

No. 46

Pacific Western Airlines, de Havilland DHC - 2, CF - GIX, crashed 2 miles south of High Lake, North West Territories, on 29 August 1958. Report released by Department of Transport, Canada, Serial No. 58-13.

Circumstances

CF - GIX took off from High Lake at 1745 hours M.S.T. on a non-scheduled charter flight to Desolation Lake, N.W.T., with a pilot and three passengers aboard. The aircraft failed to arrive at its destination and later, during the same day, it was reported missing. The wreckage was found on 30 August approximately 2 miles south of High Lake. All four occupants had been killed in the crash and the aircraft was destroyed.

Investigation and Evidence

Examination of the wreckage revealed no evidence which might indicate that the airframe or controls of the aircraft were not functioning properly immediately prior to the accident. However, an excessive amount of water was found in the fuel system. Witnesses stated that at High Lake, where fuel is stored in 45-gallon drums, in the past on occasions the hand-operated fuel pump had been primed with water to induce suction as the pump was known to be defective. In this instance, it was stated that the pump was primed with the fuel remaining in the hose. CF - GIX landed at High Lake at about 1700 hours on 29 August, and as the pilot was anxious to leave as soon as possible, he taxied the aircraft to the refuelling point. Between 30 and 40 gallons of fuel were pumped through a felt filter over a funnel into the aircraft. Whether or not the pilot drained the fuel wells of the aircraft to ensure that no water was present in the fuel system prior to the take-off, is not known.

When refuelling was completed, the aircraft proceeded to the north end of the lake and took off in a southerly direction. Two persons who observed the aircraft for a short while when it became airborne stated that the aircraft sounded quite normal.

From an examination of the wreckage it was found that the propeller was still attached to the engine and only slightly bent thus indicating that very little or no power was being delivered by the engine at the time of the accident. The propeller pitch control was in the coarse position and the throttle was closed. The magneto switch and fuel selector valve were in the "off" position. From the foregoing it would appear that failure of the powerplant had occurred and that the pilot put the propeller in coarse pitch, possibly to reduce drag, turning off the fuel valve and magneto switches to lessen the danger of fire in anticipation of an emergency landing.

The aircraft's port wing tip struck the ground first followed by the engine, which nosed into the ground, causing the aircraft to nose over onto its back. Except for small fragments of red glass, the port wing and port wing strut, which were found 65, 50 and 15 ft respectively from the main point of impact, the wreckage was almost in one piece, indicating that the aircraft had struck the ground at a very steep angle. It is, therefore, possible that the aircraft stalled during an attempt by the pilot to reach one of the many small lakes in the area. A small unnamed lake, which is approximately

1 000 ft long and on which the aircraft could have landed safely, was only about 100 yds away from the scene of the accident. Two seat belts, the straps of which had torn loose from the seats, were found still buckled.

The pilot held a valid Commercial Pilot Licence and had accumulated a total of about 2 700 hours of flying experience of which about 320 hours were flown during the 90 days prior to the time of the accident. His total experience on de Havilland DHC - 2 type of aircraft was about 560 hours.

The weather, as reported for the High Lake area at the time of the accident, indicated that scattered to broken cumulus clouds, the bases of which were between

3 000 and 4 000 ft above the ground, were present. The visibility was more than 15 miles, the wind was from the southeast at 7 miles per hour and the temperature was 51°F with a dew point of 31°F. Weather was not considered to have been a factor in the accident.

Probable Cause

The engine failed. Subsequent examination revealed sufficient water in the fuel lines, screens and filters to cause engine failure. A forced landing was necessary and the aircraft struck the ground at a steep angle, estimated at approximately 60° measured from the horizontal, indicating that the aircraft was out of control at the time of impact.
