Aviation Safety Investigation Report 199903458

Boeing Co B737 Airbus A320

05 July 1999

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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:	199903458		Occurrence Typ	e: Incident		
Location:	13km ENE Sydne	ey, Aerodrome				
State:	NSW		Inv Category:	4		
Date:	Monday 05 July 1	1999				
Time:	1013 hours		Time Zone	EST		
Highest Injury Level:	None					
Aircraft	Boeing Co					
Manufacturer:	C					
Aircraft Model:	737-300					
Aircraft Registration:	ZK-FDM				Serial	
Type of Operation:	Air Transport High Capacity International Passenger Scheduled				Number:	
Damage to Aircraft:	Nil					
<b>Departure Point:</b>	Sydney NSW					
Departure Time:	0009 EST					
Destination:	Dunedin New 2	Zealand				
Aircraft Manufacturer:	Airbus					
Aircraft Model:	A320-211					
Aircraft Registration:	VH-HYF				Serial	027
8					Number:	
Type of Operation:	Air Transport Scheduled	Domestic High	n Capacity Passen	ger		
Damage to Aircraft:	Nil					
<b>Departure Point:</b>	Brisbane Qld					
<b>Departure Time:</b>						
Destination:	Svdnev NSW					

Approved for Release: Tuesday, September 28, 1999

The crew had been issued a runway 34R MARUB2 SID with a requirement to maintain 5,000 ft and had confirmed this altitude on contact with Departures North. The aircraft was then observed on radar to climb above the assigned altitude. The controller confirmed the altitude requirement and passed traffic information on a crossing A320 at 6,000 ft. The B737 crew immediately descended from 5,400 ft to 5,000 ft. Concurrently the crew of the A320 responded to a TCAS Resolution Advisory and climbed from 6,000 ft to 6,700 ft.

A plot of the recorded radar data showed that the B737 had levelled at 5,400 ft and that the two aircraft had come within 600 ft of one another. The required standard was 1,000 ft and, therefore, an infringement of separation standards had occurred. The company operating the B737 conducted an investigation into the circumstances surrounding this incident and a copy of their report was duly lodged with the Bureau.

Their investigation found that a captain under training was flying the aircraft. A training captain occupied the right crew seat and performed the crew functions of the pilot not flying. The captain under training was hand-flying the aircraft at the time of the incident. Although he had correctly set the assigned altitude of 5,000 ft in the window of the Mode Control Panel, the Flight Director (FD) did not capture the 5,000 ft level-off altitude and, despite the training captain having alerted him to the approaching assigned altitude, he had allowed the aircraft to climb above the assigned 5,000 ft altitude.

An intermittent fault in the altitude selection function of the FD had been detected a few days earlier but because the problem was not thought to be an aberrant operation, it was not reported. After this occurrence the problem was reported and a few days later manifested itself in a 'hard' failure. The Mode Control Panel of the Flight Management System was subsequently replaced.

The investigation concluded that the slow response of the captain under training had allowed the aircraft to exceed the assigned altitude. The company's Standard Operating Procedures were found to be adequate and, despite this event, did not require amendment. However, a recommendation was made that training captains require pilots under training to use greater levels of automation in busy flight phases in order to enhance their monitoring role.