

AAIB Bulletin No: 6/95

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Category: 1.2

Aircraft Type and Registration:	Cessna 310K, G-ONBF	
No & Type of Engines:	2 Continental IO-470-V piston engines	
Year of Manufacture:	1966	
Date & Time (UTC):	17 April 1995 at 0830 hrs	
Location:	Bagby (Thirsk) Airfield, North Yorkshire	
Type of Flight:	Private	
Persons on Board:	Crew - 1	Passengers - None
Injuries:	Crew - None	Passengers - N/A
Nature of Damage:	Left main landing gear leg collapsed; disruption of main leg attachment structure; left engine shock loaded and propeller bent; creases in left side tailplane surfaces and bent flaps	
Commander's Licence:	Commercial Pilot's Licence	
Commander's Age:	53 years	
Commander's Flying Experience:	3,402 hours (of which 890 were on type) Last 90 days - 62 hours Last 28 days - 38 hours	
Information Source:	Aircraft Accident Report Form submitted by the pilot	

The grass runway at Bagby is 520 metres long. Because it slopes upwards by 3% along Runway 06, in light wind conditions pilots are advised to land on Runway 06. The pilot had landed there many times before and he was well used to landing on steep uphill grass runways. At the time the ground was hard and the surface wind was westerly at five knots.

Approaching Bagby the aircraft flew through a heavy shower which had recently passed overhead the airfield and wetted the grass. On landing the aircraft touched down about 80 metres beyond the threshold but the wheelbrakes were ineffective on the wet grass. Perceiving that the aircraft would fail to stop in the remaining length, the pilot decided to try to yaw the aircraft through 180° so that he could use engine power to stop it. Unfortunately, whilst attempting the manoeuvre, the aircraft passed over a track which crossed the runway which was slightly ridged. On hitting a ridge the left main gear leg collapsed sideways under the wing.

The pilot stated that the airspeed, position and altitude were correct for the landing and he assessed the cause of the accident as either a stronger tailwind at the threshold than indicated or water in the aircraft's airspeed indicator from the heavy shower he encountered approaching the airfield. The normal landing roll for the Cessna 310 on dry tarmac is about 180 metres. The CAA's General Aviation Safety Sense leaflet No 7 entitled 'Aeroplane Performance' states that the probable effect on the landing run of long wet grass is an increase of 40%. If allowances are made of 5% for the tailwind component and -15% for the uphill slope, the required landing roll distance should have been approximately 225 metres. When the additional safety factor of 1.43 is applied, the required distance increases to 322 metres.