

ACCIDENT

Aircraft Type and Registration:	Piper PA-18-150 Super Cub, G-BAKV	
No & type of Engines:	1 Lycoming O-320-A2B piston engine	
Year of Manufacture:	1972	
Date & Time (UTC):	6 September 2006 at 0930 hrs	
Location:	Thruxton Airfield, Hampshire	
Type of Flight:	Private	
Persons on Board:	Crew - 1	Passengers - None
Injuries:	Crew - None	Passengers - N/A
Nature of Damage:	Propeller, engine, right wing strut and vertical stabiliser damaged	
Commander's Licence:	National Private Pilot's Licence	
Commander's Age:	46 years	
Commander's Flying Experience:	300 hours (of which 5 were on type) Last 90 days - 45 hours Last 28 days - 5 hours	
Information Source:	Aircraft Accident Report Form submitted by the pilot	

Synopsis

The pilot attempted to go around from an unsatisfactory approach by opening the throttle rapidly. The engine did not respond immediately, probably because carburettor heat was selected causing the engine to rich cut. The pilot then attempted to land the aircraft but during the landing ground roll the engine responded to the throttle which had remained open. The aircraft accelerated, departed the left-hand edge of the runway, somersaulted and came to rest inverted.

History of the flight

The pilot was in the process of converting his NPPL¹ to

Footnote

¹ National Private Pilots Licence, a licence issued by the UK CAA which accords restricted privileges.

a PPL and had decided to conduct the required flying training on a tailwheel aircraft, because he intended to own and operate an aircraft with this landing gear configuration. His total experience on tailwheel types was the five hours training he had completed on this Super Cub. On the morning of the accident he flew with an instructor for 45 minutes, during which he completed six takeoffs and landings. He then went solo.

The pilot considered that his first solo landing on the tarmac Runway 25 was satisfactory. On the second approach, judging that the aircraft was slightly low, he opened the throttle momentarily in order to remain airborne until crossing the landing threshold. During the landing flare the aircraft ballooned slightly and the

pilot decided to go around rather than attempt to recover the approach. When he advanced the throttle rapidly, however, the engine “spluttered” but did not produce more power. He pushed forward on the control column in order to lower the nose and maintain airspeed, and the aircraft landed in what observers considered to be a normal three-point attitude. As it did so, the engine started to deliver more power. The aircraft then accelerated and was seen to swerve before departing the left-hand edge of the runway, in a nose-down attitude, onto the adjacent grass taxiway. The propeller struck the grass and the forward momentum of the aircraft caused it to somersault and come to rest inverted. The uninjured pilot vacated the aircraft without assistance using the entrance door on the right-hand side of the fuselage. The AFRS attended shortly afterwards but there was no fire.

Meteorological information

The surface wind reported at the time of the accident was from 270° at 8 kt with visibility in excess of 10 km and no cloud below 5,000 ft.

Aircraft information

The Super Cub is a two-seat high-wing monoplane with tailwheel landing gear. Aircraft in this configuration, where the CG is behind the main landing gear, are

less stable on the ground than those with a tricycle undercarriage. If the aircraft begins to yaw on the ground a swing will develop if uncorrected. An over-correction will cause a swing in the opposite direction, which itself must be positively corrected. The correct technique for directional control on the ground can be learned with practice.

The engine is conventional and simple to operate but it is susceptible to a rich cut² in certain circumstances, particularly if the throttle is opened abruptly with carburettor heat selected.

Discussion

The pilot commented that, when the engine failed to respond, he should have closed the throttle and then opened it more gradually. He also believed that in attempting to recover the aircraft he focused on his immediate surroundings and lost his awareness of the aircraft’s attitude. He did not recall selecting carburettor heat off or closing the throttle at any time during the landing or subsequent ground manoeuvres. He remarked that the engine fitted to the aircraft type most familiar to him responded satisfactorily to abrupt throttle movements but noted that this was not an appropriate technique for most engines.

Footnote

² A rich cut is said to occur if the fuel and air mixture becomes too fuel rich to support combustion.