

LIMITED OCCURRENCE INVESTIGATION REPORT – FINAL

Reference Number	CA18/2/3/10390						
Classification	Accident	Date	18 November 2023	Time	1230Z		
Type of Operation	Training (Part 141)						
Location							
Place of Departure	Brits Airfield (FABS), North West Province		Place of Intended Landing	Brits Airfield (FABS), North West Province			
Place of Occurrence	On an open field near Brits Airfield						
GPS Co-ordinates	Latitude	25°32'27.5" S	Longitude	027°46'36.13" E	Elevation	3 710 ft	
Aircraft Information							
Registration	ZS-GPD						
Make; Model; S/N	Grob-Burkhaart Flugzeugbau, Twin Astir glider (Serial Number: 3010)						
Damage to Aircraft	Substantial			Total Aircraft Hours	671.25		
Pilot-in-command							
Licence Type	Glider Pilot Licence (GPL)		Gender	Male		Age	66
Licence Valid	Yes	Total Hours	1 086.6		Total Hours on Type	380	
Total Hours Past 30 Days	47.0		Total Flying Hours on Type Past 90 Days	63.4			
People On-board	2+0	Injuries	0	Fatalities	0	Other (on ground)	0
What Happened							
<p>On Saturday, 18 November 2023, an instructor and a student pilot on-board a Twin Astir Glider with registration ZS-GPD were on a training flight from Brits Airfield (FABS) in the North West province with the intention to return to the same airfield when the accident occurred. The training flight was conducted under visual meteorological conditions (VMC) by day and under the provisions of Part 141 of the Civil Aviation Regulations (CAR) 2011 as amended.</p> <p>The instructor pilot stated that the tug aircraft with the glider in tow lined up on Runway 20 in preparation for the flight. A few minutes later, the tug aircraft and the glider took off. During the climb at approximately 150 feet (ft) above ground level (AGL), the tug aircraft rapidly lost height due to the downdraft which resulted in the misalignment of the glider and the tug aircraft. <i>According to the Pilot's Operating Handbook (POH) the normal height for the tug aircraft to release the glider is 450 (ft).</i> After the glider crew realised that the tug aircraft is not gaining sufficient height, they initiated a left turn to return to the take-off runway. As a safety precaution, the instructor pilot (glider) called for the release of the glider from the tug aircraft so that he can execute a forced landing on a field due to the absence of lift/thermals. During the forced landing, the undercarriage collapsed, and the tail boom was substantially damaged. Both occupants were not injured.</p> <p>The tug aircraft returned to the airfield where it landed safely and undamaged.</p>							

The accident occurred during day light at Global Positioning System (GPS) co-ordinates determined to be 25°32'27.5" South 027°46'36.33" East, at an elevation of 3 710 feet (ft).



Figure 1: Aerial view of the accident site. (Source: Google Earth)



Figure 2: The aircraft as it came to rest after the accident. (Source: Pilot)

The following information was obtained from the South African Weather Services (SAWS).

Wind Direction	360°	Wind Speed	9 knots	Visibility	No data
Temperature	21°C	Cloud Cover	No data	Cloud Base	No data
Dew Point	16.6°C	QNH	1019hPa		

The following weather information was obtained from the pilot questionnaire.

Wind Direction	Variable	Wind Speed	5 knots	Visibility	20 km
Temperature	32°C	Cloud Cover	5/8	Cloud Base	8500
Dew Point	Unknown	QNH	Unknown		

Findings

1. The instructor pilot was initially issued a Glider Pilot Licence (GPL) by the South African Civil Aviation Authority (SACAA) on 23 February 2019. The licence was reissued on 20 February 2021 with an expiry date of 11 February 2025. The pilot had flown a total of 1 086.6 hours of which 380 hours were on the aircraft type.
2. The instructor pilot had the aircraft type endorsed on his licence. The pilot had a valid Class 2 aviation medical certificate that was issued on 28 February 2023 with an expiry date of 28 February 2025.
3. The aircraft was issued an Authority to Fly (ATF) on 16 December 2019. The ATF was renewed on 20 February 2023 with the expiry date 28 February 2024.
4. The aircraft was issued a Certificate of Registration (C of R) on 14 May 2015.
5. The last annual inspection of the aircraft was certified on 15 February 2023 at 656.58 hours. At the time of the accident, the aircraft had a total of 671.25 airframe hours. The aircraft was flown a further 14.67 hours since the last annual inspection.
6. The aircraft was issued a Certificate of Release to Service (CRS) on 15 February 2023 at 656.58 hours with an expiry date of 15 February 2024 or at 756 hours, whichever occurs first. There were no defects recorded in the flight folio at the time of the accident flight.

Probable Cause
The instructor pilot disconnected the glider from the tug aircraft at a height of 150 feet AGL due to the tug aircraft experiencing a downdraft; as a result, the instructor pilot conducted an unsuccessful forced landing on a field.
Contributing Factor
Insufficient thermals to sustain lift.
Safety Action(s)
None.
Safety Message
None.
About this Report
<i>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.</i>
<i>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.</i>
Purpose
<i>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.</i>
Disclaimer
<i>This report is produced without prejudice to the rights of the AIID, which are reserved.</i>

**This report is issued by:
Accident and Incident Investigations Division
South African Civil Aviation Authority
Republic of South Africa**