Aviation Safety Investigation Report 198901547

Gulfstream 695B

17 July 1989

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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: 198901547 **Occurrence Type:** Accident
Location: Mangalore VIC
Date: 17 July 1989 **Time:** 1407
Highest Injury Level: Nil
Injuries:

	Fatal	Serious	Minor	None
Crew	0	0	2	2
Ground	0	0	0	-
Passenger	0	0	0	0
Total	**0**	**0**	**0**	**2**

Aircraft Details: Gulfstream 695B
Registration: VH-LTM
Serial Number: 96208
Operation Type: Private
Damage Level: Substantial
Departure Point: Mangalore VIC
Departure Time: 1407
Destination: Mangalore VIC

Approved for Release: 12th December 1989

Circumstances:

The aircraft was being used for Examiner of Airmen training. For the first part of the flight from Essendon, the captain flew the aircraft from the left crew seat as captain and the other pilot performed the co-pilot role from the right seat. An instrument approach was flown at Mangalore followed by three touch and go landings. During the touch and go landings the co-pilot operated the flap selection lever and the captain operated the undercarriage lever in accordance with standard operating procedures. The positioning of the flap and landing gear selectors either side of the throttle quadrant is mirrored. After a full stop landing, a shut-down and a mutual briefing, the captain occupied the right crew seat and performed the role of co-pilot as well as supervisory pilot. The other pilot flew the aircraft while acting in command under supervision from the left seat. During a touch and go landing on runway 23 the pilot under supervision lowered the nosewheel to the runway and then advanced the power levers to takeoff power. The supervisory pilot selected flaps up and advised the pilot under supervision of the selection. Unexpectedly the pilot under supervision then selected the landing gear up before the aircraft had left the ground. The supervisory pilot attempted to prevent the gear up selection but was unable to because of the physical location of the landing gear lever and the speed at which the pilot under supervision had moved his hand. The landing gear retraction cycle progressed far enough to turn both mainwheels inwards causing them to drag along the runway whereas the nosewheel remained in the down position. Hearing a loud scraping noise, the pilot under supervision immediately reselected landing gear down. Both pilots elected to retard the power levers and abort the takeoff. The aircraft slid to a halt within 200 metres on its rear fuselage and nose wheel. When the pilot under supervision selected the landing gear up the aircraft was travelling at about 90 knots. It was light on the mainwheels. The oleos were no longer compressed enough to activate the "squat switch" which guards against inadvertent landing gear retraction on the ground. The pilot under supervision had previously been given endorsement training on the aircraft. He had almost completed the thirty hours acting in command under supervision required before being

considered for unsupervised command duties. His training had not been concentrated. About twelve months had elapsed since the training began. Prior to joining the Civil Aviation Authority, he had not flown turbo-prop or turbo-jet aircraft nor had he previously experienced two pilot crew techniques. He had experienced some difficulty understanding the particular crew roles during the training because he had flown with several supervisory pilots who used slightly different practices. The pilot's selection of landing gear up was the result of a reflex role reversal at a time of reasonably high workload. The pilot believes his actions were triggered by the supervisory pilot saying "Flaps selected UP".

Significant Factors:

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

1. The pilot under supervision had limited experience in two pilot operations.

2. The training of the pilot under supervision had been drawn out over a long period of time.

3. In training the pilot under supervision had experienced slightly different two pilot techniques with several supervisory pilots.