

**Aviation Safety Investigation Report  
199601504**

**Beech Aircraft Corp  
Super King Air  
Boeing Co  
B727**

**11 May 1996**

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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](http://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:** 199601504                      **Occurrence Type:** Incident  
**Location:** 45km S Gayndah, (ALA)  
**State:** QLD    **Inv Category:** 4  
**Date:** Saturday 11 May 1996  
**Time:** 1138 hours                                      **Time Zone** EST  
**Highest Injury Level:** None

**Aircraft Manufacturer:** Boeing Co  
**Aircraft Model:** 727-277  
**Aircraft Registration:** VH-ANB    **Serial Number:** 22642  
**Type of Operation:** Air Transport Domestic High Capacity Passenger  
Scheduled  
**Damage to Aircraft:** Nil  
**Departure Point:** Brisbane Qld  
**Departure Time:** 1122 EST  
**Destination:** Cairns Qld

**Aircraft Manufacturer:** Beech Aircraft Corp  
**Aircraft Model:** 200  
**Aircraft Registration:**    **Serial Number:**  
**Type of Operation:** Non-commercial Other (including military)  
**Damage to Aircraft:** Nil  
**Departure Point:** Amberley Qld  
**Departure Time:** 1107 EST  
**Destination:** Rockhampton Qld

**Approved for Release:** Wednesday, October 2, 1996

#### FACTUAL INFORMATION

A B200 had departed Amberley, Qld for Rockhampton, Qld and was tracking from Kilcoy to Gayndah on climb to flight level (FL) 200. This level was an initial air traffic control restriction pending further climb approval from Brisbane Sector 3B. The pilot contacted sector control prior to Kilcoy and was re-cleared from the aircraft's present position direct to Gayndah. This instruction had the effect of establishing the aircraft on a track slightly to the west of the Kilcoy direct Gayndah track.

The sector controller had a foreign registered A330 in conflict with the B200 and instigated a step climb procedure until the pilot of the B200 was assigned his preferred level, FL280.

A B727 had departed Brisbane, Qld for Cairns, Qld and was on climb to the standard intermediate level, FL200. It was on a track that included the leg Kilcoy to Gayndah. The crew contacted Brisbane Sector 3B and the controller issued a climb instruction to the flight planned level, FL350. The controller also estimated that the B727 would pass the B200 just prior to Gayndah and, at 1129 EST, asked the crew of the B727 if they could reach FL290 by 80 NM north of Brisbane; a requirement that, if accepted, would have guaranteed separation between the two aircraft.

The B727 crew replied that they could not make the requirement and the controller acknowledged, informing the crew that a radar vector for separation may become necessary.

Approximately four minutes later, the controller's attention was transferred to the task of processing several aircraft in the Maroochydore area that were in conflict and required separating.

At approximately 1138, as the B727 climbed through FL270, separation with the preceding, slower B200 broke down. This was not immediately noticed by the controller. However, when making a subsequent periodic scan of his traffic, he did notice the conflict and initiated a radar vector for the B727. This action re-established radar separation at 1140.

The B727 passed 2.3 NM to the east of the B200 while passing through that aircraft's level. The required standard was 5 NM by radar.

## ANALYSIS

The controller had recognised the conflict between the two aircraft and had correctly estimated the point at which radar separation would break down. He attempted to establish positive procedural separation but, when the crew of the B727 were unable to meet the proposed requirement, elected to radar monitor the aircraft knowing that both vertical and horizontal separation were likely to be lost eventually.

Alternative procedural standards were available to establish positive separation, but these options were not taken by the controller. When he became task oriented to the situation developing to the south-east of his area of responsibility, the time available to continue radar monitoring the B727 and B200 in the northern part of his airspace was severely reduced.

Consequently the controller's traffic scan did not detect the proximity of the two aircraft until a breakdown in separation had occurred.

## SIGNIFICANT FACTOR

The sector controller did not apply appropriate separation assurance techniques.

## SAFETY ACTION

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The Bureau of Air Safety Investigation is evaluating aspects of separation assurance techniques within air traffic control. Any forthcoming recommendations will be published in the Quarterly Safety Deficiency Report.

