

No. 5

Transportes Aereos Orientales, Douglas DC-3, HC-AFQ accident at Puyuyaco, Province of Pastaza, Ecuador on 16 September 1965. Report undated, released by the Directorate General of Civil Aviation, Ecuador

1. - Investigation1.1 History of the flight

The aircraft took off from Coca Airport at 1020 hours local time on a scheduled domestic flight to Pastaza, a distance of 100 miles. The flight was to take approximately 45 minutes. At 1052 hours the pilot reported over Arajuno, approximately 12 minutes before its ETA at Pastaza, indicating that he was flying at 4 500 ft, mainly IFR. Thereafter the weather conditions further deteriorated and the aircraft finally entered a poor weather zone with continuous rain. At approximately 1102 hours it collided with trees and then crashed.

1.2 Injuries to Persons

| Injuries | Crew | Passengers | Others |
|-----------|------|------------|--------|
| Fatal | 3 | 6 | |
| Non-fatal | | 2 | |
| None | | | |

1.3 Damage to aircraft

The aircraft was destroyed.

1.4 Other damage

There was no other damage.

1.5 Crew information

The pilot-in-command, aged 46, held an airline transport pilot's licence valid until 1 December 1965. He had flown a total of 4 946 hours up to 1 July 1965.

The co-pilot, aged 30, held a Class II commercial pilot's licence valid until 8 February 1966. He had flown a total of 330 hours up to 20 May 1964.

The third crew member was a steward.

1.6 Aircraft information

The aircraft had a certificate of airworthiness valid until 30 December 1965. It had flown a total of 10 982 hours, including 1893 hours since last overhaul. At the time of the accident the aircraft weighed 21 692 lb which was less than the maximum permissible of 26 200 lb. The aircraft carried 280 gallons of fuel.

The type of fuel being used was not stated in the report.

1.7 Meteorological information

The weather conditions were as follows: cloud: 8/8 stratocumulus; ceiling: 300 m; wind: 120°/10 kt; horizontal visibility: 3 km; present weather: light continuous drizzle; previous weather: overcast.

The weather report provided to the pilot by an airline employee indicated better weather conditions than those of the weather report issued by the meteorologist at Pastaza Airport.

1.8 Aids to navigation

The pilot was aware that the radio beacon at Pastaza was out of service. However, he had the aid of the control tower of the Ecuadorian Air Force and of the airline.

The aircraft was equipped with a radio compass, VHF receiver and transmitter and, in general, complete communications equipment.

1.9 Communications

No difficulties were reported. Both the EAF and the airline communications equipment were in good condition. This also was true of the aircraft's equipment.

1.10 Aerodrome and ground facilities

Not pertinent to the accident.

1.11 Flight recorders

Not mentioned in the report.

1.12 Wreckage

The wreckage was located roughly 25 m from the peak of Pjyuyaco mountain, halfway between the Parish of Fatima and Rio Amazonas Airport. The general direction of the wreckage was on a heading of 010°.

1.13 Fire

The aircraft was 100 per cent destroyed due to the violent impact and subsequent fire.

1.14 Survival aspects

No information was contained in the report.

1.15 Tests and research

No information was contained in the report.

2. - Analysis and Conclusions

2.1 Analysis

The aircraft took off from Coca at 1020 hours in good visibility with partial cloud; however, as the aircraft approached its destination the cloud base descended until the ceiling was almost zero. Notwithstanding, the aircraft continued to fly over the area in an effort to locate the aerodrome.

The surviving witnesses stated that the aircraft was overflying the trees at a low altitude and that some seconds prior to the impact it executed a climbing manoeuvre to the left, striking the trees with its left wing. The impact with the ground followed immediately thereafter.

The marks left on the trees and on the ground and the dispersal of aircraft parts on the ground showed that the aircraft struck a tree with its left wing and that the impact caused it to turn through 270°. The aircraft then struck the ground in heavy rain, possibly at cruising speed.

2.2 Conclusions

Findings

The crew were properly certificated.

The aircraft had a valid certificate of airworthiness.

The actual weather conditions were poorer than those provided in the weather report issued by the airline employee which were better than those shown in the report issued by the meteorologist at Pastaza Airport.

The pilot was aware that the radio beacon at Pastaza was out of service.

The aircraft overflowed trees at low altitude then executed a climbing manoeuvre to the left striking trees with its left wing. Impact with the ground followed immediately thereafter.

Cause or Probable cause(s)

The accident was due to adverse weather conditions and imprudence on the part of the pilot who changed from VFR to IFR flight without having the requisite navigation aids for the type of flight he was carrying out.

Among the contributing causes were the following: failure to consult the weather report and errors in the airline office, possible overconfidence on the part of the pilot in that he carried out the flight knowing that the radio beacon was inoperative, and presumed negligence on the part of the airport commandant, who failed to declare the aerodrome closed when conditions were below the meteorological minima.

3. - Recommendations

The Board made the following recommendations:

- airport aids to navigation should be maintained more efficiently;
 - airlines should use only official weather reports;
 - airline ground personnel should be technically trained to avoid errors due to inexperience;
 - airport commandants should pay greater attention to regulations;
 - the Flight Safety Department of the Directorate of Civil Aviation should publish a circular prohibiting the use of ground-air-ground communications for purposes other than those duly authorized by the Director General of Civil Aviation;
 - the Director of Civil Aviation should impose sanctions on the airline for employing personnel which was not certificated by the Director of Civil Aviation for tasks relating to the operations of the airline.
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