



LIMITED OCCURRENCE INVESTIGATION REPORT – FINAL

Reference Number	CA18/2/3/10599						
Classification	Accident		Date	23 August 2025		Time	1235Z
Type of Operation	Aerial Works (Part 137)						
Location							
Place of Departure	Piet Retief Central Airstrip, Mpumalanga Province		Place of Intended Landing	Rusplaas Airstrip, Mpumalanga Province			
Place of Occurrence	Grass-covered runway at Rusplaas Airstrip, Mpumalanga Province						
GPS Co-ordinates	Latitude	26°53'.00"S	Longitude	030°46'.00" E	Elevation	4 048ft	
Aircraft Information							
Registration	ZS-NNZ						
Make; Model; S/N	Ayres Thrush; S2R-T34 (Serial Number: T34-122DC)						
Damage to Aircraft	Substantial			Total Aircraft Hours	10 937.6		
Pilot-in-command							
Licence Type	Commercial Pilot Licence (CPL)		Gender	Male		Age	41
Licence Valid	Yes	Total Hours	7 144.7		Total Hours on Type	1 486.2	
Total Hours 30 Days	7.2		Total Flying on Type Past 90 Days	7.2			
People On-board	1 + 0	Injuries	0	Fatalities	0	Other (on ground)	0
What Happened							
<p>On Saturday afternoon, 23 August 2025, a pilot on-board the Ayres S2R-T34 aircraft with registration ZS-NNZ was engaged in an aerial fire-fighting flight from Piet Retief Central Airstrip with the intention to land at Rusplaas Airstrip, both in Mpumalanga province. The flight was conducted under visual meteorological conditions (VMC) by day and under the provisions of Part 137 of the Civil Aviation Regulations (CAR) 2011 as amended.</p> <p>The pilot stated that the aircraft had a total of 400 litres (L) of Jet A-1 fuel in the tanks at pre-flight inspection stage. The aircraft also had approximately 1 000 L of water in the hopper tank behind the engine fire wall. At approximately 1211Z, the aircraft took off from Piet Retief Central Airstrip Runway 32 and routed towards Mkhondo area in Piet Retief to extinguish a forest fire. After releasing the first load of water on the affected area, the aircraft routed to Rusplaas Airstrip, also in Piet Retief, to refill the hopper. The pilot reported that the landing on the grass-covered Runway 30 which is 850 metres (m) in length was uneventful; he brought the aircraft to a stop near the end of the runway and, thereafter, backtracked. Whilst taxiing the aircraft to the water filling point, the left main wheel rolled over a grass-concealed hole which resulted in the left main gear (LMG) bending outward due to its forward motion. In addition, the left-wing tip impacted the ground and the propeller struck the ground.</p>							

The aircraft came to a stop in the middle of the runway after sustaining substantial damage. The pilot turned off the master switch and fuel selector before he vacated the aircraft; he was unharmed.

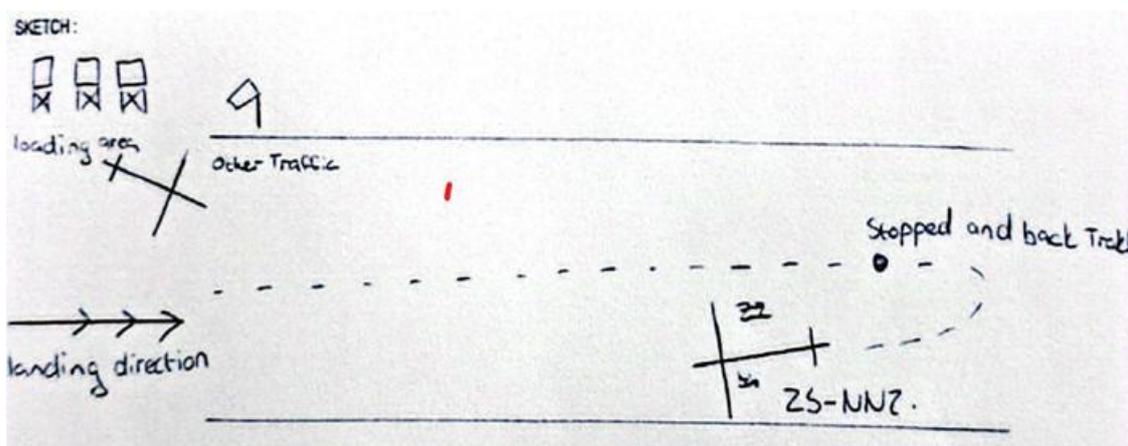


Figure 1: A sketch showing the direction of landing, the backtrack position and the accident site (shown in black dots). (Source: Pilot)

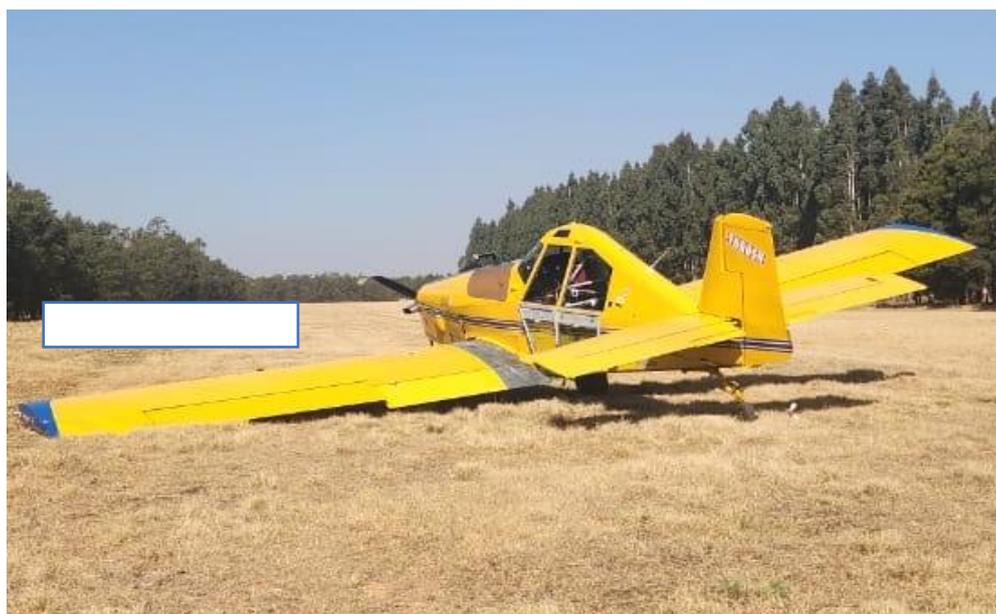


Figure 2: A view of the runway and the final resting position of the aircraft. (Source: Pilot)



Figure 3: The damaged left main landing gear. (Source: Pilot)



Figure 4: The pilot's leg positioned on the hole that was concealed by grass on the runway, and the direction of taxi (yellow arrow).

Post-accident investigation revealed that the pilot was informed by one of the workers at Rusplaas Airstrip in Ermelo that the runway was inspected for condition and that it (the runway) was safe for operation. The pilot reported that the airstrip was activated on Saturday morning, 23 August 2025, at approximately 0529Z.

Findings

1.1 Personnel

1.1.1. The pilot had a Commercial Pilot Licence (CPL) that was initially issued by the Regulator (SACAA) on 17 March 2024. The CPL was reissued on 10 June 2025 with an expiry date of 30 June 2026.

1.1.2. The pilot had a Class 1 medical certificate that was issued on 14 May 2024 with an expiry date of 31 May 2026.

1.1.3. The pilot accumulated a total of 7 144.7 flying hours of which 1 486.2 hours were on the aircraft type.

Aircraft

1.1.4. The last 100-hour mandatory periodic inspection (MPI) of the aircraft was conducted on 28 May 2025 at 10 930.10 hours. The Certificate of Release to Service (CRS) was issued on 28 May 2025 at 10 930.10 airframe hours with an expiry date of 28 May 2026 or at 11 030.5 airframe hours, whichever comes first.

1.1.5. The aircraft maintenance organisation (AMO) which performed the last inspection of the aircraft had an AMO Certificate that was issued on 29 August 2024 with an expiry date of 31 August 2025.

1.1.6. The aircraft had a valid Certificate of Airworthiness (C of A) that was issued by the Regulator on 10 January 2015 with an expiry date of 31 January 2026.

1.1.7. The Certificate of Registration (C of R) was issued to the present owner on 18 November 2020.

1.1.8. Examination of the aircraft maintenance records at the operator's facility indicated that all applicable Service Letters (SLs), Airworthiness Directives (ADs) and Service Bulletins (SBs) were complied with during the maintenance activities.

1.1.9. The operator had an Aircraft Operator Certificate (AOC) that was issued by the Regulator on 31 August 2024 with an expiry date of 31 August 2025.

1.1.10. The operator had an Operating Specifications Certificate that was issued by the Regulator on 6 March 2025. The accident aircraft (ZS-NNZ) was listed on the Operating Specifications Certificate.
Probable Cause(s)
The aircraft's left main gear wheel rolled over a grass-concealed hole during taxi and, consequently, the left main gear (LMG) bent outward which caused damage to the aircraft.
Contributing Factor(s)
The pilot relied on third-party information about the condition of the airstrip.
Safety Action(s)
None.
Safety Message and/or Safety Recommendation/s
Operators should conduct safety surveys on aerodromes that have been selected for water refilling; moreover, aerodrome operators should ensure that all hazards are identified and that sufficient safety mitigations are implemented for safe operation of aircraft.
About this Report
<i>The decision to conduct a limited investigation is based on factors including whether the cause is known and the evidence supporting the cause is clear, the level of safety benefit likely to be obtained from an investigation and that will determine the scope of an investigation. For this occurrence, a limited 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 limited report. The report has been compiled using information supplied in the initial notification, as well as from follow-up desk top enquiries 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 occurrence.</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>
Purpose
<i>In terms of Regulation 12.03.1 of the Civil Aviation Regulations (CAR) 2011 and ICAO Annex 13, 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>
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**