SOUTH AFRICAN CIVIL AVIATION AUTHORITY

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

LIMITED ACCIDENT INVESTIGATION REPORT

Reference Number	CA18/2/3/9991				
Classification	Accident	**Date**	1 May 2021	**Time**	1148Z
Type of Operation	Training (Part 141)				
Location					
Place of Departure	Port Alfred Aerodrome (FAPA), Eastern Cape Province	Place of Intended Landing	Port Alfred Aerodrome (FAPA), Eastern Cape Province		
Place of Occurrence	FAPA Runway 25				
GPS Co-ordinates	Latitude	33°33’20” S	Longitude	026°53’00” E	Elevation	315 ft
Aircraft Information					
Registration	ZS-PBV				
Model/Make	Piper Seneca II PA 34				
Damage to Aircraft	Minor	Total Aircraft Hours	9474		
Pilot-in-command					
Licence Type	Airline Pilot Licence (Aeroplane)	Gender	Male	Age	22
Licence Valid	Yes				
Total Hours on Type	184.9	Total Flying Hours	1767.9		
People On-board	1 + 1	Injuries	0	Fatalities	0	Other	0

What Happened

On Saturday, 1 May 2021, an instructor and a student pilot were conducting circuit training on a Piper Seneca (PA34) with registration ZS-PBV at Port Alfred Aerodrome (FAPA) in the Eastern Cape province. The flight was conducted in visual meteorological conditions by day and under the provisions of Part 141 of the Civil Aviation Regulations (CAR) 2011 as amended.

A total of five uneventful circuits were completed from Runway 28L (RWY 28L); however, during the last circuit, the green light gear down indicator for the left-side main gear did not illuminate on base leg. The instructor initiated a go-around and requested the tower to do a visual inspection of the landing gear. The tower confirmed that during the flypast, the left-side main gear did not extend to normal gear down position. The instructor alerted the tower that he will conduct an emergency landing on RWY 25. The pilot then shut down and feathered the left-side engine on short final as a precaution. The left main gear collapsed during the ground roll and the aircraft veered off to the left and came to rest on the left-side of RWY 25. The instructor and the student pilot were not injured during the emergency landing. The aircraft damage was limited to the left-side main gear flap.

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Post-accident inspection of the left main gear conducted by the aircraft maintenance organisation (AMO) revealed a foreign object debris (FOD) in the form of a CherryMAX rivet that was stuck in the grease between the two machined faces of the truss and the link assembly, preventing the gear down lock to engage. It is likely that the rivet (FOD) had dislodged from the nacelle and found its way into the left main gear. The dislodged rivet was replaced, and the landing gear was tested for serviceability as per the Piper Maintenance Manual 753-817 revision dated 30 November 2019.

Figures 1 (top) and 2 (bottom): The left underwing showing the place where the rivet detached/loosen.

Figure 3: An arrow indicates where the FOD was stuck on the left-side main gear.

Probable cause:

The left gear down lock mechanism had a FOD in the form of a rivet stuck in the grease between the machined faces of the truss and the link assembly, preventing the down lock from engaging. This led to a gear collapse during landing roll.

Safety Action/s

The rivet (FOD) was removed, and the dislodged rivet in the left main landing gear was replaced and, thereafter, the landing gear was tested for serviceability as per the Piper Maintenance Manual 753-817 revision dated 30 November 2019.

Safety Message/s and/or Safety Recommendation/s

It is encouraged that maintenance organisations ensure proper housekeeping is conducted before and after maintenance to avoid risks of accidents and serious incidents.

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

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