

**LIMITED OCCURRENCE INVESTIGATION REPORT – FINAL**

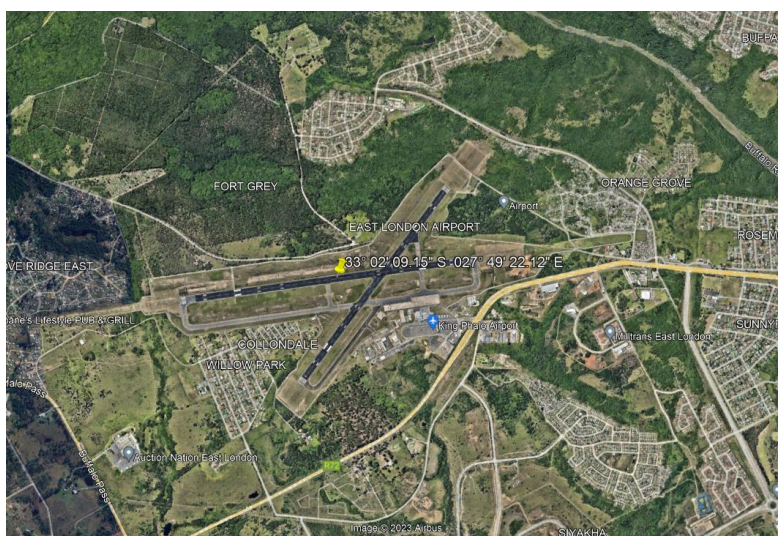
<b>Reference Number</b>	CA18/2/3/10367						
<b>Classification</b>	Accident	<b>Date</b>	14 September 2023	<b>Time</b>	1030Z		
<b>Type of Operation</b>	Private (Part 91)						
<b>Location</b>							
Place of Departure	Port Alfred Aerodrome (FAPA), Eastern Cape Province			Place of Intended Landing	King Phalo Aerodrome (FAEL), Eastern Cape Province		
Place of Occurrence	FAEL						
GPS Co-ordinates	Latitude	33° 02' 09.15" S	Longitude	027° 49' 22.12" E	Elevation	415ft	
<b>Aircraft Information</b>							
Registration	ZU-JGM						
Make; Model; S/N	Cessna 185E (Serial Number: 185-1178)						
Damage to Aircraft	Substantial			Total Aircraft Hours	7752.2		
<b>Pilot-in-command</b>							
Licence Type	Private Pilot Licence (PPL)		Gender	Male	Age	69	
Licence Valid	Yes	Total Hours	3310.7	Total Hours on Type	182.7		
Total Hours 30 Days	3.5			Total Flying on Type Past 90 Days	12.5		
<b>People On-board</b>	1+0	<b>Injuries</b>	0	<b>Fatalities</b>	0	<b>Other (on ground)</b>	0
<b>What Happened</b>							
<p>On Thursday, 14 September 2023 at 0750Z, a pilot on-board a Cessna 185E aircraft with registration ZU-JGM took off on a private flight from Port Alfred Aerodrome (FAPA) in the Eastern Cape province to King Phalo Aerodrome (FAEL) in the same province. The flight was conducted under visual meteorological conditions (VMC) by day and under the provisions of Part 91 of the Civil Aviation Regulations (CAR) 2011 as amended.</p> <p>The pilot reported that the flight from FAPA to FAEL was uneventful. Upon arrival at FAEL, he requested clearance, and the air traffic control officer (ATCO) cleared him to land on Runway 29. The pilot stated that the approach was stable at 65 knots (74.8 miles per hour). The pilot conducted a three-point landing (touched down on all wheels) with the tail-wheel lock disengaged. During the landing roll, the left wing lifted which caused the aircraft to veer off to the right of the runway. The pilot attempted to correct the anomaly by applying the left rudder and engaging the brake but could not bring the aircraft under control. The aircraft careered off the runway with the right-wing tip and horizontal stabiliser dragging on the ground before it came to a stop on the grass area. The ATCO who had witnessed the occurrence activated the alert phase (ALERFA) and the Airport Rescue and Firefighting (ARFF) personnel responded to the accident site. The pilot informed the ATCO that he</p>							

did not require assistance; he, thereafter, taxied the aircraft to the hangar. The alert phase (ALERFA) was cancelled.

The aircraft sustained damage to the right-wing tip and horizontal stabiliser. The pilot was not injured.

The Meteorological Aerodrome Report (METAR) was obtained from the South African Weather Service (SAWS), recorded at FAEL in the Eastern Cape province on 14 September 2023 at 1030Z.

Wind Direction	210°	Wind Speed	15kts	Visibility	10km
Temperature	19°C	Cloud Cover	CAVOK	Cloud Base	CAVOK
Dew Point	11°C	QNH	1016hPa		



**Figure 1:** An aerial view of FAEL with a pin indicating the accident site. (Source: Google Earth)



**Figure 2:** The aircraft parked at the hangar post-accident. (Source: Pilot)



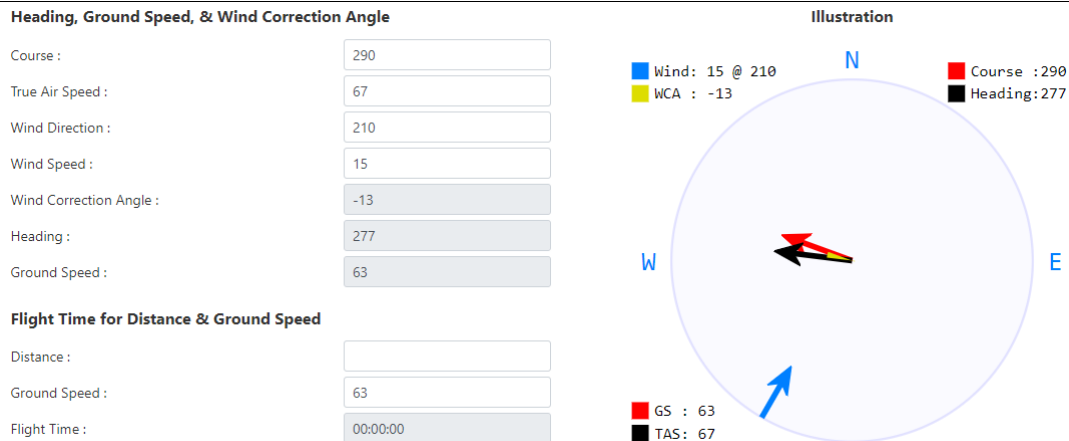
**Figure 3:** The damaged right-wing tip. (Source: Pilot)



**Figure 4:** The damaged horizontal stabiliser. (Source: Pilot)

Post-accident:

According to the pilot questionnaire, the cause of the accident was due to the crosswind component.



**Figure 5:** The crosswind component at the time of the flight. (Source: Online E6B computer)

The wind component calculator above indicates the left crosswind component of 13 knots at the time of the accident.

Landing (Source: Cessna Skywagon 185 Pilot's Operating Handbook [POH])

*Since the ability of the elevator to produce a full stall is dependent upon the adjustable stabiliser being set NOSE UP, it is important that the aircraft be completely trimmed in the approach glide. If the aircraft fails to land three point with the control wheel fully back, it is probable that adjustable stabiliser is not adjusted for the landing condition.*

*Landings may be made with the tail wheel lock engaged or disengaged. Although use of the lock is left to the individual pilot's preference, it is probable that its operation will be limited to use during strong crosswind landings on rough fields with a heavily loaded airplane. This condition would lead to a touchdown with a deflected tail wheel (if the lock were disengaged) and subsequent external forces on the tail wheel that are conducive to shimmy. Engaging the tail wheel lock restrains the steering, making the tail wheel insensitive to rudder pedal action and rocks and ruts on the landing surface.*

*The landing normally should be three-point. Heavy braking may be used initially in the ground roll if the control wheel is held full back.*

*Before landing*

1. Mixture----ENRICHEN (as required)
2. Power----AS DESIRED

3. *Cowl Flaps-----CLOSED*
4. *Propeller-----HIGH RPM*
5. *Airspeed-----85-95 MPH (flaps UP)*
6. *Wings Flaps----0°-40° (below 110 MPH)*
7. *Airspeed-----75-85 MPH (flaps DOWN)*
8. *Stabilizer and rudder Trim----ADJUST FOR LANDING*

*NOTE: The ability of the aircraft to land three-point is dependent upon the stabiliser being adjusted for hands-off trim in the glide.*

*Tail Wheel lock---AS DESIRED*

The pilot stated that the approach was stable at an approach speed of 65 knots (74.8 mph) with the tail-wheel lock disengaged and flaps set at 20° as stated in the POH. The POH does not mention the maximum crosswind component limit allowed during landings or take-offs.

### **Findings**

1. The pilot was initially issued a Private Pilot Licence (PPL) on 1 April 1996. The licence was reissued on 17 January 2023 with an expiry date of 30 April 2025. The pilot's Class 2 medical certificate was issued on 4 April 2023 with an expiry date of 30 April 2024, and with the restriction to wear corrective lenses.
2. The last annual inspection on the aircraft was certified on 27 August 2023 at 7755.2 total airframe hours. The aircraft had accumulated 7765.3 hours at the time of the accident, which meant that it was flown a further 10.1 hours after the annual inspection.
3. The Authority to Fly (ATF) was initially issued on 9 December 2019. The last ATF renewal was reissued on 22 March 2023 with an expiry date of 30 April 2024.
4. The Certificate of Registration (C of R) was issued to the present owner on 3 June 2021.
5. There was a crosswind component of 13 knots at the time of the accident flight. The POH does not mention the maximum crosswind component allowed for the aircraft.
6. The aircraft touched down on all three wheels with the tail-wheel lock disengaged; during the landing roll, the left wing lifted, and the pilot lost directional control of the aircraft and it careered to the left and exited the runway before it came to a stop on the grass.

<b>Probable Cause(s)</b>
Loss of directional control during the landing roll due to the crosswind from the left.
<b>Contributing Factor(s)</b>
Inadequate compensation for the crosswind component during landing with the tail-wheel lock disengaged.
<b>Safety Action(s)</b>
None.
<b>Safety Message</b>
The POH should state the crosswind limit for safe operation.
<b>About this Report</b>
<p><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></p> <p><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></p>
<b>Purpose</b>
<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>
<b>Disclaimer</b>
<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**