

**Aviation Safety Investigation Report
199400028**

**Beech Aircraft Corp
Travel Air**

05 January 1994

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Investigations commenced on or before 30 June 2003, including the publication of reports as a result of those investigations, are authorised by the Executive Director of the Bureau in accordance with Part 2A of the Air Navigation Act 1920.

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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: 199400028 **Occurrence Type:** Accident
Location: Archerfield
State: QLD **Inv Category:** 4
Date: Wednesday 05 January 1994
Time: 1023 hours **Time Zone** EST
Highest Injury Level: None

Aircraft Manufacturer: Beech Aircraft Corp
Aircraft Model: 95-B55
Aircraft Registration: VH-CCB **Serial Number:** TC-1613
Type of Operation: Charter Cargo
Damage to Aircraft: Substantial
Departure Point: Archerfield QLD
Departure Time: 0941 EST
Destination: Coolangatta QLD

Crew Details:

Role	Class of Licence	Hours on	
		Type	Hours Total
Pilot-In-Command	Commercial	160.6	824

Approved for Release: Monday, April 29, 1996

The pilot reported that, shortly after take-off and after selecting the landing gear up, the landing gear lights and the panel lighting dimmed and then extinguished. On checking the alternator output he found that there was no electrical power and began emergency procedures. Unable to restore electrical power, the pilot attempted to lower the landing gear using the emergency system. However, the emergency system jammed before the landing gear could be fully lowered. He subsequently landed the aircraft with the landing gear retracted.

Examination of the aircraft found that the landing gear had been fully retracted on landing. Both the normal and emergency gear systems functioned correctly when tested. The electrical system failure was caused by inadequate output from the alternators, and battery discharge. The right alternator drive belt tension bracket had broken and the drive belt had fallen off. The left alternator was able to produce only 5 A due to a shorted diode. Battery discharge soon after take-off suggests that these faults may have occurred during the previous flight.

An electrical charging fault had been reported on 30 December 1993. The maintenance organisation responsible for the aircraft had cleared the fault on 31 December 1993 with an entry indicating that both alternator drive belts had been tensioned and the operation of the alternators had been checked.

Unrestrained freight in the cabin of the aircraft was packed to the level of the cabin windows and was abutting the rear of the front seats. This would have limited the pilot's access to the emergency gear operating handle.