ACCIDENT

Aircraft Type and Registration:	Gulfstream American GA-7 Cougar, G-OOGA
No & Type of Engines:	2 Lycoming O-320-D1D piston engines
Year of Manufacture:	1979
Date & Time (UTC):	6 January 2012 at 1215 hrs
Location:	Andrewsfield Airfield, Great Dunmow, Essex
Type of Flight:	Private
Persons on Board:	Crew - 1 Passengers - 1
Injuries:	Crew - None Passengers - None
Nature of Damage:	Nose cone, nose leg, propellors and wingtip
Commander's Licence:	Basic Commercial Pilot's Licence
Commander's Age:	74 years
Commander's Flying Experience:	9,953 hours (of which 1,630 were on type) Last 90 days - 36 hours Last 28 days - 11 hours
Information Source:	Aircraft Accident Report Form submitted by the pilot and subsequent AAIB enquiries

Synopsis

During takeoff the aircraft became airborne at too low an airspeed, resulting in a loss of control. The pilot reduced engine power and the aircraft descended and impacted the ground. Both occupants were uninjured.

History of the flight

A witness at the airfield reported that the pilot encountered a number of delays and experienced problems starting the engines. The pilot stated that when he arrived at the aircraft he discovered that it had not been flown since 19 October 2011 and the battery was completely discharged. Personnel from the operating company assisted in starting the engines and the aircraft was then taxied to the refuelling bay. Once refuelled, the personnel again assisted with engine starting.

The pilot reported that on reaching the runway threshold he held the aircraft on the brakes, advanced the throttles to give 2,000 rpm on both engines, and confirmed the temperatures and pressures were correct. An instructor in an aircraft planning to take off behind G-OOGA confirmed that it appeared to have been held against the brakes for 20 to 30 seconds before the takeoff run began.

The pilot then applied full power and confirmed that both engines were turning at 2,700 rpm with correct

temperatures and pressures. As the aircraft gained speed the pilot noted that the ASI was live. As it approached 70 kt the aircraft started slithering to the left and the pilot applied right rudder to maintain runway heading. When approaching 75 kt the main wheels hit a hidden ridge and the aircraft became airborne without elevator input. The stall warner sounded intermittently and the aircraft yawed to the left despite the pilot using full right rudder. At about 15 to 20 ft agl the pilot, unable to control the yaw, decided to lower the nose and throttled back fully. The aircraft then struck the ground, pivoted to the right and the nose pitched down. The pilot closed down both engines and switched off the fuel before he and his passenger vacated through the exit door. The aircraft came to a halt well to the south of the runway, but facing north.

Eyewitnesses noted that the aircraft became airborne after what they considered was an unusually short ground run and subsequently was seen to be in a steep nose-up attitude. It was seen to roll to the left and views differed as to whether the wings then became level, but it was seen thereafter to sink and strike the ground in a tail-down attitude. Two individuals, one a flying instructor, observed the behaviour of the aircraft after it left the ground and were sufficiently concerned that they both began running, from different locations, towards the airfield crash alarm whilst the aircraft was still airborne.

A subsequent examination of the aircraft by the operator revealed no evidence of any technical problem with the rudder controls. A weight and balance calculation apparently made by the pilot assumed the aircraft was filled to “top tabs”. This indicated that the aircraft was being operated at maximum all-up weight. As some doubt existed as to the fuel state at takeoff, the actual takeoff weight could not be accurately determined.