BEA
Bureau d'Enquêtes et d'Analyses
pour la sécurité de l'aviation civile
www.bea.aero
@BEA_Aero

INVESTIGATION REPORT

Accident to the CENTRAIR – 101 Pégase registered F-CHLU

on 19 April 2010
at Pont-sur-Yonne (Bourgogne-Franche-Comté)

Time	About 16:10[1]
Operator	Private
Type of flight	Local
Persons on board	Pilot
Consequences and damages	Pilot fatally injured, glider destroyed

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

[1] Except where otherwise indicated, times in this report are in Coordinated Universal Time (UTC). Two hours should be added to obtain the legal time applicable in Metropolitan France the day of the occurrence.

Collision with the ground during the approach

1 - HISTORY OF THE FLIGHT

Note: the following information is based on witness statements and the glider's FLARM data.

The pilot carried out a towed take-off from Pont-sur-Yonne aerodrome at about 12:25. He climbed using thermal uplifts located near the aerodrome for around 25 minutes until he reached an altitude of about 1,800 m. He then headed south-east of the aerodrome for approximately two hours: the altitude of the glider varied between 1,200 and 2,300 m.

Around 15:00, he turned around and maintained an altitude of between 1,300 and 1,900 m for 45 minutes. He then started a descent until he reached an altitude of 800 m at 5 Nm from the aerodrome at about 16:00. He next used other uplifts for approximately five minutes until he reached an altitude of 1,350 m, before heading towards the aerodrome in descent[2].

[2] A witness heard the pilot announce his return about ten minutes before the accident.

According to the witnesses, the glider followed a steady downward path to the ground.

2 - ADDITIONAL INFORMATION

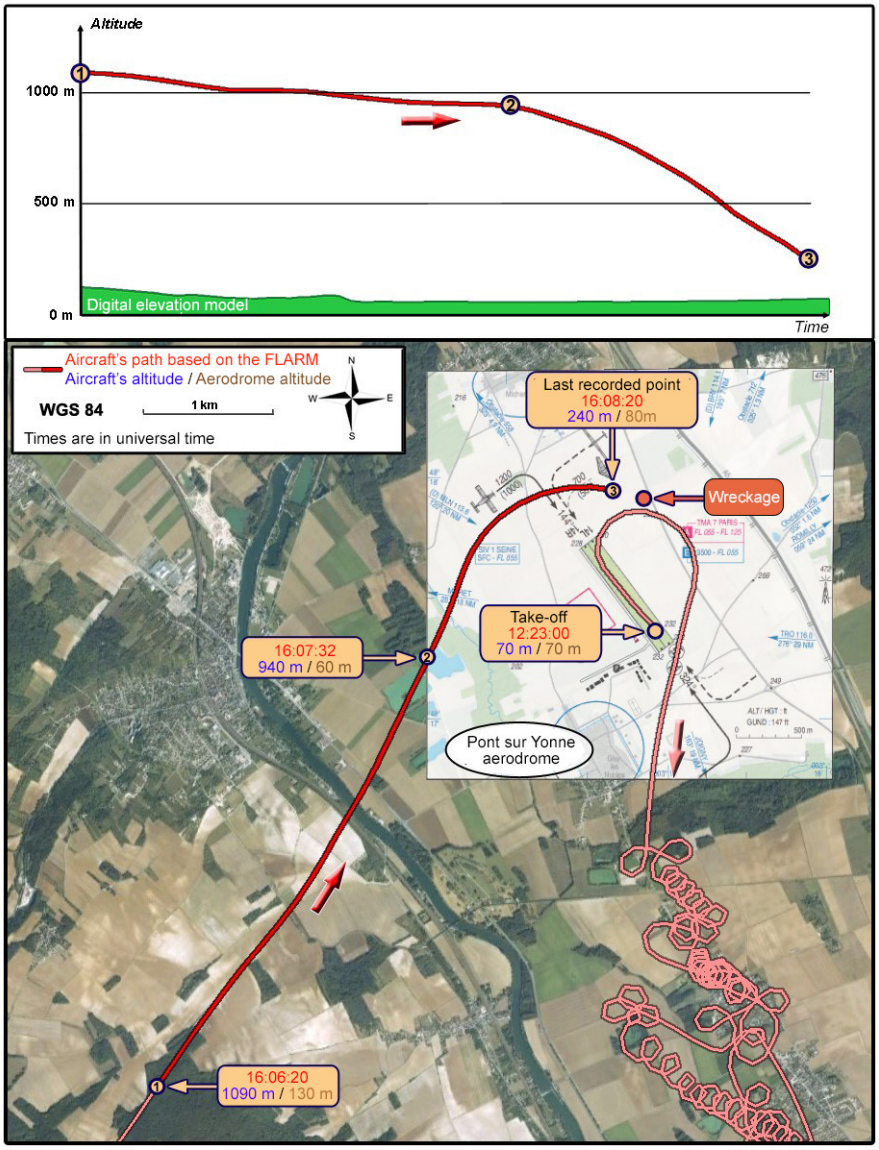
2.1 Examination of site and wreckage

The examination of the site and the wreckage showed that the glider had collided with the ground with a high horizontal speed, a high nose-down attitude and a slight right bank. The glider came to rest about 30 meters from the point of initial impact with the ground.

RÉPUBLIQUE FRANÇAISE
Liberté
Égalité
Fraternité

2.2 Read-out of the computers

The glider was equipped with a FLARM computer. The path could be reconstructed from the data read out from the computer.



Glider's path

The analysis of the recorded data showed that the vertical speed increased abruptly one minute before the end of the flight from -500 ft/min to -4 000 ft/min at the last recorded point. During this time, the glider described a smooth turn with a radius of about 1000 m.

2.3 Weather conditions

The estimated weather conditions at the accident site were as follows: wind from 090° at 5 kt, gusting to 12 kt, visibility greater than 10 km, scattered clouds, temperature 21°C.

2.4 Pilot information

The 61-year-old pilot, who held a glider pilot licence issued in 1984, had logged about 1,200 flight hours, including two hours on type in the previous three months.

His last medical examination for his class 2 medical fitness certificate was on 8 July 2008[3].

[3] At the time of the accident, this certificate was valid for two years for pilots over 40 years old.

2.5 Medical and pathological information

The autopsy revealed cardiomegaly[4] and coronary atherosclerosis[5] reaching 66% in some places[6].

Cardiomegaly may contribute to the person feeling dizzy or fainting in case of stress, especially because of rhythm disorders.

When a pilot stays at an altitude of more than 1,500 m[7] for a few hours, his/her body will react to adapt and maintain the same level of oxygenation of the tissues as at sea level. This results in an increase in cardiac output and pulmonary ventilation, most of the time without the pilot noticing it. Coronary arteries adapt their size to the degree of altitude-induced hypoxia. However, arteries whose walls are rigidified by sclerosis are not able to adapt in such a way and this may contribute to the occurrence of acute coronary events.

[4] Refers to a heart that is larger than normal.

[5] Presence of atheromatous plaque on the wall of certain arteries causing narrowing (stenoses) that hinders the passage of blood and therefore the oxygen supply to the organ it irrigates.

[6] At sea level, symptoms due to coronary stenoses generally appear when stenoses is present 70% or more.

[7] The Glider Pilot Manual indicates that signs of hypoxia can occur at altitudes of 1,500 m upwards.

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 examination of the wreckage did not reveal any element contributing to the accident. During the last minute of flight, the glider abruptly entered a nose-down attitude and initiated a right turn. This path suggests that the pilot was no longer piloting the glider.

It can be conjectured from the pathologies revealed by the autopsy that the pilot might have had a dizzy spell or fainted. Flight conditions in a glider at an altitude of more than 1,500 m for three hours, expose pilots with cardiovascular disorders to complications linked to exertion and high-altitude hypoxia.