LIMITED OCCURRENCE INVESTIGATION REPORT – FINAL

Reference Number	CA18/2/3/10650						
Classification	Accident	**Date**	29 March 2026		**Time**	0630Z	
Type of Operation	Private (Part 94)						
Location							
Place of Departure	Uitspan Klein Karoo Guest Farm Airstrip near Ladismith, Western Cape Province		Place of Intended Landing		Uitspan Klein Karoo Guest Farm Airstrip near Ladismith, Western Cape Province		
Place of Occurrence	On the left side of the gravel runway at Uitspan Klein Karoo Guest Farm, Western Cape Province						
GPS Co-ordinates	Latitude	33°32'28.97" S	Longitude	021°9'11.80" E		Elevation	1 190 ft
Aircraft Information							
Registration	ZU-ANU						
Make; Model; S/N	Skystar; Kitfox IV (Serial Number: 1712)						
Damage to Aircraft	Substantial		Total Aircraft Hours	625.4			
Pilot-in-command							
Licence Type	National Pilot Licence (NPL)		Gender	Male		Age	68
Licence Valid	Yes	Total Hours	1 813.1	Total Hours on Type			625.4
Total Hours 30 Days	6.8		Total Flying on Type Past 90 Days				4.5
People On-board	1+1	**Injuries** 1	**Fatalities**	0	**Other (on ground)**		0

What Happened

On Sunday morning, 29 March 2026, a pilot and a passenger on-board a Skystar Kitfox IV aircraft registered ZU-ANU took off from Uitspan Klein Karoo Guest Farm private airstrip near Ladismith in Western Cape province with the intention to land back at the same airstrip. The flight was conducted under visual meteorological conditions (VMC) and under the provisions of Part 94 of the Civil Aviation Regulations (CAR) 2011, as amended.

According to the pilot who is also the owner of the farm, he conducted a pre-flight inspection of the aircraft and noted no anomalies. Good weather conditions prevailed at the time of the flight. The aircraft had approximately 25 litres (L) of Aviation Gasoline (Avgas) 100 Low Lead (100LL) in the fuel tanks. After the engine was started, he taxied the aircraft to the gravel runway and aligned it for take-off in a north-easterly direction. He applied full throttle and commenced with the take-off run. The pilot stated that the aircraft became airborne and, during the initial climb, there was an unexpected downdraft which degraded power, resulting in reduced climb performance. The aircraft was unable to maintain a positive rate-of-climb, and it began to lose height. In response, the pilot initiated a left turn to avoid the rising terrain (Klein Swartberg Mountains) ahead of the flight path.

During the turn, the aircraft's left wing struck a barrier fence pole before it impacted the ground and cartwheeled; it came to rest within the farm's boundary. The aircraft was substantially damaged. The pilot sustained minor injuries, and the passenger was not injured.

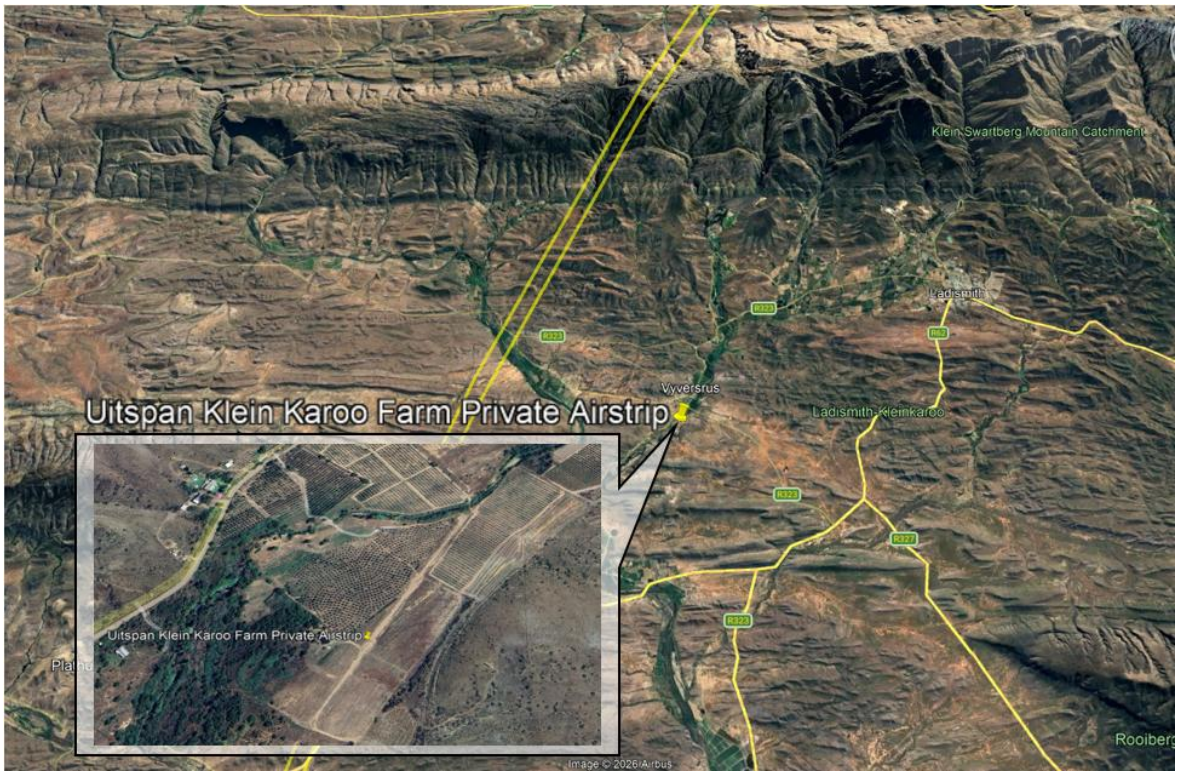

Figure 1: The position of the aircraft and the runway. (Source: Google Earth)

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

Figure 3: A side view of the aircraft after the accident. (Source: Pilot)

Weather Conditions

The pilot reported a downdraft encounter during the early stage of the climb. There was no official or automatic weather station available in the vicinity of the farm. The weather data in the table below was sourced from a website search of the weather conditions in the area, captured on 29 March 2026 at 0600Z, which indicated a temperature of approximately 22°C and a north-westerly wind of 5 knots (9 km/h).

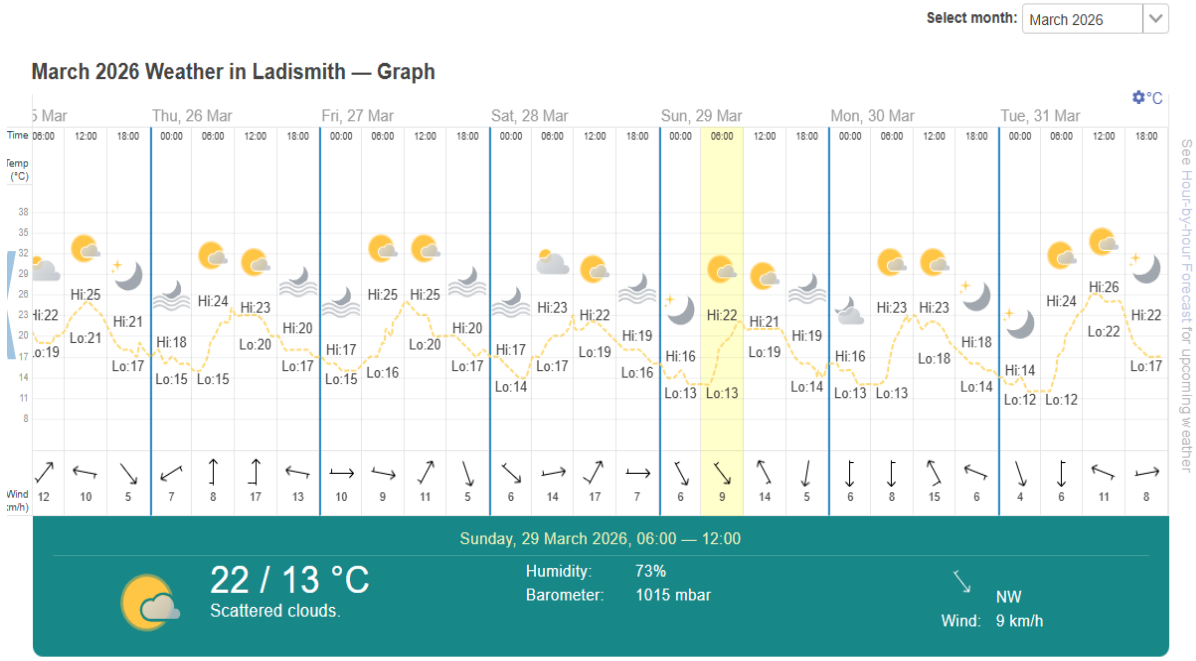

Figure 4: Meteorological information around the accident site. (Source: Predictwind.com)

Runway Information

The farm airstrip is privately owned and unlicensed with a gravel-surface runway measuring approximately 470 metres (m) in length and 15m in width, and with an elevation of about 1 175ft. The airstrip is in a mountainous terrain; a mountain range with an approximate 6 000ft peak is located about 12 kilometres (km) from the runway in the take-off direction. The terrain also rises around the airstrip runway within 500m.

Figure 5: Runway view of the take-off direction along the gravel runway (left picture); runway view from the opposite end (right picture). (Source: Pilot)

Aircraft Description and Performance (Source: POH)

The aircraft is a light sport aircraft (LSA) of high-wing configuration with fixed landing gear and tailwheel (taildragger) undercarriage. The aircraft type is designed to be typically fitted with Rotax 912/S engines type in the power range of 80 to 150 horsepower (hp) and has a maximum take-off mass of 540kg. The published operating wind limitations include a maximum crosswind component of 10–15 knots and a maximum gust component greater than 20 knots.

The aircraft was fitted with a Rotax 582 UL (two-stroke, two-cylinder, liquid-cooled) engine rated at 48 kilowatts (kW) (64.4 hp) and at 6 500 revolutions per minute. The manufacturer's overhaul interval is 300 hours. At the time of the accident, the engine had accrued 625.4 hours in service; however, no logbook was provided to confirm that the required overhaul maintenance was conducted. The same engine (Rotax 582 UL) was fitted to the aircraft at the time of registration with the Regulator (SACAA).

Weight and Balance

On the day of the flight, two occupants were on-board the aircraft; the pilot's weight was 90kg and the passenger, 70kg. The weight and balance calculations were found to be within limits. The total weight was 472kg (1042.42 lb); therefore, the weight was 68kg less than the Maximum Take-off Weight (MTOW) of 540kg (1190.49 lb).

The pilot stated that the aircraft encountered a downdraft. The aircraft took off north-easterly towards the mountainous terrain. A review of the surrounding surface conditions and the effect of wind obstruction by the mountainous terrain was explored, and the following extract was found:

Atmospheric Hazards Posing Problems for Pilots (An extract from the Pilot's Handbook of Aeronautical Knowledge, Chapter 12)

Obstructions on the ground affect the flow of wind and can be an unseen danger. Ground topography and large buildings can break up the flow of the wind and create gusts that change rapidly in direction and speed. These obstructions range from man-made structures, like hangars, to large natural obstructions, such as mountains, bluffs, or canyons. It is especially important to be vigilant when flying in or out of airports that have large buildings or natural obstructions located near the runway.

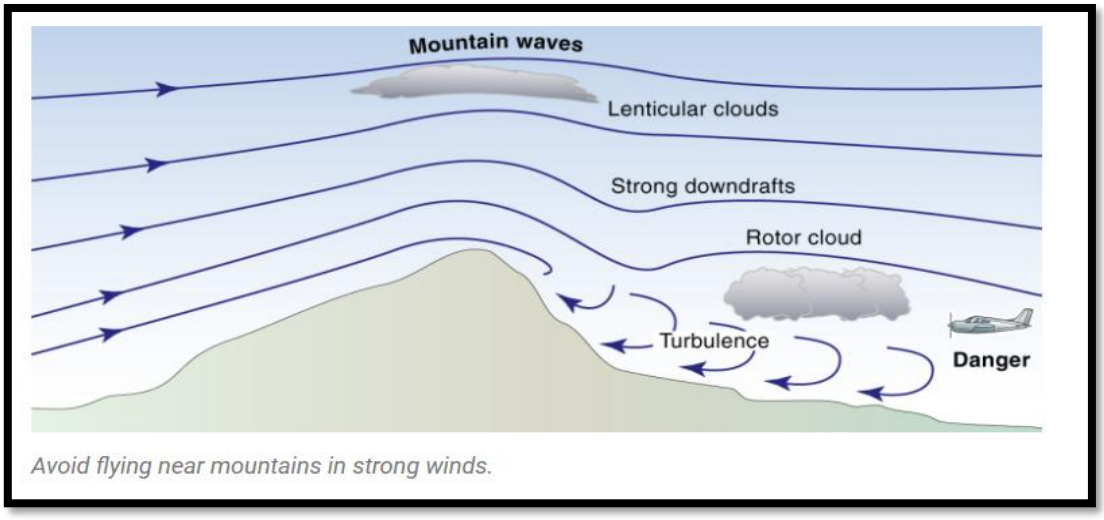

Figure 6: Turbulence in mountainous regions.

This same condition is even more noticeable when flying in mountainous regions. While the wind flows smoothly up the windward side of the mountain and the upward currents help to carry an aircraft over the peak of the mountain, the wind on the leeward side does not act similarly. As the air flows down the leeward side of the mountain, it follows the contour of the terrain and is increasingly turbulent. This tends to push an aircraft into the side of a mountain. The stronger the winds, the greater the downward pressure and turbulence become. Due to the effect terrain has on the wind in valleys or canyons, downdraft can be severe. Before conducting a flight in or near mountainous terrain, it is helpful for a pilot unfamiliar with a mountainous area to get a checkout with a mountain-qualified flight instructor.

Findings

Pilot

1. The pilot had a National Pilot Licence (NPL) that was initially issued by the Regulator on 22 May 2017. The licence was reissued on 23 March 2026 with an expiry date of 16 March 2028.

2. The pilot had a Class 4 aviation medical certificate that was issued on 16 March 2026 with an expiry date of 31 March 2029. The pilot had no restrictions listed in his medical certificate.

3. The pilot had a total of 1 815.7 flying hours of which 625.4 hours were accumulated on the aircraft type. The aircraft type was endorsed in his licence.

4. The pilot was properly licensed and qualified for the flight and had a valid medical certificate.

5. As the property owner, the pilot was familiar with the runway and the local operating conditions.

Aircraft

6. The aircraft had an Authority-to-Fly (ATF) Certificate that was issued by the Regulator on 13 November 2025 with an expiry date of 31 October 2026.

7. The aircraft Certificate of Registration (C of R) was issued to the owner on 12 February 2008.

8. The last annual inspection of the aircraft was conducted and certified on 4 November 2025 at 618.0 airframe hours after which a Certificate of Release to Service (CRS) was issued with an expiry date of 3 November 2026 or at 718.0 airframe hours, whichever comes first. The aircraft had 625.4 total hours at the time of the accident; it had accrued 7.4 hours since the annual inspection.

9. An approved person (AP) who conducted the annual inspection of the aircraft had a valid AP Certificate that was issued on 23 October 2024 with an expiry date of 22 October 2026. The aircraft type was endorsed in the AP's operational specifications.

10. The aircraft was designed to operate with an engine range of between 80 and 150 horsepower (hp); however, it was equipped with a two-stroke engine with 64.4hp. This engine produced less power than what was recommended for the aircraft.

11. There were no maintenance records indicating that the engine was overhauled at the manufacturer's recommended 300-hour intervals.

12. The aircraft was operated within the recommended weight limits (total weight of 472kg, and 68kg below the 540kg MTOW) but it had less engine power than the design requirements (64.4hp instead of 80–150hp), which likely reduced take-off and climb performance.

Environment

13. The weather conditions at the time of the flight were generally favourable with reported calm surface winds of 5kts. Although localised windshear and downdrafts could adversely affect aircraft performance at low altitude, the conditions on the day of the flight were not severe.

Aerodrome

14. The aircraft was operated from a gravel runway located in an area with a rising mountainous terrain where localised windshear and terrain-induced downdrafts were likely to be encountered, adversely affecting aircraft performance during take-off and initial climb phases.

Mission

15. The aircraft was unable to achieve a positive rate-of-climb during the critical take-off phase when maximum power was required. The installed engine produced less power than the design requirement for the prevailing weight of the aircraft.

16. Whilst attempting to avoid the rising terrain ahead of the flight path, the pilot initiated a left turn during which the left wing struck a fence pole, which resulted in loss of control.

Probable Cause(s)

During take-off, the aircraft was unable to achieve a positive climb due to inadequate engine power as the installed engine did not meet the aircraft's required performance specifications. Whilst attempting to avoid the rising terrain ahead of the flight path, the pilot initiated a left turn during which the left wing struck a fence pole, and the pilot lost control of the aircraft.

Contributing Factor(s)

Engine performance degradation due to improper fitted design specifications and poor maintenance.

Safety Action(s)

None.

Safety Message and/or Safety Recommendation/s

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 desktop 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 produced without prejudice to the rights of the AIID, which are reserved.

This report is issued by:

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