PRELIMINARY ACCIDENT REPORT

Accident and Incident Investigations Division

Accident
- Preliminary Report -
AIID Ref No: CA18/2/3/10655

Figure 1: A file picture of the Dudek Warp 3 18. (Source: Owner's Manual)

Description:

On Saturday, 23 May 2026 at approximately 1346Z, a pilot operating a Dudek Warp 3 18 wing motor-powered paraglider departed on a private flight from the Aviators "new site" adjacent to The Coves Airfield in Hartbeespoort Dam, North West province, with the intention to return to the launch site and participate in an informal race with three other pilots. After two unsuccessful take-off attempts due to handling difficulties during the informal race, the pilot successfully launched on the third attempt under favourable weather conditions with north-north-east winds gusting 8 knots (kts) and a temperature of 22°C.

The flight tracking data (Gaggle Flight Recorder) indicated that the paraglider flew east along the Regional Road 512 (R512) before turning left at approximately 1352Z towards Hartbeespoort Dam. During the next two minutes, the recorded flight path indicated a descent from 345ft AGL to approximately 203 feet (ft) above ground level (AGL) with speed reducing from about 63 kilometres per hour (km/h) to 43 km/h.

At approximately 1354Z during a sharp 90-degree left turn, the paraglider rapidly lost height and airspeed, and it impacted the ground on the left side of the R512. The impact time was confirmed at 1354:22Z when the groundspeed reduced to zero. The total flight time was approximately 7 minutes and 27 seconds. Motorists on the R512 were first on scene; they assisted the pilot as well as alerted the relevant authorities. The Emergency Medical Services (EMS) and the South African Police Service (SAPS) personnel declared the pilot fatally injured at the scene after assessing him.

Occurrence Details

Reference Number	**:** CA18/2/3/10655
Occurrence Category	**:** Accident (Category 2)
Type of Operation	**:** Private
Name of Operator	**:** Eugene Cussons
Paraglider Wing Make and Model:	**:** Dudek Warp 3 18
Nationality	**:** South African
Place	**:** On the left side of the R512 near Harties Dam View Resort
Date and Time	**:** 23 May 2026 at 1354Z
Injuries	**:** Fatal
Damage	**:** Substantial

Purpose of the Investigation

In terms of Regulation 12.03.1 of the Civil Aviation Regulations (CAR) 2011, 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.

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.

Investigation Process

The Accident and Incident Investigations Division (AIID) was notified of an occurrence involving a Dudek Warp 3 18 wing motor-powered paraglider which occurred on the left side of the R512 near Harties Dam View Resort, North West province, on 23 May 2026 at 1354Z. The South African Hang-Gliding and Paragliding Association (SAHPA) requested the assistance of the AIID to conduct the investigation in accordance with (IAW) Part 12 of the Civil Aviation Regulations (CAR) 2011, as amended.

The information contained in this preliminary report is derived from the information gathered during the on-going investigation into the occurrence. Later, an interim or final report may contain altered information in case new evidence is found during the on-going investigation that requires changes to the information depicted in this report.

The AIID reports are made available to the public at:
https://www.caa.co.za/industry-information/accidents-and-incidents/

Notes:

1. *Whenever the following words are mentioned in this report, they shall mean the following:*
   Accident — this investigated accident
   Powered Paraglider— the Dudek Warp 3 18 wing involved in this accident
   Investigation — the investigation into the circumstances of this accident
   Pilot — the pilot involved in this accident
   Report — this accident report

2. *Photos and figures used in this report were taken from different sources and may have been adjusted from the original for the sole purpose of improving clarity of the report. Modifications to images used in this report were limited to cropping, magnification, file compression; or enhancement of colour, brightness, contrast; or addition of text boxes, arrows, or lines.*

Disclaimer

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Table of Contents

Abbreviation	Description
°	Degrees
°C	Degrees Celsius
AGL	Above Ground Level
AIID	Accident and Incident Investigations Division
Alt	Altitude
CAR	Civil Aviation Regulations
CCTV	Closed Circuit Television
C of R	Certificate of Registration
CRS	Certificate of Release to Service
CPR	Cardiopulmonary Resuscitation
EMS	Emergency Medical Service
FALA	Lanseria International Airport
ft	Feet
GPS	Global Positioning System
hPa	Hectopascal
IGC	International Gliding Commission
kg	Kilograms
kt	Knots
m	Metres
METAR	Meteorological Aerodrome Report
N/A	Not Applicable
NPL	National Pilot Licence
PPG	Powered Paraglider
SACAA	South African Civil Aviation Authority
SAHPA	South African Hang Gliding and Paragliding Association
SAPS	South African Police Service
SAWS	South African Weather Service
VFR	Visual Flight Rules
VMC	Visual Meteorological Conditions
QAR	Quick Access Recorder
QNH	Altitude Above Mean Sea Level
Z	Zulu (Term for Universal Co-ordinated Time - Zero Hours Greenwich)

1. FACTUAL INFORMATION

1.1. History of Flight

1.1.1. On Saturday afternoon, 23 May 2026, at 1346Z, a pilot on-board a Dudek Warp 3 18 wing motor-powered paraglider departed on a private flight from the designated launch site, Aviators (new site), situated adjacent to The Coves Airfield in Hartbeespoort Dam, North-West province, with the intention to land back at the same launch site; thereafter, race three other paragliders before returning to the same launch site. The flight was conducted under visual meteorological conditions (VMC) and under the provisions of Part 94 of the Civil Aviation Regulations (CAR) 2011, as amended.

1.1.2. The paraglider pilot had difficulty launching the paraglider during the first two take-off attempts. He launched the paraglider successfully on the third attempt. The wind speed was north-north-east, gusting 8 knots (kts) with an air temperature of 22°C. According to the Gaggle Flight Recorder application used by the South African Hang-Gliding and Paragliding Association (SAHPA) for their flight tracking, the paraglider departed from the launch site at approximately 1347Z and proceeded east along the Regional Road 512 (R512). (*The Gaggle Flight Recorder primarily records GPS position, altitude, speed and live tracking of a flight path data in the form of video footage*). At approximately 1352Z, the paraglider turned left towards Hartbeespoort Dam, flying north along the right side of the R512 at about 63 kilometres per hour (km/h) and approximately 345 feet (ft) above ground level (AGL). The recorded flight path showed a descent to about 203ft with speed reducing to about 43 km/h. At approximately 1354Z, the paraglider's speed and height decreased rapidly during a sharp 90-degree turn to the left after which it impacted the ground on the left side of the R512.

1.1.3. At 1354:22Z, the flight recorder recorded ground speed reduction to zero, consistent with ground impact. The recorded flight time from departure to impact was approximately 7 minutes and 27 seconds. During this time, another pilot in the race transmitted a MAYDAY (distress call) on radio frequency 125.8-Megahertz (MHz) which was received by the Aeronautical Rescue Coordination Centre (ARCC) and relayed to the relevant authorities.

1.1.4. Motorists travelling on the R512 who witnessed the accident were the first to arrive at the site. They attempted to rescue the pilot whilst emergency services were contacted. After the arrival of the Emergency Medical Service (EMS) and the South African Police Service (SAPS) personnel, the pilot was declared fatally injured at the scene after their assessment.

1.1.5. The accident occurred during daylight on the left side of the R512 near Harties Dam View Resort at Global Positioning System (GPS) co-ordinates determined to be 25°46'15.58" South 27°49'14.79" East, at a field elevation of approximately 3 886ft.

Figure 2: The recorded flight path of the paraglider. (Source: SAHPA)

1.2. Injuries to Persons

Injuries	Pilot	Crew	Pass.	Total On-board	Other
Fatal	1	-	-	1	-
Serious	-	-	-	-	-
Minor	-	-	-	-	-
None	-	-	-	-	-
Total	**1**	**-**	**-**	**1**	**-**

Note: Other means people on the ground.

1.2.1. The pilot was fatally injured during the accident.

1.3. Damage to Aircraft

1.3.1. The motor-powered paraglider was substantially damaged during the accident sequence.

Figure 3: The damaged paraglider after the accident. (Source: First Responders)

1.4. Other Damage

1.4.1. None.

1.5. Personnel Information

Nationality	South African	Gender	Male	Age	46
Licence Type	National Pilot Licence (NPL)				
Licence Valid	Yes	Type Endorsed	Yes		
Ratings	Power Paraglider (PPG) Grade B, PPG Sport, PPG Tandem				
Medical Expiry Date	30 September 2027				
Restrictions	None				
Previous Accidents	Unknown				

Note: Previous accidents refer to past accidents in which the pilot was involved, when relevant to this accident.

Flying Experience:

Total Hours	1904
Total Past 24 Hours	0.2
Total Past 7 Days	0.2
Total Past 90 Days	Unknown
Total on Type Past 90 Days	Unknown
Total on Type	18.65

1.5.1. The pilot had a National Pilot Licence (NPL) that was initially issued by the Regulator (SACAA) on 12 September 2013. The licence was reissued on 15 September 2025 with an expiry date of 30 September 2027. His Class 4 aviation medical certificate was issued on 2 September 2025 with an expiry date of 30 September 2027. The medical certificate was valid at the time of the flight.

1.5.2. The pilot was a Grade B and Tandem instructor on power paragliders. He had a total of 1 904 flying hours of which 1 076 were accrued on powered paragliders and 828 on striker aircraft.

1.6. Paraglider Information

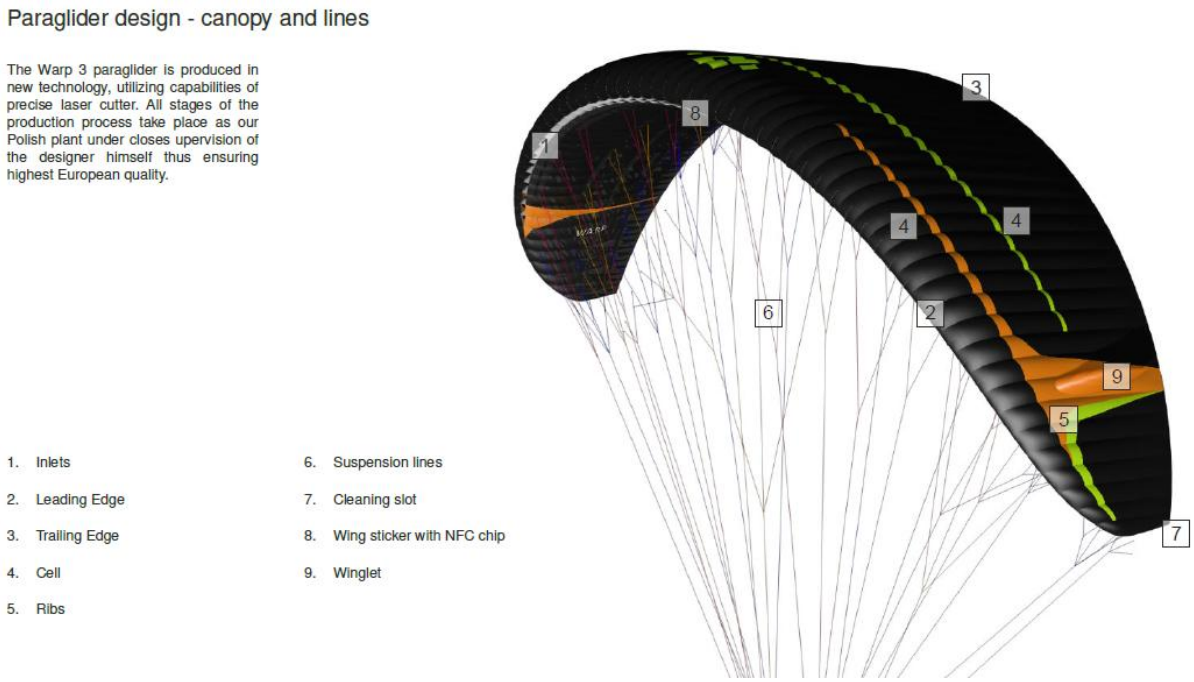

Figure 4: The Dudek Warp wing type. (Source: Dudek Warp 3 User Manual)

1.6.1. *The Dudek Warp 3 Size 18 wing is a high-performance reflex paramotor wing aimed at experienced cross-country and competition pilots. It combines high speed with improved efficiency and stability compared with the previous Warp 2. For a foot-launch pilot, the Size*

18 is generally considered most balanced around 115–125kg all-up weight (pilot, motor, fuel, and equipment combined). Loading closer to 140kg increases speed and dynamic handling but requires greater pilot skill.

Airframe:

Manufacturer/Model	Nirvana / Dudek Warp 3	
Serial Number	P-282982 2025 Size 18	
Year of Manufacture	2025	
Total Airframe Hours (At Time of Accident)	18.65	
Last Inspection (Date & Hours)	Unknown	
Hours Since Last Inspection	Unknown	
CRS Issue Date	N/A	
C of A / ATF (Issue Date & Expiry Date)	N/A	
C of R (Issue Date) (Present Owner)	N/A	
Type of Fuel Used	93 /95 Mogas	
Operating Category	Recreational (Part 94)	
Previous Accidents	None	

Note: *Wing servicing is the responsibility of the pilot. The associated service records were not available on the Gaggle platform, as submission of these records is not mandatory.*

Engine:

Manufacturer/Model	Simonini / Nirvana F230cc 33Hp
Serial Number	2523111
Part Number	TBA
Hours Since New	TBA
Hours Since Overhaul	TBA

Note: *The Paramotor comes with the built-in three-bladed propellers.*

1.6.2. The fuel in the paraglider was filled to capacity and amounted to 8 litres (L) with a total weight of 7 kilograms (kg) when the flight was conducted. The pilot's weight was estimated at 95kg and the pilot's kit weighed approximately 3kg. The frame, motor, harness and reserve parachute weighed approximately 37kg and the wing weighed 4.3kg. The estimated all-up weight was approximately 146kg, exceeding the manufacturer's recommended maximum weight of 140kg.

1.6.3. Use of Brakes in Different Configurations (Source: User's Manual)

It is not recommended to use the main brakes with the trimmers released beyond half of their adjustment range and/or with the speed system engaged, especially in turbulent conditions. The limit configuration for using the main brakes can be considered the setting in which the trimmer strap tip remains attached to the magnet. Releasing the trimmer and using the speed

system generally increase the wing's stability and resistance to collapses. However, when the main brakes are applied, this effect is reversed. The faster is pulled down, the lower the wing's resistance to collapses. In extreme configurations (e.g. full speed), pulling one or both brakes may result in sudden and dynamic collapse.

Important: It is not recommended to shorten the brake lines relative to factory settings without appropriately adjusting the position of the brake pulleys. When adjusting the brake line length, make sure that the trailing edge does not deform in any speed configuration. If deformation occurs, stop testing immediately and lengthen the brake lines.

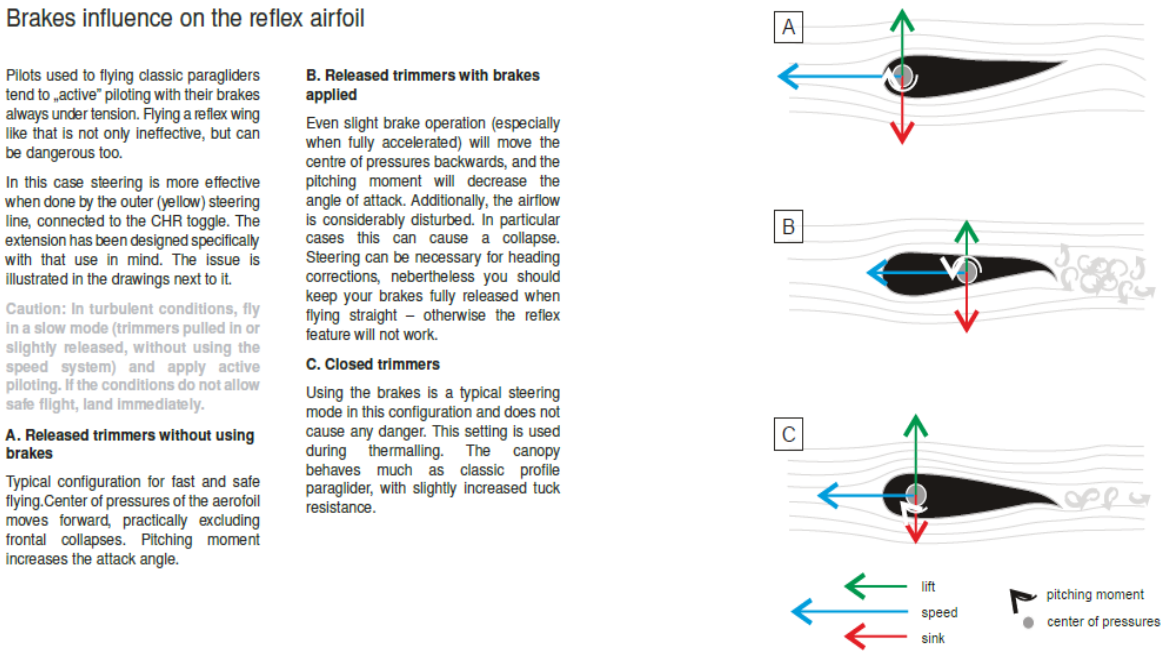

Figure 5: Illustration of the brake effect during flight.

1.7. Meteorological Information

1.7.1. The weather information below was obtained from the Meteorological Aerodrome Report (METAR) that was issued by the South African Weather Service (SAWS), recorded at Lanseria International Airport (FALA) on 23 May 2026 at 1350Z. The accident site was approximately 12 nautical miles (nm) from FALA.

Wind Direction	NNE°	Wind Speed	8 kt	Visibility	9999 m
Temperature	22°C	Cloud Cover	3/8	Cloud Base	6 500 ft
Dew Point	°C	QNH	1021 hPa		

1.7.2. The weather conditions in the vicinity were characterised by thermal activity, gusty surface winds, cumulus cloud development and elevated wind speeds. Local pilots reported that the accident area was prone to rotor activity at low altitude. The Gaggle Flight Recorder track log and video footage indicated that the pilot descended to a lower altitude, likely to avoid stronger winds aloft and improve ground speed. The pilot's on-board video footage also showed evidence of thermal and rotor activity near the accident site.

Figure 6: Thermal in the vicinity around the accident site.
(Source: Gaggle Flight Recorder Data Application)

1.7.3. Thermal activity during the flight was assessed from the recorded flight data and available video footage of the Gaggle Flight Recorder Application. Data showed active pilot input, including the use of the tip-steering handles, consistent with the pilot managing thermal lift and turbulence. Gaggle Flight Recorder Application data, including thermal strength, sink rate and G-force values, provided objective corroboration of the dynamic atmospheric conditions encountered during the flight.

1.8. Aids to Navigation

1.8.1. The paraglider was equipped with standard navigational equipment, including the Gaggle Flight Recorder Application. The device records paragliding activities and compiles them into a retrievable International Gliding Commission (IGC) file format. This format provides data parameters that include GPS co-ordinates, time stamps (UTC), ground speed, GPS altitude, barometric altitude, vertical speed (variometer) and track. There were no records indicating that the navigational equipment was unserviceable before the flight.

1.9. Communication

1.9.1. The pilot's helmet was equipped with a standard communication system IC-A25CE Bluetooth, serial number: 33004645. There were no recorded defects with the communication system before the flight. The pilot briefing was conducted via Airband radio frequency 130.35-MHz. As soon as the pilot takes off from the field, they are requested to change to special rules west radio frequency 125.8-MHz, which was used by the other pilot during the broadcast of the MAYDAY call.

1.10. Aerodrome Information

1.10.1. Aviators is a field located adjacent to The Cove Airfield. It is a designated space specifically allocated for paragliding activities. The paraglider was launched in a northerly direction adjacent to Runway 36 (RWY 36).

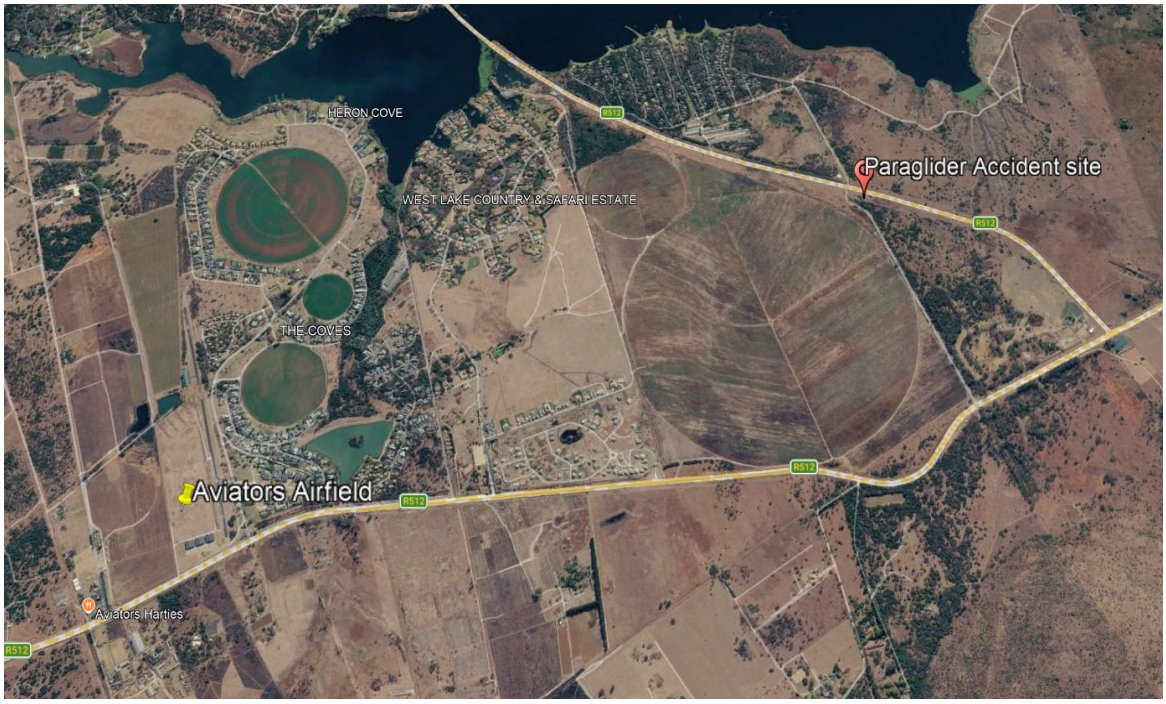

Figure 7: Aviators launch site. (Source: Google Map)

Aerodrome Location	The Coves Airfield, North West Province
Aerodrome Status	Licensed
Aerodrome GPS coordinates	25°46'38.0" South, 027°47'35.0" East
Aerodrome Elevation	3 885ft
Runway Headings	18/36
Dimensions of Runway Used	10m x 900m
Heading of Runway Used	Adjacent RWY 36
Surface of Runway Used	Tar
Approach Facilities	None
Radio Frequency	128.80-MHz

1.11. Flight Recorders

1.11.1. The paraglider was neither equipped with a flight data recorder (FDR) or a cockpit voice recorder (CVR), nor was it required by regulation to be fitted to the paraglider type.

1.11.2. In the absence of a dedicated FDR or Quick Access Recorder (QAR), flight parameter data was sourced from the following alternative recording systems:

- Gaggle Flight Recorder Application, a third-party flight logging application installed in pilots' mobile devices and records GPS co-ordinates, ground speed, GPS and barometric altitude, vertical speed (variometer), track and time-stamped flight path data in IGC-compatible format.

Figure 8: The picture shows the pilot with his legs extended forward, consistent with speed-bar position.

- On-board video camera, partial flight imagery and incidental flight data which may be extractable from the on-board camera footage, as referenced in the section below (from 1.11.3 to 1.11.9) with still footage presented in the respective figures of this report. The following sequence of events was observed from the video footage during the accident.

1.11.3. Approximately 1 minute and 06 seconds before the accident, the on-board camera showed the pilot with his legs extended forward, consistent with speed-bar usage. About a second before the initial collapse, the speed bar remained partially applied, estimated at 50% travel, and the trimmers were fully open at No.12 setting. The wing was, therefore, operating in an accelerated, high-speed configuration with reduced margin for recovery after collapse.

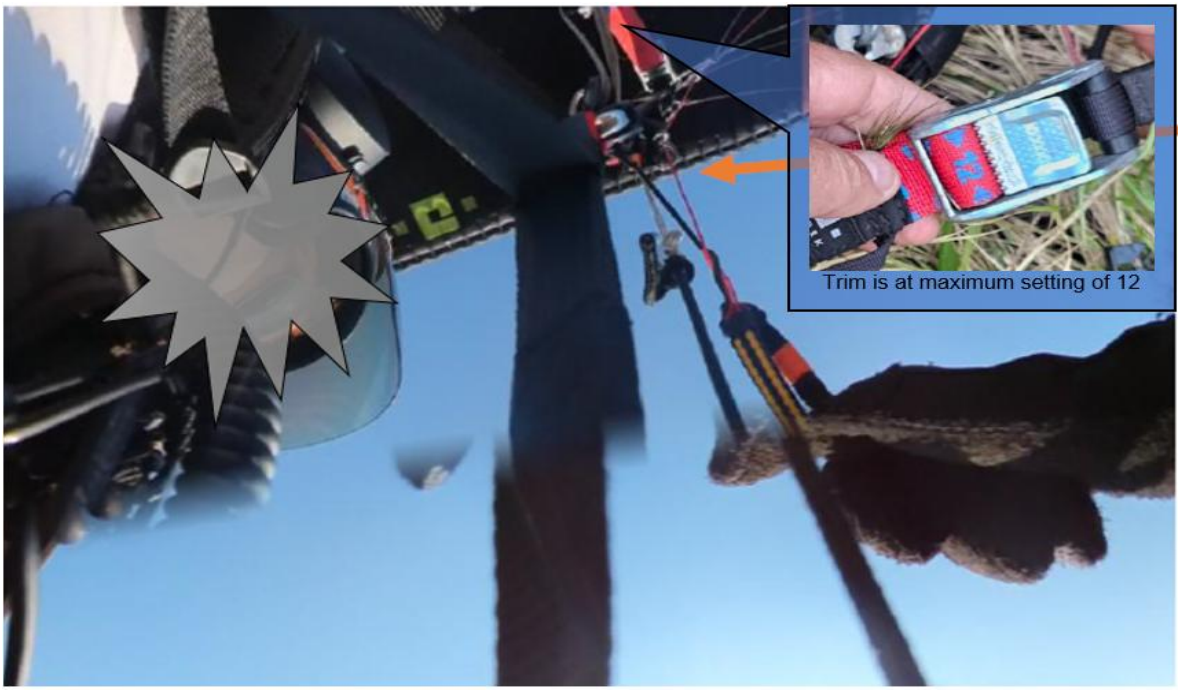

Figure 9: The pilot is observed flying a tip-steering pattern indicated by the yellow and black handle.

Note: *The time format used in the following sequence of events is in minutes/seconds/hundredths of a seconds.*

1.11.4. At 6:40.72, the first disturbance on the left wing was visible. The wing developed an asymmetric profile, consistent with the onset of a partial left-side tuck. The pilot remained on the speed bar and continued making inputs through the tip-steering handles. At 6:40.95, approximately 0.2 seconds later, the left side of the wing collapsed asymmetrically. The canopy folded inward and the wing began to fall rearward whilst the pilot was still in the accelerated configuration.

At 6:41.19, the pilot began releasing the speed bar whilst continuing to use the tip-steering handles with an estimated pull of about 300 millimetres (mm). *The left side of the wing was outside the camera view in Figure 8*. The wing pitched violently rearward and entered a rapid backwards-rotating attitude, consistent with an unrecovered asymmetric collapse in an accelerated trim configuration. At 6:41.45, the speed bar had been fully released, but the pilot was still applying tip-steering input. The wing had pitched rearward, the pilot's body was approximately 60° rearward relative to the horizon, and the wing had rolled left to an estimated 90° bank. The combined pitch, roll and collapse indicated a rapidly developing uncontrolled rotation.

Figure 10: The left-wing side edge begins to collapse.

1.11.5. At 6:41.75, the wing partially re-inflated but did not return to controlled flight. Instead, it continued rotating, entered a steep left-diving trajectory and collapsed again. The flight path had changed from a rearward pitch rotation into a high-energy, left-diving rotating descent.

Figure 11: The wing is pulled (dragged) rearwards.

The initial left collapse sequence from onset to partial re-inflation lasted approximately 1 second. The re-inflation was not a controlled recovery; it was followed by further collapse and a steep left nose-down surge which aggravated the loss of control. At 6:41.92, the left side of the wing remained deflated; the wing-and-pilot system had entered a fully developed uncontrolled spin. The pilot's body had rotated almost opposite the wing's direction of travel. Engine power remained applied, which likely steepened and accelerated the descent.

1.11.6. At 6:43.01, the wing recovered into an approximate 45° nose-down dive rather than a normal flight. The pilot was also oriented nose-down after the preceding spin. Engine power remained on, and the pilot continued applying tip-steering inputs whilst in the steep dive with a limited height for recovery.

Figure 12: The wing facing downwards at an almost uncontrollable attitude.

At 6:43.11, approximately 0.1 seconds after the partial recovery, the wing sustained a full symmetric collapse whilst already in a steep dive. Engine power remained applied, and the pilot was pulling the tip-steering handles with the visible input estimated at 450mm. *The pilot's left hand was outside the camera view and could not be assessed*. At 6:43.47, the pilot's left hand became visible holding the throttle. Significant pull on the tip-steering lines was apparent. The pilot had progressed to a near-vertical, ground-facing attitude with engine power still applied. At this point, the combination of collapse, thrust, attitude and low altitude was unrecoverable for the paraglider.

Figure 13: The pilot is seen with his hand free from the controls and the wing at a steep dive.

At 6:43.77, the wing re-inflated again but entered a steep dive rather than a controlled flight. The pilot was facing opposite the wing's heading, consistent with the accumulated rotation from the preceding spin and collapse sequence. Engine power remained applied. At 6:44.55, the wing recovered into an almost horizontal, flat nose-down attitude. The pilot was fully supine, facing upward and opposite the direction of travel. He remained active on the tip-steering handles, and the engine power continued to operate whilst the wing-and-pilot system descended in an uncontrolled terminal attitude close to the ground. At 6:44.80, the pilot released the right tip-steering handles. Engine audio confirmed that power remained applied. The wing was approximately 45° nose-down and the pilot's body was about 180° opposite the wing's heading, reflecting the accumulated rotational displacement.

1.11.7. At 6:45.08, the wing sustained another full symmetric collapse. The pilot had ceased active input and the system remained in an uncontrolled rotating descent. The reserve parachute deployment handle was visible and still secured to the harness, indicating that no reserve deployment attempt was made during the terminal sequence. At 6:46.22, the wing was partially inflated in an approximate 45° nose-down attitude. The pilot was about 45° rearward-facing relative to the descent path and appeared to reach toward the tip-steering or brake handles in a final corrective attempt. The estimated height was about 5m above ground, leaving insufficient altitude for recovery.

1.11.8. At 6:46.70, the wing appeared nearly fully inflated but remained in an almost horizontal nose-down dive. The pilot was facing toward the ground and was between 60° and 90° opposite the wing's heading. Ground contact was imminent and no altitude remained for corrective action. At 6:46.85, the wing and pilot contacted the ground almost simultaneously. The wing was in a nose-down attitude. The pilot impacted predominantly on the left side at approximately 45° to the ground, consistent with the video footage, first responder observations, and physical evidence at the accident site. At 6:46.93, the pilot was seen on the ground and on his left side while still holding the left tip-steering handle and throttle. Although the pilot had released the right tip-steering handle at 6:44.80, the footage indicated that he tried to re-engage them during the final seconds of descent in an apparent last corrective attempt.

Figure 14: The pilot and the wing nearing the ground before impact.

1.11.9. During impact, the pilot's chest pouch strap failed under ground impact force. The pilot's initial ground contact was face and body first, with the paramotor unit still mounted on his back. The mass and momentum of the unit were driven through the pilot during impact. This impact configuration is consistent with severe/fatal injuries. Confirmation remains subject to the postmortem examination report.

1.12. Wreckage and Impact Information

1.12.1. The paraglider accident site was located approximately 25m from the left edge of the R512 near Hartbeespoort Dam, North West province. The impact occurred in an open area after a sharp left turn with reduced forward speed. The site consisted of overgrown grass with a few trees within a 10m radius.

Figure 15: The flight recording leading to the accident.

The wreckage was concentrated within a radius of approximately 10m, consistent with a near-vertical, high-angle descent into terrain. This pattern indicated an uncontrolled dive from height, with minimal or no forward speed, and aligns with the recorded flight data. The impact signature, ground strike pattern, and single-point wreckage concentration further supported this assessment.

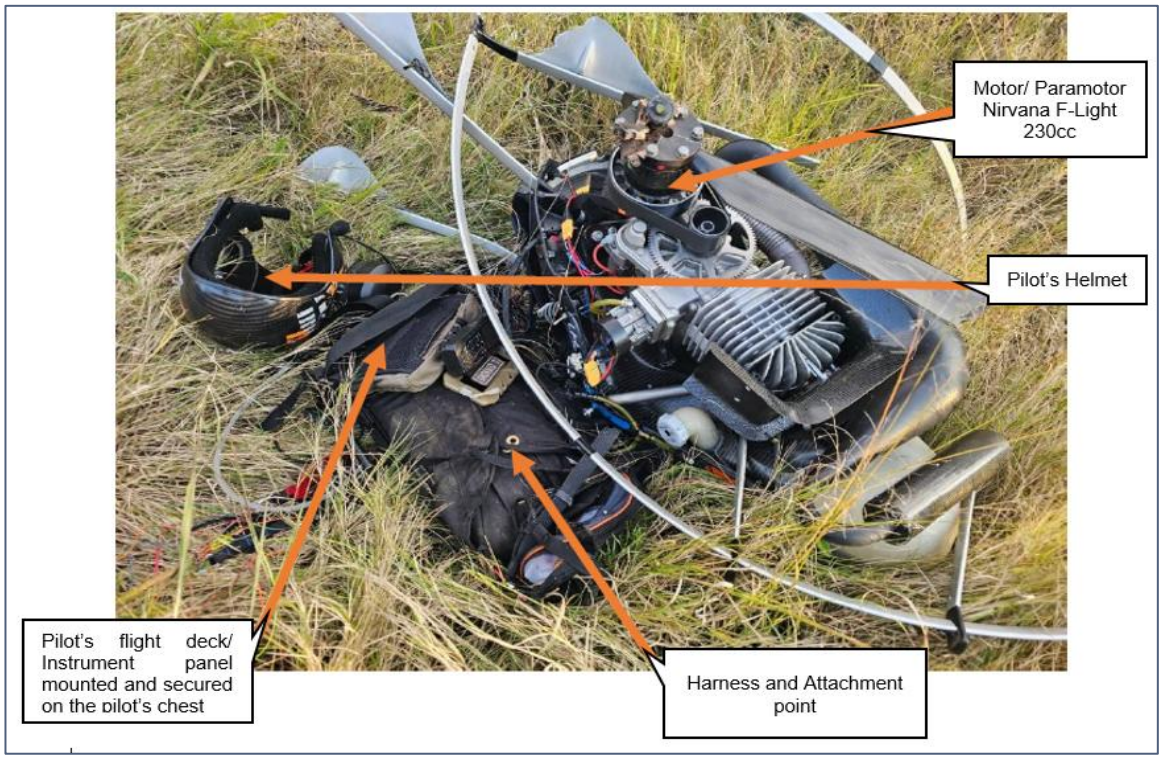

Figure 16: The paraglider motor and the canopy.

1.12.2. The pilot was wearing a Nirvana-branded helmet fitted with a face visor that provided wind protection. The face visor was found detached at the accident site. Upon arrival of the first responders, the helmet was displaced from the pilot's head. The displacement was likely a result of the accident sequence and consistent with the high-energy, near-vertical ground impact.

1.12.3. The paramotor securing fan was destroyed, and all three propeller blades had separated from the propeller hub, consistent with the forces generated during the impact sequence.

1.12.4. The pilot's harness and associated attachment points, including the carabiners connecting the wing to the harness, were examined. It was established that the first responders had cut the harness to rescue the pilot, and to administer cardiopulmonary resuscitation (CPR). The severed components included the left and right shoulder straps, chest strap, abdominal strap and both leg straps. These alterations were identified and accounted for during the on-site investigation.

Figure 17: Cut-off harnesses by first responders: shoulder, leg straps and the stomach harnesses.

1.12.5. Notwithstanding the post-impact cutting off of the harnesses, examination of the remaining attachment points and structural components revealed no evidence of in-flight structural failure or separation. This was subsequently corroborated by available video footage which showed the harness and attachment points remaining intact throughout the recorded portion of the flight.

Figure 18: The reserve parachute with one securing pin missing.

1.12.6. The reserve parachute housed in a container beneath the harness seat remained within its deployment bag. Examination of the reserve parachute assembly revealed that one of the two safety pins was displaced from its retention position, and the deployment handle was loose and detached from its normal attachment point on the harness. The reserve parachute container remained closed, and the canopy did not deploy. Available evidence indicated that no attempt was made to deploy the reserve parachute before or during the accident sequence. It could not be determined whether the displaced safety pin and detached deployment handle resulted from impact forces or if they existed before the accident. This aspect remains under investigation.

Figure 19: The cut straps, brake handle, wing riser strap and the speed.

1.12.7. The brake handles were found cut at the accident site. The wing risers remained attached to both the paramotor unit and the harness and had not been cut or interfered with during the first responder extraction procedure. Physical examination of the risers and associated carabiners revealed no evidence of structural damage, deformation or in-flight failure. All components appeared intact at the time of examination.

Figure 20: The wing riser trimmers were set to a maximum position No.12 as indicated.

1.12.8. Upon examination, the wing riser straps were found partially beneath the pilot's body at the accident site, having been cut by the first responders during the emergency extraction procedure. Notwithstanding the post-impact cutting of the riser straps, a thorough examination of all accessible riser components and carabiners revealed no indication of any structural damage, deformation or in-flight failure. All attachment hardware appeared intact and serviceable at the time of examination. The wing trim and the wing riser trim were both found on fully open for high-speed and low-angle-of-attack configurations.

Figure 21: The wing after it was moved after the accident.

1.12.9. The wing was moved from its position after impact as it was used to cover the pilot's body. The wing inspection revealed no damage.

1.13. Medical and Pathological Information

1.13.1. The pathological report has not yet been made available at the time of release of this preliminary report.

1.14. Fire

1.14.1. There was no pre- or post-impact fire during the accident sequence.
Note: The first responders requested that SAPS remove the live battery from the wreckage as there was fuel leak which posed a potential fire risk.

1.15. Survival Aspects

1.15.1. The accident was not survivable. The attitude and height resulted in significant impact forces. An eyewitness arrived within 2 minutes and attempted to assist; however, the pilot was declared fatally injured at the accident site by EMS personnel.

1.15.2. The paraglider was equipped with a reserve parachute fitted to the paramotor harness. At the accident site, the reserve parachute was found undeployed and remained in its deployment bag. One of the two safety pins was displaced, and the deployment handle was loose and detached from its secured position on the harness seat area.

1.16. **Tests and Research**

1.16.1. The wing was recovered to an approved maintenance facility for further examination.

1.16.2. The following information of the wing type and make is published at: *https://dudek.eu/en/produkt/warp-3*

The basic rule is to choose the wing size so the take-off weight is in the middle of the weight range. Less weight on the wing (lower range take-off weight) can be considered for foot take-off, when flying in calmer conditions, or when we want to improve economy. More experienced pilots who want to fly dynamically, have higher speed and fly in more demanding wind conditions can consider greater wing loading (take-off weight in the upper range). This is a common option among trike users.

***Note** – the canopy significantly changes its behaviour with increasing wing loading. The greater the loads, the greater skill and concentration of the pilot are required".*

It is not recommended to use the main brakes with the trimmers released beyond half of their adjustment range and/or with the speed system engaged, especially in turbulent conditions. The limit configuration for using the main brakes can be considered the setting in which the trimmer strap tip remains attached to the magnet. Releasing the trimmers and using the speed system generally increases the wing's stability and resistance to collapses. However, when the main brakes are applied, this effect is reversed. The faster the configuration when the trailing edge is pulled down, the greater the risk. The lower the wing's resistance to collapse. In extreme configurations (e.g. full speed), pulling one or both brakes may result in sudden and dynamic collapses.

Important: It is not recommended to shorten the brake lines relative to factory settings without appropriately adjusting the position of the brake pulleys. When adjusting the brake line length, make sure that the trailing edge does not deform in any speed configuration. If deformation occurs, stop testing immediately and lengthen the brake lines. Page 34 of WARP 3 User Manual, Appendix D.

1.17. **Organisational and Management Information**

1.17.1. This was a private flight conducted under private capacity.

1.18. **Additional Information**

1.18.1. Pilot's Social Media Handle on Paraglider Tutorial

(YouTube handle: https://youtu.be/0gv-qJ4gM_4?si=842FILqad6YChOkX)

The pilot demonstrates how an aggressive take-off with the Dudek Warp 3 at extreme trim settings can create a dangerous situation if the wing is not allowed to fully recover overhead before applying full power. He emphasises that excessive thrust may temporarily conceal a poorly flying wing, giving the pilot a false sense of security while the canopy remains at a high angle of attack. The key lesson is to prioritise wing control and proper inflation before committing to the launch. A safe take-off depends on correct trim settings, visual confirmation that the wing is flying properly, and resisting the temptation to use engine power to compensate for an unstable wing.

This narrative aligns with Dudek's published safety guidance, warning that launching with very slow trim settings can cause the wing to stay behind the pilot, increase the angle of attack, and potentially result in an asymmetric or deep stall if the launch is continued.

1.18.2. The Wing Speed Modes

Figure 22: Illustration of the wing speed trim controls.

1.18.3. Important Safety Notice (Source: Wing User's Manual)

On the Warp 3, as with most paramotor wings, operating with trims fully open at low altitude or low speed without power significantly reduces the stall margin and increases the risk of a frontal collapse or stall. The manufacturer specifies that brake input must be adjusted in proportion to trim setting — open trims require less brake travel before stall.

1.19. **Useful or Effective Investigation Techniques**

1.19.1. None.

2. FINDINGS

2.1. **General**

From the available evidence, the following preliminary findings were made with respect to this accident. These shall not be read as apportioning blame or liability to any organisation or individual.

To serve the objective of this investigation, the following sections are included in the conclusions heading:

- **Findings —** are statements of all significant conditions, events, or circumstances in this accident. The findings are significant steps in this accident sequence, but they are not always causal or indicate deficiencies.

2.2. **Findings**

2.2.1. The pilot had a National Pilot Licence (NPL) that was initially issued by the Regulator on 12 September 2013. The licence was reissued on 15 September 2025 with an expiry date of 30 September 2027.

2.2.2. The pilot's Class 4 aviation medical certificate was issued on 2 September 2025 with an expiry date of 30 September 2027.

2.2.3. The pilot was a Grade B and Tandem instructor on power paragliders. He had a total of 1 904 flying hours of which 1 076 were accrued on powered paragliders and 828 on striker aircraft.

2.2.4. The wing harness and controls were cut off by first responders during the pilot's rescue.

2.2.5. The pilot was flying with maximum speed trimmer setting and with speed bar configurations.

2.2.6. The left wing collapsed shortly after the pilot descended and with the paramotor power reduced.

3. ON-GOING INVESTIGATION

3.1. The AIID investigation is on-going, and the investigator will investigate other aspects of this accident which may or may not have safety implications.

3.2. The wing was recovered and has been sent to a manufacturer-approved facility for further examination.

4. SAFETY RECOMMENDATIONS

4.1. General

The safety recommendations listed in this report are proposed according to paragraph 6.8 of Annex 13 to the Convention on International Civil Aviation and are based on the conclusions listed in heading 3 of this report. The AIID expects that all safety issues identified by the investigation are addressed by the receiving States and organisations.

4.2. Safety Recommendation/s

4.2.1. None.

5. APPENDICES

5.1. None.

This report is issued by:

Accident and Incident Investigations Division
South African Civil Aviation Authority
Republic of South Africa