



DUTCH  
SAFETY BOARD

# Summary

Paramotor trike  
crashed  
during flight



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## Paramotor trike crashed during flight

*The Hague, July 2022*

*The reports issued by the Dutch Safety Board are publicly available on [www.safetyboard.nl](http://www.safetyboard.nl).*

*Cover photo: KNVvL*

## **The Dutch Safety Board**

When accidents or disasters happen, the Dutch Safety Board investigates how it was possible for these to occur, with the aim of learning lessons for the future and, ultimately, improving safety in the Netherlands. The Safety Board is independent and is free to decide which incidents to investigate. In particular, it focuses on situations in which people's personal safety is dependent on third parties, such as the government or companies. In certain cases the Board is under an obligation to carry out an investigation. Its investigations do not address issues of blame or liability.

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If there is a difference in interpretation between the Dutch report and this English summary, the Dutch report will prevail.

# GENERAL OVERVIEW

Identification number:	2020030
Classification:	Accident
Date, time of occurrence:	2 June 2020, around 20.30 hrs <sup>1</sup>
Location of occurrence:	Didam, the Netherlands
Registration:	D-MJBE
Aircraft type:	Wing: Ozone Mag Max 2 41 Trike: Condor
Aircraft category:	Paramotor trike
Type of flight:	Pleasure
Phase of operation:	En route
Damage to aircraft:	Destroyed
Flight crew:	One
Passengers:	None
Injuries:	Pilot fatally injured
Other damage:	None
Light conditions:	Daylight

<sup>1</sup> All times are local times, unless otherwise mentioned.

On 2 June 2020, the pilot and sole occupant of a paramotor trike, consisting of a wing with a motorised trike, took off from a field in Didam. The pilot would make a flight together with another, experienced, pilot, each in his own paramotor trike. It was the pilot's first flight as licensed pilot since he had obtained his licence a few days earlier.

Shortly after the pilot took-off, the weather circumstances suddenly changed strongly, with a sharp increase in wind and turbulence. The pilot lost control of the paramotor trike due to the sudden worsening of the weather conditions. He was unable to regain control and ended up in a spiral flight. During this spiral flight, the G-forces were so high that the pilot probably lost consciousness and the aircraft ultimately crashed. The pilot was fatally injured.

The aviation weather forecast that day mentioned that a 'vore', a convergence line between warm and cold air, was passing from west to east over the Netherlands. Shortly after its passage, turbulence and wind would increase strongly, locally up to 20 knots. The radar images showed that this convergence line passed Didam at the moment that both paramotor trikes had just taken off. Although the pilot had consulted weather forecast sources via various apps prior to the flight, he was not aware of the expected weather change. The other pilot was not aware of this either.

The pilot had purchased the wing during his training. The wing manufacturer Pilot's Manual states among other things that the wing is suitable for experienced, qualified tandem pilots and that the wing is intended for competent pilots only and is not suitable for beginner pilots nor those under training. On the other hand, according to the applicable standards, the wing was classified as a B wing, which means that the wing is suitable for all types of pilots, including pilots in training. The manufacturer stated that this wing was designed and tested as a paragliding wing. The use of this wing for a paramotor trike results in different flying characteristics. Therefore, it is not clear whether the type of wing was suitable for this beginner paramotor trike pilot.

The investigation also revealed that the judicial definition of a powered paraglider is not suitable for a paramotor trike and that a paramotor trike is not mentioned separately in aviation legislation. Paragliding has developed further over the years with the introduction of trikes, but the legislator has not actively followed this development. The result of this is that these paramotor trikes have been flown since approximately 2010 while no legal regulations exist for this form of aviation. The Ministry of Infrastructure and Water Management (I&W) was aware of this and started developing laws and regulations in 2015, in cooperation with the Royal Dutch Aeronautical Association (KNVvL). Despite KNVvL's insistence, I&W has not yet resolved this situation due to a lack of capacity and priority.

Meanwhile, legislation and regulations are being developed in the form of a Decree that is expected to be implemented before the end of 2022. The lack of applicable legislation and regulations had no influence on the occurrence of the accident.

More accidents and incidents involving student and beginner paramotor pilots have occurred in the recent past. These incidents, and this accident, have shown that the training, both theoretical and practical, of paramotor (trike) pilots differs from the training of other pilots in recreational aviation. Paramotor (trike) pilots use the same airspace and must partly meet the same requirements as other pilots in recreational aviation. Both the training of student pilots and the operation of licensed pilots therefore require a professional approach. The KNVvL, paramotor flight division, has started to harmonize the training courses. This is a good development but also the licensed pilots must realise that paramotor (trike) flying requires a professional approach. For the student pilots, the flight schools are the first choice. Licensed pilots are responsible for themselves, supported by the KNVvL.

# RECOMMENDATIONS

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Although paramotor (trike) aviation is often considered an air sport, it requires a professional approach by all those involved, as is the case with other forms of recreational aviation. Both the preparation and the execution of the flight deserve thorough attention in this approach. This starts with a uniform training whereby the necessary attention must be paid to theory and practice. The training of glider pilots can be taken as an example. Already licensed pilots of paramotor (trikes) must also be constantly aware of this. The Royal Netherlands Aeronautical Association (KNVvL) has a supporting role in this.

An adequate legal basis is also required to be able to perform aviation safely. This investigation has shown that there is no such basis for flying with paramotor trikes. In order to improve the safety of paramotor (trike) aviation, the Dutch Safety Board therefore makes the following recommendations:

To the Royal Netherlands Aeronautical Association (KNVvL):

- Develop a uniform training course that pays extensive attention to the theoretical and practical elements of paramotor (trike) flying.
- Ensure that licensed pilots are made aware of a professional approach to paramotor (trike) flying. Emphasize the need for thorough flight preparation.

To the Minister of Infrastructure and Water Management:

- Develop and implement the necessary regulations for flying paramotor trikes as soon as possible. Include that the undercarriage, engine and wing together form an aircraft which all must carry the same registration number.



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