

**AAIB Bulletin No: 6/93**

**Ref: EW/G93/04/01**

**Category: 1c**

**Aircraft Type and Registration:** Cessna 120, G-AJJS

**No & Type of Engines:** 1 Continental O-200-A piston engine

**Year of Manufacture:** 1947

**Date & Time (UTC):** 4 April 1993 at 1510 hrs

**Location:** Willow Farm, Tenterden, Kent

**Type of Flight:** Private

**Persons on Board:** Crew - 1                      Passengers - 1

**Injuries:** Crew - None                      Passengers - None

**Nature of Damage:** Substantial to main landing gear, propeller and lower fuselage

**Commander's Licence:** Private Pilot's Licence with IMC and Night Ratings

**Commander's Age:** 38 years

**Commander's Flying Experience:** 186 hours (of which 116 were on type)  
Last 90 days - 5 hours  
Last 28 days - 4 hours

**Information Source:** Aircraft Accident Report Form submitted by the pilot

It was planned to operate the aircraft from a grass strip which had a take-off run available of 360 metres. The strip had no significant slope and was oriented north east/south west. Before take off, the pilot drove along the strip and noted that the damp grass was three to four inches long. The pilot assessed the surface wind, by means of the airfield wind sock, as west south west at 10 to 15 kt and elected to take off on a heading of 230°M. Having warmed the engine and completed a satisfactory power check, the pilot applied full power against the brakes before starting his take off run. The aircraft accelerated normally to the predicted take off speed of 40 to 45 miles per hour but failed to get airborne. The pilot released the forward pressure on the control column causing the tail wheel to make contact with the ground which induced a slight turn to the right and a reduction in airspeed. The aircraft was now 300 metres along the strip and the pilot decided that there was insufficient distance remaining in which to stop and elected to continue the take off. As the aircraft approached a dyke at the end of the strip, the pilot pulled back on the control column in an attempt to reach a flat field on the other side of the dyke but the main landing gear contacted the far bank and the aircraft came to rest in the field. Neither occupant was injured and both were able to evacuate the aircraft without difficulty.

Manufacturer's data indicates that, in the prevailing conditions, the aircraft should have become airborne in less than 155 metres. Application of the relevant factors from the Aeronautical Information Circular 52/1985 'Take-off Climb and Landing Performance of Light Aircraft' would have increased this distance to 190 metres. The pilot stated that there was no degradation of engine performance during the take off and attributes the cause of the accident to over-rotation when the aircraft failed to become airborne at the anticipated position.