

No. 54

Líneas Aéreas de Nicaragua, S. A., Curtiss C-46, AN-AOE, accident at Las Mercedes International Airport, Managua, Nicaragua, 15 December 1961. Report released by the Ministry of War, Navy and Aviation, Nicaragua.

Circumstances

The aircraft departed Las Mercedes at 1100 hours on an IFR flight to Miami, Florida. Its only occupants were the captain and co-pilot. Shortly after take-off control difficulties were experienced. During an attempt to return to the airport, the aircraft stalled on final approach, went into a spin and crashed at an angle of 45 to 50° on its right wing. The aircraft immediately burst into flames, and the central section, fuselage and the portion of the wings which contained the fuel tanks, were destroyed. The two crew members were killed instantly.

Investigation and EvidenceThe Aircraft

It had a certificate of airworthiness valid until 25 November 1962.

The Crew Members

Both pilots, on loan from LACSA Airlines of Costa Rica, were fully qualified and holders of Costa Rican airline transport pilot licences. The pilot-in-command and co-pilot had flown 12 135 and 5 066 hours respectively.

Reconstruction of the flight

Following a normal ground run the aircraft took off at 1100 hours. Almost immediately thereafter it made a left turn while climbing. Between the crosswind leg and the start of the downwind leg, an emergency call was made by one of the crew members. Two crew aboard another aircraft in No. 1 take-off position later stated that they had heard three calls

from AN-AOE indicating control difficulties. Both control tower operators said that they had only heard one call declaring an emergency. The aircraft continued around the traffic pattern at a height of about 500 ft during which time the pilot apparently experienced difficulty in controlling the pitch attitude of the aircraft. The aircraft turned onto base leg and final approach at what appeared to be a normal sinking speed. It proceeded at a height of about 200 ft up to a point approximately 200 yd from the end of runway 09, which it was approaching. At that point the aircraft assumed a sharp nose-up attitude until it reached a vertical position. Soon after it entered the nose-up attitude, full power was applied to both engines, and the undercarriage and flaps began to retract. The aircraft climbed about 400 to 500 ft above ground level, then stalled and went into a spin, spiralling almost vertically towards the ground.

Examination of the wreckage - Results

The wreckage examination revealed that the control cables were in normal and satisfactory working condition and were almost new. The elevator trimming was pushed forward fully to keep the aircraft's nose down. While flying the traffic pattern the aircraft showed a tendency to pull up, and when it slowed down for the landing the tail proved extremely heavy. The pilot when trying to correct this situation applied full engine power and retracted the landing gear in order to gain speed and obtain a response from the controls. He was not able to correct the tail's persistent tendency to become heavier, and had to make an almost vertical climb, whereupon the aircraft stalled and went into an uncontrollable spin at low altitude.

Conclusions reached following technical investigation

Immediately after take-off the aircraft adopted unusual flying attitudes, and while flying the traffic pattern it was observed to be continuously pitching. This is corroborated by the emergency call made by one of the crew. As the aircraft proceeded, with landing gear down, at a height of more or less 150 to 200 ft* from the approach end of runway 09 on final approach, the pilot reduced engine power

in order to lose height and start the landing procedure. In this position it abandoned its descent path and slowly and progressively assumed a climb attitude, with definite signs of stalling.

Probable Cause

The accident was attributed to cargo displacement towards the rear of the aircraft during the take-off run or immediately after taking-off.

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* An omission seems to have occurred here. Translator.