

ACCIDENT

Aircraft Type and Registration:	Piper PA-18-150 (Modified) Super Cub, G-BJCI	
No & Type of Engines:	1 Lycoming O-360-C2A piston engine	
Year of Manufacture:	1958 (Serial no: 18-6658)	
Date & Time (UTC):	17 September 2015 at 0930 hrs	
Location:	Milfield Airfield, Northumberland	
Type of Flight:	Private	
Persons on Board:	Crew - 1	Passengers - None
Injuries:	Crew - None	Passengers - N/A
Nature of Damage:	Minor damage to right elevator and slight damage to parked vehicle	
Commander's Licence:	Private Pilot's Licence	
Commander's Age:	64 years	
Commander's Flying Experience:	1,347 hours (of which 225 were on type) Last 90 days - 1 hour Last 28 days - 0 hours	
Information Source:	Aircraft Accident Report Form submitted by the pilot and additional inquiries by the AAIB	

Synopsis

The aircraft was being prepared to embark on a series of glider aerotows. However, when the engine fired, it ran up to a high power level and started to move forwards towards a parked car. The pilot tried to turn the aircraft away from the car but the right elevator struck the rear of the vehicle. Damage to both was slight. A loose clamp on the throttle cable is thought to have been responsible for the uncommanded high power setting.

History of the flight

The pilot (Pilot A) intended to undertake a glider tow using G-BJCI. Having completed the daily inspection without finding any discrepancies, he placed his feet upon the heel brakes and, after a few attempts, started the engine which immediately ran up to much higher power than he expected. Closing the throttle had no effect on the rpm and, despite having his heels on the brakes, the aircraft started to move towards a car parked about 20 ft away. Despite trying to turn left to avoid the car, he heard something strike the aircraft and, when he had shut down the engine and climbed out to investigate, he found damage to the right elevator and corresponding damage to a rear light lens of the car.

On the morning of the day before, a different pilot (Pilot B) had started 'CI with a view to performing a short test circuit before commencing aerotow duties. However, as he was performing the pre-takeoff power checks, the engine had run up to full power without being

commanded. Having rolled forward for a few seconds, he shut down the engine and had the aircraft pushed back to its hangar. He completed his first morning's towing duties using a different type of aircraft.

Pilot B was later informed that 'CI was ready to test again, so he took it for a single circuit, during which the aircraft performed normally and a further seven successful tows were performed before breaking for lunch. After lunch, the pilot was tasked with towing a club glider to 2,500 ft but, immediately after release, the engine again ran up uncommanded to full power; he immediately shut down the engine and commenced a glide approach to the airfield. The subsequent engine-off landing was successful, the aircraft was pushed into its hangar and Pilot B resumed towing using the aircraft he had flown earlier in the day.

Upon finishing for the day, he spoke to the club safety officer about the problem and left a telephone message for the tugmaster. He followed the latter up with an email and, in a later reply from the tugmaster, he was informed that Pilot A would be "coming to the site the next day to look at the Cub".

Discussion

A licensed technician who attended to assess the damage to the aircraft, knew that the reported behaviour of the engine was consistent with a known problem when a clamp on the throttle cable becomes loose and allows the cable outer to move. A spring on the throttle, intended as a fail-safe feature in case of cable failure, then drives the throttle to fully open. The technician tightened the clamp but did not run the engine to confirm that this was the defect responsible for the uncommanded power increase. It is not known who had told Pilot B the previous day that the aircraft was ready for a test after the first occurrence or what, if anything, had been done.

Pilot A, when he had reported as duty tug pilot, was evidently unaware of the previous day's events (or thought the defect had been rectified) and treated the engine start as routine. The club did not keep technical logs for their tugs, although reportedly some form of system existed for passing information between pilots, but it did not appear to have been used in this instance.

The club received a visit from the Chief Technical Officer of the British Gliding Association (BGA) to assist with implementing measures to prevent a recurrence of this accident, which could have had more serious consequences. The measures included restricting airside vehicle access and introducing a system of using chocks at refuelling and start-up points. There was a general perception that the Super Cub's brakes were incapable of holding the aircraft against the thrust of full power, although that is considered a misconception if the brakes are properly maintained and adjusted.