

LIMITED ACCIDENT INVESTIGATION REPORT

Reference Number		CA18/2/3/10067					
Classification	Accident	Date	4 November 2021	Time	0700Z		
Type of Operation	Private (Part 94)						
Location							
Place of Departure	Farm Klipdrift, Parys, Free State Province		Place of Intended Landing	Farm Klipdrift, Parys, Free State Province			
Place of Accident	Runway (RWY 06), Farm Klipdrift						
GPS Co-ordinates	Latitude	26°53'36" S	Longitude	027°4'48.54" E	Elevation	4749 feet	
Aircraft Information							
Registration	ZU-BZE						
Model/Make	Chayair Sycamore Mk.1 (Serial number:0006)						
Damage to Aircraft	Substantial		Total Aircraft Hours	532.3			
Pilot-in-command							
Licence Type	National Pilot License (NPL)	Gender	Male	Age	48		
Licence Valid	Yes						
Total Hours on Type	±62.1		Total Flying Hours	457.3			
People On-board	1 + 0	Injuries	0	Fatalities	0	Other (on ground) 0	
What Happened							
<p>On 4 November 2021 at approximately 0700Z, a pilot on-board a Chayair Sycamore Mk.1 Gyrocopter with registration ZU-BZE was about to take-off from Farm Klipdrift Runway 06 with the intention to perform circuits on the same farm. The pilot stated that he taxied to Runway 06 threshold and did the pre-take-off checks; thereafter, he started the pre-rotation run, brought the cyclic back and continued to pre-rotate. The pilot then released the wheel brakes and started the take-off run. However, during the take-off run on the grass runway, the nose gear hit a bump which caused the gyrocopter to bounce, resulting in the main rotor flapping and, subsequently, striking the vertical fin. The pilot aborted take-off and taxied back to the hangar. The flight was to be conducted in 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 was not injured during the accident sequence; the gyrocopter sustained damage to the main rotor blades, vertical fin and tail.</p>							



Figure 1: Damage on the rudder. (Source: Pilot)



Figure 2: Damaged winglet. (Source: Pilot)

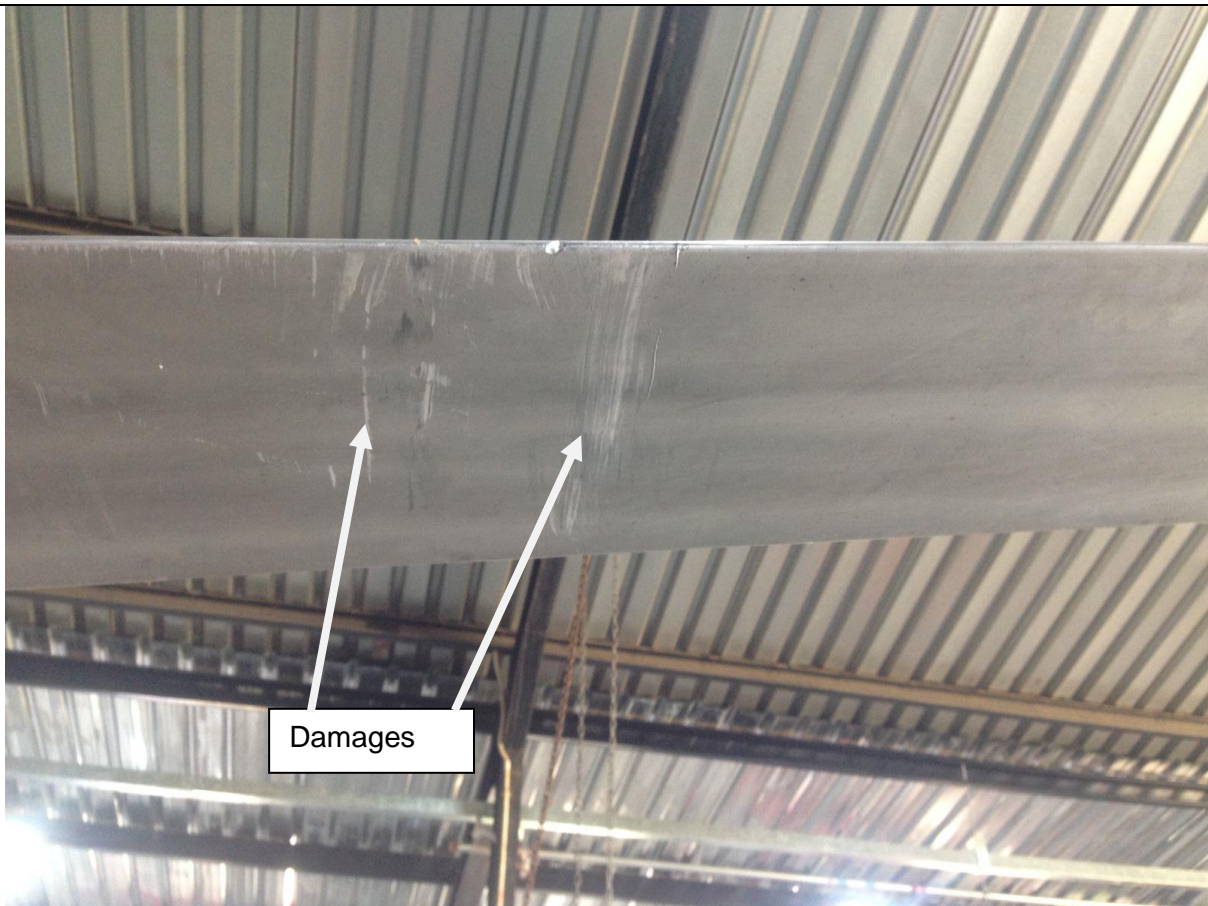


Figure 3: Damage on the main rotor blade.

What was found:

- The last annual inspection before the accident was carried out on 8 March 2021 at 510 airframe hours. The aircraft had accumulated an additional 22.2 airframe hours in operation since the last inspection. There were no reported or recorded defects prior to the accident as all damage was related to the accident.
- After the accident, the runway was scraped to clear all the bumps.

Probable cause:

The gyrocopter hit a bump on the grass runway and bounced before the main rotor blades struck the rudder and the tail, causing damage to both components. This resulted in the pilot aborting take-off.

Safety Action/s

None.

Safety Message and/or Safety Recommendation/s

Safety recommendation: The Director of Civil Aviation (DCA) to consider including in Part 94 of the CAR 2011 the requirements of gyrocopters to ensure runway safety prior to take-off.

<p>Safety Message: Pilots who operate gyrocopters should do a runway inspection prior to take-off to identify possible hazards.</p>	
<p>Purpose of the Investigation</p>	
<p><i>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.</i></p>	
<p>About this Report</p>	
<p><i>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.</i></p> <p><i>This report provides an opportunity to share safety message/s in the absence of an investigation.</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>	
<p>Disclaimer</p>	
<p><i>This report is produced without prejudice to the rights of the AIID, which are reserved.</i></p>	

This report is issued by:

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