

**LIMITED OCCURRENCE INVESTIGATION REPORT – FINAL**

<b>Reference Number</b>	CA18/2/3/10498						
<b>Classification</b>	Accident	<b>Date</b>	25 September 2024	<b>Time</b>	1330Z		
<b>Type of Operation</b>	Private (Part 94)						
<b>Location</b>							
<b>Place of Departure</b>	Wings Park Aerodrome, Eastern Cape Province		<b>Place of Intended Landing</b>		Wings Park Aerodrome, Eastern Cape Province		
<b>Place of Occurrence</b>	RWY09 at Wings Park Aerodrome, approximately 12 nautical miles north of East London Airport (FAEL)						
<b>GPS Co-ordinates</b>	<b>Latitude</b>	32°49'00" S	<b>Longitude</b>	027°50' 11" E	<b>Elevation</b>	1200ft	
<b>Aircraft Information</b>							
<b>Registration</b>	ZU-JOG						
<b>Make; Model; S/N</b>	Kitplanes for Africa; Kitplanes Safari (Serial Number: 031-11-16 SAF 2)						
<b>Damage to Aircraft</b>	Substantial			<b>Total Aircraft Hours</b>	228.0		
<b>Pilot-in-command</b>							
<b>Licence Type</b>	Airline Transport Pilot Licence (ATPL)		<b>Gender</b>	Male		<b>Age</b>	30
<b>Licence Valid</b>	Yes	<b>Total Hours</b>	4 435.8		<b>Total Hours on Type</b>	40.7	
<b>Total Hours 30 Days</b>	39		<b>Total Flying on Type Past 90 Days</b>			4.0	
<b>People On-board</b>	1+1	<b>Injuries</b>	0	<b>Fatalities</b>	0	<b>Other (on ground)</b>	0
<b>What Happened</b>							
<p>On Wednesday afternoon, 25 September 2024, a pilot and a passenger on-board a Kitplane Safari aircraft with registration ZU-JOG were conducting circuit take-off and landing exercises at Wings Park Aerodrome in the Eastern Cape province with the intention to land at the same aerodrome. Visual meteorological conditions (VMC) by day 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.</p> <p>The pilot reported that he conducted a pre-flight inspection of the aircraft with no anomalies noted. Thereafter, he started the engine and taxied to the threshold of Runway 09 where he performed the pre-take-off checks. All engine parameters were within the normal operating range. At approximately 1230Z, he took off to conduct touch-and-go landings and simulated emergency landings. After about 1 hour following a touch-and-go landing at approximately 200 feet (ft) above ground level (AGL), the pilot reduced power to idle during a climb to initiate a simulated engine failure; the flaps were not selected, and the speed was 50 knots (kts). The pilot did not maintain the glide speed which resulted in a high sink rate. The aircraft landed hard and, thus; the main gear was damaged.</p>							

Despite the hard landing and whilst oblivious to the damage sustained to the main gear, the pilot applied full power, and the aircraft was airborne again. The pilot flew a circuit and landed on the runway; this further damaged the main gear.



**Figure 1:** The aircraft after recovery. (Source: Pilot)

The aircraft's landing speed is 42 kts as per the Pilot's Operating Handbook (POH).

**Take-off Speed** (Source: Kitplanes for Africa Safari flight manual)

Rotation speed ( $V_r$ ): 40-45 kts

Lift-off speed ( $V_l$ ) 50-55 kts

The pilot was conducting a simulated engine failure after take-off during a private flight with a passenger on-board.

**Findings**

1. The pilot was initially issued an Airline Transport Pilot Licence (ATPL) on 12 September 2016. The licence was reissued on 13 November 2023 with an expiry date of 31 October 2025. The pilot was appropriately rated for the flight and the aircraft type was endorsed on his licence. He had 4 435.8 total flying hours of which 40.7 hours were on the aircraft type. The pilot had last flown the aircraft type on 21 September 2024.
2. The pilot was issued a Class 1 aviation medical certificate on 22 July 2024 with an expiry date of 31 July 2025 with the following restrictions:
  - Limited period of validity at 12 months.
  - Corrective lenses for defective distant vision (VDL), intermediate and near vision.

3. The last annual inspection of the aircraft was certified on 27 March 2024 at 219.3 total airframe hours after which a Certificate of Release to Service (CRS) was issued with an expiry date of 24 March 2025 or at 319.3 hours, whichever comes first. At the time of the accident flight, the aircraft had accrued 8.7 hours since the last maintenance.
4. The Authority-to-fly (ATF) was initially issued on 13 January 2020. The ATF was reissued on 18 April 2024 with an expiry date of 30 April 2025.
5. The Certificate of Registration (C of R) was issued to the present owner on 14 August 2024.
6. The pilot was conducting a simulated engine failure after take-off outside the training environment with a passenger on-board.
7. After a touch-and-go landing, the pilot reduced the engine power to idle during a climb to simulate an engine failure.
8. The pilot did not maintain the glide speed after the simulated engine failure which resulted in a high sink rate and the subsequent hard landing; this damaged the main gear.

**Probable Cause(s)**

The pilot did not maintain the glide speed after the simulated engine failure was initiated which resulted in a high sink rate and the subsequent hard landing; this caused damaged to the main gear.

**Contributing Factor(s)**

None.

**Safety Action(s)**

None.

**Safety Message**

Pilots should not conduct simulated engine failures outside a training environment with passengers on-board.

**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 desktop 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**