

LIMITED OCCURRENCE INVESTIGATION REPORT – FINAL

Reference Number	CA18/2/3/10212					
Classification	Accident	Date	6 October 2022	Time	1515Z	
Type of Operation	Private (Part 94)					
Location						
Place of Departure	Potchefstroom Aerodrome (FAPS), North West Province		Place of Intended Landing	Potchefstroom Aerodrome (FAPS), North West Province		
Place of Occurrence	On a private farm, approximately 20 kilometres (km) north-west of Klerksdorp Aerodrome (FAKD)					
GPS Co-ordinates	Latitude	26° 42'. 17" S	Longitude	26° 37'. 17" E	Elevation	4352 ft
Aircraft Information						
Registration	ZS-GKL					
Make; Model; S/N	LS1 Glider (Serial Number: 77)					
Damage to Aircraft	Substantial		Total Aircraft Hours	1877		
Pilot-in-command						
Licence Type	Glider Student Pilot Licence (GSPL)		Gender	Male	Age	24
Licence Valid	Yes	Total Hours	660	Total Hours on Type	660	
Total Hours Past 30 Days	5.5		Total Hours on Type Past 90 Days		60	
People On-board	1+0	Injuries	0	Fatalities	0	Other (on ground) 0
What Happened						
<p>On Thursday morning, 6 October 2022, a pilot on-board an LS1 non-powered glider with registration ZS-GKL was launched at 1036Z behind an aerotow tug on Runway 03 at Potchefstroom Aerodrome (FAPS) in the North-West province with the intention to return to the same aerodrome. No flight plan was filed for this private flight. Visual meteorological conditions (VMC) by day prevailed at the time of the flight which was conducted under the provisions of Part 94 of the Civil Aviation Regulations (CAR) 2011 as amended.</p> <p>The pilot reported that after the glider was released from the tug, he flew towards Viljoenskroon in the Free State province, soaring between 8 000 and 14 000 feet (ft) above ground level (AGL). Upon his return to the departure aerodrome after 4 hours and 45 minutes of flight time, the glider was in an area with no thermals, which affected its lift and ability to remain airborne. The pilot elected to perform an off-field landing on a private farm approximately 20 kilometres (km) north-west of FAKD. During landing at 1515Z, the glider's port-side wing got hooked on the maize crops and it ground looped, damaging the undercarriage and the port-side wing. The pilot disembarked the glider unassisted and uninjured. The glider sustained substantial damage. The surface wind at the time was calm and variable between 01 and 03 knots.</p> <p>Off-Field Landing Procedures (Source: FAA-H-8083-13a Glider Flying Handbook) <i>The possibility of an off-field landing is present on virtually every cross-country soaring flight, even when flying in a self-launching glider. If the engine or power system fails and there is no airport within gliding range, an off-field landing may be inevitable. It should be noted that many glider pilots not flying cross-country have faced the necessity of performing an off-field landing. Causes of off-field landings while soaring in the vicinity of the launching airport, include rapid weather deterioration, a significant change</i></p>						

in wind direction, unanticipated amounts of sinking air, disorientation, lack of situational awareness, tow failures, and other emergencies requiring an off-field landing. In these situations, it usually is safer to make a precautionary off-field landing than it is to attempt a low, straight-in approach to the airport. If the glide back to the airport comes up short for any reason, the landing is likely to be poorly executed and may result in damage to the glider or injury to the pilot.



Figure 1: The glider came to a stop on a maize crop field. Inset shows some of the damaged crops.
(Source: Operator)

Findings

- The pilot, a German national, was granted a 28-day validation of foreign pilot's licence for visual flight rules (VFR) recreational flying. He was validated as a Glider Student Pilot Licence (GSPL) holder with 660 hours total on type flying experience. His current licence was issued on 27 September 2022 with an expiry date of 10 October 2022.
- The European Union issued the pilot a valid Class 2 medical certificate on 13 September 2022 with an expiry date of 13 September 2027 with no restrictions.
- The last maintenance periodic inspection (MPI) that was carried out on the aircraft was on 28 September 2022 at 1857 airframe hours. The aircraft had accumulated a total of 20 hours since the last inspection.
- The aircraft's Authority to Fly (ATF) was issued on 16 October 2019 with an expiry date of 31 October 2022.

Probable Cause

Rapid loss of height in-flight because of lack of thermals, which prompted the pilot to perform an off-field landing on a maize field. This resulted in substantial damage to the glider.

Contributing Factors

None.

Safety Action

None.

Safety Message and/or Safety Recommendation/s

None.

About this Report

Decisions 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

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This report is issued by:

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