SOUTH AFRICAN CIVIL AVIATION AUTHORITY

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

# LIMITED OCCURRENCE INVESTIGATION REPORT – FINAL

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| **Reference Number** | CA18/2/3/10524 | | | | | | |
| **Classification** | Accident | **Date** | 14 November 2024 | | **Time** | 0953Z | |
| **Type of Operation** | Private (Part 94) | | | | | | |
| **Location** | | | | | | | |
| Place of Departure | Rhino Park Aerodrome, Gauteng Provine | Place of Intended Landing | Kitty Hawk (FAKT) Aerodrome, Gauteng Provine | | | | |
| Place of Occurrence | Runway 01 at Kitty Hawk Aerodrome (FAKT) | | | | | | |
| GPS Co-ordinates | Latitude | 25° 51' 42.0" S | Longitude | 028° 26' 49.0" E | Elevation | 4 586 ft | |
| **Aircraft Information** | | | | | | | |
| Registration | ZU-EOE | | | | | | |
| Make; Model; S/N | Jabiru; J430 (S/N: 421) | | | | | | |
| Damage to Aircraft | Substantial | Total Aircraft Hours | 2 510.7 | | | | |
| **Pilot-in-command** | | | | | | | |
| Licence Type | Private Pilot Licence (PPL) | Gender | Male | Age | 19 | | |
| Licence Valid | Yes | Total Hours | 61.3 | Total Hours on Type | 15.5 | | |
| Total Hours 30 Days | 1.8 | Total Flying on Type Past 90 Days | 2.9 | | | | |
| **People On-board** | 1 + 1 | **Injuries** | 0 | **Fatalities** | 0 | **Other (on ground)** | 0 |

**What Happened**

On Thursday morning, 14 November 2024, a pilot and a passenger on-board a Jabiru J430 aircraft with registration ZU-EOE took off on a private flight from Rhino Park Airfield to Kitty Hawk Aerodrome (FAKT), both located in Gauteng province. Visual meteorological conditions (VMC) prevailed at the time of the flight which was conducted under the provisions of Part 94 of the Civil Aviation Regulations (CAR) 2011 as amended.

The pilot reported that he conducted the pre-flight inspection of the aircraft and the run-up checks, and no anomalies were noted. The take-off and the flight from Rhino Park to FAKT, situated 4.8 nautical miles (nm) south-west of the airfield, were uneventful. The unmanned circuit joining procedure was completed and the pilot positioned the aircraft for right downwind on Runway (RWY) 01. After completing the base leg checks, the pilot turned the aircraft and established the final approach for landing on RWY 01. The aircraft landed deep (more than 1/3) with 30 degrees flap setting. The aircraft overran the runway.

The aircraft exited the runway and rolled into a ditch beyond the threshold of RWY 01 before it stopped in a nose-down attitude beyond the end of the runway. RWY 01/19 is 810m x 18m with a

tarred surface. The two occupants were not injured. During the accident sequence, the aircraft sustained substantial structural damage to the nose, left main gear and propeller.

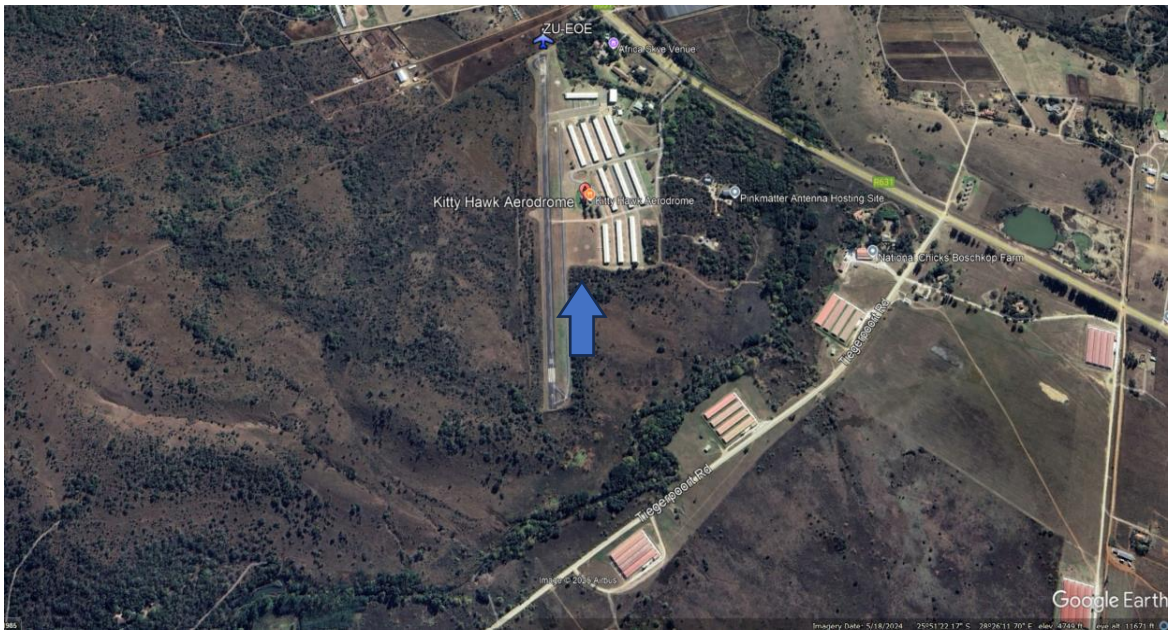
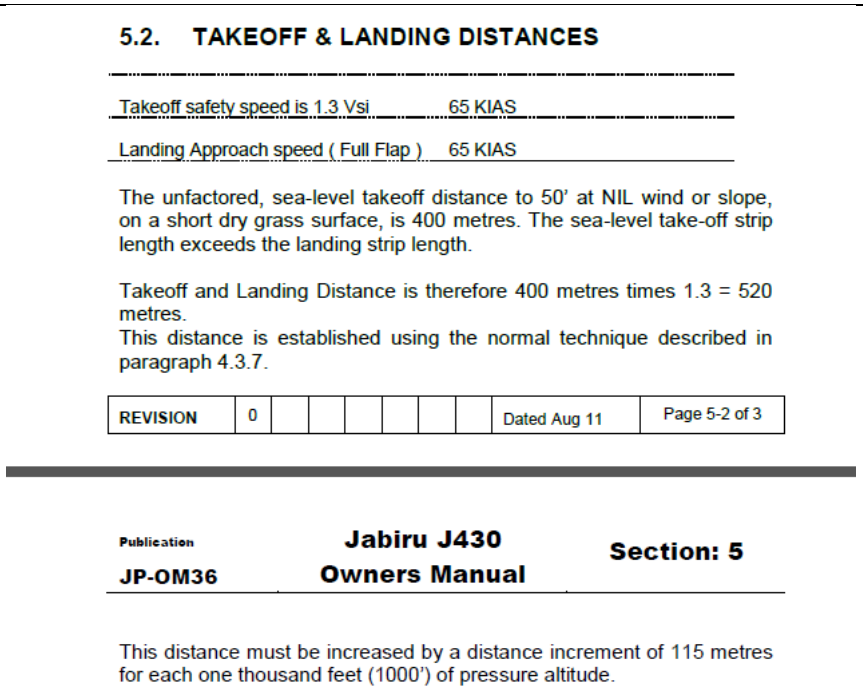



**Figure 1**: The arrow indicates the direction and approximate landing point at FAKT. (Source: Google Earth)


**Figure 2**: The aircraft as it came to rest. (Source: Pilot)



**5.2. TAKEOFF & LANDING DISTANCES**

Takeoff safety speed is 1.3 Vsi 65 KIAS

Landing Approach speed ( Full Flap ) 65 KIAS

The unfactored, sea-level takeoff distance to 50' at NIL wind or slope, on a short dry grass surface, is 400 metres. The sea-level take-off strip length exceeds the landing strip length.

Takeoff and Landing Distance is therefore 400 metres times 1.3 = 520 metres.
This distance is established using the normal technique described in paragraph 4.3.7.

| REVISION | 0 | | | | | | | Dated Aug 11 | Page 5-2 of 3 |
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This distance must be increased by a distance increment of 115 metres for each one thousand feet (1000') of pressure altitude.

**Figure 3**: Landing distances. (Source: POH)

Aircraft Performance: Landing Distances (Source: Pilot's Operating Handbook [POH])

The Pilot's Operating Handbook (POH) indicates a landing distance requirement of 520 metres (m). The runway at FAKT is 800m long and 18m wide and positioned on an upslope. The runway required for the aircraft to land is 672m (landing distance = (4.5 X115) = 517 X1.3 = 672m) for a normal landing at 4586 ft field elevation, as per the POH recommendation.

The pilot stated that he landed more than a third of the way down the runway, which reduced the available distance to bring the aircraft to a safe stop. There are powerlines about 2000m south of RWY 01 at approximately 700 feet (ft) elevation, which meant that an early touchdown would have potentially resulted in a collision with the powerlines on final approach.

**Findings**

1. Personnel Information

1.1 The pilot had a Private Pilot Licence (PPL) that was issued on 14 August 2024 with an expiry date of 31 July 2025.

1.2 The pilot had a Class 2 aviation medical certificate that was issued on 31 July 2023 with an expiry date of 28 February 2026 with no restrictions. However, the pilot was adequately qualified and licensed to conduct the flight. He had a total of 15.5 hours on the aircraft type and 2.9 hours in the preceding 90 days.

2. Aircraft Information

2.1 The last annual inspection of the aircraft was conducted and certified on 30 July 2024 at 2 502.6 airframe hours. The aircraft had accrued 8.1 hours after the said inspection.

2.2 The aircraft had a valid Authority-to-fly (ATF) Certificate that was initially issued on 9 December 2019. The ATF was renewed on 5 September 2024 with an expiry date of 30 September 2025. The aircraft's Certificate of Registration (C of R) was issued to the present owner on 5 November 2024.

2.3 The aircraft was issued a Certificate of Release to Service (CRS) on 30 July 2024 with an expiry date of 30 July 2025 or at 2 602.6 airframe hours, whichever occurs first.

2.4 The aircraft was maintained by an aircraft maintenance organisation (AMO) with an AMO Certificate that was issued by the Regulator (SACAA) on 31 June 2023 with an expiry date of 31 August 2025.

2.5 The aircraft landed deep on RWY 01, leaving an insufficient runway for effective braking. As a result, the aircraft overran the runway and came to a stop in a ditch beyond RWY 01.

3. Environment

The weather on the day of the flight was not a contributory factor to the accident.

**Probable Cause(s)**

The aircraft landed deep to avoid powerlines and failed to stop, thus, overran the runway and rolled into a ditch.

**Contributing Factor(s)**

None.

**Safety Action(s)**

None.

**Safety Message and/or Safety Recommendation/s**

None.

**About this Report**

*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.*

*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.*

***Purpose***

*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.*

**Disclaimer**



**This report is issued by:**

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