

TENERIF REPORT BLAMES KLM TRANSCRIPT

TENERIFE : REPORT BLAMES KLM

Two 747s collided on the runway at Tenerife on March 27, 1977. because the captain of the KLM aircraft took off without clearance, says the report of the Spanish commission of inquiry. An English translation of the report has been issued by the US National Transportation Safety Board. The accident resulted in the death of all 234 passengers and 14 crew aboard KLM Flight 4805 and 317 passengers and 9 crew aboard Pan Am Flight 1730. Another 61 passengers and nine crew from the Pan Am aircraft survived the collision.

The two aircraft were among several to be diverted to Tenerife when a bomb explosion in the terminal building caused Las Palmas Airport to be closed. Both were parked on the north-west taxiway, together with three other aircraft for which space could not be found on the main apron. The Pan Am departure had to be delayed because access to the runway was blocked by the KLM 147 while it was being refuelled. The report notes that KLM 4805 took on enough fuel to fly direct to Amsterdam.

The KLM flight was initially cleared to enter the runway and leave at the third link to the taxiway. This was changed almost immediately to an instruction to backtrack along the full length of the runway and turn about in readiness for take-off from Runway 30. After turning round and when the take-off checks were complete, the KLM crew obtained departure clearance. The co-pilot read the instruction back and ended his transmission with "We are now at take-off". Almost immediately, according to correlation between the flight-data and cockpit-voice recorders, brakes were released for take-off. Ground roll had already been started when the control tower advised "Stand by for take-off, I will call you". On hearing this call the Pan Am crew interjected "And we are still taxiing down the runway, Clipper 1736".

The Pan Am 747 had been given clearance to "Taxi into the runway and leave the runway third, third to your left". Cockpit voice recordings show that the crew discussed the turn-off during their checks as the aircraft moved down the runway. They identified the C2 link (see chart) and then, says the reports, "perhaps through error, or, thinking that C4 was an easier exit than C3, they overshot the exit ordered by the tower".

The Pan Am call that it was still on the runway caused a shrill whistle on the radio of the KLM aircraft, but the tower's reply, "Papa Alpha 1736 report runway clear," was audible in the KLM cockpit, as was the next Pan Am transmission, "OK, will report when we're clear".

On the KLM flight deck the radio exchange prompted the flight engineer to enquire "Is he not clear, then ?" Captain : "What do you say ?" Engineer : "Is he not clear, that Pan American ?" Captain : "Oh yes". The last remark was emphatic, says the report.

From the Pan Am cockpit voice recorder it can be deduced that the crew saw the approaching KLM aircraft 9.5 sec before impact. Weather reports show that the runway visibility was 2-3 km 15 min before the accident, though this had reduced to 300 m when a special reading was taken only four minutes before. Pan Am crew made an attempt to turn clear of the runway but their aircraft was hit by the main landing gear of the KLM 747. Tracks starting on the runway about 300 ft before the point of impact and continuing for 65 ft showed that the KLM aircraft had dragged its tail in an excessive rotation ; it was fully airborne at impact and hit the ground again about 150 m further on. The two aircraft came to rest 450 m apart and both were further on. The two aircraft came to rest 450 m apart and both were burning fiercely, although the fires were not visible from the control tower.

In analysing the actions of the KLM crew the report says that "cockpit operation was correct and the checklists were adequately kept". Some anxiety was apparent over a number of factors. The crew were nearing the limit of their duty time. Changing visibility could have rendered take-off company minima impossible, particularly as the runway centreline lights were inoperative. The captain seemed in doubt whether he should leave the runway by C1 or C4. He was reminded by the co-pilot, after the take-off checks were complete, that they did not have clearance. "The captain asked him to request it", says the report, "but while the co-pilot was still repeating the clearance the captain opened the throttle and started to take off. Then the co-pilot, instead of requesting take-off clearance or advising that they did not yet have it, added to his readback the co-pilot, instead of requesting take-off 'We are now at take-off'. The tower, which was not expecting the aircraft to take off as it had not given clearance, interpreted the sentence as 'We are now at the take-off position,'"

The report suggests that contributing causes of the accident were the facts that the KLM captain did not obey the call to stand by for take-off from the tower; he did not interrupt the take-off on learning that the Pan Am aircraft was still on the runway ; and he replied emphatically in the affirmative when the flight engineer asked whether the Pan Am had already left the runway. The report suggests that worry about flight-time limitations was probably one reason for the captain's actions. It points out also that Tenerife weather was a factor. "Layers of low-lying cloud are blown by the wind and therefore cause sudden and radical changes in visibility. These conditions undoubtedly make a pilot's decisions regarding take-off and landing much more difficult".

The report is concerned that two transmissions took place at the same time, resulting in a three-second whistling tone on the KLM aircraft's radio. It is critical of "inadequate language" during communications with the tower and it draws attention to the fact that the Pan Am aircraft did not leave the runway at the third intersection. This plane communicated with the tower to find out whether the third intersection was C3 or C4 if it had any doubts, and this it did not do"

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