

**Aviation Safety Investigation Report
199402031**

**Boeing Co
B767
de Havilland Canada
Dash 8**

15 July 1994

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NOTE: All air safety occurrences reported to the ATSB are categorised and recorded. For a detailed explanation on Category definitions please refer to the ATSB website at www.atsb.gov.au.

Occurrence Number: 199402031 **Occurrence Type:** Incident
Location: 28km SW Sydney
State: NSW **Inv Category:** 4
Date: Friday 15 July 1994
Time: 1202 hours **Time Zone** EST
Highest Injury Level: None

Aircraft Manufacturer: Boeing Co
Aircraft Model: 767-338ER
Aircraft Registration: VH-OGB **Serial Number:** 24316

Type of Operation: Air Transport Domestic High Capacity Passenger
Scheduled
Damage to Aircraft: Nil
Departure Point: Perth WA
Departure Time:
Destination: Sydney NSW

Aircraft Manufacturer: de Havilland Canada
Aircraft Model: DHC-8-102
Aircraft Registration: VH-TQR **Serial Number:** 208
Type of Operation: Air Transport Domestic Low Capacity Passenger Scheduled
Damage to Aircraft: Nil
Departure Point: Sydney NSW
Departure Time: 1200 EST
Destination: Canberra ACT

Approved for Release: Wednesday, June 5, 1996

VH-TQR departed Sydney on Runway 25, Radar 3 departure, and was cleared to climb to an initial altitude of 5,000 ft, on a radar heading of 240 degrees. The altitude restriction was to provide vertical separation with inbound traffic. The aircraft was under the control of the Departures South Controller.

VH-OGB was inbound to Sydney from the southwest, being radar vectored by the Approach South Controller for a left circuit to runway 34L, and had been assigned a heading of 050 degrees, on descent to 5,000 ft. This placed VH-OGB and VH-TQR on crossing tracks with a convergence angle of about 170 degrees. The crew of VH-OGB received a Traffic Alerting and Collision Avoidance System (TCAS) Traffic Advisory warning which indicated an aircraft climbing towards VH-OGB, 1,800 ft below. They expected the TCAS traffic would level off 1,000 feet below them. As VH-OGB was in visual meteorological conditions, a lookout was commenced for the traffic. VH-TQR was not fitted with TCAS. The conflicting traffic was then observed on TCAS, climbing some 500 feet below VH-OGB.



The Approach South Controller instructed VH-OGB to turn right heading 090 degrees to position for landing on runway 34L. The other traffic passed off the TCAS screen behind VH-OGB, without the crew sighting the aircraft. Minimum vertical separation indicated by TCAS was 300 ft. Neither the Departures South nor Approach South controller recognised the traffic conflict and no traffic information was passed to either aircraft.

Recorded radar data confirmed the conflicting traffic was VH-TQR which passed within 1 NM of VH-OGB, with a minimum vertical separation of 500 ft. The minimum separation standard required for air traffic control purposes was 1,000 ft vertical or 3 NM lateral.

New air traffic handling procedures for departing and arriving aircraft were introduced at Sydney one week prior to the incident. Among the changes was an alteration to the vertical division for airspace in the vicinity of Sydney Airport between the Departures and Approach Controllers. The controller who occupied the Approach South position had minimal familiarity with the new procedures. He inadvertently reverted to old procedures and incorrectly assigned VH-OGB an altitude of 5,000 ft instead of 6,000 ft. Neither the Departures South nor the Approach South controller had been monitoring the vertical progress of their respective aircraft, at the point at which the flight paths crossed.

