

July 19, 2019

30 Years Ago Today: The "Impossible" Landing - United Airlines Flight 232



N1819U, the aircraft involved in the accident, seen here in 1977

On July 19, 1989, United Airlines Flight 232 from Denver to Chicago's O'Hare airport encountered an unthinkable emergency. Later dubbed 'impossible' by United Maintenance engineers, the DC-10 experienced a total loss of hydraulics. Tragically, 111 souls were lost on that day, however, the heroic actions of the crew saved 184 lives.

At 37,000 feet the tail-mounted engine exploded and disintegrated. Shrapnel from the engine punctured the plane's hydraulic lines depleting all power to the flight controls. At that time, there were no checklist procedures for total loss of hydraulics on a DC-10. The crew had to troubleshoot this unexpected emergency in real-time with the lives of the entire aircraft in the balance.

Captain Al Haynes, First Officer Bill Records, and Second Officer Dudley Dvorak worked together along with Captain Denny Fitch, a United DC-10 instructor who happened to be on board. They managed to level the aircraft by adjusting power to the remaining engines, and used differential thrust to proceed toward the nearest suitable airport. Throughout the flight, the pilots coordinated closely with the Flight Attendant team and ground personnel to prepare for what they expected would be a crash landing.

Captain Haynes and his crew successfully maneuvered the severely crippled DC-10 to a landing in Sioux City, Iowa. Upon landing, the DC-10 cartwheeled, broke up, and exploded into flames. The flight crew's heroic efforts, and those of the cabin crew and first responders marshalled on short notice, saved the lives of 184 people on board. It was not until 35 minutes after the crash that rescuers identified the debris that was the remains of the cockpit, with the four pilots alive inside. All four recovered from their injuries and eventually returned to flight duty.



Flight Crew of United 232 From left: Capt. Alfred Haynes, First Officer William Records, Second Officer/Flight Engineer Dudley Dvorak and Capt. Dennis Fitch

The disaster is considered a gold-standard example of successful Crew Resource Management (CRM), due to the effective use of all the resources available for help during the emergency. United Airlines instituted a Crew Resource Management class in the early 1980s that Captain Haynes and the NTSB would later credit toward the success of the United Flight 232 crew's handling of this emergency. Flight 232 showed clearly that the most important system on any aircraft are well trained pilots working effectively as a crew. The legacy of United's commitment to continuously improve best practices and pilot teamwork continues today with our CRM/TEM program.



Click above for animated simulation

To learn more about the flight crew's heroism, a third-party video simulation [here](#) combines flight animation, ATC, and news footage of flight 232.

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