

No. 14

Iberia, Spanish Airlines, DC-3, EC-ACX, accident near Puertito de Sausal, Tenerife, Islas Canarias, on 16 September 1966. Report dated 9 March 1967, released by the Department of Civil Aviation, Spain.

1. - Investigation1.1 History of the flight

The aircraft took off from Tenerife airport at 0821. After two minutes of flight the propeller of the left engine began overspeeding. The pilot-in-command applied the normal overspeed procedures, but obtained no response to the manoeuvre. He then actuated the feathering mechanism but this also was ineffective and as the aircraft was losing height he was obliged to ditch it approximately one mile from the coast, since the orography of the locality made a landing impossible. The ditching took place normally. The aircraft remained afloat approximately five minutes and then sank carrying with it one of the passengers who refused to abandon it and who had impeded the evacuation of the other passengers and resisted the efforts of the pilot-in-command and hostess to get him to safety.

1.2 Injuries to persons

Injuries	Crew	Passengers	Others
Fatal		1	
Non-fatal		2	
None	3	21	

1.3 Damage to aircraft

The aircraft is not aeronautically recoverable and is therefore considered to be a total loss.

1.4 Other damage

Inapplicable.

1.5 Crew information

The pilot-in-command had logged a total of 5 000 flying hours, including approximately 3 500 on the subject type. He held a valid airline transport pilot's licence.

The co-pilot had logged a total of 1 400 flying hours, including approximately 350 on the subject type. He held a senior commercial pilot's licence.

1.6 Aircraft information

The certificate of airworthiness was valid up to 16 February 1967.

The aircraft had a total of 25 134:38 flying hours, including 75:34 since its last check.

Engine history was as follows:

Engine No. 1 .- total hours: 6 812:06; since last overhaul 392:21; since last periodic check 75:34.

Engine No. 2. - total hours: 17 484:50; since last overhaul 769:20; since last periodic check 75:34.

At the time of the accident, the weight of the aircraft and the centre of gravity were within prescribed limits.

1.7 Meteorological information

Atmospheric conditions at the airport at 0825 hours were as follows:

Visibility: 10 km.

Cloud cover: 3/8 Sc. at 150 m and 4/8 Sc at 180 m

QNH: 1021.7 mb equivalent to 30 - 17 inches.

QFE: 947.4 mb.

Temperature: 16° Dew point: 15°.

1.8 Aids to navigation

Inapplicable.

1.9 Communications

Normal.

1.10 Aerodrome and ground facilities

Inapplicable.

1.11 Flight recorders

None.

1.12 Wreckage

The aircraft sank in the sea and is not considered aeronautically recoverable.

1.13 Fire

Nil.

2. - Analysis and Conclusions

2.1 Analysis

Since the aircraft was not recovered, the only source of information is the statements of the crew and passengers.

According to the pilot's testimony, the accident was caused by overspeeding of the left engine and inability to feather the corresponding propeller.

Once the propeller is overspeeding, the only procedure to counteract this is to actuate the feathering system, which was done by the pilot without result.

It is felt that the failure to feather the propeller might have been due to the fact that, if the overspeed is large, the load to be overcome is too great for the feathering mechanism. This seems to have been the case in this instance, since the pilot declared that the system functioned correctly when he tested it on the ground and that whenever he pressed the feathering button in the air it had remained depressed (correct) and the generators had indicated consumption (also correct).

When the propeller is windmilling, even if the weights are below the normal gross landing weights, the aircraft will not maintain altitude, according to Technical Instruction O.T.-1C-47-1, section III, page 9, and for this reason the pilot-in-command has to adopt one of the following alternatives:

- (a) land at the nearest aerodrome;
- (b) evacuate the aircraft;
- (c) carry out a forced landing or ditching;
- (d) attempt a combination of the foregoing.

In view of the fact that the emergency occurred only 2 minutes after take-off, in the climb-out phase, with an indicated (QNH) altitude of 2 800 ft, that loss of altitude occurred as soon as the propeller began windmilling and that the aircraft was in cloud and below the elevation of Tenerife airport (2 073 ft), the pilot-in-command was forced to adopt alternative (c) above.

2.2 Conclusions

Cause or
Probable cause(s)

The accident resulted as a consequence of propeller overspeed on the left side, the cause of which could not be determined owing to the fact that the aircraft was not recovered.

3.- Recommendations

Inapplicable.

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