its altitude is 750 feet amsl. In the 23 direction there is a significant downwards slope which begins 150 metres and ends 300 metres from the starting point. At the time of the accident the weather was fine with calm wind and a strip QFE of 997 HPa. The pilot was a part-owner of the aircraft and he had operated from the strip since May 1991.

The pilot decided to make use of the downslope on Runway 23 using 5° flap for take off. To begin the take off he held the aircraft on the wheel brakes at full throttle and achieved 2550 RPM. After releasing the brakes the aircraft accelerated as normal and achieved about 55 mph at the end of the downhill slope. However, after reaching this speed it failed to accelerate appreciably and there was insufficient strip length remaining in which to stop. As the aircraft approached the wire fence at the field boundary the pilot pulled back on the control column in an attempt to clear the fence. He was unsuccessful; the main landing gear wheels touched the top of the fence and the aircraft's stall

warningsounded. The pilot decided to land in the ploughed field aheadwhich had furrows at right angles to his direction of travel. On touching down in the field the aircraft dug into the softground and turned over onto its back. The uninjured occupantswere able to vacate the aircraft unaided.

The pilot attributed the accident to a patch of abnormally softground between the end of the down slope and the end of the strip. The drag of the wheels traversing this patch prevented the aircraftfrom accelerating to a suitable unstick speed.

The pilot did not inform the AAIB of the empty weight of his aircraft. The payload was 448 lb and assuming an aircraft empty weightin the region of 1100 lb, the aircraft was operating at closeto MTOW. At that weight in ISA conditions the aircraft's publishedground roll distance is 224 metres on tarmac. CAA Safety SenseLeaflet 7B lists cumulative factors which pilots should use whencalculating performance for a particular take off. With thesefactors applied, there should still have been sufficient runwaylength for take off unless the ground was extremely soft.