

CASE STUDY

ALPI (CAVACIUTI)

PIONEER 400

Aviation Accident

Private flight - England

3 January 2015

On 3 January 2015, the Pioneer 400 aircraft departed Bembridge Airfield, Isle of Wight, for a visual flight rules (VFR) flight to Bidford Airfield, near Evesham. The aircraft contained a family, two parents and one young child, and one of the parents was the pilot.

En-route the aircraft diverted to Popham Airfield and appeared to be trying to land. Due to low cloud it was seen to fly what appeared to be a low level, left-hand circuit. Whilst in the circuit, the aircraft aerodynamically stalled and struck trees before hitting the ground. Tragically both parents were killed, but the child survived with serious injuries. A defect was identified with the engine turbo (turbocharger) control, which likely resulted in the engine manifold air pressure limit being exceeded and the engine seizing in flight.

The air accident report focused on the weather conditions of the flight, which were challenging in respect of the pilot's experience and qualifications. It concluded that although there was a specific defect, the engine was still capable of being operated safely with an increased level of pilot monitoring and awareness. It went on to state that it was likely that the pilot saw a deterioration in weather that eroded the safety margin for visual flight and that it would have been prudent to divert or to have turned back to the depart airfield.

Jim Morris reviewed the report, the weather, the nature of the emergency and the evidence indicating that the engine problem occurred before the aircraft diverted to Popham. It was his view that although challenging, the pilot should have been able to track around the poor weather to reach the destination airfield and, in the worst case, could have safely diverted to another airfield enroute.

However, he took the view that it was likely that it was the problem with the engine, not the weather, that caused the pilot to divert to Popham. Although the AAIB state that the aircraft could be flown so long as the pilot kept the engine manifold pressure within limits, this was a very difficult situation to manage with the nature of the warning system and engine instrument indicators in the accident aircraft. Effectively, the pilot had lost a crucial engine protection system, meaning that the engine could seize if he moved the throttle just a bit too far to increase power. Furthermore, in the report the AAIB identify that when this type of aircraft has its gear and flaps down

for landing, the increased drag means that there is little excess power and it produces a low rate of climb at full throttle if the landing is aborted.

Given the seriousness of this engine problem, Jim's view was the pilot made the right flight safety decision - to divert to Popham, which was the nearest airfield, and that when positioning to land with the drag of landing gear and possibly flap, the pilot needed power to maintain safe airspeed but this exceeded the limit and caused the engine to seize. But for this serious engine problem, this fatal accident would not have occurred.

The Inquest was held in April 2016. Jim Morris was the family's advocate and the main witnesses were the AAIB pilot, engineer and data experts. Following the Coroner's questions to the AAIB witnesses, the Coroner stated, "Can I say that this is a weather problem rather than a technical problem?" The response from the AAIB was, "I believe the weather here is the overriding factor, I don't believe he would have been in that position if it were not for the weather."

Prior to Jim's questioning of the AAIB witnesses, the Coroner provided Jim with a draft narrative verdict which focused on the weather and did not attribute any causal element to the problem with the engine system. This was in contrast to Jim's opinion and would have serious implications for the legal case. If the pilot was found to be to blame, the child would only be able to claim a loss of dependency for one parent.

Jim then proceeded to question the 3 AAIB witness in detail. As a result of his questions and the AAIBs responses, the Coroner decided to amend his draft verdict to read "They encountered poor weather conditions and a technical problem with the aircraft engine and in the course of attempting to land at Popham airfield in Hampshire, the engine seized and lost power and they collided with trees and crashed to the ground." The jury agreed and adopted this narrative.

This verdict was extremely important to the family and the child's legal case for the loss of both of his parents. A legal claim is now being pursued against the aircraft and engine manufacturers.

[Jim Morris \(Link to Jim profile\)](#)

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Jim specialises in representing the victims of international air accidents. He was a professionally qualified Royal Air Force pilot prior to becoming an aviation lawyer, and has over 28 years' experience in aviation and litigation.

