

**No: 8/86**

**Ref: 1a**

**Aircraft type and registration:** Consolidated Vultee PBY5A Catalina C-FOWE

**No & Type of engines:** 2 Pratt and Whitney R-1820 G2 radial piston engines

**Year of Manufacture:** 1944

**Date and time (UTC):** 31 May 1986 at 1050 hrs

**Location:** Plymouth Harbour, Devon

**Type of flight:** Private

**Persons on board:** Crew — 4                      Passengers — 3

**Injuries:** Crew — 1 (minor)                      Passengers — 1 (minor)

**Nature of damage:** Substantial damage to port wing and nose section

**Commander's Licence:** US Airline Transport Pilot's Licence

**Commander's Age:** 66 years

**Commander's Total Flying Experience:** Over 10,000 hours (of which approximately 600 were on type)

**Information Source:** Aircraft Accident Report Form submitted by the pilot, AIB examination of aircraft and BBC video recordings.

The aircraft was the second of two Catalina flying boats to arrive at Plymouth after a transatlantic flight commemorating the arrival on 31 May 1919 of the first flying boat to cross the atlantic and the 75th anniversary of US Naval Aviation. A landing strip measuring 1220 × 122 metres was marked out in Plymouth Harbour by Royal Navy patrol craft, which had searched the area beforehand for floating debris and kept it clear of other craft. Visibility was good beneath a 1500 feet cloudbase, and the wind was from the north-west at 5 knots, giving a crosswind for landing of about 3 knots from the right.

C-FOWE arrived some 50 minutes after the first aircraft landed safely. A video film showed that the aircraft touched down some 460 metres from the start of the landing strip after an extended flare during which it flew level over the water for about 200 metres. Touchdown was gentle and in a normal attitude. Some 3 seconds after initial contact with the water and about 1 second after the bow settled on the water, the aircraft yawed sharply to the right and, at the same time, a surge of engine power was heard. The rudder was seen to move fully to the left as the yaw began but the aircraft turned through approximately 40° before the yaw was checked. Throughout this time, both wingtip floats were clear of the water. As the aircraft straightened up, the starboard wingtip float knocked over an inflatable buoy without any apparent damage to the aircraft. Immediately afterwards the left wing struck a channel marker buoy, which tore off the port wingtip float and 9 feet of the port wingtip, causing the aircraft to pivot violently to the left, the hull momentarily leaving the water before impacting hard on the left side of the nose and coming to rest with the hull slowly filling with water. Rescue boats reached the aircraft in less than a minute, disembarked the occupants, and towed the aircraft to a suitable beaching area, where it sank in shallow water.

When the aircraft was inspected after the accident both nosewheel doors were missing. A search by Royal Navy divers for the missing doors had not been successful. It was evident that the doors had been violently ripped off during the landing and that high hydrodynamic forces had been experienced in the nosewheel bay. However, in the absence of the doors it was not possible to determine what had caused them to detach, nor at what point in the landing sequence this had occurred. Available evidence indicated that the nosewheel doors were fully closed at touchdown.

The pilot stated afterwards that he considered his approach and landing to have been normal with touchdown at 75 knots. He could not account for the undemanded yaw and had no recollection of having applied power at any time after touchdown.