REPUBLIC OF NAMIBIA

MINISTRY OF WORKS AND TRANSPORT

Directorate of Aircraft Accident and Incident Investigations

Occurrence Reference: INCID/05112023/01-07/

Aircraft Serious Incident Investigation Final Report

Sling 4 TSI ZU-IPA

RELEASE DATE: 09/11/2024

Aircraft Accident Report

DESCRIPTION OF OCCURRENCE: Landing on a Taxiway.
TYPE OF OPERATION: Private.
AIRCRAFT TYPE: Sling 4 TSI (ZU-IPA)
LOCATION: Swakopmund Airport Namibia
DATE AND TIME: 11th May 2023 (12:00 UTC).

File Photo : www.avcom.co.za

Ministry of Works and Transport

INCID/05112023/01-07

DIRECTORATE OF AIRCRAFT ACCIDENT INVESTIGATION INCIDENT REPORT – EXECUTIVE SUMMARY

Aircraft Registration	ZU-IPA	**Date of Incident**	11th May , 2023	**Time of Incident**	12:00 UTC
Type of Aircraft	SLING 4 TSI		**Type of Operation**	Private	
Pilot- In - command License Type	0272420290	**Age**	64	**License Valid**	VALID
Pilot-In-command Flying Experience	Total Flying Hours	353.3		**Hours on Type**	81.9
Last point of departure	Solitaire				
Next point of intended landing	Swakopmund Airport				

Location of the accident site with reference to easily defined geographical points (GPS readings if possible)

FYSM SWAKOPMUND Airport

Meteorological Information	Wind speed: 10knt, Temperature: 20 ° C Visibility: Fog				
Number of people on board	2	**No. of people injured**	0	**No. of people killed**	0

Synopsis

On the 11 of May, 2023, a South African experimental aircraft a Sling 4 TSI with registration ZU-IPA was scheduled for a private flight from Solitaire to Swakopmund. On board were the pilot and a passenger.

The pilot received information about changing weather conditions en-route, indicating increasing fog at Swakopmund. Upon arrival, fog was present at the airfield, prompting urgency to land.

During the first landing attempt, the aircraft bounced, leading to a go-around. Concerned about potential damage, the pilot requested a visual inspection, another aircraft in the vicinity confirmed the nose wheel was intact.

A second landing attempt was made, but fog made locating the runway challenging. Mistaking a taxiway for the runway, the pilot decided to land there, considering it the safest option. Post-landing inspection revealed no damage or injuries were reported.

The pilot was a 64-year-old South African citizen who was a holder of a valid Private Pilot License. The pilot had a total 81.9 hours on type and had flown 37.9 hours on the last 90 days.

The occurrence was reported on the same day by an operator of the aircraft on the holding point who had to make an evasive manoeuvre to avoid collision, the pilot did not report this occurrence and proceeded to fly back to south Africa without contacting Namibia authorities. The pilot later reported the incident on the 19th May 2023, reason being that she was not familiar with Namibia rules and that the next two days the pilot as in a remote area without contact.

The last mandatory Annual Inspection was carried out on the 21th June 2022, and had a total of 175.6 airframe hours at the time of the occurrence.

Probable Cause:

Misidentification of Landing Surface:

Contributing factor (s):

The decision to proceed with the flight in degraded meteorological conditions exacerbated by the inaccurate perception of a landing gear failure lead to favourable conditions for pilot disorientation and imprecise assessment of the conditions leading to landing on the Taxiway.

The report is given without prejudice to the rights of the Directorate of Aircraft Accident and Incidents Investigations, which are reserved.

Purpose of the Investigations:

In terms of the Namibia Civil Aviation Act (Act No. 6 of 2016) and ICAO Annex 13, this report was compiled in the interest of the promotion of aviation safety and the reduction of risk of aviation accidents or incidents and **not to establish blame or legal liability.**

This report contains facts relating to aircraft accidents or incidents that have been determined at the time of issue. The report may therefore be revised should new and substantive facts are made available to the investigator (s).

1. FACTUAL INFORMATION

1.1 History of Flight

1.1.1 On the 11th May 2023.a South African registered experimental aircraft was preparing for a private flight from Solitaire to Swakopmund. On board was the pilot and a passenger.

1.1.2 The pilot, the stated that on the 11th May, 2023, just before the scheduled flight from Solitaire to Swakopmund, a friend in Swakopmund informed the pilot about changing weather conditions marked by increasing fog. It was suggested that there was a favourable weather window to land at Swakopmund before the airfield potentially closed due to fog.

1.1.3 Upon arrival at FYSM, the pilot initiated an approach to runway 24, where sea fog was already present, creating a sense of urgency to land promptly. While attempting to land on runway 24, the aircraft experienced a bounce, leading to a decision to execute a go-around. Concerned about potential damage to the nose-wheel, the pilot asked over the radio, using the applicable airfield frequency (126.3), whether any person on the ground, or another aircraft, could conduct a visual inspection at aircraft (ZU-IPA) to confirm any damage.

1.1.4 Another aircraft a Cessna 210 (WLD211) got airborne from the airport FYSM for a flight to FYWE the pilot stated that at around 1123Z he was trying to get close to ZU-IPA to try and have a closer look as the PIC of ZU-IPA suspected that her nose wheel fell off on the first landing attempt at FYSM. He confirmed that the nose wheel was still intact.

1.1.5 The pilot stated that the increasing fog posed challenges in locating the field and maintaining correct positioning and also shaken by the initial failed approach and suspected nose wheel failure, the pilot was eager to land immediately, the pilot mis took the taxiway from the runway.

1.1.6 A warning from an aircraft (V5-BTM) which was conducting power checks at the holding point alerted the pilot to the error. Despite the late realization, the pilot proceeded with a landing on the taxiway, making a split-second decision based on the belief that it was the safest option given the circumstances.

1.1.7 Post-landing, a thorough inspection revealed no damage to the landing gear or the aircraft. Acknowledging, that landing on a taxiway is typically unacceptable, the pilot justified the decision as a response to the evolving fog conditions, aiming to avoid flying into the fog for another landing attempt. The decision, made in the spur of the moment, was perceived as the safest option, considering the circumstances and the similarity in surface characteristics between the taxiway and the runway and being no traffic on the taxiway.

1.1.8 There was no reported damage on the aircraft nor injuries to the occupants.

1.1.9 The occurrence was reported on the same day by an operator of the aircraft on the holding point who had to make an evasive maneuver to avoid Collison, the pilot did not report this occurrence and proceeded to fly back to south Africa without contacting Namibia authorities. The pilot later reported the incident on the 19th May 2023, reason being that she was not familiar with Namibia rules and the next two days the pilot was in a remote area without contact.

2. ANALYSIS

SHELL Model Analysis

S (Software) - Procedures, Manuals, Regulations:

- **Weather Briefing:** The pilot received a weather briefing about increasing fog and a limited favourable window for landing. The urgency created by this information influenced the pilot's decision-making.
- **Standard Operating Procedures (SOPs):** The pilot followed the procedure to go around after a bounced landing and sought a visual inspection via radio communication, indicating adherence to procedural norms.

H (Hardware) - Aircraft and Equipment:

- **Aircraft Performance:** The aircraft bounced during the first landing attempt on runway 24, which led to concerns about potential nose-wheel damage.
- **Inspection Assistance:** Another aircraft (Cessna 210) provided mid-air visual inspection support, confirming no visible damage to ZU-IPA's nose-wheel.

E (Environment) - Physical and Operational Environment:

- **Weather Conditions:** Rapidly deteriorating weather conditions, specifically increasing fog, posed significant challenges to the pilot's situational awareness and visibility during approach and landing.
- **Landing on Taxiway:** The fog led to the pilot fog mistaking the taxiway for the runway. Despite a warning from another aircraft, the pilot landed on the taxiway, considering it the safest option under the circumstances.

L (Liveware) - Human Factors:

- **Pilot Decision Making:** The pilot made several critical decisions under pressure, including going around after the first bounce and deciding to land on the taxiway due to deteriorating fog conditions.
- **Stress and Fatigue:** The urgency to land due to weather conditions, combined with the stress from the initial failed approach, impacted the pilot's decision-making process.
- **Communication:** Effective use of radio communication to request and receive assistance for a visual inspection played a crucial role in the decision-making process.

L (Liveware) - Interaction with Others:

- **Support from Other Pilots:** Coordination with another pilot who inspected ZU-IPA's nose-wheel and the warning from the aircraft at the threshold (V5-BTM) were critical in managing the situation.
- **No Injuries or Damage:** Effective interaction and communication ensured no injuries or damage to the aircraft.

The maintenance records indicated that the aircraft was certified, equipped and maintained in accordance with existing regulations and approved procedures.

2.2 The aircrafts experimental certificate was valid at the time of accident. It was till 29th may 2024.

2.3 The pilot's private pilot license no 0272420290 was valid till 24th march 2024. The class 2 medical certificate was valid till 24/03/2024.

2.4 There was no evidence of any defect or malfunction in the aircraft that could have contributed to the accident.

3. CONCLUSION

3.1 Findings

3.1.1 Maintenance Records:

a. The maintenance records indicated that the aircraft was certified, equipped, and maintained in accordance with existing regulations and approved procedures.

3.1.2 Aircraft Certification:

a. The aircraft's experimental certificate was valid at the time of the accident, with an expiration date of May 29, 2024.

3.1.3 **Pilot Certification**:

a. The pilot's private pilot license (No. 0272420290) was valid until March 24, 2024.

b. The Class 2 medical certificate was valid until March 24, 2024.

3.1.4 **Aircraft Condition**:

a. There was no evidence of any defect or malfunction in the aircraft that could have contributed to the incident.

3.2. Probable Cause/s

3.2.1. Landing on the Taxiway

3.3 Contributing factors

3.3.1 The decision to proceed with the flight in degraded meteorological conditions.

3.3.2 **Decision-Making Under Pressure:(Human Factors)**
The initial failed landing attempt and concerns about potential damage to the nose-wheel increased the pilot's stress levels, impacting the clarity of subsequent decisions.

3.3.3 **Situational Awareness**:
The pilot's situational awareness was compromised by the challenging weather conditions, leading to the misidentification of the taxiway as the runway.

4.0 Safety Recommendations

4.1. None.

Compiled by

Date: ...11 SEPT 2024...

Hafeni Mweshixwa
Investigator-in-Charge

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