

LIMITED OCCURRENCE INVESTIGATION REPORT – FINAL

Reference Number	CA18/3/2/1410						
Classification	Serious Incident	Date	7 April 2023			Time	0655Z
Type of Operation	Private (Part 91)						
Location							
Place of Departure	Wonderboom Aerodrome (FAWB), Gauteng Province		Place of Intended Landing		Chitwa Chitwa Game Lodge Airstrip, Hoedspruit, Limpopo Province		
Place of Occurrence	Runway 19 at Chitwa Chitwa Game Lodge, Hoedspruit, Limpopo Province						
GPS Co-ordinates	Latitude	24°44'02" S	Longitude	031°33'37" E	Elevation	1 200ft	
Aircraft Information							
Registration	ZS-NYU						
Make; Model; S/N	Mooney, M20C (Serial Number: 2726)						
Damage to Aircraft	Substantial			Total Aircraft Hours	3 415		
Pilot-in-command							
Licence Type	Private Pilot Licence (PPL)		Gender	Male		Age	38
Licence Valid	Yes	Total Hours	151.7		Total Hours on Type	74.2	
Total Hours Past 30 Days	0.5		Total Flying Hours on Type Past 90 Days		42.7		
People On-board	1 + 3	Injuries	0	Fatalities	0	Other (on ground)	0
What Happened							
<p>On Friday morning, 7 April 2023, a pilot and three passengers on-board a Mooney M20C aircraft with registration ZS-NYU were on a private flight from Wonderboom Aerodrome (FAWB) to Chitwa Chitwa Game Lodge Airstrip in Hoedspruit, Limpopo province. No flight plan was filed for the flight. Visual meteorological conditions (VMC) by day prevailed at the time of the flight which was conducted under the provisions of Part 91 of the Civil Aviation Regulations (CAR) 2011 as amended.</p> <p>The pilot reported that the aircraft had 50 US gallons of Avgas 100LL fuel on-board prior to take-off, and the aircraft was within its weight limit. The total flight time was 1 hour and 43 minutes. After landing on the gravel Runway 19 at the Chitwa Chitwa Game Lodge Airstrip and as the aircraft was taxiing at a speed of approximately 10 knots (kts) towards the end of the runway, the left main gear ran over a furrow caused by rain. The nose section of the aircraft pitched down momentarily and caused the propeller blades to strike the runway surface. The propeller blades and the left main gear door were damaged during the accident. There were no injuries reported.</p> <p>The accident occurred during daylight at Global Positioning System (GPS) co-ordinates determined to be S24°44'02" E031°33'37" at an elevation of 1 200 feet (ft).</p>							

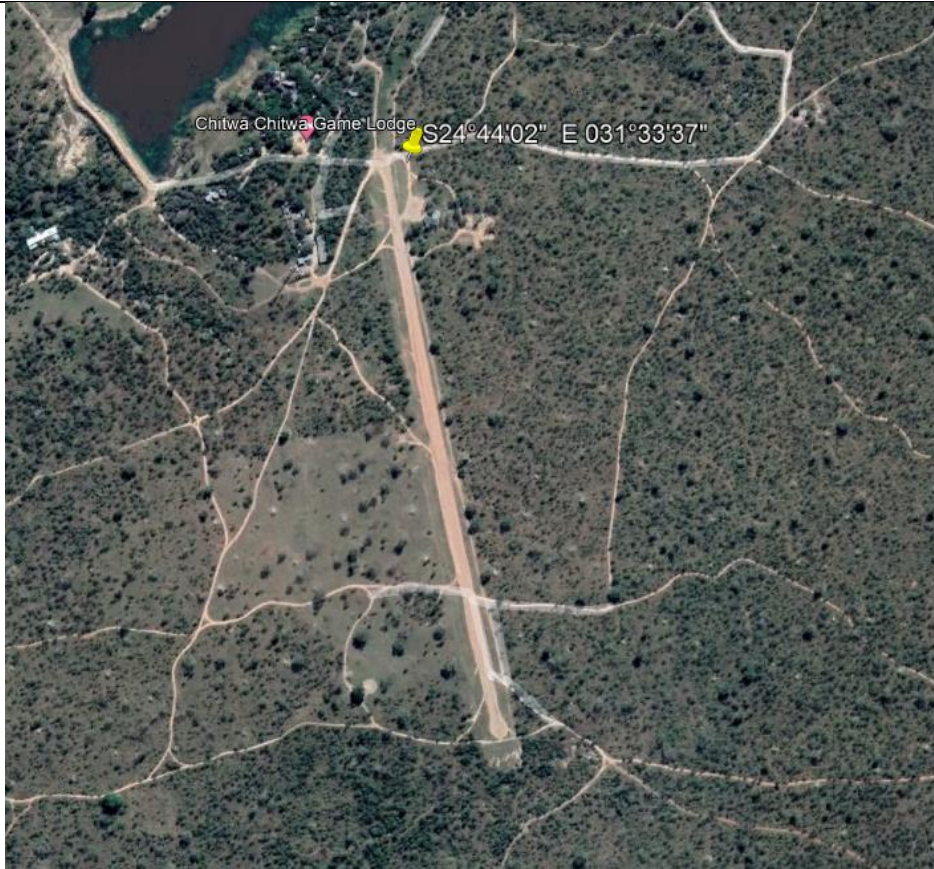


Figure 1: The runway and the accident site. (Source: Google Earth)



Figure 2: The damaged left main gear door. (Source: Pilot)



Figure 3: The furrow on the gravel runway caused by rain. (Source: Pilot)



Figure 4: The bent propeller blade. (Source: Pilot)

Findings
<ol style="list-style-type: none"> 1. The pilot was initially issued a Private Pilot Licence (PPL) by the SACAA on 15 September 2022 with an expiry date of 30 September 2023. The pilot had flown a total of 151.7 hours, of which 74.2 hours were on the aircraft type. 2. The pilot had the aircraft type endorsed on his licence. The pilot's Class 2 aviation medical certificate was issued on 22 June 2022 with an expiry date of 30 June 2027. 3. The aircraft was issued a Certificate of Registration (C of R) on 20 April 2018. The Certificate of Airworthiness (C of A) was issued on 29 December 2017 with an expiry date of 30 November 2023. 4. The last 100-hour Mandatory Periodic Inspection (MPI) was conducted on 25 January 2023 at 3 383.7 hours. At the time of the accident, the aircraft had a total of 3 415 hours. The aircraft was flown a further 31.3 hours since the last MPI. 5. The aircraft was issued a Certificate of Release to Service (CRS) on 26 January 2023 at 3 383.71 airframe hours with an expiry date of 25 January 2024 or at 3 483.70 airframe hours, whichever occurs first. There were no defects recorded in the flight folio at the time of the accident. 6. The probability exists that the pilot was not aware of the condition of the runway following the rains in the vicinity of the airfield and, thus, could not plan or mitigate the hazards on the runway.
Probable Cause
The aircraft landed on a gravel runway and the left main gear ran over a furrow caused by rain; as a result, the propeller blades struck the runway surface and the left main gear door sustained damage.
Contributing Factor
Rain eroded the runway surface.
Safety Action(s)
None.
Safety Message
Pilots and aircraft operators are encouraged to request information about the condition of the runways at their intended destination airports/airfields to minimise the risks of damage to aircraft and injuries as a result of accidents.
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</i>

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

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**