Aviation Safety Investigation Report 199002211

Boeing B737-300
Boeing B737-300

7 May 1990

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Occurrence Number: 199002211 **Occurrence Type:** Incident
Location: 176 kms South West of Sydney NSW
Date: 7 May 1990 **Time:** 1939
Highest Injury Level: Nil
Injuries:

	Fatal	Serious	Minor	None
Crew	0	0	0	0
Ground	0	0	0	-
Passenger	0	0	0	0
Total	**0**	**0**	**0**	**0**

Aircraft Details:	Boeing B737-300	Boeing B737-300
Registration:	VH-CZN	VH-TAV
Serial Number:	24303	23487
Operation Type:	Scheduled Domestic Passenger Service	Scheduled Domestic Passenger Service
Damage Level:	Nil	Nil
Departure Point:	Melbourne VIC	Adelaide SA
Departure Time:	N/K	
Destination:	Sydney NSW	

Approved for Release: 11th October 1990

Circumstances:

VH-CZN was tracking Albury direct to the Bindook VOR at FL 350. At 0928 UTC Sydney Sector 3 Controller issued the aircraft with clearance to descend to FL190 with a requirement to reach that level by 80 DME Sydney. At 0933 UTC, the Sector 3 Controller cleared VH-TAV, which was tracking to Bindook VOR via Rugby NDB at FL330, to descend to FL200 with a requirement to reach that level by 70 DME Sydney. Because VH-CZN was about 10 miles ahead of VH-TAV, on converging tracks for Bindook, VH-CZN was No 1 in the approach sequence, VH-TAV was No 2, and a Thai B747 on the Parkes - Bindook track was No 3. At this time, Sector 3 Radar and Procedural positions were combined due to a relatively light work load. The controller who occupied the position was inexperienced. He had completed 11 shifts following training and initial rating on the Sector 3 position. VH-CZN had an operational restriction not to exceed 250 knots IAS below 10,000 feet which was noted on its flight plan message. At 0935 UTC, VH-CZN was 130 miles from Sydney and VH-TAV was approximately 140 miles from Sydney and laterally displaced about 20 miles to the left of VH-CZN. The Flow Controller decided to reverse the arrival sequence, with VH-TAV to become No 1 and VH-CZN No 2 because of the speed restriction on VH-CZN below 10,000 feet. The Flow Controller asked the Sector Three Controller to position VH-CZN behind VH-TAV and request VH-TAV to maintain maximum speed. At 0936 UTC the Sector Three Controller instructed VH-CZN to turn left onto heading 350 and requested VH-TAV to maintain maximum speed for as long as possible. At 0938 08 VH-TAV reported leaving FL330. Thirty two seconds later, VH-CZN reported leaving FL350. The controller acknowledged the descent and turned VH-CZN further left onto 340. This was followed by another heading change onto 330 twenty nine seconds later, at 0939 12. At 0939 27 VH-CZN was instructed to maintain FL 330 but the aircraft reported having left FL320. The aircraft was re assigned FL310. VH-TAV reported leaving FL315 at 0939 48. VH-CZN requested the distance from the other aircraft at 0940 21. The controller advised it was

5 miles north (of VH-CZN's position). A breakdown in the separation standards occurred. The radar recording indicated VH-CZN had passed behind and above VH-TAV. The minimum distance/height between the aircraft was two miles and 600 feet. An experienced controller was seated beside the sector Three Controller during the incident but he did not have his headset plugged into the circuit. He suggested vertical separation be re-applied by restricting VH-CZN to FL330. This advice was misconstrued by the Sector 3 Controller as a heading change onto 330.

Significant Factors:

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

1. The Controller made an error of judgement in the assessment of an initial heading for VH-CZN to be positioned behind VH-TAV.

2. Attempts to radar vector VH-CZN to maintain lateral separation after the initial heading change were ineffective due to further poor judgement.

3. The controller did not apply procedures in a timely manner, to maintain vertical separation between the two aircraft, until after the initial vertical separation was lost.

4. The controller did not warn the crew of VH-CZN of the loss of separation standards.

5. The poor judgement by the controller indicated inadequate training and checking of the controller in radar vectoring techniques.

6. The controller was inexperienced.

7. An experienced controller seated at the Sector Three consoel, was unable to offer timely advice as he was not plugged into the intercomm/radio circuit.

Reccomendations:

The circumstances of this occurrence have been referred to the Civil Aviation Authority (Air Traffic Services) with recommendations concerning the training and checking of trainee and newly rated ATS officers. -