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Accident to the ROBIN - DR400 - 140B

registered **F-GOOF**

on 14 June 2023

at Pressignac-Vicq (Dordogne)

Time	Around 18:30 ¹
Operator	Cercle Aérien Peugeot
Type of flight	Cross-country
Persons on board	Pilot and one passenger
Consequences and damage	Pilot and passenger severely injured, aeroplane 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.

Non-stabilised approach, long landing, runway veer-off, collision with obstacles

1 HISTORY OF THE FLIGHT

Note: the following information is principally based on statements.

The pilot, accompanied by a passenger, took off from Chavenay aerodrome (Yvelines) bound for Royan aerodrome (Charente-Maritime) and then Pressignac-Vicq Rebeyrotte private aerodrome.

On arriving at Pressignac-Vicq Rebeyrotte aerodrome, the pilot joined the downwind leg for unpaved runway 19. On landing, the aeroplane bounced, touched down hard on the runway and then bounced again. The pilot went around and made an aerodrome circuit. At the end of the second approach, on landing, the aeroplane touched down on the runway approximately 500 m after threshold 19, to the left of the centreline, and deviated to the left. The aeroplane exited the runway, crossed the aerodrome perimeter fence and collided with trees.

2 ADDITIONAL INFORMATION

2.1 Site and wreckage

The wreckage was located approximately 600 m from the threshold of runway 19 and 40 m to the left of the runway centreline, at the foot of trees over 10 m tall.

The first marks left by the main landing gear on the runway were approximately 110 m before the wreckage. The first mark corresponds to the right main landing gear and was located approximately 3 m before the mark left by the left landing gear. Approximately 30 m after the first mark, a runway light located on the left side of the runway was damaged. A mark left by the

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



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nose landing gear was observed after this damaged light. The marks then stopped at the bank bordering the runway, before the perimeter fence.

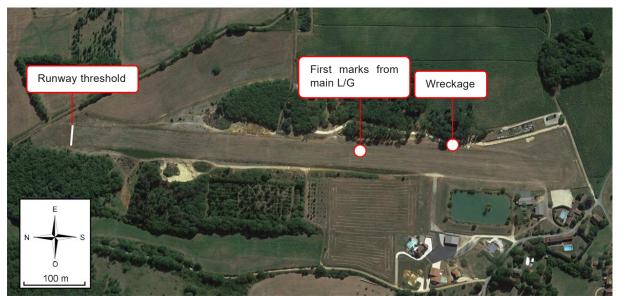


Figure 1: accident site (Source: Google Earth, BEA annotations)

The damage observed on the propeller blades showed that the engine was transmitting torque to the propeller at the time of the collision with the ground or with the obstacles on the ground. However, it was not possible to define the power delivered by the engine during this collision.

The flap control lever was pulled up to the second detent position, which corresponds to the "landing" position.

The runway was dry. The grass was short.

2.2 Meteorological information

The meteorological conditions estimated by the French met office, Météo-France, at the accident site were as follows: wind from 340° of 9 kt, CAVOK, temperature 30°C.

2.3 Pilot information

The 63-year-old pilot held a Private Pilot Licence - Aeroplanes (PPL(A)) issued in May 2009. He had logged approximately 550 flight hours, the majority of which on DR400s, and 12 hours of which in the previous three months, all on DR400s.

He had already been to the aerodrome once and had obtained authorization to go there on the day of the accident.

2.4 Aerodrome information

Pressignac-Vicq Rebeyrotte aerodrome is a private aerodrome reserved for pilots who have obtained prior authorisation². It is located at an altitude of 643 ft and has an unpaved runway 01/19 measuring 800 m x 35 m.

Landing can only take place on runway 19, which has a landing distance available of 800 m. Runway 19 has an upward slope of approximately 5% over the first 150 m, of approximately 3.5% over the following 550 m, then slopes slightly downwards. Flying over nearby villages and hamlets is prohibited at low height³.

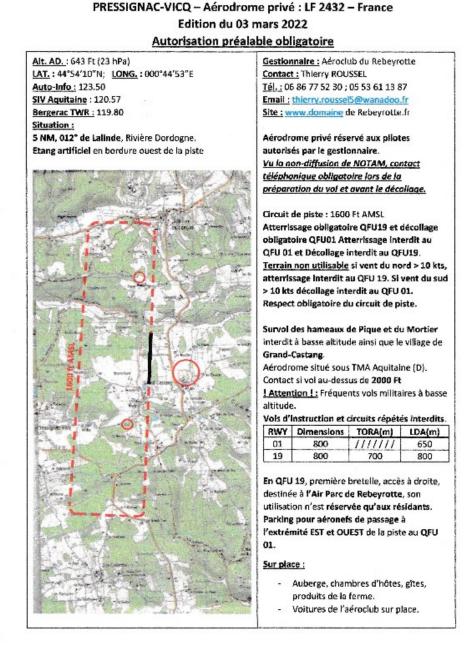


Figure 2: aerodrome chart (source: Aéroclub du Rebeyrotte)

² At least 200 flight hours of experience as pilot-in-command is required. A certificate stating that pilots have read the latest version of the aerodrome chart must be signed to obtain authorisation. ³ These are similar in red on the aerodrome short

³ These are circled in red on the aerodrome chart.

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2.5 Statements

2.5.1 Pilot's statement

The pilot indicated that he took off from Chavenay aerodrome in the morning for a flight bound for Royan which lasted approximately two hours. During the stop at Royan, he went for a bike ride which was more tiring than he anticipated. In preparation for the second flight and the flight scheduled for the following day, he added fuel. He specified that he topped up the main fuel tank and added 20 I to the additional tank. He then took off for a flight which lasted approximately one-and-a-half-hours bound for the Châteaux of Périgord and Pressignac-Vicq Rebeyrotte aerodrome, where he planned to stop for the evening. During the flight, he flew over the aerodrome in an easterly direction to ensure that he could find it easily.

Coming back to the aerodrome, the pilot flew overhead the runway before joining the downwind leg at the altitude indicated on the chart. He stated that he turned onto the base leg before a farm⁴ located on the final approach path because he did not want to fly over it. During the landing, the aeroplane touched down on the runway with a speed that was too high and a steep nose-up attitude. The aeroplane bounced. As he was unable to see the runway after that bounce, the pilot pushed the stick forward and the aeroplane touched down hard on the runway with the nose landing gear. The pilot then went around and made another runway circuit.

During the second approach, the pilot turned again onto the base leg before the farm. The final was far too short and the pilot did not manage to stabilise the approach speed or path. He continued the approach, probably due to a loss of clear-headedness. During the landing, the aeroplane touched down on the runway to the left of the centreline and immediately deviated to the left. The pilot specified that the aeroplane's speed at wheel touchdown was 120 km/h⁵. He had no recollection of his actions after touchdown.

The pilot stated that the runway circuit described on the chart bypassed the farm he saw on the final path, with the base leg being to the north of this farm. Retrospectively, he considered that he did not study the chart sufficiently. He specified that he had landed at Pressignac-Vicq Rebeyrotte aerodrome several years before and was therefore confident. However, given the hilly environment, the references there were different from those of the aerodromes where he was used to flying, which may have misled him. He added that he did notice a fairly light northerly wind, but forgot to take into account the tailwind component on final approach⁶.

The pilot specified that the nose landing gear may have been damaged during the first landing.

2.5.2 Witness statements

The aerodrome manager stated that during the second approach, he heard a go-around. He specified that the touchdown on runway 19 generally takes place between 100 and 150 m after the runway threshold, on the 5% slope section.

⁴ Farm circled in red to the north of the runway on the aerodrome chart (see **Figure 2**).

⁵ According to the flight manual, the approach speed on final with the flaps in the landing position is 115 km/h.

⁶ The flight manual indicates that 10% should be added to the landing distance for each additional 2 kt of tailwind. It does not mention a maximum tailwind.

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A second witness heard the first go-around and then saw the aeroplane in initial climb. A few minutes later, he heard a second go-around, followed by the noise of an impact.

3 CONCLUSIONS

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

Scenario

After a first flight lasting two hours and a second flight lasting one hour and thirty minutes, the pilot joined the downwind leg of the Pressignac-Vicq Rebeyrotte aerodrome circuit for a landing on unpaved runway 19. He mistakenly shortened the aerodrome circuit by turning too early onto the base leg to avoid flying over a farm. On landing, after bouncing twice on the runway, he went around. He made another aerodrome circuit and once again turned too early onto the base leg. In the context of a short final approach with a tailwind, he did not manage to stabilise the approach. He continued the approach, even though it was not stabilised due to an excessive speed, and a path that was offset in relation to the runway centreline and above the approach slope. A loss of clear-headedness possibly resulting from the fatigue accrued due to the day's schedule may have contributed to the pilot not aborting the approach.

During the landing, the aeroplane touched down on the runway about 500 m after threshold 19, to the left of the centreline, it deviated to the left and then exited the runway. The aeroplane collided with the fence located on the left side of the runway and then with trees.

Contributing factor

Partial knowledge of the aerodrome chart led the pilot to turn too early onto the base leg and thus contributed to the non-stabilised approach.

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