LIMITED OCCURRENCE INVESTIGATION REPORT – FINAL

Reference Number	CA18/3/2/1513						
Classification	Serious Incident	**Date**	16 October 2025		**Time**	0700Z	
Type of Operation	Training (Part 141)						
Location							
Place of Departure	Lydenburg Aerodrome (FALL), Mpumalanga Province	Place of Intended Landing	Lydenburg Aerodrome (FALL), Mpumalanga Province				
Place of Occurrence	On a field which is the extension of the centreline of Runway 04 at Lydenburg Aerodrome						
GPS Co-ordinates	Latitude	25°06'57.02" S	Longitude	030°24'33.37" E	Elevation	4 890 feet	
Aircraft Information							
Registration	ZU-FXH						
Make; Model; S/N	Micro Aviation SA; Bat Hawk (Serial Number: MA12-11)						
Damage to Aircraft	Substantial		Total Aircraft Hours	1 374.7			
Pilot-in-command							
Licence Type	Recreational Student Pilot Licence		Gender	Male	Age	45	
Licence Valid	Yes	Total Hours	18.4	Total Hours on Type	18.4		
Total Hours 30 Days	2.5		Total Flying on Type Past 90 Days	5.9			
People On-board	1 + 0	**Injuries**	0	**Fatalities**	0	**Other (on ground)**	0

What Happened

On Thursday morning, 16 October 2025, a student pilot on-board a Bat Hawk aircraft with registration ZU-FXH took off from Lydenburg Aerodrome (FALL) in Mpumalanga province with the intention to land back at the same aerodrome. The flight was conducted during the day under visual meteorological conditions (VMC) and in accordance with the provisions of Part 141 of the Civil Aviation Regulations (CAR) 2011, as amended.

The student pilot was engaged in a solo consolidation flight (flying circuits) on Runway 04. Whilst on his sixth circuit and on final approach, the engine lost power and he was unable to reach the runway which was approximately 150 metres (m) in front of his flight path. As a result, he executed a forced landing 150m short of the threshold of Runway 04. During the landing roll, the nose gear impacted an anthill during which the forward structure of the aircraft was damaged. The student pilot was not injured.

The accident occurred during the day at Global Positioning System (GPS) co-ordinate determined to be 25°06'57.02" South 030°24'33.37" East, at an elevation of 4 890 feet (ft).

Figure 1: The position of the aircraft indicated by the yellow pin. (Source: Google Earth)

Figure 2: The aircraft after it had come to rest. (Source: Pilot)

Figure 3: The front view of the aircraft. (Source: Pilot)

Figure 4: The anthill with which the aircraft impacted. (Source: Pilot)

Engine Inspection

A Camit engine with serial number 33SLRE-0111 was fitted to the aircraft on 22 August 2018; it has been in operation for 521.6 hours. The aircraft was taken to the manufacturer for inspection; it was found that the engine could be turned freely by hand, and that there were no abnormalities or unfamiliar sounds detected which could be associated with mechanical failure. The carburettor bowl was removed; it still contained fuel. The fuel filter was found clean. The oil level was checked using a dipstick and a normal oil reading was recorded.

An engine ground run was conducted with the engine still secured to the airframe. The engine started without difficulty and kept running until the oil pressure and temperature had stabilised. The throttle was then advanced to approximately 2 000 revolutions per minute (RPM) and held at this setting for a few minutes; thereafter, the engine was throttled back to ground idle and then shut down. The cylinder differential pressures (blow-by) were taken for all six cylinders; all six readings were within the normal operating range between 77 and 73 over 80 pounds per square inch (psi). *(Blow-byes is an inherent byproduct of all internal combustion engines, including those on aircraft. It refers to the leakage of a small amount of combustion gases from the cylinder, past the piston rings, into the crankcase.)*

Figure 5: The aircraft during the engine ground run.

Figure 6: The engine monitoring display during the ground run.

Findings

1. Personnel

1.1 The student pilot had a Student Pilot Licence (SPL) that was initially issued by the Regulator (SACAA) on 15 August 2024 with an expiry date of 27 August 2026. The pilot had flown a total of 18.4 hours which he accumulated on the aircraft type.

1.2 The student pilot was issued a Class 4 aviation medical certificate on 12 June 2024 with an expiry date of 12 June 2026.

2. Aircraft

2.1 The aircraft was manufactured in 2013 and was initially fitted with a Jabiru 3300A engine. The aircraft was fitted with a two-blade wooden Brent Thompson propeller with serial number 457. The propeller was not damaged during the serious incident.

2.2 The last annual inspection of the aircraft was conducted and certified on 4 November 2024 at 1 319.9 airframe hours. The aircraft had accrued 54.8 hours since the annual inspection.

2.3 The aircraft was issued an Authority-to-Fly (ATF) Certificate on 21 November 2024 with an expiry date of 30 November 2025.

2.4 A Certificate of Release to Service (CRS) was issued on 4 November 2024 with an expiry date of 3 November 2025 or at 1 419.9 airframe hours, whichever comes first.

2.5 The aircraft was fitted with a Camit engine serial number 33SLRE0-111 on 22 August 2016. The engine has been in operation for 521.6 hours. No engine anomalies were noted during the engine evaluation and ground run after the serious incident.

3. Declared Training Organisation (DTO)

3.1 The flight school had a valid Declared Training Organisation (DTO) Certificate that was issued by the Regulator on 29 January 2025 with an expiry date of 28 February 2030.

3.2 The flight was accordingly authorised. The flight was also the student pilot's third solo flight since he commenced his training.

Probable Cause

The student pilot executed a forced landing following an engine power loss on short final approach, which resulted in damage to the aircraft. The cause of engine power loss was undetermined.

Contributing Factor

Hidden terrain hazards (anthills) resulted in damage to the aircraft during a forced landing on a field adjacent to the runway.

Safety Action

None.

Safety Message and/or Safety Recommendation

None.

About this Report

The decision to conduct a limited investigation is based on factors including whether the cause is known and the evidence supporting the cause is clear, the level of safety benefit likely to be obtained from an investigation, and that will determine the scope of an investigation. For this occurrence, a limited investigation has been conducted, and the Accident and Incident Investigations Division (AIID) has relied on the information submitted by the affected person/s and organisation/s to compile this limited report. The report has been compiled using information supplied in the initial notification, as well as from follow-up desk top enquiries to bring awareness of potential safety issues to the industry in respect of this occurrence, as well as possible safety action/s that the industry might want to consider in preventing a recurrence of a similar occurrence.

All times given in this report are Co-ordinated Universal Time (UTC) and will be denoted by (Z). South African Standard Time is UTC plus 2 hours.

Purpose

In terms of Regulation 12.03.1 of the Civil Aviation Regulations (CAR) 2011 and ICAO Annex 13, this report was compiled in the interest of the promotion of aviation safety and the reduction of the risk of aviation accidents or incidents and not to apportion blame or liability.

Disclaimer

This report is issued by:

Accident and Incident Investigations Division
South African Civil Aviation Authority
Republic of South Africa