



LIMITED OCCURRENCE INVESTIGATION REPORT – FINAL

Reference Number	CA18/2/3/10458					
Classification	Accident	Date	30 May 2024	Time	1015Z	
Type of Operation	Private (Part 94)					
Location						
Place of Departure	Port Elizabeth Airport (FAPE), Eastern Cape Province		Place of Intended Landing	Wings Park Aerodrome, Eastern Cape Province		
Place of Occurrence	Runway 22 at Wings Park Aerodrome near East London, Eastern Cape Province					
GPS Co-ordinates	Latitude	32° 49'31.1" S	Longitude	027° 50'07.7" E	Elevation	1 278 ft
Aircraft Information						
Registration	ZU-EWJ					
Make; Model; S/N	Yakovlev; YAK52 (Serial Number: 855406)					
Damage to Aircraft	Substantial		Total Aircraft Hours	1 229.0		
Pilot-in-command						
Licence Type	Airline Transport Pilot Licence (ATPL)		Gender	Male	Age	56
Licence Valid	Yes	Total Hours	4 900	Total Hours on Type	12.5	
Total Hours 30 Days	24.5		Total Flying on Type Past 90 Days	12.5		
People on-board	1+0	Injuries	0	Fatalities	0	Other (on ground) 0
What Happened						
<p>On 30 May 2024, a pilot on-board a Yakovlev YAK52 aircraft with registration ZU-EWJ was conducting a private flight from Port Elizabeth Aerodrome (FAPE) in the Eastern Cape province to Wings Park Aerodrome near East London in the same province. The flight was conducted under visual meteorological conditions (VMC) by day and under the provisions of Part 94 of the Civil Aviation Regulations (CAR) 2011 as amended.</p> <p>The pilot stated that the flight from FAPE to Wings Park Aerodrome was uneventful. During landing on Runway 22 at a speed of 90 knots (kts) with full flaps, a strong wind from the north (right side of the aircraft) caused the aircraft to veer off to the left. The pilot applied right rudder and foot brakes to recover but was unsuccessful. The aircraft exited the runway and careered to the left; consequently, the right wing impacted a tree. After the aircraft had come to a stop, the pilot switched off the master switch and disembarked from the aircraft without assistance. The aircraft sustained substantial damage. The pilot was not injured during the accident.</p>						



Figure 1: The damaged propeller. (Source: Operator)



Figure 2: The dented left wing leading edge. (Source: Operator)



Figure 3: The damaged right wing (indicated in the yellow circle). (Source: Operator)

Weather Information

The following weather information was obtained from the South African Weather Service (SAWS) for East London Aerodrome (FAEL) on 30 May 2024 at about 1015Z. FAEL is located 29 kilometres (km) south-west of Wings Park Aerodrome.

Wind Direction	330°	Wind Speed	14G24kt	Visibility	10km
Temperature	31°C	Cloud Cover	Clear	Cloud Base	None
Dew Point	7°C	QNH	1007 hPa		

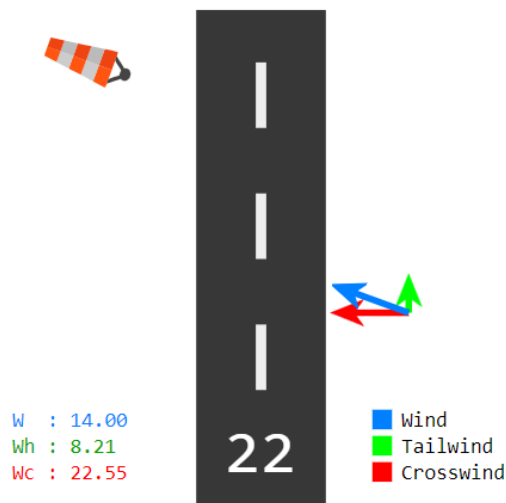


Figure 4: Wind, tailwind and crosswind calculations. (Source: <https://e6bx.com/wind-components/>)

- Figure 4 indicates a crosswind of 22.4 kts and a tailwind of 8.21 kts.
- The crosswind component that an aircraft can endure during take-off and landing is specified in the YAK52 Flight Manual as 11.6 kts (6 metres per second). The crosswind at the time of the accident was 10.8 knots more than the maximum crosswind velocity a YAK52 aircraft can endure.
- The maximum wind speed on take-off and landing in headwind is 29 kts (15 metres per second).

Findings

1. The pilot was initially issued the Airline Transport Pilot Licence (ATPL) on 13 February 2004. The licence was reissued on 26 July 2023 with an expiry date of 31 July 2024. His Class I medical certificate was issued on 12 July 2023 with an expiry date of 31 July 2024 with the following restrictions:
 - Limited period of validity of the medical certificate is 12 months (TML).
 - Valid only with correction for defective distant, intermediate and near vision (VML).
 - Special restrictions as specified on the medical protocol (SSL).
2. The last 100-hour annual inspection of the aircraft was certified on 7 June 2023 at 1 204.5 total airframe hours. The aircraft had accrued 1 229.0 hours at the time of the accident, which meant that it was flown for 24.5 hours after the annual inspection.
3. The Certificate of Registration (C of R) was issued to the present owner on 10 March 2021.

4. At the time of the flight, the wind was 14 kts gusting 24 kts with a crosswind of 22.4 kts. The aircraft's maximum crosswind is 11.6 kts. The aircraft was operated in a crosswind that is 10.8 kts more than its maximum crosswind.
5. The Authority to Fly (ATF) Certificate was initially issued on 20 January 2020; it was renewed on 2 April 2024 with an expiry date of 31 January 2025.
6. The aircraft approached with an indicated airspeed (IAS) of 90 kts and tailwind of 8.21 kts. The Pilot's Operating Handbook (POH) required a landing speed of 62 to 65 kts (115-120 kilometres per hour) with full flaps down. This meant that the pilot landed with a ground speed of 98.2 kts, which is 36 kts more than the recommended speed.
7. The pilot landed with a tailwind and crosswind at a speed of 90 kts; consequently, the aircraft veered off to left of the runway. The pilot tried to recover the aircraft but was unsuccessful.

Probable Cause(s)

The aircraft landed with a tailwind, exacerbated by the high speed and strong, gusting wind which caused it to veer off to the left of the runway.

Contributing Factor(s)

Landing with a tailwind beyond the limitations specified in the POH.

Safety Action(s)

None.

Safety Message

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

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**This report is issued by:
Accident and Incident Investigations Division
South African Civil Aviation Authority
Republic of South Africa**