

# Safety Investigation Progress Report

Ref. AAIU-2021-08-08-01  
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Status: Progress

## About this report

As per Annex 13 and EU regulation EU 996/2010, each safety investigation shall be concluded with a report in a form appropriate to the type and seriousness of the accident and serious incident. For this occurrence, a limited-scope, fact-gathering investigation and analysis was conducted in order to produce a short summary report.

It is not the purpose of the Air Accident Investigation Unit to apportion blame or liability. The sole objective of the investigation and the reports produced is the determination of the causes, and, where appropriate define recommendations in order to prevent future accidents and incidents.

## SYNOPSIS

<b>Classification:</b>	Accident	<b>Occurrence category:</b>	Loss of control – inflight (LOC-I)
<b>Level of investigation:</b>	Full	<b>Type of operation:</b>	Non-commercial – Cross Country
<b>Date and time<sup>1</sup>:</b>	Saturday 8 August 2020 13:15 UTC	<b>Phase:</b>	Approach/Manoeuvring
<b>Location:</b>	Goetsenhoven, Tienen	<b>Operator:</b>	Private
<b>Aircraft:</b>	Schempp Hirth Nimbus-4DM	<b>Aircraft damage:</b>	Destroyed
<b>Aircraft category:</b>	Fixed Wing – Powered Sailplane (Glider) – Retractable powerplant	<b>Injuries:</b>	2 fatal

## Abstract:

The motorglider took off from the airfield of Goetsenhoeven-Tienen (ICAO: EBTN) for a 3-hours flight above the Ardennes. The aircraft was spotted overhead EBTN, flying a non-standard circuit for runway 06. The righthand turn into final was seen with an important bank (the witness reported the wings were nearly vertical and curved). The aircraft then dove into the ground, nearly vertically.

The two speed indicators, retrieved after the crash showed 260 km/h at impact. Parts were found up to 45 m from the main crash side.

The two occupants died instantly.

The accident occurred at 13:15 UTC. AAIU(Be) was notified by the airfield commander at 13:51 UTC, followed by the ATC (Skeyes – CANAC supervisor). At 14:25 UTC 3 investigators deployed to the accident site, where they arrived at 15:35 UTC to conduct the on-site examination and to interview witnesses. Once this was complete, the aircraft was removed to a secure facility of the Belgian Federal Police at Neershespen, Linter, for detail examination.

## Progress of the investigation

For the investigation sources like such as witness statements, detailed wreckage inspection, CCTV images, radar recordings and flight recorder (logger) are used.

The investigation did not reveal any systemic safety issue that should lead to a safety recommendation so far.

Up till the last righthand turn, there is no factual evidence of structural failure or pre-existing damage.

It is confirmed that the last righthand turn towards runway 06 happened at an airspeed higher than the manoeuvring speed  $V_A$  and at a steep bank angle of  $\pm 60^\circ$ .

Although these conditions do not immediately lead to the exceedance of the maximum load factor, an additional small pitch-up (deliberate or by a gust) could have easily led to the exceedance at such an airspeed. This on his turn led to an aircraft upset and a loss of control.

There was no structural break-up before impact, however the trace of the impact of the wings and the wreckage examination afterwards showed an important upward deformation.

The impact was considered unsurvivable.

The investigation is trying to reconstruct the very last part of the flight in order to understand the degree of plastic deformation of the wings and flight control rods during the final manoeuvre and to asses if the aircraft upset would have been recoverable after the loss of control.

In accordance with ICAO Annex 13 standards and EU 996/2010 regulation, the report will be forwarded to the following organisations to receive their comments and remarks:

- The EASA,
- The BFU of Germany, as the state of design, manufacture and registration of the aircraft,
- The DGTA/DGLV, the Belgian Civil Aviation Authority, as the state of operation

After reception of the comments and remarks, the final report will be published on the website of the Federal Public Service for Mobility and Transport.

Expected time of issue is end 2021.