

**Aviation Safety Investigation Report
199901762**

**Cessna Aircraft Company
402C**

05 April 1999

Readers are advised that the Australian Transport Safety Bureau investigates for the sole purpose of enhancing transport safety. Consequently, Bureau reports are confined to matters of safety significance and may be misleading if used for any other purposes.

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.

Investigations commenced after 1 July 2003, including the publication of reports as a result of those investigations, are authorised by the Executive Director of the Bureau in accordance with the Transport Safety Investigation Act 2003 (TSI Act). Reports released under the TSI Act are not admissible as evidence in any civil or criminal proceedings.

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: 199901762 **Occurrence Type:** Accident
Location: Gove, Aerodrome
State: NT **Inv Category:** 4
Date: Monday 05 April 1999
Time: 1010 hours **Time Zone** CST
Highest Injury Level: None

Aircraft Manufacturer: Cessna Aircraft Company
Aircraft Model: 402C
Aircraft Registration: VH-UBB **Serial Number:** 402C0412
Type of Operation: Air Transport Domestic Low Capacity Passenger Scheduled
Damage to Aircraft: Substantial
Departure Point: Gove NT
Departure Time: 0855 CST
Destination: Lake Evella NT

Crew Details:

Role	Class of Licence	Hours on	
		Type	Hours Total
Pilot-In-Command	Commercial	177.0	2673

Approved for Release: Monday, August 30, 1999

During the initial climb after takeoff, the pilot of the Cessna 402 observed that the nose landing gear had failed to retract. While orbiting clear of the airfield, the pilot commenced troubleshooting and found that the hydraulic system circuit breaker had tripped. After resetting the circuit breaker, several further retraction attempts failed to resolve the problem. The pilot then attempted to lower the landing gear using the emergency function. These attempts were also unsuccessful. After briefing the passengers on emergency procedures and with RFFS in position, the pilot commenced the landing with an unlocked nose gear. During the approach, the pilot shut down both engines and turned off the fuel. He then realised that the aircraft would land short of the runway. The aircraft came to rest 10 metres outside of the airport boundary fence. The pilot and passengers were uninjured.

Engineering inspection of the aircraft revealed a wire in the electrical loom to the left main landing gear which had shorted to structure. When a selection was made with the landing gear selector lever, power applied to move the electro-hydraulic shuttle valve from the idle position to either up port or down port would pop the circuit breaker. This prevented the nose gear from completing the cycle to the fully down position and also prevented the return of all the gears to the up and locked position. The emergency blow down bottle was removed and examined. It was found to require a force well in excess of the maintenance manual requirement to operate the mechanism.

These two defects prevented the landing gear from being locked down.