



Accident to the Ikarus C42B
identified **57BPJ**
on 22 September 2022
near Dieuze-Guéblange aerodrome (Moselle)

Time	Around 09:40 ¹
Operator	Association ULM des PIAFS du Saulnois
Type of flight	Local
Persons on board	Pilot and passenger
Consequences and damage	Pilot and passenger 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.

Collision with vegetation then with the ground, post-impact fire

1 HISTORY OF THE FLIGHT

Note: the following information is principally based on statements.

At 09:19, the pilot phoned the treasurer of the association that owned the microlight to inform him that he would soon be taking off for a local flight with a friend from Dieuze-Guéblange restricted-use aerodrome. He told him that he had 30 litres of fuel on board, which was enough for his local flight of less than one hour.

At 09:44, a farmer working in a field near the aerodrome saw smoke from a fire and alerted the fire brigade. The two occupants were found fatally injured in the microlight, which was destroyed by the fire.

2 ADDITIONAL INFORMATION

2.1 Meteorological information

The meteorological conditions estimated by Météo-France at the time of the accident were as follows: clear skies, visibility greater than 10 km, north-easterly wind of 3 to 5 kt, temperature 9 °C, dew point temperature 6 °C, no turbulence or aerological phenomena, no icing.

¹ Except where otherwise indicated, the times in this report are in local time.

2.2 Aerodrome information

Dieuze-Guéblange restricted-use aerodrome is reserved for based aircraft. It comprises a single grass runway oriented on 05/23 and measuring 300 m x 50². A firing range ([R 252 restricted zone](#) from the ground up to 3,500 ft) is located north of runway 05, in its centreline. The firing area was not active at the time of the event.

The aerodrome's altitude is 718 ft.

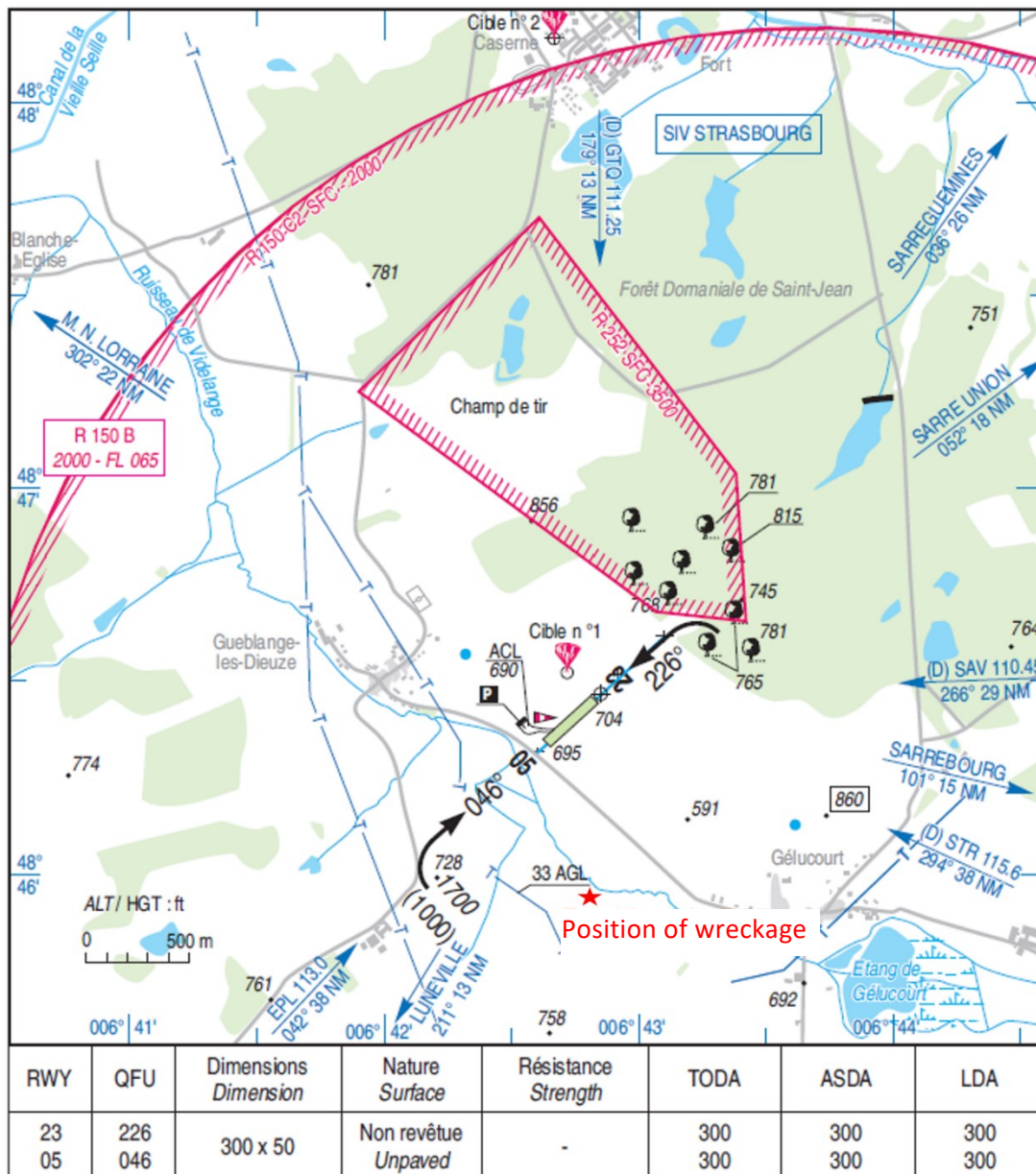


Figure 1: excerpt from the aerodrome VAC chart (Source: AIS)

The aerodrome circuits are made to the south-east of the runway. The [BASULM sheet](#) also indicates that runway 05 is the preferred runway.

² [The information on the BASULM sheet](#) indicates an incorrect, longer runway (825 m x 50), corresponding to the extension of the runway up to the edge of the adjacent wood.

2.3 Site and wreckage information

The wreckage was located in a field approximately 1,200 m south of the start of runway 05. The microlight was completely burned. The tip of the right wing was torn off when it made contact with a tree, before the aircraft hit the ground. This element was found at the top of a poplar of 15 to 20 m in height, located around 100 m north of the main wreckage. This tree, the largest in the area, was rather isolated.

With the exception of the line of trees containing the poplar, the environment was suitable for a forced landing.



Figure 2: general view of the site and wreckage (Source: BGTA Metz, BEA annotations)

The extent of the damage caused by the fire limited the scope for examination. As regards the flight controls, only the yaw and elevator trim controls could be studied. They were probably operational at the time of the collision with the vegetation.

All of the damage observed on the fuselage, wings, tail units and landing gears was the result of the collision with the vegetation and the ground and of the fire which ensued.

The absence of damage to two of the propeller's three blades, the characteristics of the damage to the third blade as well as the damage to the propeller spinner were consistent with the propeller not rotating or rotating at very low speed at the time of the collision with the ground. The engine was substantially damaged by the fire. This engine was not equipped with a torque limiter.

After analysing the information gathered as part of the safety investigation, and given the damage to the microlight, the BEA decided not to carry out further examination of the engine.

2.4 Microlight information

The Ikarus C42 is a single-engine, fixed-wing microlight with high wing, equipped with tricycle landing gear and wing flaps. The cabin is equipped with two seats in side-by-side configuration. The microlight's lift-to-drag ratio is between 8 and 9 and fuel consumption is around 12 l/h in normal operation.

57BPJ was equipped with a Rotax 912 UL engine delivering a power of 80 hp. The engine was equipped with a composite propeller.

The microlight was maintained by the association. The last maintenance inspection was on 8 September 2022, and included an oil change, replacement of the spark plugs and oil filter, a check of the reduction gearbox and top-up of the coolant. The microlight had logged 12 flight hours since this inspection.

The evidence gathered during the investigation showed that the microlight was within the weight and balance limits.

2.5 Pilot information

The 77-year-old pilot held a paramotor microlight pilot licence issued in 2000 and a fixed-wing microlight pilot licence issued in 2014.

It was not possible to determine the total number of flight hours he had logged. He had logged more than 200 flight hours with the association since 2013 and at least 3 flight hours in the last three months on 57BPJ.

On the date of publication of the report, the pilot's autopsy report was not available and only the results of the anatomical pathology examinations could be taken into account. These examinations revealed a pre-existing heart condition, characterised by coronary stenoses up to 90 %, in particular in the right coronary artery, which led to the placement of stents. Injuries to the right coronary artery are known to cause cardiac arrhythmia or even sudden death.

2.6 Statements

The BEA spoke to the president of the association and the treasurer who received the pilot's phone call prior to the accident.

In their view, given the short time which elapsed between the pilot's phone call and the call to the emergency services, the accident probably occurred shortly after take-off. Indeed, after his phone call, the pilot had to take the microlight out of the hangar, prepare it, seat his passenger, warm up the engine, taxi and line up, then take off.

They confirmed that runway 05 is the one that is usually used and that the wind direction on the day of the accident was compatible with taking off from this runway.

The microlight runway circuit is generally flown at 500 ft above ground level, i.e. at an altitude of around 1,200 ft. The Ikarus generally reaches an altitude of 1,200 ft on the crosswind leg.

They also specified that many fields are available for a forced landing in the vicinity of the aerodrome.

3 CONCLUSIONS

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

Scenario

During a local flight in the vicinity of Dieuze-Guéblange restricted-use aerodrome, the microlight's right wing tip struck an isolated tree of approximately 20 metres in height and ruptured. The microlight then collided with the ground in a field, near the downwind leg of the aerodrome. A fire broke out shortly afterwards.

The examination of the wreckage revealed that all of the damage observed on the fuselage, wings, tail units and landing gear was the result of the collision with the vegetation then the ground and of the fire which ensued. The observations made on the propeller seemed to indicate that it was not rotating on the collision with the ground.

However, given the environment, with weather conditions suitable for visual flight and many fields available in the vicinity for a forced landing, it was not possible to determine why, even in the event of a possible engine problem, the microlight collided with an isolated tree of approximately 20 metres in height. As a consequence, the hypothesis of a possible incapacitation related to the pilot's heart condition could not be ruled out.

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