



LIMITED ACCIDENT INVESTIGATION REPORT
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Reference Number		CA18/2/3/10045					
Classification	Accident	Date	27 September 2021		Time	1445Z	
Type of Operation		Training (Part 141)					
Location							
Place of Departure		Nelspruit Aerodrome (FANS), Mpumalanga Province		Place of Intended Landing		Nelspruit Aerodrome (FANS), Mpumalanga Province	
Place of Incident		Nelspruit Aerodrome (FANS), Taxiway					
GPS Co-ordinates	Latitude	S 25°30'07"	Longitude	E 30°54'40"	Elevation	2900ft	
Aircraft Information							
Registration		ZS-EPO					
Model/Make		Cessna 172H					
Damage to Aircraft		Substantial		Total Aircraft Hours		7362.5	
Pilot-in-command							
Licence Valid		Yes		Gender		Male	
						Age	
						48	
Licence Type		Student Pilot Licence (Aeroplane)					
Total Hours on Type		10.4		Total Flying Hours		57.6	
People On-board	1 + 0	Injuries	0	Fatalities	0	Other (On ground)	0
What Happened							
<p>On Monday, 27 September 2021, a student pilot intended to conduct a solo training flight on a Cessna 172H aircraft with registration ZS-EPO from Nelspruit Aerodrome (FANS) to the general flying area (GFA) when the accident occurred.</p> <p>The student pilot, under supervision of a flight instructor, performed a pre-flight inspection on the aircraft; nothing out of the ordinary was noticed. The aircraft was refueled to capacity with 42 gallons of Avgas LL100 fuel. The training flight was planned to last approximately an hour before the student pilot return to FANS.</p> <p>The student pilot boarded the aircraft and started the engine without fault. About 10 minutes after the pre-flight inspection, the student pilot was ready to depart the parking area (see Figures 1 and 2). He released the park brake and started taxiing the aircraft to the runway.</p>							



Figure 1: The aircraft at a parking bay. (Source: ATO)



Figure 2: Green circle indicates the aircraft parking at the aerodrome. (Source: Google Maps)

During taxi, the student pilot applied the toe brakes to test them and noticed that there was no response every time he applied the brakes and, thus, he was unable to stop the aircraft. At this point, the aircraft had gained momentum. The pilot continued to apply the toe brakes but was

unsuccessful. While preoccupied with the toe brakes, the student pilot did not notice the aircraft's proximity to the concrete wall ahead. The aircraft hit the concrete wall with the nose section and the left wing (see Figures 3 and 4), causing substantial damage to the nose and the left-side wing. The student pilot was not injured during the accident.



Figures 3 and 4: The wall before impact (left picture); the wall after impact (right picture). (Source: ATO)

Examination of the student pilot's logbook indicated that he had a total of 57.6 hours of flight time at the time of accident, with 10.4 hours on type.

Examination of the maintenance records indicated that the last 100-hour mandatory periodic inspection (MPI) prior to the accident flight was carried out on 29 June 2021 at 7276.5 airframe hours. The aircraft was issued a Certificate of Release to Service (CRS) on 30 June 2021 with an expiry date of 29 June 2022 or at 7376.5 hours, whichever occurs first.

Post-accident

The instructor tested the aircraft after the accident and found that the brakes were 100% operational with no sign of hydraulic fluid leak on the system.

Probable cause

The cause of the accident was due to the student pilot not applying sufficient pressure on the toe brakes.

Safety Action

The student pilot had a theory Lesson 5 remedial training, which is "Taxiing", and thereafter, conducted the practical aspects of Lesson 5.

Safety Message and/or Safety Recommendation/s

None.

Purpose of the Investigation	
<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>	
About this Report	
<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>	
<i>This report provides an opportunity to share safety message/s in the absence of an investigation.</i>	
<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>	
Disclaimer	
<i>This report is produced without prejudice to the rights of the AIID, which are reserved.</i>	

This report is issued by:

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