

**Aviation Safety Investigation Report
199301965**

**Boeing Co
B747**

03 July 1993

Readers are advised that the Australian Transport Safety Bureau investigates for the sole purpose of enhancing transport safety. Consequently, Bureau reports are confined to matters of safety significance and may be misleading if used for any other purposes.

Investigations commenced on or before 30 June 2003, including the publication of reports as a result of those investigations, are authorised by the Executive Director of the Bureau in accordance with Part 2A of the Air Navigation Act 1920.

Investigations commenced after 1 July 2003, including the publication of reports as a result of those investigations, are authorised by the Executive Director of the Bureau in accordance with the Transport Safety Investigation Act 2003 (TSI Act). Reports released under the TSI Act are not admissible as evidence in any civil or criminal proceedings.

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.

The Bureau did not conduct an on scene investigation of this occurrence. The information presented below was obtained from information supplied to the Bureau.

Occurrence Number: 199301965 **Occurrence Type:** Incident
Location: Kinglake
State: VIC **Inv Category:** 4
Date: Saturday 03 July 1993
Time: 1335 hours **Time Zone:** EST
Highest Injury Level: None

Aircraft Manufacturer: Boeing Co
Aircraft Model: 747-438
Aircraft Registration: VH-OJD **Serial Number:** 24481
Type of Operation: Air Transport High Capacity International Passenger
Damage to Aircraft: Nil
Departure Point: Sydney NSW
Departure Time:
Destination: Melbourne VIC

Approved for Release: Tuesday, April 5, 1994

Overhead Kinglake at 5,500 ft on approach into Melbourne the crew received a terrain proximity alarm and applied emergency climb power, climbing to 7,000 ft.

This is one of a large number of spurious warnings occurring to the world fleet of Boeing 747-400 aircraft. In broad terms, the problem is in the logic of the ground proximity warning system (GPWS) which allows a warning to be registered when the landing gear is retracted and the number 1 radio altimeter registers an altitude of 2,500 ft (ie 2,500 ft above terrain).

The aircraft manufacturer has devised a modification to the antenna and the number 1 radio altimeter that has since been incorporated into the operator's fleet and these spurious warnings no longer occur.