Accident to the Aerospool WT9 Dynamic identified **04FO** on Sunday 11 August 2024 at Eschbach (Bas-Rhin)

Time	Around 08:50[1]
Operator	Aéroclub de Haguenau
Type of flight	Instruction
Persons on board	Pilot under instruction and instructor
Consequences and damage	Pilot and instructor fatally injured, microlight destroyed
This is a courtesy translation by the BEA of the Final Report on the Safety Investigation. As accurate as the translation may be, the original text in French is the work of reference.	

Loss of control, collision with ground, in instruction

1 HISTORY OF THE FLIGHT

Note: the following information is principally based on the recordings from the instructor's Garmin D2 Mach 1 aviator smartwatch.

The pilot under instruction, accompanied by the instructor, took off from Haguenau aerodrome at approximately 08:30 for a flight in order to be signed off to fly solo on WT9s.

He headed north, bypassing the Haguenau urban area. He then headed towards the commune of Eschbach at a stable altitude of approximately 2,300 ft[2] and a ground speed estimated to be 105 kt.

[1] The times in this report are in local time.

[2] The glossary of abbreviations and acronyms frequently used by the BEA can be found on its web site.

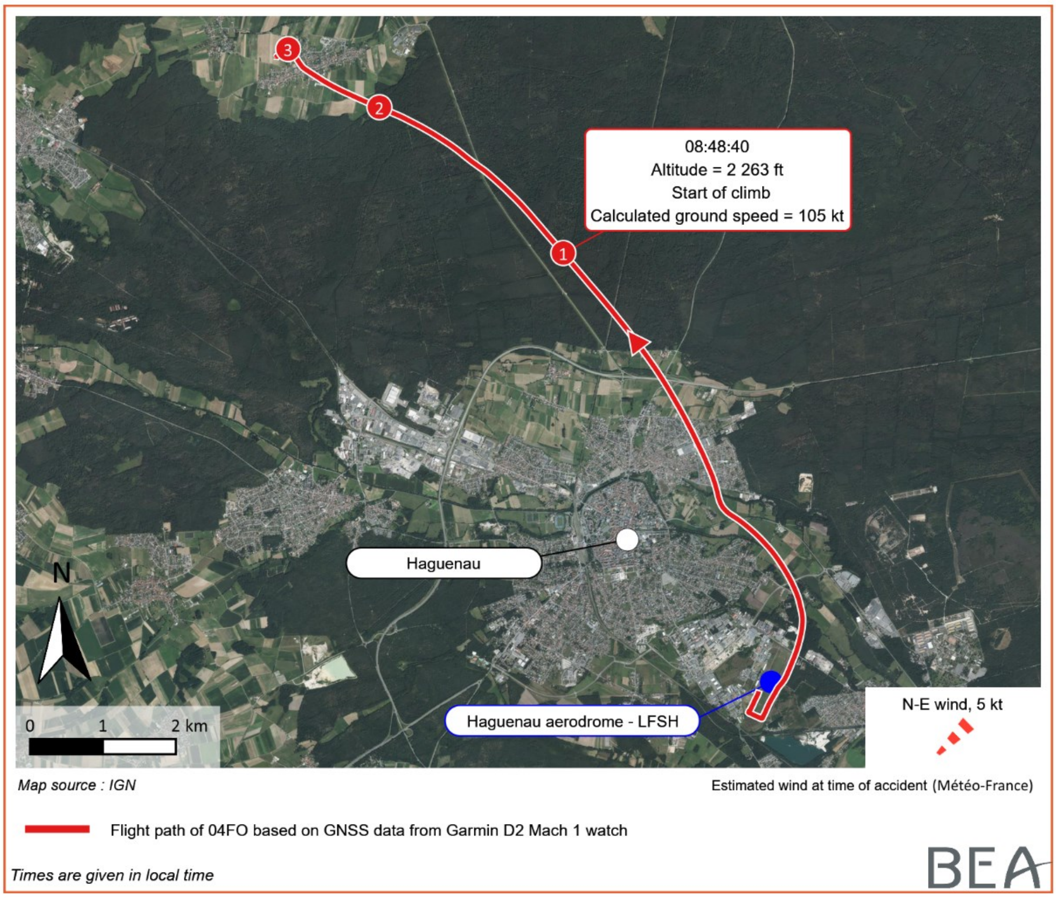

Figure 1: flight path of 04FO

He then climbed to 3,100 ft before returning gradually to 2,800 ft; during this descent, the ground speed fell sharply below 50 kt[3].

[3] During this dynamic phase, the reliability of recorded data did not enable the speed to be accurately determined. This parameter is therefore not shown until the end of the flight, on the vertical profile of **Figure 2**.

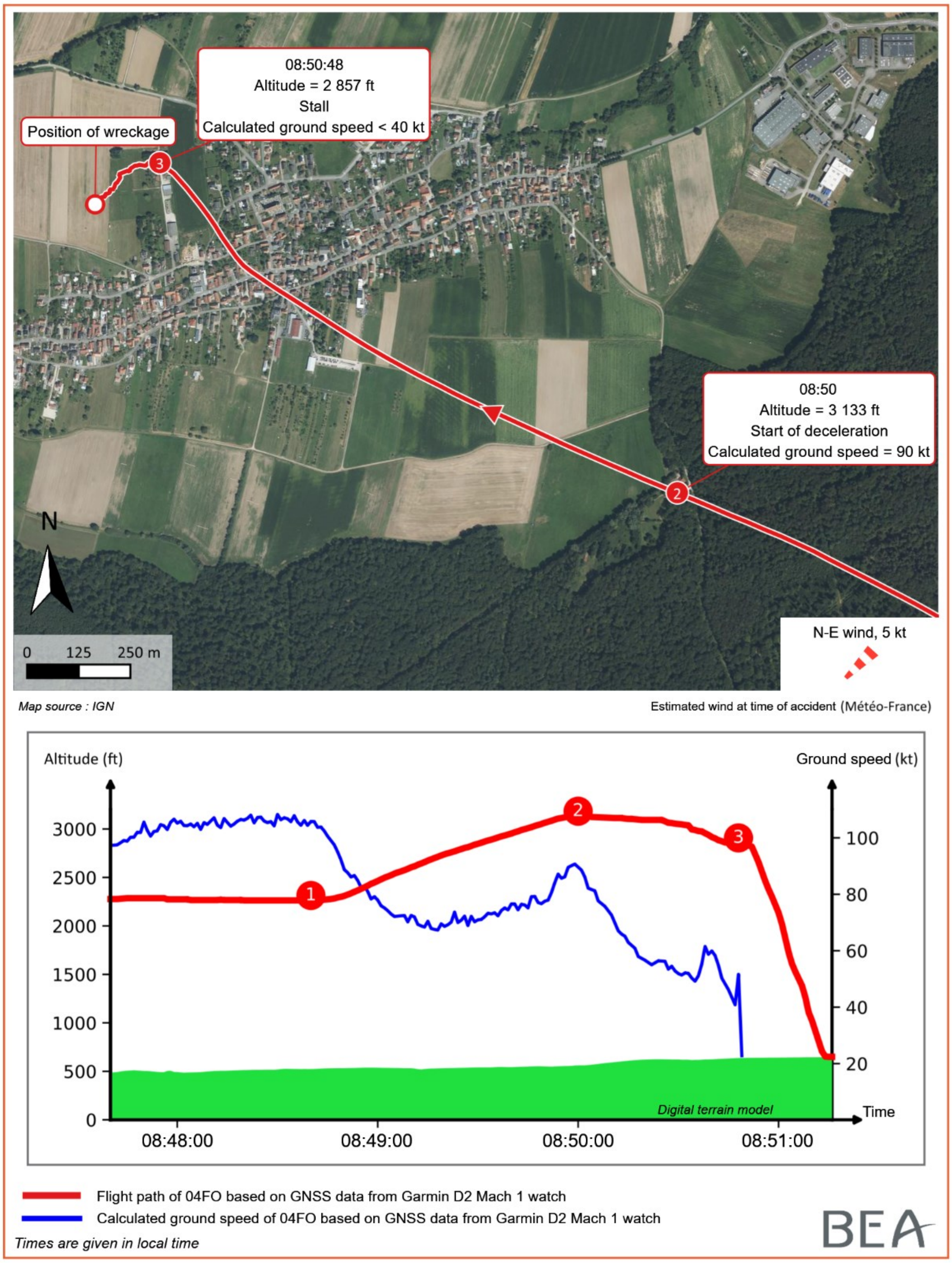

Figure 2: end of flight path of 04FO

The recorded path indicated a sudden decrease in altitude up to the collision with the ground.

2 ADDITIONAL INFORMATION

2.1 Site and wreckage observation

The accident occurred in a cultivated field located at the edge of the village of Eschbach, in a low-lying area, at an altitude of 630 ft. The wreckage was not dispersed, and no mark was observed on the ground around it.

Figure 3: rupture of the rear section of the fuselage (Source: BEA)

The rear section of the fuselage was cut and showing a leftward deviation from the fuselage axis. The landing gears were substantially bent upwards. All of the observations made indicated that the aircraft collided with the ground with a slightly nose-down attitude, in a left-hand rotation, with almost zero horizontal speed and high vertical energy. These observations were consistent with a left-hand spin up to the collision with the ground.

The observations also showed that the engine was delivering zero or low power.

The airframe parachute was found not fully deployed, a part of it still being in its container. The parachute housing door, which was ejected when the parachute came out, was found in the immediate vicinity of the wreckage. The parachute control handle was in the pulled position: one of the pilots very probably activated it. The statements (see para. 2.2) and these observations indicated that this input was probably made at a late stage and at a height that was too low for the parachute to have time to deploy, inflate and slow down the fall of the aircraft.

Figure 4: position of the airframe parachute handle after the accident (Source: BEA)

At the time of the accident, the microlight was close to its maximum weight of 525 kg, with a fairly aft centre of gravity (about 27% MAC[4] for a permitted centre of gravity between 20% and 30%).

2.2 Statements

Several witnesses on the ground indicated that they saw the microlight descend making spins, with the nose slightly downwards. One of the witnesses specified that he saw that a parachute had deployed but was not inflated. All of them specified that no engine noise was heard while the microlight was descending in a spin.

2.3 Aircraft information

The WT9 Dynamic is a low-wing microlight, with a carbon structure and equipped with a Rotax 912 ULS engine.

The WT9 Dynamic is available in a microlight version with the "airframe parachute" option, for a maximum weight of 525 kg. An LSA version, developed and certified in 2017, has a maximum weight increased to 600 kg. In particular, the CS-LSA requirements called for the installation of stall strips (appendages installed on the leading edge of the wings with the aim of reducing roll movements during a stall). The manufacturer specified that the stall strips reduce the risk of unintentional entry into a spin. Since 2018, Aerospool has been installing stall strips on all new WT9s, including the microlight version.

04FO was built in 2012 and was not equipped with stall strips.

[4] Mean aerodynamic chord.

The installation of stall strips is possible on the WT9 microlight built before 2018 through the implementation of a Service Bulletin (ZBWT9 31A / 2024). This Service Bulletin, initially classified as “optional”, was reclassified as “highly recommended” by the manufacturer in September 2024, following the accident to 04FO. However, at the time of publication of this report, it had not been made mandatory by an airworthiness directive.

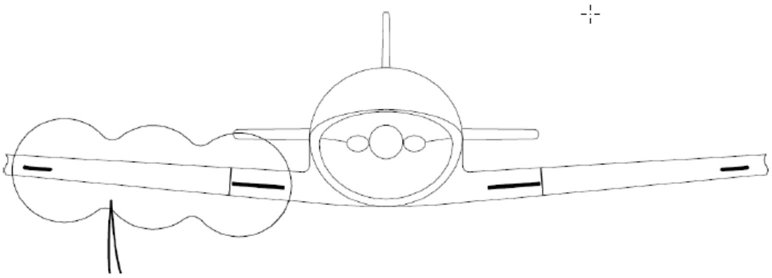

Figure 5: stall strip installation drawing (Source: Aerospool)

Figure 6: stall strips on a WT9 microlight (Source: Finesse Max)

At the maximum weight of 525 kg and with a centre of gravity at 30% MAC, the stall speed in flaps-retracted configuration indicated by the manufacturer is 43 kt.

Prior to flight, during the ignition check as part of the engine tests, the flight manual specifies that, at 4,000 rpm, the speed drop with only one magneto must not exceed 300 rpm. The speed difference on each magneto must not exceed 115 rpm.

The on-board computer equipping 04FO could record flight parameters on an SD card. At the time of the accident, the SD card was not installed in the 04FO computer, and no parameter was recorded for the accident flight.

2.4 WT9 04FO maintenance

04FO entered into service in 2012. At the time of the accident, the microlight's hour meter had logged 3,258 operating hours. A summary of maintenance operations was established based on the invoices transmitted by the club which owned the microlight:

Date	Description	Hours
8 March 2024	Maintenance of engine + installation of AirBox	
16 May 2024	Repair of main gear clearance	
25 June 2024	Inspection of landing gear and replacement of tyres	
31 July 2024	Maintenance of engine (100-hour inspection) + balancing of propeller	3,233 hours
08 August 2024	Replacement of spark plugs + AirBox air filter	3,249 hours

Examination of the logbook showed a recurring problem with left ignition that was reported by the pilots in the week preceding the accident, on 5, 6 and 8 August, with losses of approximately 350 rpm during the tests on the ignition circuits.

The mechanic who worked on the engine on 8 August explained that he first replaced the spark plugs, in particular because the deadline for their replacement was close. Following this operation, four pilots performed six flights before the accident flight, for a total of nine flight hours. They did not record any anomaly in the microlight's logbook. The pilot who performed the last three flights before the accident explained that during the ignition tests, he observed variations of approximately 300 rpm in the engine speed, without these variations exceeding the permissible values. He did not notice any other anomaly.

2.5 Engine examinations

Following the accident, the engine was removed by the BEA and an examination was carried out on a test bench. Due to the installation on a new engine stand and damage to certain elements, some changes were required on the powerplant before the tests, in particular at the control cables of the carburettors and of the air inlet. The tests showed that the engine operated normally at the maximum speed of 5,800 rpm as well as at intermediate speeds.

However, on switching to idle, the engine systematically stalled. Carburettor balancing and idle adjustment operations were then carried out in accordance with the procedure recommended by the manufacturer, following which the engine operated satisfactorily at all speeds and no longer stalled at idle speed. The incorrect carburettor balancing and idle adjustment may be the result of the changes that were required for the installation on the test bench.

2.6 Pilot information

2.6.1 Pilot under instruction

The 52-year-old pilot under instruction held a Private Pilot Licence - Aeroplanes issued in 2018, and had logged 189 flight hours on aeroplanes. He also held a microlight pilot licence with the gyroplane rating issued in 2021. On the day of the accident, he was performing his first flight in a WT9.

2.6.2 Instructor

The 57-year-old instructor was the president of the flying club. He held a Private Pilot Licence - Aeroplanes issued in 2013 as well as a microlight licence with the fixed-wing rating, issued in 2014, and the gyroplane rating, issued in 2017. His licences came along with the microlight instructor rating, issued in 2020, and the aeroplane instructor rating, issued in 2023. He had logged 535 flight hours on aeroplanes and 344 flight hours on microlights. His flight experience on the WT9 as a pilot or instructor could not be accurately determined.

2.7 Meteorological information

At the time of the accident, the weather conditions were anticyclonic, with a clear sky, a visibility greater than 10 km and a north-easterly wind of 4 to 6 kt. The temperature was 17°C.

2.8 Prior accident to WT9: 67BVN on 12 April 2024 at Peynier

During an instruction flight, the instructor showed the student-pilot a stall exercise: the microlight stalled, then, while the instructor was about to exit the stall, the microlight tipped onto the right wing. The instructor tried to regain control, without success, then he activated the airframe parachute. The microlight fell under the parachute with an average rate of sink of 1,500 ft/min, then it made contact with the ground: the student-pilot and the instructor evacuated the microlight unharmed.

The WT9 identified 67BVN was not equipped with stall strips. The managers of the flying club which owned the microlight did not know of their existence.

The manufacturer indicated to the BEA that in its original microlight configuration, the WT9 could have a tendency to roll during stall. If the stall was maintained, this roll could cause the microlight to enter a spiral. Nevertheless, the manufacturer explained that pilots could easily recover from this roll by easing the stick forward.

Following this accident and the one to 04FO, the French importer of the WT9 amended the unintentional spin recovery procedure in the flight manual for the WT9 microlight. This procedure now provides for the use of the airframe parachute (if so equipped) in the event that the recovery procedure fails or below a specific height:

AVERTISSEMENT

En même temps que la récupération d'une vrille, l'activation du parachute de secours doit toujours être envisagée (si équipé) !

Si la récupération d'une vrille est impossible, activez le système de sauvetage selon 3.13.5 (si équipé) !

Ne tentez pas de récupérer d'une vrille à une altitude inférieure à 300 m (1000ft) AGL. Activez le système de secours conformément à 3.8.3 (si équipé) !

Figure 7: amendment to the flight manual for the WT9 microlight

3 CONCLUSIONS

The conclusions are solely based on the information which came to the knowledge of the BEA during the investigation.

Scenario

During a familiarisation flight in order to be signed off to fly solo on the WT9, the pilot under instruction and the instructor climbed and then levelled off at an altitude of approximately 3,100 ft. A gradual reduction in speed was then observed, which might correspond to a low-speed flight and stall exercise.

The microlight then very probably entered a roll and spin up to the collision with the ground. In the absence of recordings of the flight parameters, it was not possible to determine the exact reasons for the loss of control and for the absence of recovery.

One of the pilots released the airframe parachute, but too late for this to have time to deploy, inflate and slow down the fall of the aircraft.

Contributing factors

The following factor may have contributed to a roll movement during a stall exercise and then to the development of a spin:

- the absence of stall strips on the microlight. These aerodynamic devices designed to improve the stall behaviour of the microlight, reduce the risk of roll, and therefore, of entry into a spin. This risk increases if the entry into a roll is not countered early enough or if the pilot makes inappropriate inputs, such as a maintained nose-up input or inputs on the ailerons that would induce a differential drag contributing to the entry into a spin.

Safety lessons

Behaviour of “high performance” microlights

The arrival on the market of “high performance” microlights - such as the WT9 - characterised by a high wing loading (greater than 50 kg/m²) and often a laminar airfoil profile has resulted in new concerns: these aircraft may have behaviours in flight that differ greatly from those of older design aircraft: the stall may be more sudden and may in particular be accompanied with a sudden roll movement.

Some of these microlights are used in flight training schools and their behaviour may take pilots used to older design aircraft by surprise, including instructors, who are rarely trained in spin recovery.

It is therefore particularly important to raise instructors’ and their student-pilots’ awareness of the specific behaviour of these “high performance” microlights, in particular during stall exercises.

“High performance” microlights are generally equipped with an airframe parachute. As a consequence, pilots must also be reminded of the possibility of using it in the event of an abnormal situation.

Using the airframe parachute

Losses of control in flight frequently result in high-energy collisions with the ground, that are often fatal. The BEA recorded a high number of accidents, often fatal, involving aircraft equipped with an airframe parachute, that was not activated or was released too late.

Prompt use of the airframe parachute can help preserve the occupants' chances of survival. Its use must therefore be considered immediately in the event of a loss of control, in particular during an unintentional entry into a spin.

For example, the FFPLUM highlighted on several occasions the importance of being ready to use the airframe parachute:

- Quick-reference sheet entitled "*utilisation du parachute de secours*" (Using the airframe parachute).
- Article entitled "sauvez vos vies avec le parachute de secours" (Save your lives with the airframe parachute).

A BEA study published in the summer of 2025 addresses the cognitive, emotional and physical mechanisms at stake when activating an airframe parachute.

The BEA investigations are conducted with the sole objective of improving aviation safety and are not intended to apportion blame or liabilities.