

Aircraft type and registration: Boeing 707 5N-ASY (multi-jet public transport aircraft)

Year of Manufacture: 1965

Date and time (GMT): 19 February 1986 at 2256 hrs

Location: Stansted Airport, Essex

Type of flight: Cargo

Persons on board: Crew — 4 Passengers — 1 (non-revenue)

Injuries: Crew — None Passengers — None

Nature of damage: Left and right cowling panels from No 4 engine became detached from aircraft

Commander's Licence: Airline Transport Pilot's Licence (Nigerian)

Commander's Age: 33 years

Commander's Total Flying Experience: Approximately 5000 hrs

Information Source: AIB Field Investigation.

The aircraft departed from runway 23 at Stansted Airport at 2256 hrs bound for Port Harcourt. While over France, the crew were informed that a large panel had been found on runway 23 at Stansted and that this had been identified as an engine cowling panel from a Boeing 707. The crew were able to determine visually that at least part of the cowling was missing from No 4 engine and elected to return to Stansted, reducing to idle power on this engine until final approach. After jettisoning fuel over the North Sea the aircraft landed safely at 0042 hrs on 20 February, using reverse thrust on Nos 2 and 3 engines only. A second cowling panel was later found in a field near Stondon Massey, 14 miles from Stansted Airport.

Examination of the damaged cowling from No 4 engine showed that the right-hand (outboard) panel had separated from the aircraft early in its take-off run, lifting about the line of hinges along its upper edge. Marks on the left-hand (inboard) panel and on the wing, however, indicate that although the left-hand panel lifted in a similar manner, its movement was impeded by a section of leading-edge Krueger flap until the flaps were retracted. A replay of radar recordings confirmed that a portion of the aircraft became detached at about 3500 feet, nearly overhead the point where the left-hand (inboard) panel was found on the ground.

The two panels of the cowling are held together along their lower edges by a series of 6 mechanical latches, mounted in the right-hand (outboard) panel. All 6 latches were found in the fully open position and the damage done to 5 of these latches was only consistent with their being fully open when the panel struck the runway.

5N-ASY had arrived at Stansted at 0015 hrs on 18 February, and the operator had requested an engineering organisation based at the airport to investigate a defect on No 2 engine starter motor and continuing defects on the fuel heaters on Nos 2 and 4 engines. The engineering organisation was initially able to comply with the operator's request and worked on all defects, but was unable

to proceed with work beyond 1800 hrs at which time, by mutual consent and with none of the defects cleared in the Technical Log, the operator took back the aircraft and brought in a working party from another operator. This party installed a new starter motor and gearbox and this defect was cleared in the Technical Log with a satisfactory ground run of Nos 2 and 3 engines. The next entry in the Technical Log is "PDI carried out" (Pre-Departure Inspection) and the crew states that such an inspection was performed, but the Technical Log did not carry signatures in the blocks for "Aircraft Cleared For Service" or "Captain's Acceptance of Aircraft".