BEA
Bureau d'Enquêtes et d'Analyses
pour la sécurité de l'aviation civile

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SAFETY INVESTIGATION REPORT

Accident to the Aerospool WT9 Dynamic Club microlight identified **67BVN** on Friday 12 April 2024 at Peynier

Time	Around 15:00[1]
Operator	Aix ULM
Type of flight	Instruction flight
Persons on board	Instructor and student-pilot
Consequences and damage	Microlight substantially damaged
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 during a stall exercise, activation of the airframe parachute, in instruction

1 HISTORY OF THE FLIGHT

Note: the following information is principally based on read-outs from the microlight's Dynon computer, statements, radio communication recordings and radar data.

After a briefing on the ground, the instructor and the student-pilot took off at 14:38 (see **Figure 1**, point 1) from Aix-Les-Milles aerodrome (Bouches-du-Rhône) to perform handling exercises (steep bank turns, stall) and then runway circuits. They headed towards the south of Sainte-Victoire mountains, where the instructor took control to show the student-pilot a stall exercise.

At 14:58, at an altitude of 3,500 ft[2] (i.e. a height of approximately 2,750 ft), the instructor gradually reduced the power to idle and fairly maintained level flight while gradually increasing the attitude. The indicated airspeed decreased from 92 kt to 47 kt.

At 14:58:43 (point 3), the attitude reached 15°, and the speed was 51 kt. The microlight overturned to the right. The instructor did not manage to regain control and activated the airframe parachute. At 14:58:57, the rate of sink decreased, corresponding to the full deployment of the parachute (see paragraph 2.5). The microlight then descended under the parachute, at an average rate of sink of 1,500 ft/min. The instructor transmitted an emergency message over the Provence Info frequency and announced that he had deployed the parachute.

At 15:00 (point 5) the microlight ended its descent in a vineyard field and the engine stopped following contact of the propeller with the ground. The student-pilot and the instructor evacuated the microlight.

[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.

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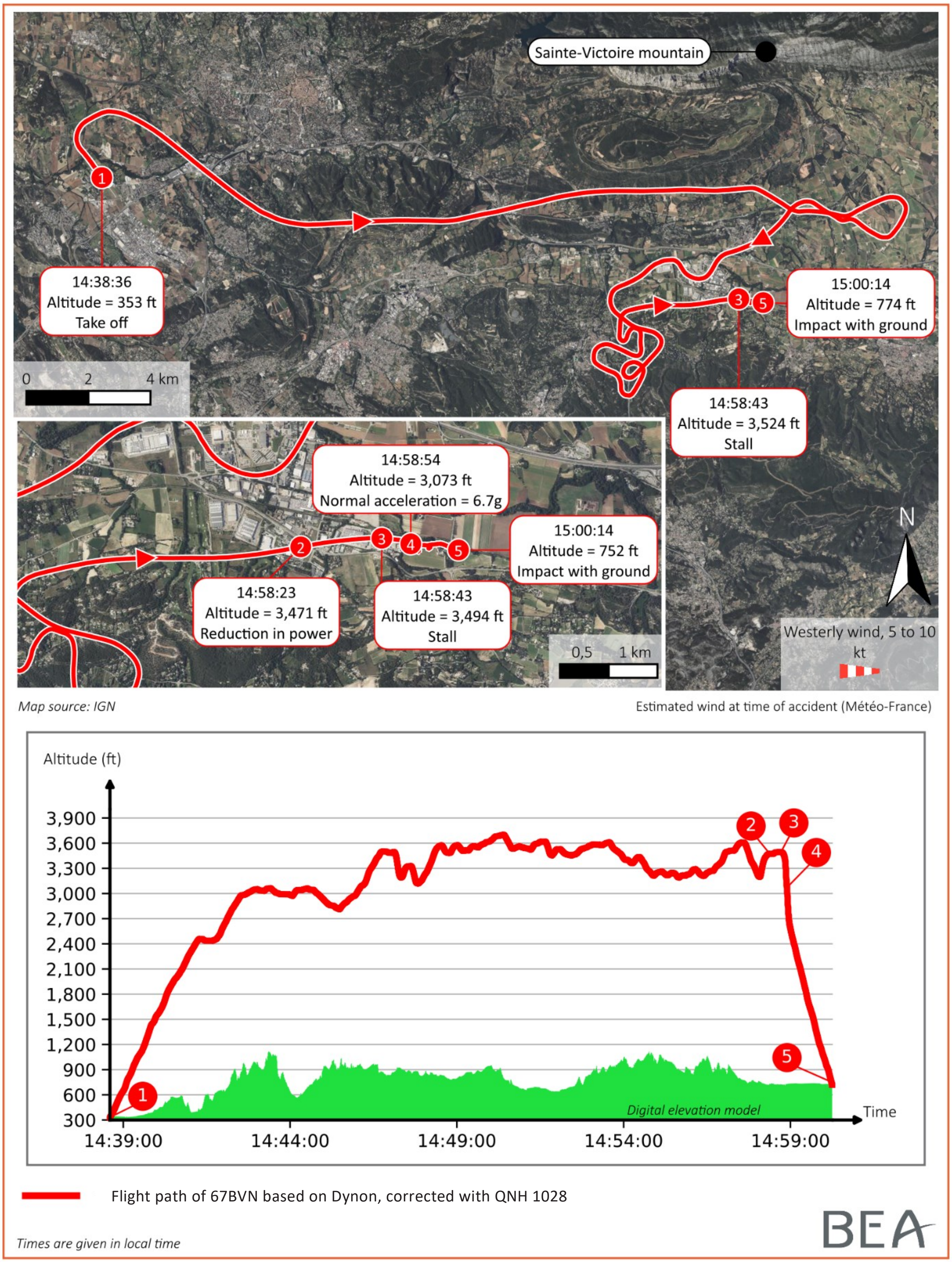


Figure 1: microlight flight path

Figure 2: excerpt of a video of the descent under the parachute taken by a witness on the ground

2 ADDITIONAL INFORMATION

2.1 Wreckage information

Figure 3: wreckage of 67BVN at the accident site (Source: BGTA)

The wreckage was disassembled and stored in a hangar where it was examined by the BEA. The damage observed on the microlight resulted from the contact with the ground under the parachute. The flight controls were in place and the continuity of the flight control linkages was confirmed. The airframe parachute deployed correctly and was effective all the way to the ground.

2.2 Meteorological information

The meteorological conditions estimated by Météo-France in the vicinity of the accident site were as follows: westerly wind (at an altitude of 2,000 ft) of 5 kt to 10 kt, gusts of 15 kt to 20 kt, CAVOK, temperature 20°C.

2.3 Instructor and student-pilot information

The 55-year-old instructor held a microlight pilot licence along with the fixed-wing rating issued in 2017, as well as a microlight instructor rating issued in 2019. He held a Private Pilot Licence - Aeroplanes (PPL(A)) issued in 1994, for which the SEP rating had expired. He had logged a total of 2,000 flight hours in microlights, 900 flight hours of which on WT9s. In the three months prior to the accident, he had logged 25 flight hours on WT9s and 78 flight hours on A22 microlights.

The 26-year-old student-pilot started his training to be a microlight pilot. He had made four instruction flights, including three on WT9s.

2.4 Instructor's and student-pilot's statements

The instructor explained that he indicated to the student-pilot that he was taking over the controls to show him a stall exercise. He proposed that the student-pilot follow him through on the controls. He reduced the power and maintained level flight and flight symmetry. At the time of stall, while he was about to move the stick forward again, it seemed to him that the microlight suddenly entered a left-hand spin. The instructor indicated that the microlight overturned onto its back and that at that point, he heard a noise[3] at the rear of the microlight, which he interpreted as a possible structural failure. He tried to recover from the spin with a right yaw input but had the impression of feeling resistance or blockage at the rudder. He indicated that he then made inputs on the ailerons and elevator. Unable to regain control of the microlight and suspecting a structural failure, he activated the airframe parachute. The instructor specified that he had already experienced roll movements during stall exercises on this WT9, but that he had always managed to counter them.

He explained that he systematically mentions, during sightseeing and instruction flights, the presence of the airframe parachute and the cases in which it is to be used. In particular, he includes in the pre-take-off briefing the minimum height at which the airframe parachute is to be used (set at 500 ft by the school), and he removes the safety pin from the handle before each start.

He specified that approximately ten years before, he had made several awareness-raising flights on CAP-10s. He also specified that he and the Aix ULM club were not informed of the existence of stall strips (see paragraph 2.7.1) and that if they had been, these would have been installed.

The student-pilot indicated that he never performed a stall exercise. He specified that he kept his hand on the stick to feel the instructor's input during the exercise. It seemed to him that the microlight "fell" to the right, making several spins while descending very quickly.

2.5 Analysis of the data from the Dynon computer

The Dynon Skyview SV-D1000 on-board computer records various data during the flight, including the angle of attack expressed as a percentage of the maximum angle of attack. This maximum angle of attack is calibrated at the factory and corresponds to the stall angle of attack at a weight of 600 kg with the flaps retracted. The inputs made on the stick and rudder as well as the flap configuration are not recorded. The flight symmetry is not recorded and the accuracy of all of this data cannot be fully guaranteed after the loss of control of 67BVN.

[3] Retrospectively, he thought that this noise came from a fire extinguisher that was not attached in the cargo compartment.

Figure 4 below shows the parameters recorded by the computer.

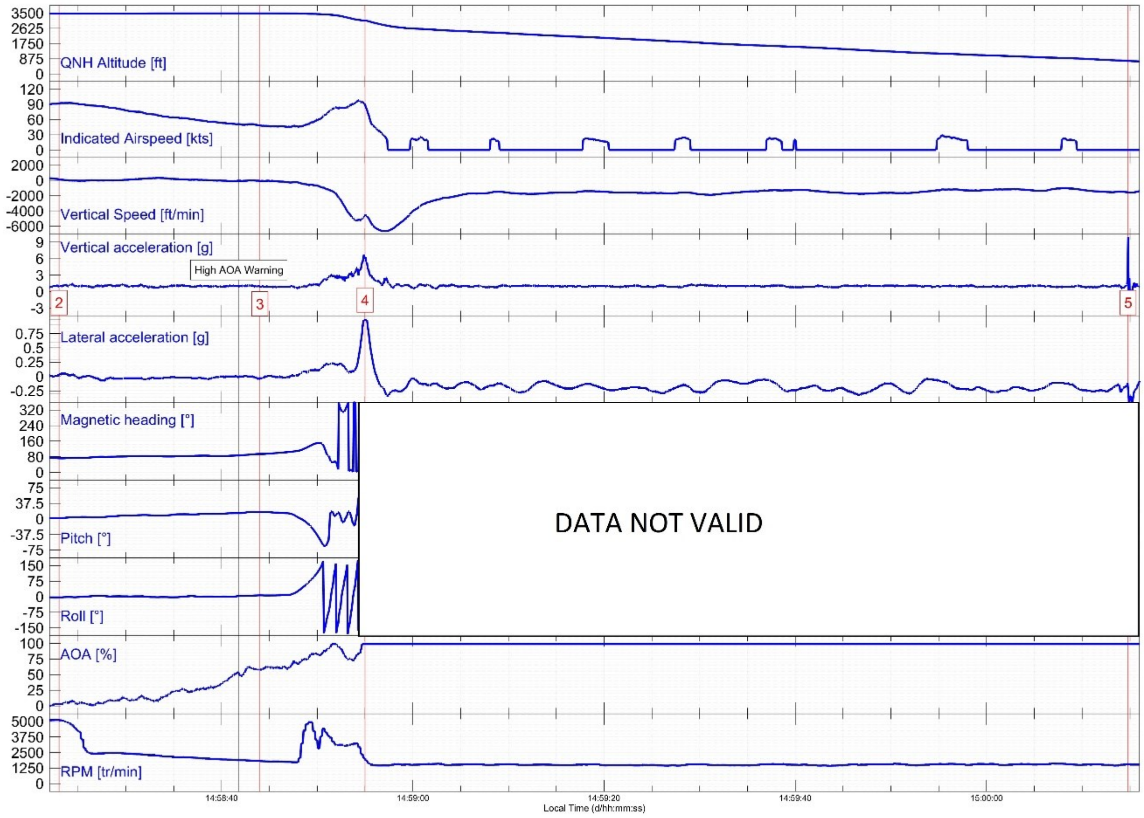


Figure 4: recorded parameters (Source: BEA)

The following could be observed:

- At 14:58:42, the angle of attack reached 53%, and the "High AOA" alert (see paragraph 2.6) appeared, indicating a high angle of attack close to that of stall.
- At 14:58:47, the microlight started to roll to the right. The angle of attack was 61% then.
- At 14:58:49, the angle of attack reached 76%, the bank angle was 68°, and the power temporarily increased.
- At 14:58:54, a peak load factor of 6.7 g was recorded, corresponding to the partial deployment of the parachute. The altitude was 3,073 ft.
- At 14:58:57, the rate of sink decreased. The parachute was fully deployed.
- At 15:00:15, the microlight collided with the ground, i.e. approximately 1 min and 30 s after the loss of control and 1 min and 18 s after the parachute deployed.

2.6 Microlight information

The WT9 Dynamic has been built since 2001 and is produced in several versions:

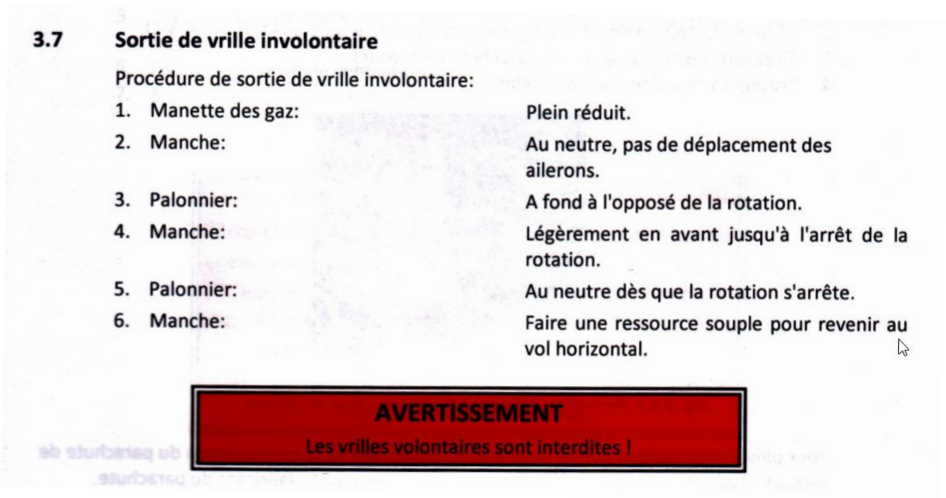
- The WT9 microlight "Speed" model (with a retractable landing gear), "Club" model (with a fixed landing gear) and "Remo" model (with a fixed landing gear, used for glider towing). The maximum take-off weight for the WT9 microlights is 525 kg (when equipped with an airframe parachute). The WT9 microlights can be equipped with one or two optional stall warning systems and an airframe parachute.

- The LSA-certified WT9, with a maximum take-off weight of 600 kg. The WT9 LSA version is equipped with two separate stall detection systems, combined with an audio alert, a voice alert, as well as a device known as a “stick shaker”. The LSA version is structurally and aerodynamically very similar to the microlight version. The LSA version has balancing weights in the ailerons and elevator, which the microlight version does not have.

The stall speed of the WT9 Dynamic microlight at 525 kg is 37 kt with the flaps in the landing position (position 3), and 45 kt with the flaps retracted.

67BVN is a WT9 Dynamic microlight with fixed landing gear built in 2012, originally equipped with a Junkers Magnum 501 airframe parachute. It is equipped with a multifunction pitot tube that also measures the angle of attack. The angle of attack is not displayed in real time in the cockpit, but this microlight is equipped with a High Angle Of Attack (“High AOA”) alert which, in level flight, triggers between 9 and 19 km/h before the microlight stalls, according to Aerospool.

The flight manual for the WT9 microlight in force at the time of the accident specified the following unintentional spin recovery procedure (see **Figure 5** below):


3.7 Sortie de vrille involontaire

Procédure de sortie de vrille involontaire:

1.	Manette des gaz:	Plein réduit.
2.	Manche:	Au neutre, pas de déplacement des ailerons.
3.	Palonnier:	A fond à l'opposé de la rotation.
4.	Manche:	Légèrement en avant jusqu'à l'arrêt de la rotation.
5.	Palonnier:	Au neutre dès que la rotation s'arrête.
6.	Manche:	Faire une ressource souple pour revenir au vol horizontal.

AVERTISSEMENT
Les vrilles volontaires sont interdites !

Figure 5: spin recovery procedure in the flight manual for the WT9 microlight
(Source: Finesse Max)

This procedure did not recommend the use of the airframe parachute in the event that the recovery procedure failed. It has since been revised to include the use of the airframe parachute (see paragraph 2.10).

During the accident, the microlight’s weight was close to the maximum weight and the centre of gravity was between[4] 25.5% and 27.5% MAC, within the limits defined in the flight manual.

[4] It was not possible to accurately confirm the student-pilot’s weight.

2.7 WT9 Dynamic behaviour

2.7.1 Stall behaviour

Aerospool indicated that, in its original configuration, the WT9 could have a tendency to roll during stall, and that if the stall was maintained, this roll could cause the microlight to enter a spiral[5]. Nevertheless, the manufacturer explained that pilots could easily recover from this roll by releasing the nose-up input.

In 2016, Aerospool undertook a flight test campaign with a view to obtaining the EASA LSA certification. During this campaign, it was found that the WT9 had a tendency to have more than 20° of roll or yaw during stalls. Aerospool explained that, although this behaviour could be disconcerting for pilots who were not accustomed to this phenomenon, it was nevertheless easy to regain control by reducing the angle of attack with a nose-down input.

To comply with the requirements of European Certification Specifications CS-LSA[6], Aerospool installed stall strips (appendages installed on the leading edge of the wings with the aim of improving the microlight's aerodynamic behaviour and making the wing root stall first, while maintaining the efficiency of the ailerons (see **Figure 6** below).

The manufacturer indicated that the stall strips reduced the risk of asymmetric stall and therefore entry into an unintentional spin or spiral.

Figure 6: stall strips (circled in red) on another WT9 microlight.
(Source: Finesse Max, BEA annotation)

These stall strips are installed as standard on all new WT9s under CS-LSA certification, and since 2018 as standard on all newly produced WT9 microlights. A retrofit kit also exists for installing stall strips on WT9s which are not so equipped. The microlight 67BVN was not equipped with stall strips.

[5] Steep descending turn with a high angle of attack.
[6] One of the requirements in particular, restricts movements to 20° of roll or yaw during stall and recovery, in all weight and balance combinations (text in English only).

2.7.2 Spin behaviour

Aerospool indicated to the BEA that during a spin test campaign conducted in 2004 on the WT9 microlight, the test pilot managed to recover from the spin in all of the tested weight and balance configurations, including in one configuration with the centre of gravity beyond the aft limit.
In 2007, Aerospool also conducted a spin test campaign[7] on a WT9 LSA version produced for the US market, in various configurations, several of which included a centre of gravity beyond the aft limit mentioned in the flight manual (centre of gravity beyond the aft limit at 31.4% and weight of 552.8 kg, for example). The test pilot managed to recover from the spin in all of the tested configurations.

Aerospool and Finesse Max (the distributor of the WT9 in France) did not conduct a new flight test campaign for the microlight version when the maximum take-off weight was increased from 472.5 kg to 525 kg in 2019 (possibility provided by the French Order dated 24 June 2019[8]), considering that:

- the few differences between the microlight and CS-LSA versions of the WT9 did not give rise to any difference as regards behaviour or performance;
- tests had already been conducted at a weight of 600 kg for the WT9 CS-LSA version[9].

2.7.3 Accident during the flight tests for obtaining the CS-LSA certification for the WT9 Dynamic

EASA Certification Specifications CS-LSA require an aeroplane with the "No Intentional Spins" placard to be capable of recovering from the longer of the following two phenomena: one-turn spin or a three-second spin. In 2016, Aerospool undertook an in-flight spin test campaign with a view to obtaining EASA Certification CS-LSA for the WT9. During a test at the maximum weight of 600 kg, with the centre of gravity at the aft limit, the pilot induced an entry into a left-hand spin. After more than one full spin, the pilot tried to recover from the spin and did not manage to do so. The pilot then activated the anti-spin parachute[10], the WT9 recovered from the spin and the pilot managed to land normally.

A new test flight was conducted, during which the WT9 LSA version entered once again a left-hand spin at an altitude of 10,000 ft. After one full spin, the pilot tried to recover from the spin, but once again did not manage to do so despite carrying out different spin recovery procedures. At an altitude of 3,300 ft, the pilot activated the anti-spin parachute. This parachute did not deploy. The pilot jettisoned the canopy at an altitude of 2,440 ft, he evacuated the aeroplane and activated his own parachute. The Slovak authority conducted a safety investigation and published a report[11] on this accident. The flight tests were then suspended.

When the CS-LSA requirements cannot be fully met, an alternate solution providing an Equivalent Level Of Safety (ELOS) can be used. The ELOS relating to spinning for CS-LSA consists in installing a second stall detection system, separate from the original one, along with a "stick-shaker" type warning system, and in using the airframe parachute as a recovery action in the event of an unintentional spin. The use of this ELOS was accepted by EASA, and the ELOS is mentioned in the Type Certificate for the WT9 CS-LSA version.

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[7] Aerospool posted an excerpt from a video of the tests.
[8] Order pertaining to motorised microlights (Version in force on the day of the accident).
[9] These WT9s were equipped with stall strips.
[10] The anti-spin parachute is a device installed at the rear of the fuselage for test flights only. Its deployment slows the yaw rotation induced by a spin.
[11] Text in Slovak only.

The spin recovery procedure was then amended on 2 November 2016 in the flight manual for the WT9 LSA version (see **Figure 7**). This was not the case for the microlight version at the time of the accident.

3.7. Recovery from unintentional spin

For recovery from an unintentional spin the following procedure should be used:

1. Rescue system: Activate.

WARNING

Intentional spins are prohibited!

Figure 7: Unintentional spin recovery procedure -
Flight manual for Dynamic WT9 LSA version as amended on 2 November 2016
(SBLSA-012-2016 R1).

2.8 Technical conditions applicable to microlights

"High-performance" microlights, such as the WT9, are often equipped with a thin "laminar" airfoil, which is thinner than that equipping most of older design microlights or training aeroplanes. Their aspect ratio [12] and wing loading are also higher. With this type of wing, these microlights offer excellent cruising performance. However, at the onset of stall, they may show a more sudden behaviour, with a greater tendency to roll.

The French Directive dated 24 June 2019 (Article 7.2) pertaining to motorised microlights provides the Minister responsible for civil aviation with the possibility of imposing special airworthiness conditions for Class 3 microlights with a wing loading at maximum weight[13] greater than 30 kg/m^2 on the basis of:

- sub-parts B (flight) and C (structure) of the CS-VLA, or
- the French or foreign airworthiness regulations that formed the basis for the certification of light aircraft, or
- special regulations, as proposed by the applicant, accepted by the Minister responsible for civil aviation.

Examples of standards or regulations that can be used to impose special airworthiness conditions include ASTM F-2245-12d, EASA Certification Specifications CS-VLA (Very Light Aeroplanes*)* or CS-LSA (Light-Sport Aeroplanes), or German standard LFT-UL. These four documents contain requirements regarding stall behaviour, aimed at preventing excessive entry into a roll, as well as requirements regarding spinning and the entry into a spin.

In the United States, "high-performance" microlights can only fly under the LSA category. In several European countries, including Germany, compliance with standard LFT-UL is required for these aircraft. This standard LFT-UL is sometimes used as a reference by other countries.

[12] The WT9's aspect ratio is 8.1; that of a DR400 is 5.3.
[13] The wing loading for 67BVN at the maximum weight of 525 kg is 50 kg/m^2.

In France, the imposition of special airworthiness conditions was not used by the DSAC for approving "high-performance" microlights widely used in France, such as the WT9, the VL3 and the Shark. However, when they issued a request to increase the maximum take-off weight of the Shark and VL3 from 472 to 525 kg, the respective manufacturers submitted a technical record based on German standard LFT-UL.

For example, the flight manual for the VL3 (a high-performance microlight with a wing loading of approximately 50 kg/m^2), prohibits "power-on stalls", specifying that a wing could drop during a stall. If this occurs, it is recommended that pilots push the stick forward and gradually apply pedal input opposite to the wing drop direction. The flight manual warns pilots that stall training with the landing gear retracted is not recommended.

2.9 Similar accidents

The BEA conducted several investigations into accidents involving "high performance" microlights (with wing loading substantially greater than 30 kg/m^2) during which an unexplained loss of control occurred:

- Accident to the WT9 identified 04FO on 11 August 2024: *Loss of control, collision with ground, in instruction.* This WT9 Dynamic produced in 2012, was not equipped with stall strips. The microlight very probably started to roll during a stall exercise and entered a spin until it collided with the ground.
- Accident to the Aveko VL-3A identified 57AVB on 8 April 2017: *Loss of control in flight, collision with ground, fire.* The investigation was unable to determine the reasons for the loss of control in flight, but an asymmetric stall during a turn may have caused the microlight to enter a spin.
- Accident to the VL3 identified 59DUJ on 19 June 2020: *Loss of control en route, collision with ground.* At an altitude of around 7,000 ft, during a steep-bank steep angle-of-attack left turn, the microlight very probably experienced an asymmetric stall resulting in an unrecovered loss of control.
- Accident to the VL3 identified 88PP on 16 October 2021: *Loss of control in initial climb, collision with ground.* The microlight entered a left-hand spin.
- Accident to the Esqual identified OO-H81 on 21 August 2018: *Loss of control in instruction flight, collision with the ground, fire* The instructor and student-pilot lost control of the microlight, which entered a spin.

2.10 Actions taken following the accident

Publication of a Service Bulletin recommending the installation of stall strips

Following exchanges between the BEA, Aerospool and Finesse Max after the accidents to 67BVN and 04FO, Aerospool published a Service Bulletin (ZBWT9 31A / 2024) that strongly recommended the installation of stall strips on WT9s which were not so equipped. In particular, a full kit is available for sale, so that owners can install them.

Amendment to the unintentional spin recovery procedure in the flight manual for the WT9 microlight

Finesse Max informed the BEA of the amendment, on 27 September 2024, of 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 plus de la sortie de vrille, l'activation du parachute de secours doit toujours être envisagée (le cas échéant) !
>
> S'il n'est pas possible de sortir d'une vrille, activez le parachute de secours selon 3.13.5 (si équipé) !
>
> N'essayez pas de sortir d'une vrille à une altitude inférieure à 2000 pieds (600 m) AGL. Activer le parachute de secours selon 3.13.5 (si équipé) !

Figure 8: amendment to the flight manual for the WT9 microlight (Source: Finesse Max)

3 CONCLUSIONS

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

Scenario

During a stall exercise performed by the instructor, at a speed close to the stall speed, the microlight entered a right-hand roll. The instructor thought he had entered a left-hand spin. He briefly increased engine power to maximum and then returned to idle. The angle of attack continued to increase. The data recorded was unable to determine a potential asymmetry during the exercise.

When the microlight entered a right-hand roll, it is possible that the instructor made a reflex input on the stick to counter this start of roll.

Control of the microlight was lost and the instructor did not manage to regain it. Having heard a noise coming from the rear of the microlight, the instructor thought there was a structural failure and activated the airframe parachute.

Contributing factors

The following factors may have contributed to the loss of control:

- the absence of stall strips, which are aerodynamic devices designed to improve the stall behaviour of the microlight;
- the tendency of the WT9, which was not equipped with these stall strips, to tip onto a wing during stall;
- possible inappropriate inputs on the controls by the instructor or student-pilot. An instinctive and inappropriate reaction on the controls, such as an input on the ailerons to counter the entry into a roll, may worsen the loss of control (entry into a spin, maintaining the spin or flattening the spin), especially because of the aerodynamic effects resulting from the deflection of the control surfaces.

Safety lessons

Loss of control and use of the airframe parachute

An unintentional spin recovery procedure is described in the flight manual of most fixed-wing microlights. By nature a risky manoeuvre, intentional spinning is not authorised on most aircraft, and few instructors would be able to teach spin recovery. As a consequence, few pilots benefit from regular spin recovery training. It is therefore unlikely that, in the event of an unintentional spin, an untrained and unaware pilot would be able to apply a spin recovery procedure, which can vary depending on the aircraft.

Since the accident to 67BVN, the WT9 flight manual was amended and now recommends the use of the airframe parachute in the event of an unrecovered unintentional spin and in the event of a spin below a specific height.

The consequences of a collision with the ground following an in-flight loss of control are generally fatal. By using the airframe parachute at a sufficient height, the instructor preserved the occupants' chances of survival.

The FFPLUM has published a quick-reference sheet on this topic, as well as an 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.

4 RECOMMENDATIONS

Note: in accordance with the provisions of Article 17.3 of Regulation No 996/2010 of the European Parliament and of the Council of 20 October 2010 on the investigation and prevention of accidents and incidents in civil aviation, a safety recommendation shall in no case create a presumption of blame or liability for an accident, serious incident or incident. The addressees of safety recommendations shall report to the safety investigation authority which issued the recommendations, on the actions taken or under consideration for their implementation, as provided for in Article 18 of the aforementioned regulation.

4.1 Installation of stall strips on WT9s which are not so equipped

As indicated in paragraph 2.7.1, it was found that the initial behaviour of the WT9 did not meet the CS-LSA requirements regarding stall behaviour. The installation of stall strips substantially improved stall behaviour by helping the laminar airfoil to stall in a more symmetrical manner and allowed better yaw control to be maintained.

Aerospool then decided, without any obligation to do so, to improve the behaviour of the WT9 microlight by installing stall strips on all newly produced WT9 microlights, as from 2018. A retrofit kit was also made available to install stall strips on already built WT9s. However, until Aerospool and Finesse Max published a Service Bulletin recommending the installation of stall strips in August 2024, few owners[14] knew of their existence.

The examination of the database of microlights identified in France against the number of stall-strip retrofit kits sold by Finesse Max shows that approximately 130 to 150 WT9 microlights, produced before 2018, are not equipped with stall strips and have a valid identification card in France.

Consequently, the BEA recommends that:

- *whereas the stall behaviour of the "high performance" WT9 microlight can be disconcerting compared to an older design microlight with a substantially lower wing loading;*
- *whereas the tests conducted by Aerospool show that the installation of stall strips improves stall behaviour;*
- *whereas during the tests for obtaining the LSA certification for the WT9, the installation of stall strips was necessary to meet LSA stall requirements;*
- *whereas the French Directive dated 23 September 1998 as amended (Article 13) allows the DSAC to impose operational or airworthiness directives for safety reasons;*
- *whereas the WT9 microlights produced before 2018 were not originally equipped with stall strips and a large number of WT9 microlights produced before this date are identified in France;*
- *whereas 130 to 150 WT9 microlights not equipped with stall strips are registered in France;*
- *whereas many WT9 microlights are used in flying schools, including for primary flight training, and stall exercises are therefore regularly performed;*
- *whereas the DSAC is the only authority provided with the possibility of making the implementation of a Service Bulletin mandatory for microlights in France;*

the DSAC make the implementation of Service Bulletin ZBWT9 31A / 2024 (Installation of safety equipment – stall strips) mandatory for all Dynamic WT9 microlights which are not so equipped. **[FRAN-2025-007]**

[14] Before that date, Finesse Max had only sold 13 stall-strip retrofit kits.

4.2 Request for special airworthiness conditions for "high-performance" Class 3 microlights

In the general case, the microlight regulations, through the French Order dated 23 September 1998 as amended in force at the time of the accident[15], require a manufacturer to demonstrate compliance of its microlight with a minimum flight test programme. In particular, this programme involves checking the manoeuvrability and stability of the microlight in any weight and balance configuration within the demonstrated flight envelope. However, there are no requirements regarding stall and spin behaviours.

However, there is a regulatory possibility (Article 7.2 of the French Directive dated 24 June 2019) for the DSAC to impose special airworthiness conditions on the basis of (among other things) sub-parts B (flight) and C (structure) of the CS-VLA for "high-performance" (high wing loading and high cruise speed) Class 3 fixed-wing microlights.

"High-performance" microlights may have a disconcerting behaviour compared with microlights with substantially lower wing loading, and may therefore take pilots by surprise, particularly during a stall, as was the case in the accident to 67BVN. In several accidents involving high-performance microlights, pilots lost control of their microlights and entered unintentional spins.

Moreover, pilots are generally not trained for and confronted with a spin during their training and during proficiency flights. It is therefore unlikely that an untrained pilot would be able to identify a spin and apply the recovery procedure correctly.

The BEA recommends that:

- *whereas a growing number of "high-performance" microlights is used, in particular in flying schools (including for primary flight training);*
- *whereas the stall behaviour of these "high performance" WT9 microlights can be disconcerting compared to a microlight with a substantially lower wing loading;*
- *whereas microlight pilots and instructors rarely train in spin recovery;*
- *whereas a substantial number of loss of control occurs in "high performance" microlights, in particular as part of the accidents mentioned in paragraph 2.9;*
- *whereas the French Directive dated 24 June 2019 pertaining to motorised microlights provides the DSAC with the possibility of imposing special airworthiness conditions on the manufacturers of Class 3 microlights with a wing loading at maximum weight greater than 30 kg/m^2;*

the DSAC impose, for newly designed Class 3 microlights, special airworthiness conditions regarding the microlight's approach and stall behaviours. [FRAN-2025-008]

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

[15] A new French Order dated 17 February 2025 pertaining to the conditions of use of motorised microlights has been published since the accident. Nevertheless, this Order does not amend the articles of the French Order dated 23 September 1998 as amended which are mentioned in this paragraph.