REPUBLIC OF NAMIBIA

MINISTRY OF WORKS AND TRANSPORT

Directorate of Aircraft Accident and Incident Investigations

Occurrence Reference: ACCID/05092024/ 01-02

Aircraft Accident Investigation Final Report

GYROPLANE ELA-07 V5-UIR

RELEASE DATE: **05 MARCH 2025**

Aircraft Accident Report

DESCRIPTION OF OCCURRENCE: Crashed after landing at Eros airport
TYPE OF OPERATION: Private.
AIRCRAFT TYPE: GYROPLANE ELA-07
LOCATION: Eros Airport (FYWE) Runway 01
DATE AND TIME: 09th May 2024 (09:04 UTC).

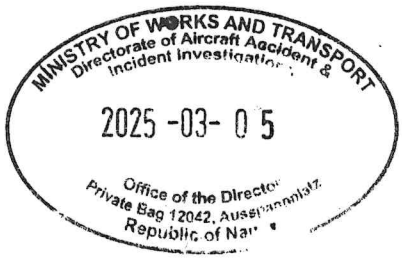
Figure 1: The Gyroplane ELA-07 V5-UIR, 12092780724 (S/N) accident aircraft (File foto)

Foreword

This report presents the information, data analysis, conclusions, and safety recommendations reached during the investigation. The purpose of the investigation was to establish the circumstances surrounding this safety occurrence.

In accordance with the provisions of Annex 13 to the Convention on International Civil Aviation Organization, the accident's analysis, conclusions, and safety recommendations contained therein are intended neither to apportion blame nor to single out any individual or group of individuals. The main objective was to identify the systemic deficiencies and draw lessons, from the occurrence, which might help to prevent accidents and incidents in the future. To this end, many a time, the reader may be interested in whether or not an issue was a direct cause of the accident (that has already taken place), whereas the investigator is mainly concerned with the prevention of future accidents/incidents.

As a result, the usage of this report for any purpose other than (the latter and spirit of Annex 13 and other relevant statutes) prevention of similar occurrences in the future might lead to erroneous interpretations and applications.



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ABBREVIATION

AME	-	Aircraft Maintenance Engineer
AMO	-	Aircraft Maintenance Organization
ARFFS	-	Airport Rescue and Fire Fighting Services
ATC	-	Air Traffic Control
CAVOK	-	Ceiling and Visibilty OK
DAAII	-	Directorate of Aircraft Accident and Incident Investigation
GFA	-	General Flying Area
GYR	-	Gyroplane Pilot License
ICAO	-	International Civil Aviation Organization
IIC	-	Investigator-In-Charge
kts	-	Knots
NCAA	-	Namibia Civil Aviation Authority
NAMCARs	-	Namibian Civil Aviation Regulations
MPI	-	Mandatory Periodic Inspection
QNH	-	Barometric Pressure Adjusted to Sea Level
SB	-	Service Bulletins
UTC	-	Universal Time Co-ordinated

Ministry of Works and Transport

ACCID/11162022/01-05/

DIRECTORATE OF AIRCRAFT ACCIDENT INVESTIGATION
ACCIDENT REPORT – EXECUTIVE SUMMARY

Aircraft Registration	V5-UIR	**Date of Accident**	09th May 2024	**Time of Accident**	09:04 UTC
Type of Aircraft	GYROPLANE ELA-07		**Type of Operation**	Private	
Pilot- In - command License Type	GYR	**Age**	52	**License Valid**	Valid
Pilot-In-command Flying Experience	Total Flying Hours	53		**Hours on Type**	53
Last point of departure	EROS Airport Windhoek (FYWE)				
Next point of intended landing	EROS Airport Windhoek (FYWE)				

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

223649.88S 0170449.59E EROS Airport Runway 01

Meteorological Information	Wind Direction: 330°, Wind speed: 13kts Gusting 16kts, Visibility 9999 (More than 10 km) with clear sky (CAVOK), Temperature: 24°C, Air Pressure: QNH 1027 Hpa				
Number of people on board	1	**No. of people injured**	0	**No. of people killed**	0

Synopsis

On the 09th of May 2024, at around 08:30 UTC (10:30 local time), a Namibian registered Gyroplane aircraft got airborne from runway 01 at EROS airport for a private flight. On board was the pilot only.

The pilot stated that the intention for the flight was to perform circuits and landings. The pilot reported that the first circuit was uneventful.

On the second circuit another aircraft was inbound from the north to join the Eros circuit for landing. The inbound aircraft was instructed to join the lefthand downwind position while the Gyroplane was cleared for a *touch-and-go and to maintain runway track until the pilot has the inbound aircraft in sight.

On touchdown, the pilot reported that he slowed the Gyroplane down until almost coming to a full stop. Just before stopping, a gust of wind from the West (left side) hit the Gyroplane. The pilot reported that he could feel the left hand mainwheel lifting off the ground and the Gyroplane fell over on its right hand side. The pilot switched the engine off and evacuated the aircraft.

The Directorate of Aircraft Accident and Incident Investigations (DAAII) was informed by telephone by the air traffic controller on duty. The DAAII appointed an Investigator-In-Charge (IIC) to lead the investigation and issue the final report.

The pilot was a Namibian citizen who was a holder of a valid Gyroplane Pilot License and a medical certificate valid till 31 October 2024.

The last Annual Inspection (AI) was carried out and certified on 02/07/ 2023, in accordance with the manufacturers specifications at 176 hours.

**Touch-and-go: a manoeuvre where a pilot lands on a runway and immediately takes off again instead of coming to a complete stop.*

Probable cause:

Loss of control on the ground (LOC-G)

Contributing factor (s):

Gust of wind.

MINISTRY OF WORKS AND TRANSPORT
Directorate of Aircraft Accident & Incident Investigations
2025 -03- 05
Office of the Director
Private Bag 12042, Ausspannplatz
Republic of Namibia

AIRCRAFT ACCIDENT REPORT

Name of Owner/Operator	: Wilhelmus K. Liebenberg
Manufacturer	: Ela Aviation, Spain
Model	: ELA-07
Nationality (aircraft)	: Namibian Registered
Registration	: V5-UIR
Location	: EROS Airport Windhoek
Date	: 09th May 2024 Time: 09:04 UTC

All times given in this report are in Co-ordinated Universal Time (UTC).

Disclaimer:

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 09th of May 2024, at around 08:30 UTC, a Namibian registered Gyroplane got airborne from runway 01 at Windhoek Eros airport (FYWE) for a private flight. On board was the pilot only.

1.1.2 The aircraft took off from runway 01 for the purpose of performing circuits and landings. The pilot indicated afterwards to the investigator, that he wanted to keep himself current by actively flying on a regular basis. He successfully completed his first touch-and go and continued with the second circuit.

1.1.3 On touchdown on the second circuit, the pilot slowed the Gyroplane down to almost a complete standstill. Just before coming to a full stop, a gust of wind from the west (left side) hit the Gyroplane and lifted the left main wheel off the ground. Before the pilot could do anything about the gust (counter act), the Gyroplane fell over due to the gust onto its right-hand side.

1.1.4 The whole accident was witnessed from the control tower and the crash alarm was pressed by the air traffic controller. The Airport Rescue and Fire Fighting Services (ARFFS), responded and proceeded to the scene. At the accident site, they found that the pilot had already evacuated the Gyroplane after switching everything off, but, because the gyroplane was on its side, fuel was leaking out from the fuel tank, they proceeded to spray the area with foam. The ARFFS crew then lifted the Gyroplane back on its wheels to avoid more fuel leaking out and causing a fire hazard.

1.2 Injuries to Persons

Injuries	Pilot	Crew	Pass.	Other
Fatal	-	-	-	-
Serious	-	-	-	-
Minor	-	-	-	-

1.3 Damage to Aircraft

1.3.1 The aircraft sustained substantial damage.

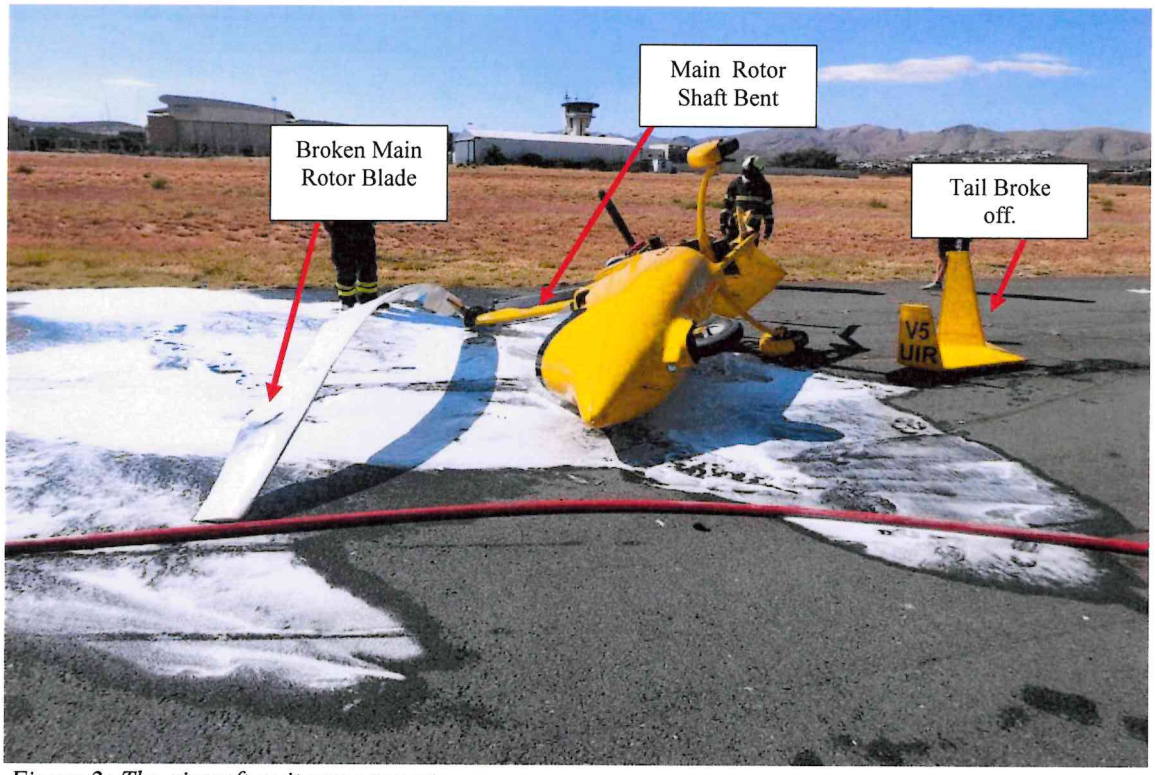


Figure 2: The aircraft as it came to rest.

1.4 Other Damage

1.4.1 No other damage was reported.

1.5 Personnel Information

1.5.1 Pilot-in-command

Nationality		Namibian			
Licence No	GYR 73686	Gender	Male	Age	52
Licence valid		Valid	Type Endorsed	n/a	
Type Ratings		None			
Medical Expiry Date		31/10/2024			
Restrictions		None			
Previous Accidents		Unknown			

Total Hours	53
Total Past 90 Days	4.3
Total on Type Past 90 Days	4.3
Total on Type	53

1.6 Aircraft Information

Figure 3: GYROPLANE ELA-07 (Source: Google, ELA Aviación)

The ELA 07 series features a single main rotor, a two-seats-in-tandem open cockpit with a windshield, tricycle landing gear with wheel pants and a four-cylinder, air-cooled, four-stroke, dual-ignition 100 hp (75 kW) Rotax 912S engine in pusher configuration. The turbocharged 115 hp (86 kW) Rotax 914 powerplant is optional.

The aircraft fuselage is made from TIG welded, CNC laser-cut stainless steel tubing for corrosion resistance. The cockpit fairing is non-structural carbon fibre and resin. Its 8.23 m (27.0 ft) diameter rotor has a chord of 22 cm (8.7 in) and is mounted to a rotor head made from a combination of stainless steel and 7075 T6 aluminium. The triple tail is also made from carbon fibre and resin.

Airframe:

Type	GYROPLANE
Serial No.	12092780724
Manufacturer	Ela Aviation
Year of Manufacture	2010
Last MPI (Date & Hours)	02/07/2023 at 176.4 airframe hours
Hours since Last MPI	53.6
Release for Safe Flight	20/07/2023 valid till 19/07/2024
Operating Categories	GYROPLANE.

Engine:

Manufacturer	ROTAX
Model	914
Serial No.	6773883
Hours since New	230

1.6.1 The Last Annual inspection was carried out on the 02nd of July 2023.

1.7 Meteorological Information

Wind direction	330°	Wind speed	13G16kts	Visibility	9999
Temperature	24° C	Cloud cover	NIL	Cloud base	CAVOK
QNH	1027				

1.8 Aids to Navigation

1.8.1 The aircraft was equipped with standard navigation equipment as approved by the Regulator. There was no recorded defects with the navigational equipment prior to the flight.

1.9 Communications.

1.9.1 The aircraft was equipped with standard communication equipment as approved by the Regulator for the type. There were no recorded defects with the communication system prior to the flight.

1.10 Aerodrome Information

1.10.1 The accident occurred during daylight at EROS Airport runway 01.
1.10.2 The accident occurred at GPS co-ordinates 223649.88S 0170449.59E

Accident Location	EROS Airport Windhoek	
Accident Co-ordinates	223649.88S 0170449.59E	
Accident site Elevation	5575 ft (1699.26 m)	
Runway Designations	01/19	09/27
Runway Dimensions(pan Length)	1983m x 30m	1005m x 30m
Runway Used	01	
Runway Surface	Asphalt	
Approach Facilities	none	
Visual aid	PAPI, Angle 4.3°	

1.11 Flight Recorders

1.11.1 The Aircraft was not equipped with a flight data recorder (FDR) or a cockpit voice recorder (CVR) nor was it required by the relevant aviation regulations.

1.12 Wreckage Distribution and Impact Information

The accident occurred at Eros airport on Runway 01.

When the Gyroplane fell on its side, the spinning main rotor blades stroke the ground causing the blades to be substantially damaged. The propeller on the engine also impacted the ground and the propeller blades were broken. The impact also caused damage to the main rotor shaft and casing, the main rotor shaft was bent. The tail broke off and was separated from the aircraft.

Figure 4: Photo depicting overall damage to Gyroplane.

Figure 5: Photo depicting damage to main rotor.

Figure 6: Photo depicting damage to the engine propeller.

1.13 Medical and Pathological Information

1.13.1 The pilot medical certificate was valid.

1.14 Fire

1.14.1 There was no pre- or post-impact fire.

1.15 Survival Aspects.

1.15.1 The pilot was properly restrained by making use of the aircraft-equipped safety harness and did not sustain any injuries during the impact sequence which was associated with low kinetic forces within the level of human tolerance.

1.15.2 This was a survivable accident.

1.16 Tests and Research.

1.16.1. No test or research was carried out and none was required.

1.17 Organizational and Management Information.

1.17.1. The Gyroplane was flown by a Gyroplane license holder who is also the owner of the aircraft.

1.18 Additional Information

1.18.1 No additional information.

1.19 Useful or Effective Investigation Techniques.

1.19.1 Not applicable.

2 ANALYSIS

2.1. Operation

The pilot informed the investigator that, the instruction from the air traffic controller was understood to be, stay on the runway until you have the other traffic insight. Thus the aircraft was landed and slowing down on the runway until the other traffic was spotted.

Recordings from the Eros Air Traffic Control tower frequency 118, 7 MHz were impounded for analysis. From the air traffic control recordings, the investigator found that the instruction to the gyroplane was, cleared for the touch-and-go and maintain runway track until the pilot have another aircraft that was returning from the General Flying Area and was joing the circuit via the lefthand downwind position insight. Runway track is, once an aircraft is airborne and on the same heading as the runway, the wind direction and speed must be considered and compensated for as not to blow the aircraft to the left or right of the runway heading.

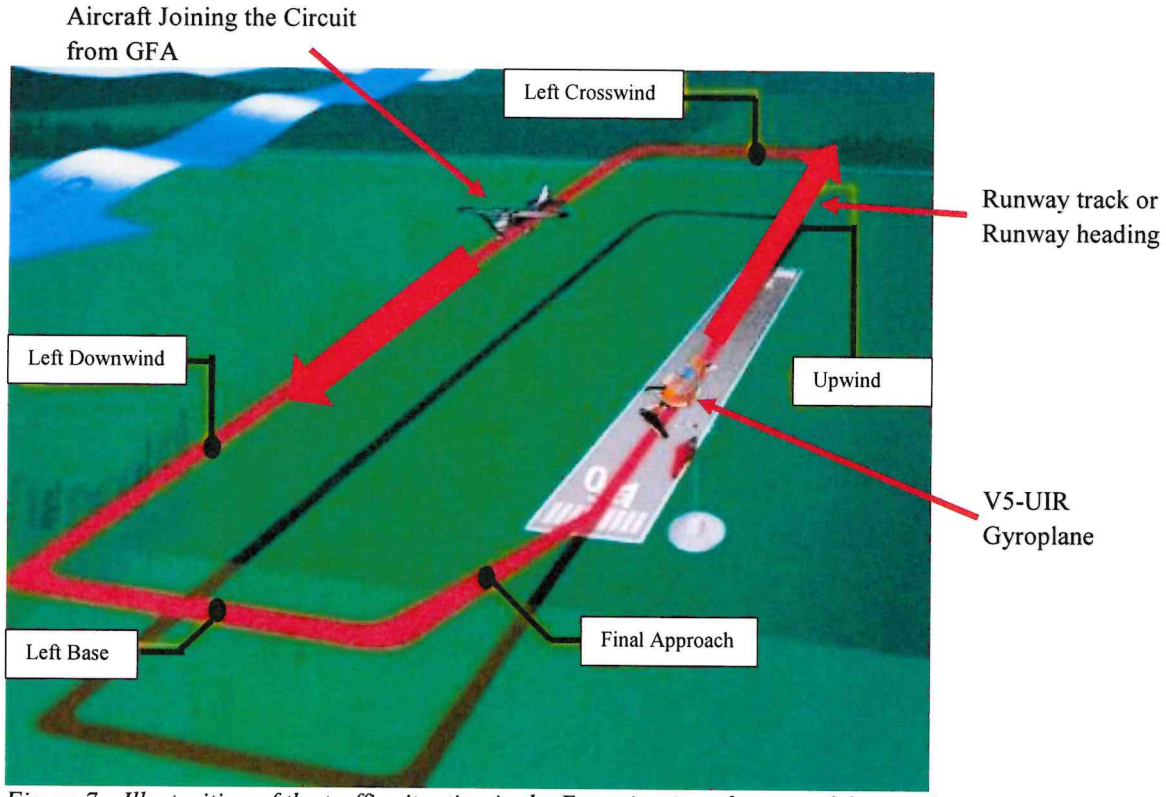


Figure 7: Illustraition of the traffic situation in the Eros circuit at the time of the accident.

2.2. Aircraft

The last MPI was conducted on 02nd July 2023 at 176 airframe hours.

Post-accident investigation revealed no pre-existing failures prior to the accident; all damage was caused during the accident. Records indicated that the aircraft was airworthy at the time.

There were no recorded defects before the flight. The aircraft was equipped with standard navigation and communication equipment as required by the Regulator for the Aircraft type.

3. CONCLUSION

3.1. Findings

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

3.1.2 The aircraft had a valid Special Certificate of Airworthiness (Authority to Fly) for Gyroplane.

3.1.3 There was no evidence of airframe failure or system malfunction prior to the accident.

3.1.4 The pilot had a valid Gyroplane Pilot Licence.

3.2. Probable Cause/s

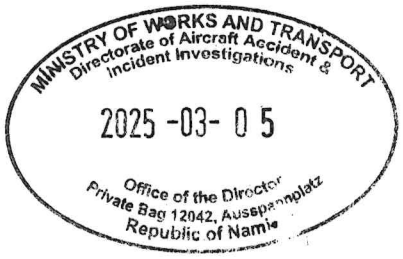
3.2.1 Loss of control on the ground (LOC-G).

3.3. Contributing factor

3.3.1 Gust of wind.

4. Safety Recommendations

4.1. None



Compiled by:

Ben C. A. Englebrecht
Investigator-in-Charge

Date: 05/03/2025

Released by:

Philippine Lundama
ACTING DIRECTOR: AIRCRAFT ACCIDENT AND INCIDENT INVESTIGATION

Date: 05 · 03 · 2025