

LIMITED ACCIDENT INVESTIGATION REPORT

Reference Number	CA18/2/3/10120					
Classification	Accident	Date	13 February 2022	Time	1420Z	
Type of Operation	Private (Part 94)					
Location						
Place of Departure	Thabazimbi Aerodrome (FATI), Limpopo Province		Place of Intended Landing	Kitty Hawk Aerodrome (FAKT), Gauteng Province		
Place of Accident	Runway 19 at FAKT, Gauteng Province					
GPS Co-ordinates	Latitude	S25° 51' .25.78"	Longitude	E28°26' .58.37"	Elevation	4573 feet
Aircraft Information						
Registration	ZU-DWF					
Model/Make	Ravin 500 (Serial Number: 0405006)					
Damage to Aircraft	Substantial		Total Aircraft Hours	864		
Pilot-in-command						
Licence Valid	Yes	Gender	Male	Age	47	
Licence Type	Private Pilot Licence (PPL)					
Total Hours on Type	120.31		Total Flying Hours	434.41		
People On-board	1 + 3	Injuries	0	Fatalities	0	Other (On Ground) 0
What Happened						
<p>On Sunday, 13 February 2022, a pilot and three passengers on-board a Ravin 500 aircraft with registration ZU-DWF were on a private flight from Thabazimbi Aerodrome (FATI) in Waterberg District Municipality, Limpopo Province, to Kitty Hawk Aerodrome (FAKT) in south-east Pretoria, Boschkop area, Gauteng Province. Visual meteorological conditions (VMC) by day prevailed and no flight plan was filed. The flight was conducted under the provisions of Part 94 of the Civil Aviation Regulations 2011 as amended.</p> <p>The pilot stated that before departure, he conducted a pre-flight inspection on the aircraft, and all was normal. The aircraft had 170 litres (l) of Avgas 100LL fuel in the tanks. At 1340Z, the aircraft took off and climbed to 6500 feet (ft), travelling at 165 knots indicated air speed (KIAS). Upon arrival at FAKT, the pilot made a blind call on 120.65-Megahertz (MHz) FAKT frequency before joining the traffic pattern for Runway 19. The pilot reported that after turning finals, he lowered the flaps to 30 degrees. It appeared as though the pilot was high when he decided to flare, which meant that the aircraft lost forward speed and lift and experienced a high rate of descent before</p>						

landing hard. The aircraft sustained substantial damages; all four occupants were not injured. The flight lasted 40 minutes.



Figure 1: The aircraft at the accident site. (Source: Pilot)

What was found:

Post-accident examination of the aircraft revealed no defects/malfunctions that would have precluded normal operation. The aircraft sustained substantial damage to the landing gear struts and underwing structures. The calculated landing mass was 1353 kilograms (kg). The aircraft was operated below its maximum take-off weight (MTOW) of 1 622kg prior to landing.



Figure 2: The aircraft with the bent main landing gear.

According to the automatic weather station located in Irene, which is the closest weather station from FAKT, light winds were forecasted around FAKT with a hint of a very weak vertical windshear. No potential hazards were forecasted around the time of landing at FAKT.

The pilot had a Private Pilot Licence (PPL) and the aircraft type was endorsed on his licence. The pilot had 120.31 total hours on type. He also had a Class 2 medical certificate issued on 5 July 2020 with an expiry date of 30 June 2022.

Post-accident examination of the aircraft maintenance records and other documentation revealed nil abnormalities or defects, and confirmed that the aircraft was certificated, equipped and maintained in accordance with existing regulations and approved procedures. The last annual inspection of the aircraft was certified on 5 January 2021 at 798.5 airframe hours. The Certificate of Release to Service was issued on 6 January 2021. Examination of the aircraft's flight folio indicated no open or deferred maintenance items listed in it before the flight.

Probable cause/s:

The aircraft landed hard because the pilot flared too early, resulting in loss of lift and forward speed.

Safety Action/s

None.

Safety Message and/or Safety Recommendation/s

None.

Purpose of the Investigation

*In terms of Regulation 12.03.1 of the Civil Aviation Regulations (CAR) 2011, 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**.*

About this Report

Decisions regarding whether to investigate, and the scope of an investigation are based on many factors, including the level of safety benefit likely to be obtained from an investigation. For this occurrence, no 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 brief report. The report has been compiled using information supplied in the initial notification, as well as follow-up information 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 accident.

This report provides an opportunity to share safety message/s in the absence of an investigation.

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.

Disclaimer

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This report is issued by:

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