

**AAIB Bulletin No:** 8/93

**Ref:** EW/G93/03/21

**Category:** 1a

**Aircraft Type and Registration:** Boeing 747-136, G-BDPV

**No & Type of Engines:** 4 Pratt & Whitney JT9D-7 turbofan engines

**Year of Manufacture:** 1976

**Date & Time (UTC):** 31 March 1993 at 1003 hrs

**Location:** Stand T10, Terminal 4, London Heathrow Airport

**Type of Flight:** Public Transport

**Persons on Board:** Crew - N/K                      Passengers - N/K

**Injuries:** Crew - None                      Passengers - None  
Others - 1 Minor

**Nature of Damage:** Interior of door 1L on the aircraft was torn and the right side of the jetty was torn

**Commander's Licence:** Airline Transport Pilot's Licence

**Commander's Age:** 48 years

**Commander's Flying Experience:** N/A

**Information Source:** Aircraft Accident Report Form submitted by the pilot plus telephone enquiries and statements made by the key personnel involved

According to the despatcher, passenger boarding commenced at door 1L (the most forward door on the left side) at 0920 hrs through a fixed, extending airbridge. As the scheduled time of departure of 1000 hrs approached, she reported to the flight deck and informed the commander that although some passengers had yet to arrive, she expected that they would arrive in time for the scheduled departure. Having agreed with the commander that she would advise him from door 1L when the passengers were on board, she left the flight deck and went to the lower passenger deck to sort out some seating problems. Whilst opposite door 1L she noticed that the aircraft's anti-collision beacons were flashing and she knew this was a sign to people on the apron that engine starting was imminent. After confirming that loading was complete she stepped from the aircraft on to the airbridge with the intention of closing the door. The act of closing the door would have indicated to the cabin crew that from the despatcher's perspective the aircraft was ready to depart; it would also have extinguished a door open light on the flight engineer's panel. As the despatcher turned to close the door, the aircraft began to move and another member of the despatch team grabbed her and pulled her clear of the door.

As the aircraft moved backwards the open door struck the right hand side of the airbridge damaging both airbridge and door.

There were two pilots and a flight engineer in the flight deck crew. The commander recalled that as the scheduled departure time approached, he was informed by the despatcher that a passenger had yet to board the aircraft. He informed her of his desire to depart the stand on time because the take off slot time was 1020 hrs. Whilst awaiting confirmation that all the passengers were on board, he decided to complete the pre-departure checklist as far as engine starting. At the checklist item of 'doors' the commander acknowledged that door 1L was still open and he continued the checklist as far as 'engine starting'. At that point the despatcher re-appeared briefly on the flight deck to inform him that all the passengers were on board and she bade him farewell. The commander then instructed the co-pilot to obtain pushback clearance from ATC whilst he and the flight engineer started No 4 engine on the stand. (Because No 4 engine is on the opposite side to the boarding doors, engine start with a door open is permitted). Thinking that the despatcher had left the aircraft, the commander then spoke to the ground engineer by interphone and informed him that ATC clearance had been given to push back. (There was no checklist item of all doors closed before pushback.) The ground engineer, who was standing underneath the aircraft by the nosewheels asked the commander to release the parking brake and signalled to the tug driver to commence the pushback. The wingtip safety man stated that he had not reached his station by the right wingtip and had not given his customary 'all clear' signal before the aircraft began to move. As it did so he heard a 'crunch' and looked around to see debris falling on the other side of the aircraft; some of this debris struck the ground engineer in charge of the pushback.

The ground engineer stopped the pushback after about 10 feet of travel. The internal structure of the door was repaired whilst the passengers remained on board and the aircraft departed about two hours later. The ground engineer was taken to hospital for treatment.

The operator and the airport authority have since formed a working group to study methods of improving co-ordination between the key people involved in aircraft and apron management during the loading and departure phases.