

**Aviation Safety Investigation Report
198803506**

De Havilland Beaver DHC2 Floatplane

5 December 1988

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indicated that the surface wind in the area at the time of the accident was 090` magnetic at 15 knots. This information was confirmed by witnesses at the dam wall who observed white caps on the surface of the dam. The north/south channel of the lake was bounded on its east side by steep hills rising to 70 metres above water level. The effect of this high ground was to partially blanket the north/south channel from the easterly wind. The position of the wreckage was in the area where the wind shadow effect would have ended and where the wind would have blown at full strength along the main east/west channel of the lake. The crosswind limitation for the aircraft as stated in the flight manual was 8.7 knots. Commenting in early 1988 on an enquiry regarding the raising of this limit, the aircraft manufacturer emphasised the 8.7 knot limit and advised that any test work to raise the limit should proceed cautiously starting at or below the current (8.7 knot) limit. If the aircraft was conducting crosswind operations in the north/south channel, and suddenly encountered a 15 knot crosswind on exiting the wind shadow area, the control difficulties confronting the pilot could have been significant. The aircraft wreckage was intact except for the floats which had been torn off by water impact forces. The right float was severely damaged while the left was intact. The forward tip of the right float had been severed by the propeller. The remaining forward section had then been forced upwards and outboard and had broken off. This weakened the float support structure, causing it to fail, and allowing the remaining section of the right float to strike the right side of the fuselage just aft of the cabin. Damage of this type an magnitude was most probably caused by the nose of the right float digging into the surface of the lake at relatively high speed. For this to occur, the aircraft was banked to the right at float impact - a possible consequence of encountering a strong crosswind from the left. There was no evidence that the aircraft had hit a submerged object.

Significant Factors:

The factors associated with the development of this accident could not be determined.

Reccomendations:

During the investigation it was found that failed passenger seats were of sub-standard manufacture. This information was relayed to the Civil Aviation Authority and the Authority subsequently issued an Airworthiness Directive requiring rectification of the seats.