

THE OLD VIEW: HUMAN = FAILURE

During the early days of aviation, human behavior, or Human Performance System, were often assigned to be the cause of accidents and defined as pilot error. Pilot error is not a system failure, but a procedure failure during a specific and last segment of the flight just prior to the crash. As data of accidents and unscheduled events were collected and analyzed over years, the industry realized that human job performance factors are manageable factors of a functional Human Performance System. By the 1990's, human factors in flight was widely accepted as system factors of a safe flight.

On November 28, 1979 a passenger jet crashed into a mountain and the cause was identified as Controlled Flight Into Terrain, since all known technical systems were operating normally. At some point during the flight an unplanned event happened and the airplane crashed.

On July 19, 1989 there was a system failure in a passenger jet, which again caused a complete flight control system malfunction. Pilots or automation were unable to produce yaw, roll and pitch control for a safe flight. During the flight an unplanned event disabled required systems for a safe flight, except for the Human Performance System. Pilots and flight crew were in essence the only viable operational system available to continue the flight.

HUMAN PERFORMANCE SYSTEM

These two flights produced the end result of an airplane crash. The first one was identified as pilot error, or CFIT, while the second as a technical system failure. Human Performance System is as much as a requirement for a safe flight as operational technical systems. However, when Controlled Flight Into Terrain becomes the cause of accidents, Human Performance Systems are ignored as a requirement system for the completion of a safe flight.



THIS MONTH IN HISTORY

UNITED AIRLINES # 409

On October 6, 1955 United Airlines Flight 409 crashed into Medicine Bow Peak, near Laramie, Wyoming. United 409, a Douglas DC-4 Propliner, was on a scheduled flight from New York to San Francisco, with stops in Chicago, Denver and Salt Lake City.

THE ROUTE

Flight 409 departed Denver, Colorado at 6:33 a.m. on October 6, 1955, 1 hour and 23 minutes late. The expected route was V-4 Denver to Laramie, V-118 to Rock River, V-6 to Fort Bridger and V-32 to Salt Lake City. #409 was operating under Visual Flight Rules and was expected to maintain cruising at FL100. The aircraft was not pressurized and maintained FL100 or below for passenger and crew comfort.

NORMAL TO CHANGE ROUTE

The normal flight path goes far north of Laramie to skirt the Snowy Range. However, a United Airlines investigation after the crash concluded pilots would occasionally fly over Medicine Bow Peak, the range's high point.



Human Performance is what made aviation safe and is still what makes flying safe.