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| <b>AIRCRAFT INCIDENT SHORT REPORT</b> |
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CA18/3/2/1192 ZS-PAF, Ayres S2R T15 veered off grass runway.

**Date and time** : 03 February 2018 at 0828Z

**Occurrence category** : Incident

**Aircraft registration** : ZS-PAF

**Aircraft manufacturer and model** : Ayres Corporation Ayres S2R – T15

**Last Point of departure** : Private Airstrip 5nm West of Midmar Dam (Elevation: 3630ft)  
(GPS: S29°31'12,3" E030°6'3,9" Kwa-Zulu Natal)

**Next point of intended landing** : Private Airstrip 5nm West of Midmar Dam (Elevation: 3630ft)  
(GPS: S29°31'12,3" E030°6'3,9" Kwa-Zulu Natal)

**Location of accident site with reference to easily defined geographical points (GPS readings if possible)** : S29°31'12,3" E030°6'3,9" Elevation : 3630ft

**Meteorological Information** : Surface wind: 10kts/040° Temperature: 26°C Pressure Altitude: 1018hPa Dew Point: 20°C CAVOK.

**Type of operation** : Private (Part 137)

**Persons on board** : 1

**Injuries** : None

**Damage to aircraft** : The aircraft sustained the following damage: a tear in both (left and right) flaps, dent to the right wing leading edge, dent to the propeller tip leading edge, and deflated right tyre.

*All times given in this report is Co-ordinated Universal Time (UTC) and will be denoted by (Z). South African Standard Time is UTC plus 2 hours.*

**Purpose of the Investigation:**

*In terms of Regulation 12.03.1 of the Civil Aviation Regulations (2011) this report was compiled in the interest of the promotion of aviation safety and the reduction of the risk of aviation accidents or accidents and **not to establish blame or liability.***

**Disclaimer:**

*This report is produced without prejudice to the rights of the CAA, which are reserved*



**Figure 1:** Ayres S2R – T15 type aircraft ZS-PAF

Source: Photograph was obtained from the internet – <http://www.airliners.net/photo/Untitled/Ayres-S2R-T15-Turbo-Thrush/3919125>

## 1. SYNOPSIS

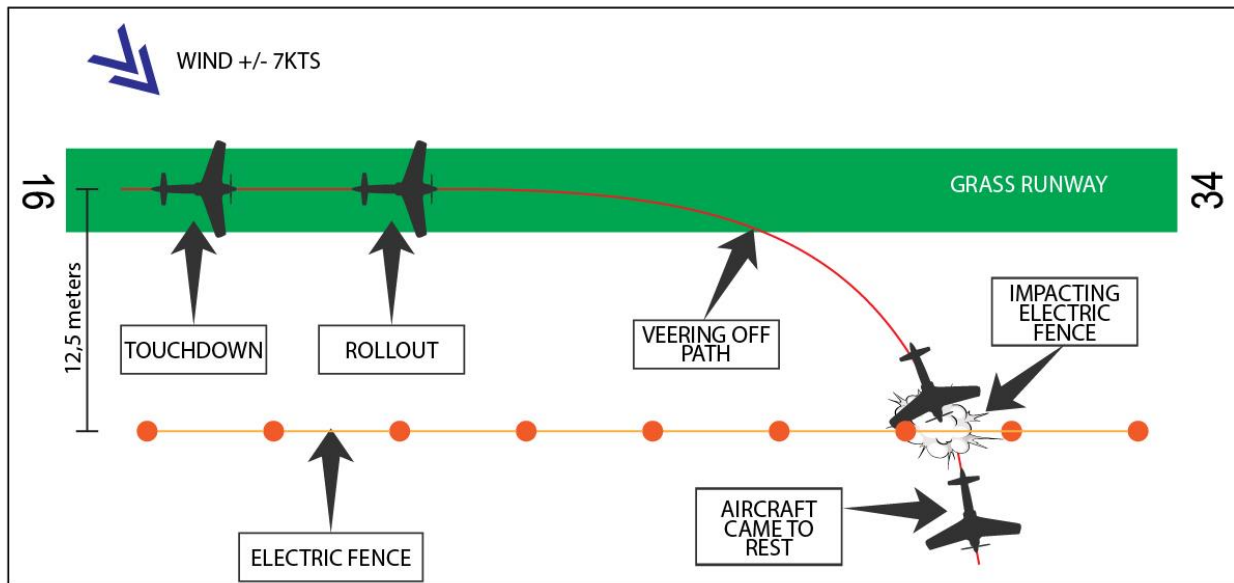
- 1.1 The pilot took off from a private grass airstrip near the Midmar Dam in Kwa-Zulu Natal for a crop spraying flight to be conducted in the area.
- 1.2 On completion of the flight, the pilot returned to the same grass airstrip. On touch-down, the aircraft settled on the landing gear and then swung violently to the right.
- 1.3 All corrective inputs from the pilot did not help maintain directional control and the aircraft collided with an electric fence 12.5 meters from the runway. The aircraft experienced damage to the wings and propeller.
- 1.4 The investigation revealed that the right tyre was deflated on touch-down and this caused the loss of directional control.

## 2. FACTUAL INFORMATION

### 2.1 History of Flight

- 2.1.1 On 08 February 2018 at approximately 0745 UTC, an Ayres S2R T15 aircraft, ZS-PAF owned by Natal Aero Spray, departed from a private airstrip 5nm West of Midmar Dam in the Petrus Stroom area in Kwa-Zulu Natal at approximately 0745 UTC. The pilot, being the sole occupant of the aircraft, got airborne for a crop spraying operation flight over the Lidgetton area.
- 2.1.2 The pilot returned to the airstrip 40 minutes after the departure for a full stop landing. On touch down, the aircraft settled on all wheels for a short period and then swung violently to the right.
- 2.1.3 The pilot applied left rudder and left brake in an attempt to keep the direction of the aircraft along the runway centre-line. With minimal success, the aircraft veered off the runway and uncontrollably headed towards an electric fence bordering the runway.

- 2.1.4 The aircraft came to rest after hitting the electric fence 12,5 meters right of the runway centre-line. The following damage was noted after impact:
- Both (left and right) flaps had tears
  - Dent to the right wing leading edge
  - Dent to the propeller tip leading edge
  - Deflated right tyre
- 2.1.5 The pilot did not sustain any injuries. Post flight inspection on the landing gear showed a deflated right tyre.
- 2.1.6 Good weather conditions prevailed at the time leading to the incident. The incident occurred in daylight.



**Figure 2:** Sketch showing approach direction and the layout after accident.





Figure 3: Google Earth location of the accident and Private Airstrip.



Figure 4: The deflated right tyre and damage caused to the right wing.





**Figure 5:** The damage sustained by the propeller.



**Figure 6:** The point where the right tyre made contact with the grass runway and veered off towards the fence.



**Figure 7:** The deflated tube with the punctured area.

### **3. FINDINGS**

- 3.1 The pilot held a valid Class 1 medical at the time of the incident.
- 3.2 The pilot held a valid CPL (A) at the time of the incident.
- 3.3 The pilot held the appropriate type rating.
- 3.4 The pilot had flown 4434.4 hours on the aircraft type prior to the incident.
- 3.5 The aircraft is owned by Orsmond Aerial Spray (PTY) Ltd and is operated under CARs, 2011 – Restricted Part 137 for crop spraying.
- 3.6 The aircraft had flown a total of 4254.1 hours up to the accident.
- 3.7 The tyre tubes were replaced on the 10<sup>th</sup> October 2016.
- 3.8 An MPI was performed by an approved AMO on 03 November 2017 at 4133.7 hours. During this inspection, the tyres, tubes, brake discs and linings were checked.
- 3.9 A Thrush representative advised that the result of a flat tyre on touchdown would have a similar outcome considering it was a grass runway.
- 3.10 South African Civil Aviation Authority records show no similar occurrence with this type of aircraft.
- 3.11 The weather was not a contributory factor to the incident.

### **4. PROBABLE CAUSE/CONTRIBUTING FACTOR**

- 4.1 The loss of directional control was due to the deflated tyre on the right hand side landing gear, which resulted in the aircraft uncontrollably veering towards the right.

### **5. SAFETY RECOMMENDATION**

- 5.1 None.