

No. 8

Línea Aeropostal Venezolana, DC-3C, YV-C-AZQ, accident at Páramo Turmal, Venezuela on 9 March 1961. Report released by the Directorate of Civil Aviation, Venezuela.

Circumstances

The aircraft took off from San Antonio del Táchira on 9 March on a flight to Maiquetía carrying 4 crew and 8 passengers. The duration of the flight was estimated at 2 hours 45 minutes with the landing at Maiquetía to be made at 1515 hours. Thirty minutes after the estimated time of arrival the Maiquetía Air Traffic Control notified the Director of Civil Aviation that an alert phase had been declared. Word was subsequently received from the Trujillo area that the aircraft had been found at Páramo Turmal. All aboard the aircraft had been instantly killed.

Investigation and Evidence

The aircraft had flown a total of 23 352 hours and had last been inspected on 16 February 1961.

The port and starboard engines had total times of 1 672 and 7 782 hours respectively.

The pilot held a valid airline transport pilot's licence (Class I) for aircraft up to 4 400 hp which had been issued in July 1959. The co-pilot had an airline transport pilot's licence (Class III) for aircraft up to 2 400 hp, issued in November 1959. Both the pilot and co-pilot held valid medical certificates.

Study of the wreckage

Examination of the front part of the fuselage showed that the aircraft struck the hill in a fairly level flight attitude. Two of the propeller blades and the hub were buried in the ground, only 50 cm remaining visible. The left propeller was turned slightly to the right, which was due to the left engine being more powerful than the right at the time of the accident. The fact that the distance between the hubs of the propellers was 5 m 56 cm instead of the original 5 m 66 cm indicated that the deceleration was extremely violent,

bringing the remains of the aircraft to a stop 50 or 60 cm after the impact. The violent deceleration, which was absorbed by the engines, undercarriage and right wing, resulted in the upper part of the fuselage and the left side of the aircraft being thrown forwards. The objects contained in the fuselage followed the same path as part of the cabin and were strewn over a distance with a radius of 300 m from the aircraft. Contact occurred at a bank angle of 5 to 6° to the right. Fire broke out through gasoline combustion.

The aircraft did not touch the trees which appeared to be close to the elevator before the impact but did so when the tail was lowered after the aircraft came to rest. Since the height of the trees was more than 2 m this shows that the tail passed over them implying a level flight attitude.

In short, at the time of the accident the following conditions existed:

- 1) undercarriage and flaps retracted;
- 2) flight height approximately 9 200 ft;
- 3) cruising power slightly increased on left engine;
- 4) radio compass No. 1 (red) tuned to Radio Barquisimeto;
- 5) radio transmitter between channels 3 and 4;
- 6) controls set on cruising flight;
- 7) time: estimated time of accident;
- 8) rudder trim tab 0°;
- 9) elevator trim tab: normal;
- 10) orientation of accident: 60° approximately (track angle).

The technical investigation did not reveal any malfunctioning of the engines, structures or controls.

Witnesses' Statements

The IFR flight plan for this flight is San Antonio del Táchira-Orope-W-6-Bobures-W-7-Carora-Siquisique-W-2-W-1-Maiquetía.

The manager of Valera Airport indicated that the aircraft flew over that airport. Residents of Carache indicated that they heard the aircraft pass to the south of their village over Concepción. Furthermore, the left radio compass at the time of the accident was on 680 kc/s, the frequency of a commercial radio station in Barquisimeto. If the two points indicated by the witnesses are joined with the town of Barquisimeto, a straight line 60° north is obtained, joining Orope with Barquisimeto and passing through the site of the accident. The wreckage pattern of the aircraft coincides with the theoretical track Orope-Barquisimeto.

Probable Cause

A navigational error in the course of an instrument flight at insufficient altitude caused the accident.

Contributing factors were:

- 1) failure to follow the route San Antonio-Maiquetía as called for by the LAV Operations Manual;

- 2) the flight took place outside of the route established by the National Airways Division;
- 3) overconfidence of the pilot in his knowledge of the route;
- 4) instrument flight which prevented visual checking of the position of the aircraft.

Recommendations

As a result of this accident the following recommendations are made:

- a) that flight recorders be installed on 3 out of every 8 commercial aircraft as a means of checking flight operations;
- b) that VOR or at least a radio beacon be installed at Carora to afford increased flight protection;
- c) that appropriate measures be taken to ensure that flight reports are transmitted regularly at the required intervals.
