Aviation Safety Investigation Report 198900818

Cessna 421 C

12 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: 198900818 **Occurrence Type:** Accident
Location: Darwin NT
Date: 12 July 1989 **Time:** 850
Highest Injury Level: Nil
Injuries:

	Fatal	Serious	Minor	None
Crew	0	0	1	1
Ground	0	0	0	-
Passenger	0	0	0	2
Total	**0**	**0**	**0**	**3**

Aircraft Details: Cessna 421 C
Registration: VH-ANH
Serial Number: 421C0006
Operation Type: Charter
Damage Level: Substantial
Departure Point: Darwin NT
Departure Time: 0724
Destination: Gove NT

Approved for Release: 3rd November 1989

Circumstances:

During the takeoff roll, witness evidence suggested that the right mainwheel tyre had blown. The pilot requested a low pass for an inspection of the gear and it was determined that the complete right mainwheel was missing. After reducing fuel weight to a minimum by burnoff, the pilot carried out a wheels-up landing on the runway which had been foamed in advance. Subsequent on-site inspection by the Civil Aviation Authority airworthiness staff determined that four adjacent mainwheel tie bolts had failed due to under-torquing. The resulting play in the wheel halves then caused the mainwheel bearing to fail followed by the stripping of the remaining tie bolt nuts and the complete separation of the outer half of the mainwheel and the tyre. The last periodic inspection of the aircraft was completed just prior to the accident flight.

Significant Factors:

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

1. The mainwheel tie bolts were under-torqued during assembly.

2. The imminent failure of the mainwheel was not detected during the last periodic inspection.