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INVESTIGATION REPORT

Accident to the CENTRAIR – 201B registered F-CGTP

on 18 October 2020
at Isolaccio di Fiumorbo, locality of Aiola (Haute Corse)

Time	Around 13:25[1]
Operator	Centre Régional de Vol à Voile de Ghisonaccia
Type of flight	Local
Persons on board	Pilot and passenger
Consequences and damage	Glider destroyed

This is a courtesy translation by the BEA of the Final Report on the Safety Investigation published in September 2021. As accurate as the translation may be, the original text in French is the work of reference.

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

Collision with trees, in slope soaring flight

1 - HISTORY OF THE FLIGHT

Note: the following information is principally based on statements and FLARM data from the aircraft.

The pilot, accompanied by a passenger, took off at around 11:30 from Ghisonaccia-Alzitone aerodrome (Haute Corse) to make a slope soaring flight over the eastern slopes of the Monte Rinosu and Monte Incudine massifs.

After two hours of manoeuvres, he reached an area in which there was another glider at a higher altitude, and initiated a spiral to attempt to gain altitude. At the end of the spiral, the glider found itself facing the terrain and collided with the top of the trees.

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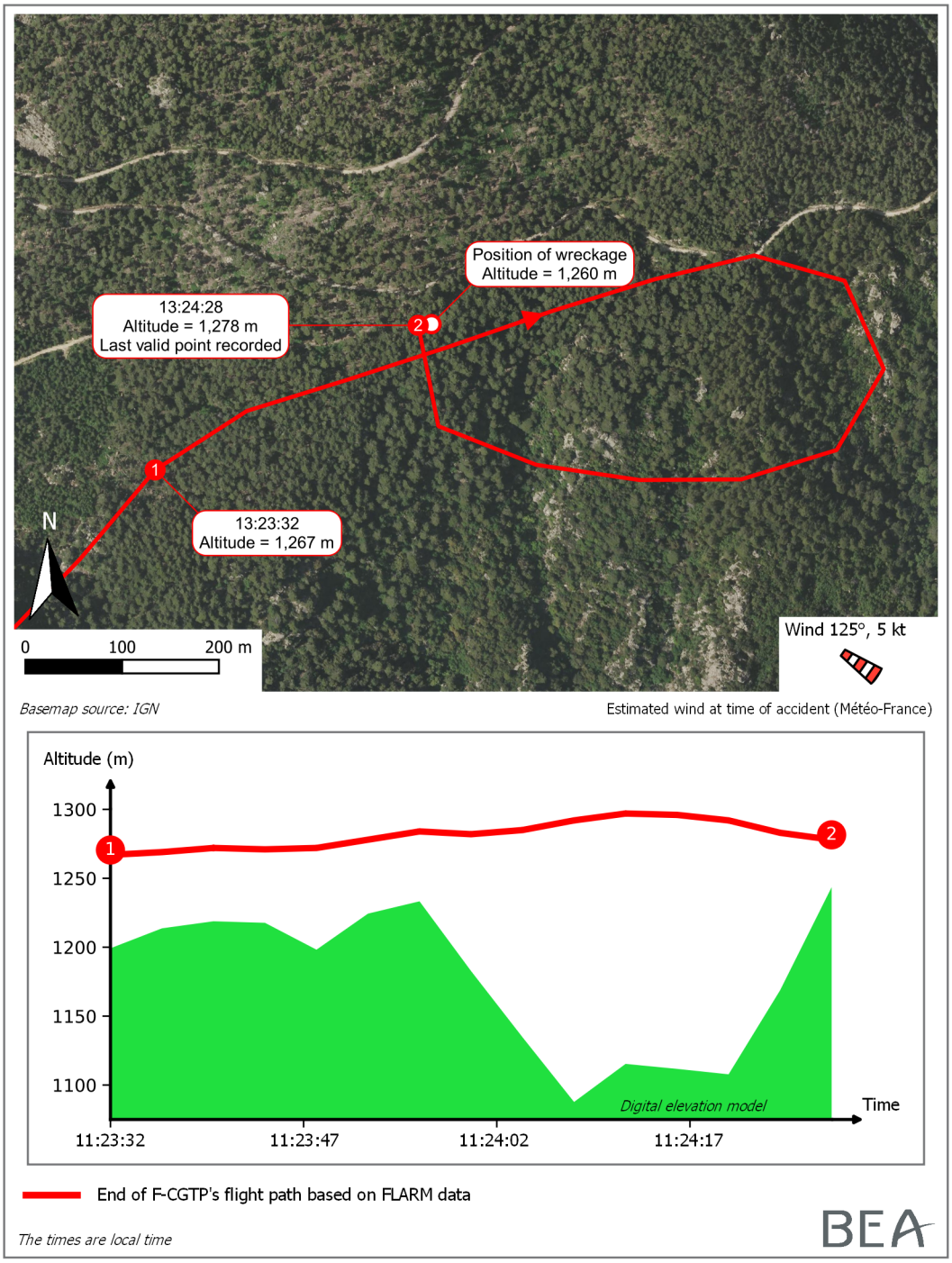


End of the glider's path

2 - ADDITIONAL INFORMATION

2.1 Pilot experience

The 65-year-old pilot held a sailplane pilot licence (SPL), as well as a sailplane instructor rating FI(S). He had logged 2,776 flight hours, 2,242 hours of which as an instructor and 20 hours on type in the last three months.

Following a career as a fighter pilot in the air force, he had been a helicopter pilot in Corsica. He had logged around 700 flight hours in the SA 313 Alouette II and the S 350 B3 Écureuil and held a Private Pilot Licence - Aeroplanes (PPL(A)) with around 4,000 flight hours.

2.2 Meteorological information

The meteorological conditions estimated by Météo-France at the accident site were as follows: wind from 125° of 5 kt, gusts from 115° of 11 kt, slope breeze, visibility greater than 10 km, presence of broken clouds at 4,000 and 6,000 ft and low clouds with a base at around 2,600 ft, temperature 6 °C, no thermal turbulence.

2.3 Pilot's statement

The glider pilot stated that the aerological conditions on that autumn day, although not very powerful, enabled him to stay aloft. He added that he knew the area where he was flying perfectly, along with the surrounding mountain.

After two flight hours, he had reached an area in which a single-seater glider was flying at a higher altitude and made radio contact with the pilot, one of his former students. He stated that he had been making a slope soaring flight and spirals. He specified that the nearer to the slope you are, the better the lift is. He initiated a spiral at a speed of around 10 to 20 km/h more than the stall speed. He realised too late that his height was too low. The pilot stated that the forest canopy (pine trees) was irregular and it had therefore been difficult to estimate the height of the tree tops. He added that the aerological conditions over a forest are weaker.

Lastly, he estimated that he had probably been distracted by the presence of the other glider and also been exhilarated by the challenge.

The pilot reported that the wings of the glider had first of all made contact with the trees. This contact had not seemed violent to him but caused the glider to lose speed. The pilot then initiated a slight climb but the trees further on were too high and he was unable to avoid them. The glider fell into the trees and its course slowed as the wings struck the branches. A pine fork blocked the left wing and the glider came to a stop with its nose around 50 centimetres off the ground.

After the accident, the pilot heard the pilot of the other glider report the accident over the radio.

3 - CONCLUSIONS

The conclusions are solely based on the information which came to the knowledge of the BEA during the investigation. They are not intended to apportion blame or liability.

Scenario

The pilot was making a slope soaring flight over the eastern slopes of the Monte Rinosu and Monte Incudine massifs. After two flight hours, he reached an area in which there was another glider at a higher altitude and initiated a spiral under the ridge to attempt to gain altitude. At the end of his first spiral turn, he found himself facing the terrain and was unable to avoid the collision with the vegetation.

Contributing factors

The following factors may have contributed to the collision with the vegetation:

- the pilot's decision to perform a spiral under the ridge;
- the decision to continue the turn in spiral facing the terrain despite the insufficient margin in distance and height in relation to the terrain;
- the pilot's focus on the other glider, which may have distracted him.

Safety lessons

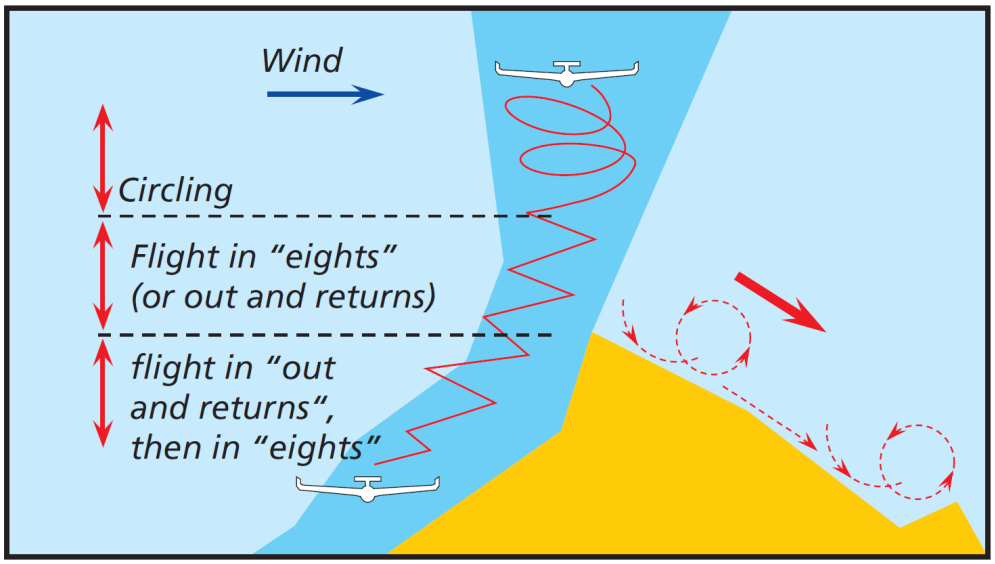
Mountain flying near the terrain and spirals

The Safety in Mountain Flying guide[2] published by the Centre National de Vol à Voile de Saint Auban sets out essential recommendations with respect to the technique of mountain flying. In particular, it addresses the technique of flying and performing spirals near the terrain.

It states that the pilot must be continuously aware of the flight path of his glider, taking into account its speed, its angle of bank, the wind, and possible sudden downdrafts. Flying in the vicinity of crests demands sustained concentration, as well as a perfect knowledge of one's glider and its reactions, as the air is often turbulent there. To reduce the risk as much as possible, the pilot should stay higher than the crests.

More specifically, in terms of spiral flight near the terrain, the guide advises the pilot to not circle while slope flying, unless he is an experienced pilot with sufficient training having followed appropriate instruction. The flying must be mastered (turn radius, speed, angle of bank, balanced flight), and the flight path must be both properly evaluated (height margin, topography, wind, turbulence) and adapted to any other traffic in the vicinity.

It advises against circling too low, specifying, to circle, a beginner in mountain flying must wait until he is well above the crest (100 m to 150 m), and not allow himself to drift to the lee of the slope. The pilot must remember that the radius of a turn in the mountains is greater, and that the closing speed to the rock face is higher (for an identical IAS) than at a lower altitude.



Source: Safety in Mountain Flying published by Centre National de Vol à Voile de Saint Auban

[2] http://www.ato.cnvv.net/logiciels/documents-de-reference

Lastly, the guide adds that if the conditions force you to circle under the crest in order to climb, the pilot must take several precautions, which include making sure that:

- the combination of bank angle and airspeed offers a circling radius that positively allows a circle without the risk of hitting the rock face or the vegetation, taking into account the wind and the possibility of a sudden downdraft;
- the topography and the turbulence have been correctly taken into account;
- the push of the lift (the increase of the load factor) is present and that the variometer reading is well in the positive when, at the latest, while at 45° to the slope, one takes the decision to keep circling;
- when flying into the wind, one decreases the angle of bank, or even flies straight for 3 or 4 seconds before tightening the turn in the downwind.

Personal locator beacon

During an accident in the mountains of a glider that is not equipped with an emergency locator transmitter (ELT[3]), it may be difficult to alert the emergency services as well as to find survivors. Indeed, there are dead spots in mobile telephone networks and OGN[4]. Searches may also be rendered difficult when the aircraft involved in the accident cannot be easily located by the emergency services.

A personal locator beacon (PLB) is an efficient alert system and enables the pilot to be rapidly located in the event of an accident. Therefore, the BEA encourages pilots to equip themselves with their own PLB.

This subject was addressed in more detail in the report on the accident to the Schleicher ASK13 registered F-CDYD on 25 June 2020 at Montagnole (Savoie)[5].

[3] In France, it is not mandatory for gliders to carry an emergency locator transmitter.

[4] Open Glider Network. This is a community system that receives data from FLARM computers installed on board gliders in real time using a network of ground reception antennas. This data is shared with the Aeronautical Rescue Coordination Centre (ARCC).

[5] https://www.bea.aero/fileadmin/user_upload/BEA2020-0221.en.pdf