

C I V I L A E R O N A U T I C S B O A R D
ACCIDENT INVESTIGATION REPORT

Adopted July 7, 1949

Released July 7, 1949

NORTHWEST AIRLINES, INC. - NEAR EDMONTON, CANADA - OCTOBER 27, 1948

Northwest Airlines' Flight 6427, a DC-4, NC-88785, en route from Minneapolis, Minnesota, to Tokyo, Japan, crashed and burned about 30 miles northwest of Edmonton, Canada, October 27, 1948, with resultant death to the captain and flight engineer. The first officer, radio operator, and navigator were seriously injured and the aircraft was destroyed by impact and subsequent fire.

Flight 6427 had departed Minneapolis at 1002MST* and arrived at Edmonton at 1530 on the first leg of a special cargo trip to Tokyo. The aircraft was serviced, and at 1632 a takeoff was made for Anchorage, Alaska, on an IFR flight plan. On board were Captain Benjamin W. Christian, First Officer Harry G. Upham, Flight Engineer Henry Kryzak, Navigator Harold N. Learned, and Radio Operator Nicholas Tangredi. With the exception of Mr. Tangredi, who came with the flight from Minneapolis, all crew members boarded the airplane at Edmonton. The total takeoff weight was 68,917 pounds, which was well within the allowable maximum of 70,600 pounds. No passengers were carried. Ceiling and visibility were unlimited.

First Officer Upham made the takeoff, and shortly after the airplane became airborne Captain Christian cut the left outboard engine and feathered the propeller, creating a simulated engine failure on takeoff. The purpose was to instruct the first officer in emergency procedures. The airplane

*All times referred to herein are Mountain Standard and based on the 24-hour clock.

climbed very slowly and, veering slightly to the left, passed over the center of Edmonton at an altitude of 400 to 500 feet. Then the flight turned to the right approximately 180 degrees to get on course toward Anchorage. This brought it back over town and Captain Christian unfeathered the propeller. Power was restored to left outboard engine and the airplane continued to climb. During this interval the tower asked the crew if they had taken off on three engines and received a negative reply.

At 1645 Trans-Canada Airlines Communications received the following message from Flight 6427, "We were off at 32, cruising 7000 at 44, estimating Whitecourt at 02, out (from the ramp) at 22." No indication of trouble was given and no further messages were received from the flight. Although this message indicates the flight had reached its assigned cruising altitude of 7000 feet MSL, all evidence points to the fact that it was never above 3000 feet MSL (700 feet above the terrain).

Surviving crew members stated that after reaching an altitude of approximately 700 feet above the terrain, Captain Christian feathered the propellers of both left engines and continued to instruct First Officer Upham in emergency procedures. Shortly after this, the crew began to realize that the airplane was getting dangerously low over a wooded area and rising terrain and that the situation was rapidly developing into an actual emergency. The captain took over the controls and attempted to restart the left engines. However, before sufficient power could be restored the airplane began striking the tree tops. It crashed and burned several hundred feet beyond the point of initial contact with the trees.

Investigation disclosed no evidence of mechanical failure or malfunctioning of the aircraft or engines and, according to surviving crew

members, the only irregularity during the flight was the intentional cutting of the left engines. According to Northwest Airlines, this flight, while not subject to scheduled air carrier rules, was to be operated in a manner similar to their scheduled flights operating over the same route. A company representative stated that Northwest has at no time authorized the practicing of emergency procedures while the airplane is at a low altitude over a congested area, or the feathering of propellers immediately after takeoff. Simulated emergency procedures are permissible only during pilot checks and training flights.

The airplane, carrier, and crew were properly certificated for the flight involved. Captain Christian held an airline pilot certificate and had flown approximately 8114 hours, of which about 1669 had been on DC-4 equipment. First Officer Upham held a pilot certificate with commercial and instrument ratings. He had flown approximately 2406 hours, of which 406 were in DC-4 equipment.

The Board determines that the probable cause of the accident was the captain's action in undertaking simulated emergency procedures at a dangerously low altitude.

BY THE CIVIL AERONAUTICS BOARD.

/s/ JOSEPH J. O'CONNELL, JR.

/s/ OSWALD RYAN

/s/ JOSH LEE

/s/ HAROLD A. JONES

Russell B. Adams, Member of the Board, did not participate in the adoption of this report.