SOUTH AFRICAN CIVIL AVIATION AUTHORITY

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

LIMITED ACCIDENT INVESTIGATION REPORT

Reference Number	CA18/2/3/10148						
Classification	Accident	**Date**	26 April 2022		**Time**	1410Z	
Type of Operation	Training (Part 141)						
Location							
Place of Departure	Springs Aerodrome (FASI), Gauteng Province		Place of Intended Landing		Springs Aerodrome (FASI), Gauteng Province		
Place of Accident	FASI's boundary concrete palisade fencing at the end of Runway 21						
GPS Co-ordinates	Latitude	S26º15'19.88"	Longitude	E028°23'50.12"	Elevation	5 364ft	
Aircraft Information							
Registration	ZS-BFC						
Make/Model	Piper PA-28-180 Cherokee (Serial Number: 28-7305276)						
Damage to Aircraft	Substantial		Total Aircraft Hours		3641.1		
Pilot-in-command							
Licence Valid	Yes	Gender	Female		Age	31	
Licence Type	Commercial Pilot Licence (Aeroplane)						
Total Hours on Type	420.2		Total Flying Hours		1431		
People On-board	1+1	Injuries	0	Fatalities	0	Other (On Ground)	0

What Happened

On 26 April 2022, a student pilot and an instructor on-board a Piper PA-28-180 Cherokee aircraft with registration ZS-BFC took off on a training flight from Springs Aerodrome (FASI) in Gauteng province with the intention to return to the same take-off aerodrome. The purpose of the flight was for the student pilot to conduct a Private Pilot Licence (PPL) skills test. Visual meteorological conditions (VMC) by day prevailed at the time of the flight and no flight plan was filed. The flight was conducted under the provisions of Part 141 of the Civil Aviation Regulations (CAR) 2011 as amended.

Upon the student pilot and the instructor's return to FASI, they joined the traffic pattern for Runway 21 with the intention to execute a touch-and-go landing. The student pilot stated that once she was established on final approach for Runway 21 with 25 degrees flaps set, she landed the aircraft at a speed of approximately 90 miles per hour (MPH). After touchdown, the student pilot configured the

aircraft for take-off and opened the throttle. During this process, the instructor deduced that a take-off would not be possible because the aircraft was nearing the end of the runway. She instructed the student pilot to abort take-off. The student pilot acknowledged. She then closed the throttle and applied the foot brakes with the intention to bring the aircraft to a stop; but the aircraft did not slow down.

The instructor then took over the control of the aircraft and pulled the park brake lever in an attempt to engage it to bring the aircraft to a stop, but without success. As the instructor noticed that her efforts were ineffective and that the aircraft was almost at the end of the runway threshold, she attempted to steer the aircraft towards the left to avoid colliding with the concrete palisade fence ahead of her path. However, as the aircraft was still travelling at high speed, she was unable to make the complete turn to avert colliding with the fence. She then resorted to shutting off the fuel mixture just before the aircraft impacted the concrete palisade fence. The aircraft was substantially damaged during the accident. The instructor and the student pilot were not injured.

Figure 1: The aircraft as it came to rest. (Source: Instructor)

Figure 2: The nose of the aircraft against the aerodrome's concrete palisade fence. (Source: Instructor)

What was found

- The aircraft was recovered to the aircraft maintenance organisation (AMO) where the investigator had an opportunity to examine the aircraft. During this examination, the investigator established that the foot and the park brakes were operational.

- The training school was issued an Approved Training Organisation (ATO) certificate on 17 June 2020 with an expiry date of 30 June 2025. According to the reviewed records, the aircraft was listed on the ATO certificate.

- The last 100-hour mandatory periodic inspection (MPI) prior to the accident flight was carried out on 11 March 2022 at 3596.10 Hobbs hours. The aircraft was issued a Certificate of Release to Service (CRS) on 11 March 2022 with an expiry date of 10 March 2023 or at 3646.10 Hobbs hours, whichever occurs first. The aircraft had 5 Hobbs hours remaining before the next inspection.

- A video footage was shared with the investigation team which showed the accident aircraft's landing phase on the day of the accident. From the audio in the footage, there was still

maximum power applied close to the end of the runway threshold, which could have been the cause of the aircraft not slowing down quick enough.

- The instructor had 1 431 total hours of which 420 hours were on type. She is a Grade 2 instructor.

- The student pilot had 94.4 total hours on type and 20.8 hours as a pilot-in-command (PIC).

Aerodrome Location	Springs, Gauteng Province	
Aerodrome Status	Licensed	
Aerodrome Co-ordinates	26°14'54.28" South 028°23'51" East	
Aerodrome Elevation	5340 feet	
Runway Headings	03/21	14/32
Runway Dimensions	1600m x 18 m	554m x 21m
Runway Used	21	
Runway Surface	Asphalt	
Approach Facilities	None	
Radio Frequency	125.40 MHz	

Figure 3: Arrows showing separation of the right-side wing from the fuselage.

Figure 4: Damage to the right wing leading edge outboard.

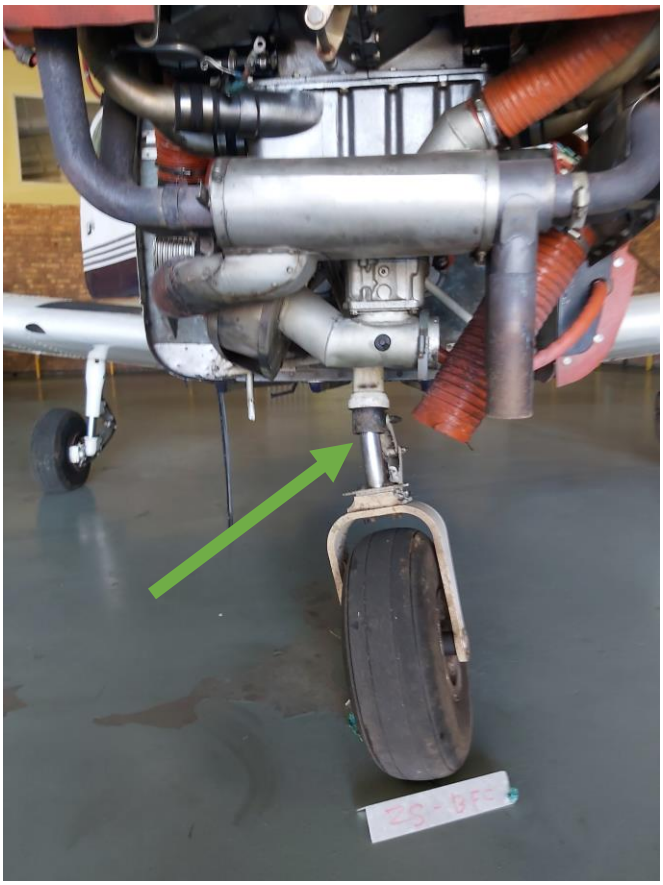

Figure 5: Arrow showing the bent nose landing gear shock absorber.

Figure 6: The line shows the path of the aircraft from touchdown until it collided with the palisade fence. (Source: Google earth)

Probable cause

The aircraft collided with the aerodrome's palisade concrete fence following a rejected take-off.

Contributing factor

A late decision to reject take-off was made as the aircraft was already near the end of the runway at maximum power; the duo could not bring the aircraft to a halt.

Safety Actions
None.
Safety Recommendation
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
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