

# The pilatus pc-12 crash in butte, montana essay sample



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In the months following its fatal crash in March 2009 in a cemetery in Butte, Montana, a full scale investigation has been lodged into the flight safety capabilities of the Pilatus PC-12 single-engine turboprop multipurpose aircraft by the National Transportation Safety Board. Dozens of questions have surfaced while under scrutiny, ranging from issues surrounding the aircrafts change in course and landing location to the aircrafts lack of sufficient technology and required recording devices, but the greatest issue at hand seems to be the believed violations of Federal Aviation Administration (FAA) regulations.

There seems to have been a number of regulatory violations taking place aboard the Pilatus PC-12 No. 01973-001 at the time of its crash landing on that fateful day. The Pilatus holds an expressed written certification that allows for a “ maximum passenger seating capacity of 9 PAX excluding pilot seats” (PC-12 EASA Certification) with an included flight crew being limited to three additional individuals, making the maximum individuals allowed onboard twelve. With 14 passengers aboard the aircraft without regard to the flight crew present, the PC-12 No. 01973-001 had clearly exceeded its human cargo limit as set forth in its operative regulations (PC-12 EASA Certification).

A second pressing issue in this case has become whether or not the PC-12 was licensed or certified to operate without the presence of cockpit voice or flight data recording mechanisms, a topic far more difficult to sift through. According to recent Flight Operator Quality Assurance (FOQA) “ all large commercial airliners” must be equipped with two types of information recording devices (voice & flight data) so that any accidents or incidents can

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be easily investigated (Airlines. org). The regulations do stipulate that if the aircraft possesses these recording devices and they are out of order that the scheduled flight will be allowed with repairs being undergone within a reasonable timeframe, but upon investigation of the crash no presence or remnant of any such recording device could be found, proving that no such device existed upon this particular aircraft prior to the flight in question.

A commercial airliner is defined as an aircraft “ used to haul passengers and freight on a scheduled basis between selected airports” (Encyclopedia Britannica). The Pilatus PC-12 No. 01973-001 was obviously cleared for such travel because no issues or information stating otherwise has surfaced, thereby leading us to the conclusion that the Pilatus PC-12 No. 01973-001 was indeed considered a certified commercial aircraft, thus, according to recent changes in federal regulations as expressed by the FOQA and FAA the Pilatus PC-12 No. 01973-001 was absolutely required to have both a cockpit voice recording device and flight data recorder on board every flight, at all times.

Federal Aviation Administration (FAA) requirements for operating a large aircraft state that, “ no holder of an air carrier operating certificate may conduct any operation under current list of aircraft used in air transportation unless that aircraft complies with any applicable flight recorder and cockpit voice recorder requirements” (Title 14 FAA Report). Cockpit voice recorders are designed for the purpose of handling and recording all communicative interactions taking place within the aircraft, to include, “ all intercom and radio communications of the flight crew, the aural warnings of flight systems, and the sounds of the cockpit environment” (White, et. al.)  
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Flight data recorders chronicle the airplane's statistics, to include its flight position, altitude, the aircraft's speed, as well as a number of other important flight constraints. Federal Aviation Regulations require all operators of commercial airplanes to carry these flight data recording devices. Flight data recording devices don't improve the flight experience in any way as far as in-flight communication between crew and passengers or other factors may go, but they are the catalyst of aircraft safety investigations; they are however vital to the investigative process and tell the authorities everything they need to know about the operative functions of the aircraft. It is through the analysis of the data acquired from the flight data recording device that investigators can decipher human error from issues with aircraft design, equipment and maintenance.

Flight data recording devices have sensors that are designed with digital imaging capacity to ensure that the data recorded on the device survives a crash and can be retrieved from that device to ensure a heightened ease of investigation. These devices record and monitor all of the aircrafts' vital operating systems and records on a 24+ hour timeframe to ensure the most recent and accurate level of information (White, et. al.).

The issue in this case is that without the presence of a functioning flight data recording device onboard the Pilatus PC-12 No. 01973-001 there is no way for investigators to know if the aircraft was experiencing technical, mechanical, or any other form of issue, outside of basic human error or some form of medical emergency, because there was no monitoring system in place on the aircraft.

According to the National Transportation Safety Board (NTSB) investigation no rational understanding for a course change from Bozeman to Butte, Montana has been discovered and no distress signals were reported as having come from the aircraft during flight. The FAA has reported having some difficulties in ensuring the safety of the Pilatus PC-12 aircrafts in general, stressing that a “ stick pusher system” be added to the aircrafts (Kreindler et. al.). With the Butte crash being compared to a crash in Bellefonte, Pennsylvania that suffered a “ defectively designed stick pusher system” (Kriendler et. al.) it is quite possible that the aircraft may have suffered some malfunction without having an opportunity to send up a distress signal, a point that makes clear the necessity of a flight data recording device.

The legal issue here is not whether or not there was any signal given or malfunctioning machinery, but the fact that the aircraft held an excess of regulatory passengers and possessed no flight data or cockpit recording machinery. The NTSB has found that the aircraft was not clear to have carried the number of passengers involved in the crash and that none of the necessary in-flight recording devices were present. According to the NTSB Chairman it is possible that the aircraft may have nose-dived as a result of possessing too much on-board weight, but the legal ramifications tied to the incident have not yet been settled.

With the pilot onboard having lost his life in the crash along with the passengers it is clear that no legal action can be taken against him for any reason, but legal action can definitely be taken against the aircraft owners by the families of the crash victims for inherent negligence. The fact that <https://assignbuster.com/the-pilatus-pc-12-crash-in-butte-montana-essay-sample/>

the aircraft owner is a parent of some of the crash victims makes the issue a bit more sensitive, but the fact of the matter is that when you board an aircraft the owners and operators of that aircraft have a duty to ensure that passengers reach their destination safely. In this instance no due diligence or reasonable care was taken – there were no required in-flight recording devices present and the aircraft was operated above regulatory capacity.

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