AAIB Bulletin: 8/2017	G-BNSZ	: EW/G2017/04/02
ACCIDENT		
Aircraft Type and Registration:	Piper PA-28-161 Cherokee Warrior II, G-BNSZ	
No & Type of Engines:	1 Lycoming O-320-D3G piston engine	
Year of Manufacture:	1981 (Serial no: 28-8116315)	
Date & Time (UTC):	9 April 2017 at 0810 hrs	
Location:	Halfpenny Green Airfield, Staffordshire	
Type of Flight:	Private	
Persons on Board:	Crew - 1	Passengers - 2
Injuries:	Crew - 1 (Minor)	Passengers - None
Nature of Damage:	None reported	
Commander's Licence:	Private Pilot's Licence	
Commander's Age:	23 years	
Commander's Flying Experience:	56 hours (of which 42 were on type) Last 90 days - 5 hours Last 28 days - 3 hours	
Information Source:	Aircraft Accident Report Form submitted by the pilot	

Synopsis

Whilst the pilot was turning the propeller by hand, it suddenly spun over approximately five revolutions, striking him on his right elbow and causing a small injury.

History of the flight

The pilot and passengers boarded the aircraft with the intention of carrying out a local flight. After following the checklist to start the engine, including priming the fuel system, the engine did not turn over when the key was rotated to the start position. Two further attempts were made, with the same result. The pilot secured the aircraft by closing the throttle, turning the fuel and electrics off and removing the keys. He then exited the aircraft and attempted to turn the propeller by hand in order check if the engine had seized. He noticed that it was indeed stiff; he applied more force and the propeller suddenly started to spin, with the engine turning over a maximum of five revolutions. He jumped backwards, instinctively raising his arm above his head, but the propeller struck his right elbow, causing a small (5 mm) puncture wound, with associated swelling and bruising. There was no long term damage.

Comment

The pilot subsequently stated that the engine had already been primed with fuel from a previously failed start attempt and that he considered that fuel in the cylinders may have detonated when he turned the propeller, causing the engine to 'run' for a few revolutions.

The pilot recalled that he had removed the ignition key prior to leaving the aircraft. As with most aircraft, the key had to be in the 'both magnetos OFF' position before it could be removed. However there remains the possibility that one, or both, of the magnetos was not properly earthed when the ignition switch was in the OFF position. The pilot stated that a check of the magnetos would definitely be conducted prior to the next flight.

This event emphasises the importance of always treating magnetos as 'live' even when they appear to be switched off. Elsewhere in this Bulletin is another account of an incident involving an injury inflicted by a propeller - see the report on G-MYUB in this issue.

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