

Serious Incident

Aircraft Type and Registration:	Piper PA-28-181, G-JACS	
No & Type of Engines:	1 Lycoming O-360-A4M piston engine	
Year of Manufacture:	1997 (Serial no: 2843078)	
Date & Time (UTC):	27 April 2025 at 1400 hrs	
Location:	Fowlmere Aerodrome, Cambridgeshire	
Type of Flight:	Private	
Persons on Board:	Crew - 1	Passengers - None
Injuries:	Crew - 1 (Minor)	Passengers - N/A
Nature of Damage:	Propeller destroyed and engine shock-loaded. Damage to engine cowling, right and left wings. Building struck by the aircraft also damaged	
Commander's Licence:	Private Pilot's Licence	
Commander's Age:	72 years	
Commander's Flying Experience:	219 hours (of which 153 were on type) Last 90 days - 3 hours Last 28 days - 0 hours	
Information Source:	Aircraft Accident Report Form submitted by the pilot	

Synopsis

The aircraft's engine started at an unexpectedly high power setting, caused by the throttle being set excessively open. The pilot manoeuvred the aircraft but did not retard the throttle or apply the brakes, and it struck a building. This accident highlights the importance of correctly following the aircraft's checklist and also the need to anticipate an unexpected outcome during a routine task such as starting the engine.

History of the flight

The pilot reported that following completion of the pre-flight checklist and with the parking brake engaged, he twice tried to start the engine without success. He sought assistance from a maintenance engineer, who after rotating the propeller suggested the pilot attempt a further engine start. The pilot recalled setting the throttle to $\frac{1}{4}$ open, which he stated was required by the aircraft's checklist.

The engine started and immediately ran at high power. The pilot's attempts to apply the toe brakes and parking brake were unsuccessful and the aircraft, having completed a 180° right turn followed by a left turn, struck a building (Figure 1). The engine stopped on impact and the pilot, who was wearing the three-point harness, received minor injuries to his left elbow and forehead.



Figure 1

G-JACS after the accident

Aircraft information

The aircraft's checklist was reviewed following the accident and the pre-start section included checking the throttle for full and free movement, before setting it to $\frac{1}{4}$ inch open.

Full throttle movement on a PA-28 was measured by the AAIB and found to be approximately 2 inches. Setting the throttle open to $\frac{1}{4}$ of its operating range would therefore result in approximately twice the setting required by the pilot's checklist.

The aircraft's braking system was inspected after the incident and both the parking brake and toe brakes were found to function correctly.

Analysis

The unexpectedly high-power level delivered by the engine once it had started was due to the throttle lever being set further open than required by the aircraft's checklist. It is possible that this may have been caused by the pilot setting the throttle to $\frac{1}{4}$ open, rather than $\frac{1}{4}$ inch open as required by the pre-start checklist.

It is also likely that the parking brake was not fully applied, as the aircraft started moving immediately after the engine had started and the braking system was found to work correctly following the incident.

The pilot's inability to bring the aircraft to a stop may have been due to a combination of startle, following the unexpected movement of the aircraft, and his prioritisation of steering the aircraft over retarding the throttle and application of the toe brakes.

This incident highlights the importance of correctly following the aircraft checklist and also the need to anticipate an unexpected outcome during a routine task such as starting the engine.

Conclusion

The throttle was set excessively open prior to engine start, resulting in an unexpectedly high-power setting when the engine started. It is likely that the parking brake was not fully applied, allowing the aircraft to move following the engine start. The pilot did not retard the throttle or apply the brakes, and the aircraft struck a building, causing minor injuries to the pilot and significant damage to the aircraft and building.