

**Aviation Safety Investigation Report
199401509**

**Boeing Co
B767**

04 June 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: 199401509 **Occurrence Type:** Incident
Location: 38kms NW Sydney
State: NSW **Inv Category:** 3
Date: Saturday 04 June 1994
Time: 1509 hours **Time Zone** EST
Highest Injury Level: None

Aircraft Manufacturer: Boeing Co
Aircraft Model: 767-238ER
Aircraft Registration: VH-EAJ **Serial Number:** 23304
Type of Operation: Air Transport High Capacity Passenger
Damage to Aircraft: Nil
Departure Point: Brisbane QLD
Departure Time:
Destination: Sydney NSW

Crew Details:

| Role | Class of Licence | Hours on Type | Hours Total |
|------------------|------------------|------------------|-------------|
| Pilot-In-Command | ATPL 1st Class | 2600.4 | 10712 |

Approved for Release: Friday, April 26, 1996

FACTUAL INFORMATION

Approaching FL190 on descent, Sydney Control requested VH-EAJ to maintain maximum speed and track direct from its position north of Mt McQuoid to the West Pymble locator.

Further descent clearances were issued and approaching 7,000 ft about 35 NM from Sydney the aircraft was transferred to the Sydney Approach controller who then cleared the aircraft to descend to 3,000 ft. The lower limit of controlled airspace on the cleared route between 35 and 22 NM Sydney is 4,000 ft. Two minutes later the controller asked EAJ to report present altitude. After being told that the aircraft was approaching 3,000 ft the controller advised the crew that they had descended below controlled airspace and that there were unidentified radar returns in the vicinity of their aircraft. The altitudes of the unidentified aircraft were not known. The crew initiated a climb and subsequently re-entered controlled airspace 22 NM from Sydney. A review of recorded radar data revealed that during the excursion of EAJ into un-controlled airspace there was no conflict with other traffic.

During the descent the co-pilot was handling the aircraft and the pilot in command was monitoring the altitude of the aircraft in relation to published lowest safe altitudes to ensure that the aircraft remained clear of terrain. Neither pilot was monitoring the position of the aircraft in relation to the control area step lower limit. They believed that air traffic clearances not only provided separation from other aircraft but also ensured that the aircraft remained within controlled airspace.

The Approach controller in issuing a clearance for EAJ to descend from 7,000 to 3,000 ft, did not consider the relationship of the descent path to the control area step lower limit as he considered this to be a pilot responsibility.

The Aeronautical Information Publication, Operations CLT-2, para 14.9 indicated that it is a pilot responsibility to ensure that the aircraft remains in controlled airspace during descent. Although ATC clearances are aimed at keeping aircraft within controlled airspace there is no specific requirement for a controller to do so.

CONCLUSION

Significant Factors

The following factors were considered relevant to the development of the incident.

1. The flight crew did not monitor the position of the aircraft in relation to the lower limit of the controlled area.
2. The airways clearance did not ensure that the aircraft remained in controlled airspace.
3. The flight crew had an expectation that the airways clearance would ensure the aircraft remained in controlled airspace.
4. The controller was not required to issue a clearance which ensured the aircraft remained in controlled airspace.
5. Instructions regarding the issue of airways clearances contained in the Manual of Air Traffic Services are deficient in that the clearance was not required to ensure that in complying with the clearance, aircraft remain within controlled airspace.

SAFETY ACTION

As a result of this investigation and a similar occurrence (9401495) the Bureau issued interim recommendation IR940164 to the Civil Aviation Authority on 6 July 1994. It stated:

The Bureau of Air Safety Investigation recommends that the Civil Aviation Authority develop procedures that will ensure that where an aircraft has planned flight in CTA, ATC shall issue instructions that maintain that aircraft in CTA, unless the pilot specifically requests alternative processing.

The CAA response received on 9 September 1994 stated:

I refer to Air Safety Interim Recommendation IR940164 regarding aircraft in controlled airspace.

Following ATS advice of the two incidents on 4 June 1994 when a Qantas aircraft descended OCTA en route to Sydney, ATS and DASR specialists agreed that new procedures, which require ATC to issue clearances providing CTA protection for flights planning to remain in controlled airspace, would be introduced.

On 17 June, Regional ATS AIC, Descent Clearances and Control Area Protection, implemented the following amended procedures:

MATS 8-3-2 Level Assignment in Approach Sequence. Except where the provision of "Visual Approach Procedures" or "Instrument Approaches" apply, unless otherwise requested by the pilot, level assignment an arriving aircraft shall provide the appropriate vertical buffer with the base of the control area.

MATS 9-1-2 Level Assignment in an Arrival Sequence. Unless otherwise requested by the pilot, level assignment for an arriving aircraft shall provide the appropriate vertical buffer with the base of control area.

These amendments were incorporated into MATS via Amendment List No 10, dated 18 August 1994.

The AIP references will remain unaltered as, although there are new ATC procedures, it is the ultimate responsibility of the pilot in command to ensure that the aircraft is operated in accordance with safety requirements. A general issue AIC will be issued shortly to advise all pilots of the amendments and reiterate their responsibilities.

The bureau has classified this response as CLOSED/ACCEPTED