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INVESTIGATION REPORT

Accident to the PIPER PA19 "SUPER CUB" registered F-BOUF

on 12 February 2017
at Chavenay-Villepreux (Yvelines)

Time	About 17:15[1]
Operator	Aéroclub Jean Bertin
Type of flight	Instruction
Persons on board	Pilot in training and instructor
Consequences and damage	Aeroplane substantially damaged

This is a courtesy translation by the BEA of the Final Report on the Safety Investigation published in April 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 local time.

Stall on short final during a low-height aerodrome circuit, collision with a fence and then the ground, in instruction

1 - HISTORY OF THE FLIGHT

Note: The following information is principally based on statements.

The pilot in training, accompanied by an instructor in the rear seat, took off from runway 10 of Chavenay-Villepreux aerodrome and performed low-height aerodrome circuits to improve his skills. He performed the first two circuits at a height of 150 ft, first right hand, then left hand, and then a third left hand circuit at a height of 100 ft. As he initiated the turn at the end of the downwind leg, the aeroplane stalled, hit the aerodrome perimeter fence and then the ground near the threshold of runway 10.

2 - ADDITIONAL INFORMATION

2.1 Pilot information

The 63-year-old instructor held a CPL(A) commercial pilot license with an instructor rating. He had logged more than 20,000 flight hours, including 1,400 hours on type and 70 hours in the previous three months, including 3 hours on type.

The 27-year-old pilot in training, held a PPL(A) private pilot license issued in April 2009. He had logged 550 flight hours, of which 160 on type, and 15 in the previous 3 months, of which none on type.

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2.2 Weather conditions

The pilots estimated the weather conditions at the accident site as being: wind from 080° at 6 kt, visibility 3,500 m, no significant clouds, mist, temperature 4°C. These conditions were consistent with the information recorded at 17:00 at Toussus-le-Noble aerodrome located about 14 km away.

2.3 Aircraft information

F-BOUF is a tandem two-seat aeroplane. Only the pilot in the front seat has access to the flight instruments. The aeroplane is not equipped with a stall warning system. The maximum allowable take-off weight is 681 kg. On the day of the accident, the aeroplane's weight was 693 kg.

2.4 Aerodrome information

Chavenay-Villepreux aerodrome is a controlled aerodrome open to public air traffic. It has two unpaved intersecting runways oriented 05/23 and 10/28. The altitude of the aerodrome is 424 ft.

According to the information on the VAC chart, the aerodrome circuit for runway 10 was to be performed at a height of 850 ft, north of the runway (left hand), avoiding overflight of the neighbouring towns. The low-height circuit, dedicated to training flights with an instructor on board, was flown in the opposite direction to the published circuit, after approval from the controller. The VAC chart did not specify the height at which this type of circuit may be flown

2.5 Low-height aerodrome circuits

At the time of the accident, the applicable regulations[2] specified that all aircraft were required to comply with the aerodrome traffic circuit and surface traffic pattern associated with the aircraft being operated, when defined. However, a height different from the standard aerodrome circuit (1,000 ft) could be used, but only for flight training purposes.

[2] Order of 17 July 1992 on general air traffic procedures for the use of aerodromes by aircraft (available in French only) (Version in force on the day of the accident)..

2.6 Statements

The student pilot and the instructor indicated that there was no educational gain in performing aerodrome circuits at a height between 100 and 150 ft and that they had "*enjoyed themselves*". They stated that they applied full power and eased the stick forward during the stall.

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 student pilot and the instructor undertook an instruction flight and decided to perform aerodrome circuits at very low height with no identified educational purpose. During the turn at the end of the downwind leg, the aeroplane stalled. Neither the student pilot nor the instructor was able to regain control of the aeroplane before it struck the ground.

Contributing factors

The following factors may have contributed to the decision to undertake very low height aerodrome circuits without an identified educational purpose:

- ❒ emulation between the two pilots that may have impaired their judgment;
- ❒ the absence of any limitation in the regulations at the time of the event.

Regulatory changes subsequent to the accident

There is now a regulatory limitation for the execution of low-height circuits. The decree of 12 July 2019[3] on general air traffic procedures for the use of aerodromes by aircraft has superseded the decree of 17 July 1992. It states that low-height circuits may be carried out for training purposes with an instructor on board, at a height different from the height of the aerodrome circuit but not less than 90 m (300 ft) above surface, after clearance at a controlled aerodrome or prior agreement between pilots at other aerodromes; the path followed is then a short circuit in order to stay close to the runway. They can only be carried out if they do not interfere with other aircraft in the aerodrome traffic.

[3] Version in force at the time of publication (Available in French only)