

LIMITED OCCURRENCE INVESTIGATION REPORT – FINAL

Reference Number	CA18/3/2/1434						
Classification	Serious Incident	Date	12 December 2023	Time	0956Z		
Type of Operation	Private (Part 94)						
Location							
Place of Departure	Wonderboom Airport (FAWB), Gauteng Province	Place of Intended Landing			Wonderboom Airport (FAWB), Gauteng Province		
Place of Occurrence	Runway 01 at Kitty Hawk Aerodrome, Gauteng Province						
GPS Co-ordinates	Latitude	25°51'32.52" S	Longitude	028°27'02.61" E	Elevation	4578 ft	
Aircraft Information							
Registration	ZU-FZA						
Make; Model; S/N	Van's RV7 (Serial Number: 74071)						
Damage to Aircraft	Minor			Total Aircraft Hours	312.6		
Pilot-in-command							
Licence Type	Airline Transport Pilot Licence (ATPL) Aeroplane		Gender	Male	Age	67	
Licence Valid	Yes	Total Hours	5474.5	Total Hours on Type	46.5		
Total Hours 30 Days	5.9		Total Flying on Type Past 90 Days			11.4	
People On-board	1+1	Injuries	0	Fatalities	0	Other (on ground)	0
What Happened							
<p>On Tuesday morning, 12 December 2023 at 0945Z, a pilot and a passenger on-board a Van's RV7 aircraft with registration ZU-FZA took off on a private flight from Wonderboom Airport (FAWB) in Gauteng province to Kitty Hawk Aerodrome (FAKT) also in Gauteng province with the intention to return to FAWB. The pilot intended to conduct touch-and-go circuits at (FAKT). The flight was conducted under visual meteorological conditions (VMC) by day and under the provisions of Part 94 of the Civil Aviation Regulations (CAR) 2011 as amended.</p> <p>The pilot stated that they arrived overhead FAKT at approximately 0956Z and followed the unmanned joining procedure. The pilot further stated that the wind was blowing at 280° direction at approximately 10 knots (kts); thus, he elected to use Runway (RWY) 01 for the touch-and-go landings.</p> <p>According to the pilot, the aircraft's approach speed was 72 kts at the time, which he reduced to 68 kts. At 50 feet (ft) above ground level (AGL), he closed the throttle to initiate the landing flare. <i>The runway's threshold is adjacent the high ground on the left.</i> The pilot stated that during the approach for landing, the wind suddenly stopped (died down). As he rounded out, the aircraft lost lift and descended faster than expected. He then tried to pull back and open the throttle, but it was</p>							

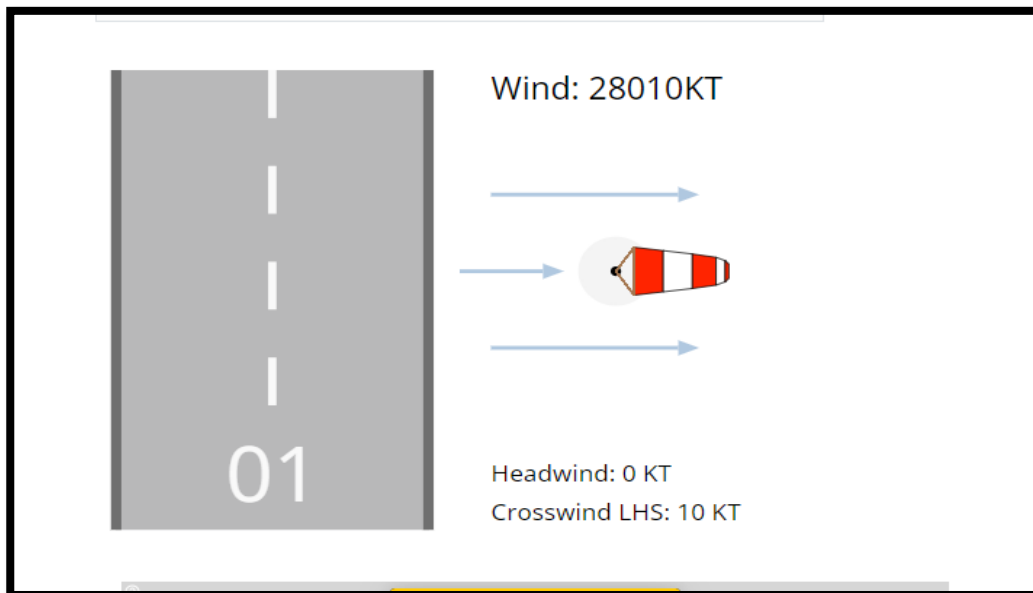


Figure 4: The crosswind was 90° from the left at 10 kts. (Source <https://aerotoolbox.com/crosswind>)

FAKT AD 2.20 Local Traffic Regulations (Source: https://www.fakt.co.za/airfield_info.html)

- (1) Runway 01 Right hand circuits.
- (2) Runway 19 Left hand circuits.
- (3) Pilots to broadcast their intentions on 120,65 MHz Kitty Hawk Traffic when east of the Waterkloof CTR.
- (4) Join overhead 6100 ft.
- (5) APPROACH 01 – Be aware of turbulence & down drafts/wind shear.
- (6) Keep look out for guinea fowl & buck at times.
- (7) Occasional aerobatic practice on Western side.
- (8) Helicopter parking marked (H) on North Eastern side of airfield.
- (9) Poor radio coms between holding point 01 & 19 at times.
- (10) Caution: Westerly winds cause extreme turbulence near threshold 01.

Kitty Hawk Aero Estate	FAKT
Elevation	4586ft
Runways	810m x 18m tar, RH 01, LH 19
Coordinates	S 25°51'42" E 028°26'49"
Kitty Hawk Traffic	120.65
Notes	Pilots to broadcast intentions on 120.65 when E of FAWK CTR. Power lines 2000m S of AF at approx. 300ft above rwy elev.
Fuel	AVGAS is available 7 days a week. Click here for more info

Figure 5: FAKT Aerodrome dimensions.

N2447A



LANDING

- a) Approach speed 90 mph
- b) Flaps 20 deg.
- c) Prop control full rpm
- d) Engine 1800 rpm
- e) 80 mph final
- f) 40 deg. flaps

AFTER LANDING

- a) Wing Flaps – UP
- b) Boost Pump – OFF
- c) Transponder – STANDBY

Figure 6: Van's RV 7 Landing procedure. (Source: Van RV7 Pilot's Operating Handbook)

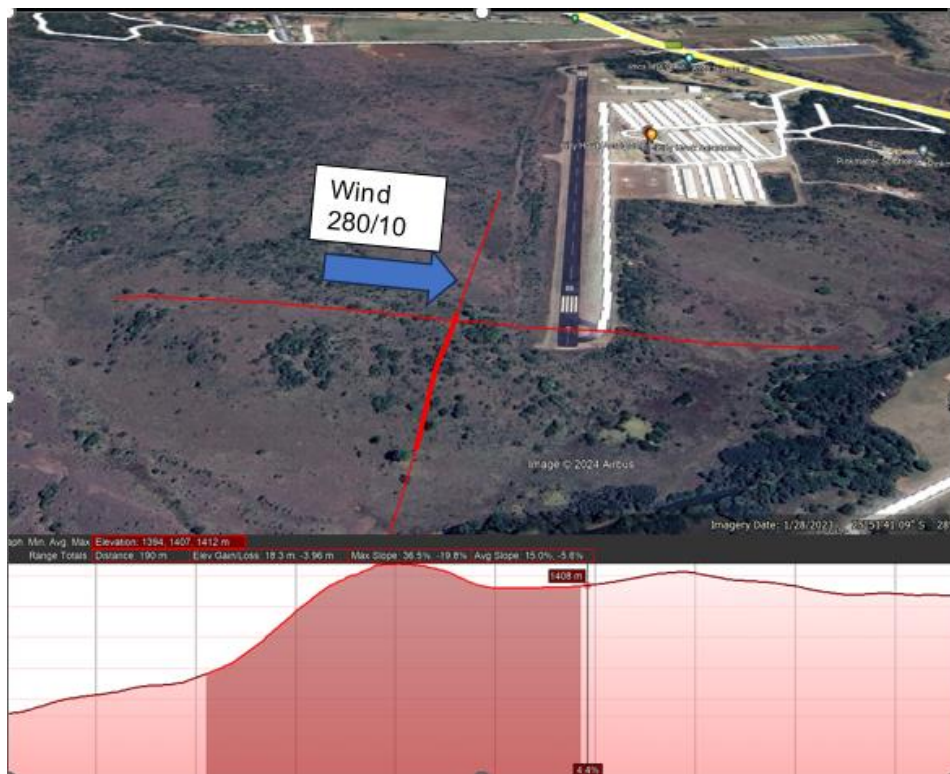


Figure 7: Image illustrates the rising terrain on the left of RWY 01. (Source Google Earth)

Findings
<ol style="list-style-type: none"> 1. The pilot was initially issued an Airline Transport Pilot Licence (ATPL) by the Regulator (SACAA) on 30 May 2023 with an expiry date of 31 May 2024. The pilot's Class 1 aviation medical certificate was issued on 27 September 2023 with an expiry date of 31 March 2024 with visual limitations. 2. The aircraft's last 100-hour inspection was conducted on 6 June 2023 at 230.8 Tachometer hours, after which a Certificate of Release to Service (CRS) was issued with an expiry date of 5 June 2024 or at 330.8 Tachometer hours, whichever comes first. 3. The Authority to Fly (ATF) was initially issued by the Regulator on 5 October 2019. The ATF renewal was issued on 31 October 2023 with an expiry date of 30 November 2024. 4. The Regulator issued the Certificate of Registration (C of R) to the current owner on 9 November 2021. 5. The crosswind was at 90° from the left of the runway and at 10 knots (depicted in Figure 7). As the aircraft flew over the rising terrain on the left, it experienced a sudden loss of wind speed which caused the aircraft to lose indicated airspeed. 6. During a crosswind landing, the aircraft experienced windshear and lost lift, bounced and landed on the nosewheel first; as a result, the nose gear strut bent.
Probable Cause(s)
During a crosswind landing, the aircraft experienced windshear and lost lift, bounced and landed on its nose gear; as a result, the nose gear strut bent.
Contributing Factor(s)
Rising terrain on the left side of the runway.
Safety Action(s)
None.
Safety Message and/or Safety Recommendation/s
None.
About this Report
<p><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 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.</i></p> <p><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></p>

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**

Attachment 1: Approach and Landing Procedures

Van's RV7 S/N 74141	Aircraft Flight Manual	Rev 0.1 I-MKLLK
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NORMAL PROCEDURES

4.2.9 A APPROACH & LANDING ➤

- 1. LANDING DATA _____ RECEIVED
- 2. ALTIMETERS _____ SET QNH
- 3. EFIS/COM/NAV _____ SET
- 4. SEAT BELTS _____ FASTENED
- 5. AUTOPILOT _____ OFF
- 6. FUEL SELECTOR _____ FULLEST TANK
- 7. APPROACH BRIEFING _____ COMPLETED

- 1. Surface Wind, RWY in use
- 2. Speeds (V FE1+2 95KIAS, V FEF 87KIAS, V REF 65KIAS)
- 3. Routing, Altitude, Restrictions
- 4. Missed Approach, Alternate, Best Glide 85

FINAL

- 1. PROPELLER _____ FULL FORWARD
- 2. FLAPS _____ 2 OR FULL
- 3. LANDING LIGHT _____ ON