SOUTH AFRICAN CIVIL AVIATION AUTHORITY

Section/division **Accident and Incident Investigations Division** Form Number: CA 12-57

LIMITED ACCIDENT INVESTIGATION REPORT

Reference Number	CA18/3/2/10021				
Classification	Accident	**Date**	4 July 2021	**Time**	0800Z
Type of Operation	Private (Part 91)				
Location					
Place of Departure	Wonderboom Airport (FAWB), Gauteng Province	Place of Intended Landing	Mountain View Game Ranch private airstrip, Limpopo Province		
Place of Occurrence	Mountain View Game Ranch Private Airstrip, Limpopo Province				
GPS Co-ordinates	Latitude	S 24°26'53"	Longitude	E 028°26'02"	Elevation	4770 ft
Aircraft Information					
Registration	ZS-MVM				
Model/Make	Mooney M20M				
Damage to Aircraft	Minor	Total Aircraft Hours	2064.1		
Pilot-in-command					
Licence Type	Private Pilot Licence	Gender	Male	Age	32
Licence Valid	Yes				
Total Hours on Type	231	Total Flying Hours	516.5		
People On-board	2 + 1	Injuries	0	Fatalities	0	Other	0

What Happened

On Sunday 4 July 2021, a Mooney M20 aircraft with registration ZS-MVM took off on a private flight from Wonderboom Airport (FAWB) with two pilots on-board, accompanied by a passenger, (who was seated on the rear seat). The flight, which was destined for Mountain View Game Ranch private airstrip in Limpopo province, was conducted under Visual Flight Rules (VFR) by day. No flight plan was filed and good weather conditions prevailed at the time of flight. The aircraft took off from Runway 29 and climbed to 7500 feet above ground level (AGL). The pilot flying (PF) reported that the entire segment of the flight to the destination airstrip was uneventful. During approach for landing at Mountain View Game Ranch private airstrip, the pilot descended the aircraft to 6100 feet above ground level (AGL) and flew over the grass runway for visual inspection in accordance with (IAW) unmanned aerodrome joining procedure. The PF reported that during the flypast, he observed powerlines spanned across the end of Runway 10; he then joined the circuit pattern and applied full flaps on final approach for Runway 10.

The PF stated that during the ground roll, the nose gear wheel ran over a sinkhole that was concealed by grass. Thereafter, the nose gear collapsed and the propeller struck the ground. The damage to the aircraft was limited to the nose landing gear and the propeller. There were no reported injuries of the occupants on-board the aircraft.

Figure 1: The aircraft with damaged propeller post-accident. (Source: Pilot)

Figure 2: The pilot with his foot in the sinkhole over which the aircraft ran over. (Source: Pilot)

Probable cause:

The aircraft's nose gear assembly ran over a sinkhole concealed by grass during the landing roll, which resulted in the collapse of the nose landing gear strut, causing damage to the propeller blades.

Safety Action/s

None.

Safety Message/s and/or Safety Recommendation/s

Safety message: Pilots are encouraged to always conduct a thorough flight planning and enquire about the condition/s of the destination airport or airfield so as to be aware or take necessary precautions.

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

This report is issued by:

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

Source: http://www.caa.co.za/Documents/Unmanned%20Airfield%20-%20transgressions%20and%20safety%20issues.PDF

Unmanned Airfields - transgressions and safety issues

At unmanned airfields, the joining procedure by law is:
Join overhead the field at 2000 ft AGL and observe the wind conditions. Descend on the "dead" side of the field and join the circuit at 1000 ft AGL.

The purpose of the overhead join is to allow either non-radio aircraft, or aircraft arriving at a non-radio airfield, to overfly the airfield at a safe height, to observe, determine the runway in use and circuit direction, and then descend into the circuit pattern.

The best course of action when visiting an unmanned aerodrome is:

- Check the arrival procedures of the next destination first, before leaving.
- Effective radio communication and traffic awareness are all-important and will help prevent a collision.
- Keep the standard phraseology when communicating.
- Report your exact position to avoid confusion.

PURPOSE

The purpose of this report is to alert the industry (GA-SPORTS) of the transgressions and safety issues raised with the Department of Transport (DoT).

The following incident illustrates the dangers posed when pilots neglect to follow the Standard Procedures:

A.

- A pilot radioed overhead on frequency and announced his intentions to descend on the dead side of the airfield and to join on a left-hand crosswind runway XX. He heard another aircraft announce his intentions to route through the unmanned aerodrome and then route onward to his final destination.

- On reaching the crosswind position of Rwy XX, he called to announce that he was left-hand cross-wind Rwy XX 'full stop'. He was expecting the aircraft to be passing overhead from the right as he called again on downwind and then again on base leg. At that point the other aircraft announced his intentions to do a low level runway inspection of runway YY in an opposite direction at 5300 ft and then route onward to his destination. The aircraft had no intention of actually landing at the aerodrome, despite conducting a runway inspection. The pilot called 'final' and cautioned the approaching aircraft that he was on final for Rwy XX, which was directly opposite to the direction that the other aircraft was approaching; and he realized that they were on a collision course. The other aircraft then called to ask if the pilot was on final Rwy XX, and the pilot confirmed.

- Realizing that time had elapsed since the other aircraft had called overhead, he would have most likely been very close to the threshold of the runway, flying straight towards him. Although the pilot considered going around to avoid the dangerous situation that was about to occur, he realized that he had nowhere to go as he could not see the other aircraft, nor did he know from which direction the aircraft would be doing its runway inspection. So he committed to landing. By this time the other aircraft called to say he would fly as if he was on the left downwind of runway XX, but by this time the other pilot was on the flare.

- He was therefore forced to land due to the threat of the approaching aircraft. The pilot ended up landing deep on runway XX and this caused him to overshoot the end of the runway.

B. When two aircraft were en route from an airport at 0700UTC, another aircraft was already in the circuit at an unmanned aerodrome, intending to land. The two aircraft approaching did not make any effort to join overhead; instead the first one joined final approach Rwy XX and the second one joined downwind Rwy YY. (Rwy XX was in use). The aircraft which had already been in the circuit averted two mid-air collisions from the first and the second aircraft.

Complacency can interfere with basic operating procedures. We need to get back to basics and focus on the details. In aviation, the consequences of neglecting the basics can be severe. These basic principles must be applied on an on-going basis.