



**Accident** to the PIPER PA30  
registered **N8663Y**  
on 12 August 2021  
at Cannes

<b>Time</b>	9:42 <sup>1</sup>
<b>Operator</b>	Private
<b>Type of flight</b>	Cross country
<b>Persons on board</b>	Pilot
<b>Consequences and damage</b>	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.

## Engine problem in flight, U-turn, water landing

### 1 HISTORY OF THE FLIGHT

*Note: the following information is principally based on the pilot's statement and telecommunication recordings.*

The pilot took off at approximately 09:25 from Cannes airport for a flight bound for Figari. The tower controller told him to leave the circuit via reporting point SA<sup>2</sup> at an altitude of 1,000 ft (see Figure 1). The pilot then contacted the Nice flight information controller. About ten minutes after take-off, the pilot switched from the main tank to the auxiliary tank to supply the right engine with fuel. The pilot immediately noticed that the right-hand engine was not operating properly. The pilot switched back to the main tank for the right-hand engine, which then returned to normal operation.

As a precautionary measure, a few minutes later, the pilot decided to turn around and land at Cannes, informing the Nice flight information controller that he had a small problem with his radio<sup>3</sup> (see Figure 1, point ①). The pilot was then approximately 16 NM from the airport. He put all the aeroplane's levers in the forward position<sup>4</sup> - the electric pumps had been operating since the beginning of the flight. He maintained the aeroplane in level flight at 1,000 ft. The pilot indicated that the aeroplane could not exceed 110 mph, which is the best rate of climb speed on a single engine (or *blue line*).

<sup>1</sup> Except where otherwise indicated, the times in this report are in local time.

<sup>2</sup> Located 1 NM south of Saint-Honorat Island.

<sup>3</sup> The pilot indicated that he had made this announcement in order not to alert the control and emergency services, as he thought the problem was minor at the time.

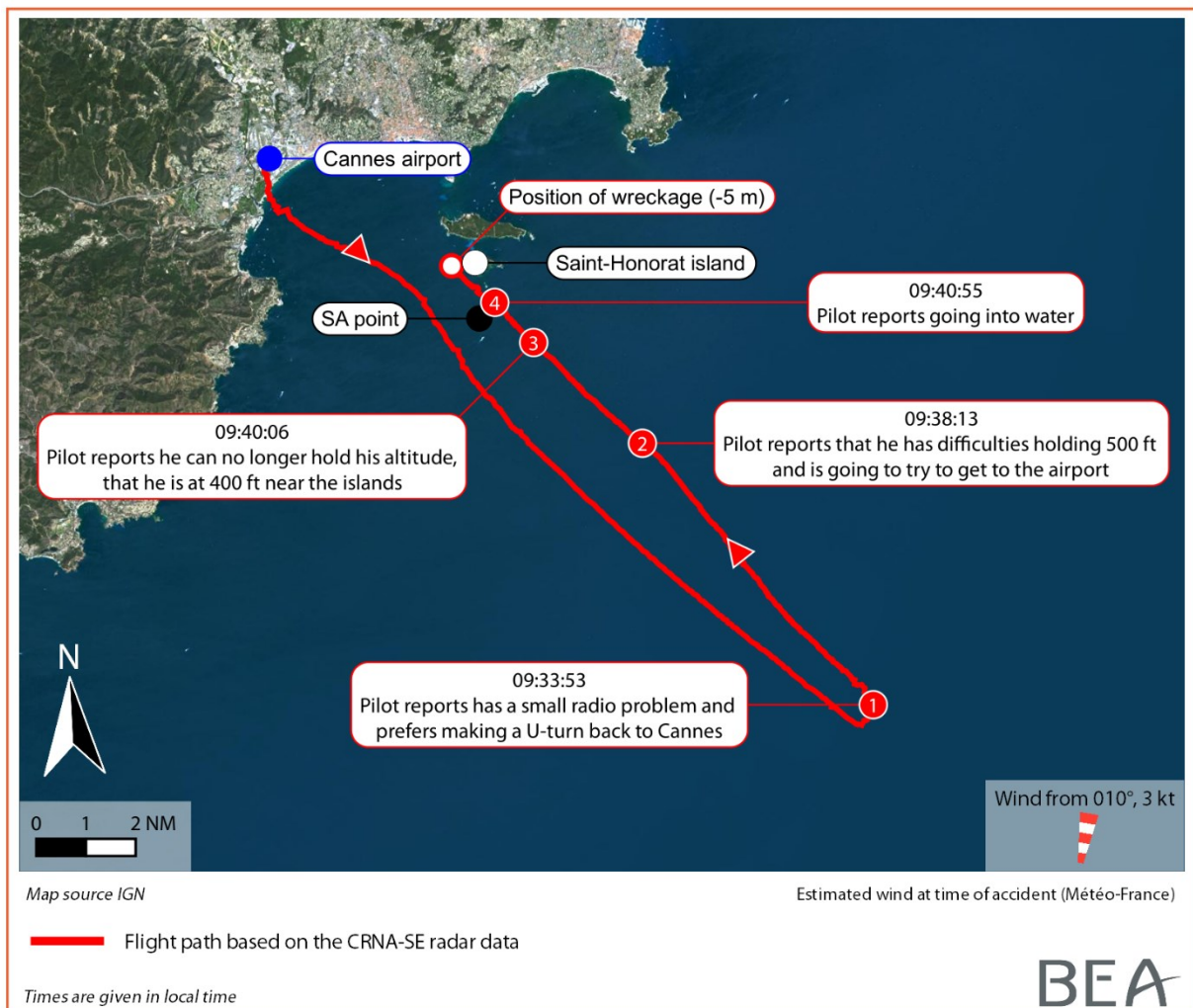
<sup>4</sup> Power control set to full throttle, propeller speed control set to full low pitch, mixture control set to full rich.

Shortly after the U-turn, the aeroplane started to lose altitude. In order to gain speed to reach the *blue line*, the pilot slightly pushed on the stick. The aeroplane regained a little speed up to 120 mph, but continued to descend. The pilot prepared for a water landing by taking out his life jacket and opening the aeroplane's door.

He announced to the Cannes tower controller that he was going into the water (see Figure 1, point 4).

The pilot landed on the water off the coast of Saint-Honorat Island. He evacuated the cockpit, put on his life jacket and positioned himself on the wing of the aeroplane. He was picked up by a boater on a jet-ski and then transferred to a pleasure boat. The aeroplane sank a few minutes after landing on the water.

The responders of the airport Rescue and Fire Fighting Service (RFFS) were alerted by the tower controller<sup>5</sup>. They declared an accident at 09:46 and boarded a Zodiac. They picked up the pilot at 10:04 from the pleasure boat and took him back to the airport on board the Zodiac.



**Figure 1: flight path of N8663Y**

<sup>5</sup> A few minutes after the last radio communication from N8663Y, the pilot of a Cessna 152 flew over the ditching site and informed the tower controller that a person had left the aeroplane.

## 2 ADDITIONAL INFORMATION

### 2.1 Site and wreckage information

The wreckage remained underwater at a depth of approximately five metres for four days before being raised (see Figure 2).



*Figure 2: wreckage of N8663Y (source: Gendarmerie)*

The wreckage was examined shortly after being raised; no anomaly likely to have contributed to the accident was found.

The following was observed:

- The rudder trim position was close to neutral.
- The power controls were set to the idle position, the propeller speed controls were close to the full low pitch position and the mixture controls were positioned at the halfway point.



*Figure 3: inside view of the N8663Y cockpit  
Photograph taken while N8663Y was submerged (source: Gendarmerie)*

The deterioration of both engines following their prolonged exposure to sea water restricted the possibility for examinations. Further examinations of components taken from the engines did not reveal any failure that could explain the accident.

Due to the fact that the aeroplane had been submerged, it was not possible to accurately determine the amount of fuel in the tanks.

Fuel samples were taken from the two main tanks, the two auxiliary tanks and the two main feeder tanks to check the quality of the fuel used. The samples from the auxiliary tanks were contaminated with sea water and could not be analysed. For the other samples, the physical and chemical properties measured met the specifications of AVGAS 100LL.

## 2.2 Meteorological information

The METAR report at 09:30 for Cannes airport indicated:

- wind from 010° of 3 kt;
- CAVOK;
- temperature of 27 °C.

## 2.3 Pilot information

The pilot held a Private Pilot Licence - Aeroplanes (PPL(A)) issued in 2001, along with SEP, MEP and IR/ME ratings. At the time of the accident, he had logged approximately 2,830 flight hours, 1,510 hours of which on twin-engine aeroplanes.

## 2.4 Aircraft information

N8663Y was equipped with six fuel tanks (i.e. three per engine): two main tanks, each with a capacity of 30 US gallons<sup>6</sup> (27 US gallons of which could be used<sup>7</sup>), two auxiliary tanks, each with a capacity of 15 US gal<sup>8</sup>, and two wingtip tanks, each with a capacity of 15 US gal.

The examination of the logbook showed an entry indicating that the aeroplane's tanks had been refuelled to capacity on 23 July 2021. On 31 July 2021, the pilot's father carried out a return flight from Cannes to Figari for a total of 2.5 hours, using only fuel from the main and wingtip tanks. The pilot indicated that the aeroplane had a consumption of approximately 40 l/h per engine. During his pre-flight check of the aeroplane before the accident, the pilot estimated that the auxiliary tanks were full, that the main tanks were half full and that the wingtip tanks were empty.

## 2.5 Pilot's statement

The pilot indicated that he did not identify any engine malfunction after switching back to the main tank for the right engine. He did not attempt to feather the aeroplane's propellers.

Just before the impact with the water, he remembered seeing on his instruments that the propellers were rotating at 2,400 rpm and that the fuel flow of one engine was half the value observed on the other one.

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<sup>6</sup>Approximately 113.5 litres.

<sup>7</sup>Approximately 102.2 litres.

<sup>8</sup>Approximately 56.8 litres.

He also specified that he did not remember making any input on either the right or left rudder pedal while returning to Cannes airport.

### 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

Shortly after take-off from Cannes airport, the pilot encountered engine power problems when switching tanks, leading him to perform a precautionary U-turn. While returning to the airport, the pilot noticed that N8663Y could not maintain speed in level flight and then lost altitude, without being able to identify any particular engine anomaly at that time. As he was unable to regain height, he landed on the water about 4 NM from the threshold of runway 35 at Cannes airport.

The investigation was unable to determine what caused the failure of the engine(s), which led to the emergency water landing.

Based on the hypothesis that one of the engines delivered reduced power, a traction asymmetry would have been detected. The lack of feathering of the propeller would then have contributed to the deterioration of the aeroplane's performance by increasing the aeroplane's drag, which could explain why the pilot was unable to maintain level flight. Imprecisions in the pilot's statement did not allow this hypothesis to be confirmed or refuted.

Based on the hypothesis that both engines failed, feathering the propellers would not have, in any case, allowed the pilot to glide to Cannes airport, given the distance he had to cover when the malfunction occurred. In this context, a water landing was the only option he had.

The pilot landed on the water in an area with a high concentration of pleasure boats at this time of the year, not far from Cannes airport. He was therefore quickly picked up by boaters and then by the airport's responders, who arrived at the site on board a Zodiac.

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