

**Aviation Safety Investigation Report  
199400587**

**British Aerospace Plc  
BAe 146-200-11  
Fairchild Industries Inc  
Metro III**

**07 March 1994**

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**Occurrence Number:** 199400587                      **Occurrence Type:** Incident  
**Location:** 140km SE Townsville  
**State:** QLD    **Inv Category:** 3  
**Date:** Monday 07 March 1994  
**Time:** 1950 hours                                      **Time Zone**                      EST  
**Highest Injury Level:** None

**Aircraft Manufacturer:** British Aerospace Plc  
**Aircraft Model:** BAe 146-200-11  
**Aircraft Registration:** VH-JJY    **Serial Number:** E2113  
**Type of Operation:** Air Transport Domestic High Capacity Passenger  
Scheduled  
**Damage to Aircraft:** Nil  
**Departure Point:** Townsville QLD  
**Departure Time:** 1936 EST  
**Destination:** Brisbane QLD

**Aircraft Manufacturer:** Fairchild Industries Inc  
**Aircraft Model:** SA227-AC  
**Aircraft Registration:** VH-UZP    **Serial Number:** AC 498  
**Type of Operation:** Charter Cargo  
**Damage to Aircraft:** Nil  
**Departure Point:** Townsville QLD  
**Departure Time:** 1930 EST  
**Destination:** Rockhampton QLD

**Approved for Release:** Wednesday, January 31, 1996

VH-UZP departed Townsville on the Townsville-Collinsville track but was then cleared to track direct to Mackay. VH-JJY, a faster aircraft, departed Townsville six minutes later and climbed initially on the Townsville-Bowen track before also being given a direct track to Mackay. The aircraft were thus on converging tracks.

VH-JJY was subsequently cleared to divert up to 10 NM right of track to avoid thunderstorm cells. This brought the aircraft into potential conflict with VH-UZP, so the controller instituted a stepped climb procedure between the two aircraft. He then noted that VH-JJY was not diverting far off track so he cleared that aircraft to climb through the level of VH-UZP which by this time was level at FL210. The controller instructed VH-JJY to expedite climb to FL 220. However, VH-JJY then diverted further right of track (but still within 10 NM of track) and did not climb at the rate the controller expected. This resulted in a breakdown of separation standards between the aircraft. Recorded radar data indicated that when the aircraft were 3 NM apart, there was 200 ft vertical separation. The prescribed standard is 5 NM or 1,000 ft.

Neither crew was given traffic information on the other aircraft. The controller, on realising that separation standards could be infringed, gave the leading aircraft (VH-UZP) a heading change from 125 degrees to 140 degrees. This was not of sufficient magnitude to ensure that the separation would be maintained.

#### Significant Factors

The following factors are considered relevant to the development of this incident:

1. Weather avoidance considerations resulted in the aircraft diverting off track.
2. Appropriate separation standards were not applied following the diversion of VH-JJY off track.