

**Aviation Safety Investigation Report
199604069**

**Cessna Aircraft Company
Centurion**

07 December 1996

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.

The Bureau did not conduct an on scene investigation of this occurrence. The information presented below was obtained from information supplied to the Bureau.

Occurrence Number: 199604069 **Occurrence Type:** Accident
Location: Darwin, Aerodrome
State: NT **Inv Category:** 4
Date: Saturday 07 December 1996
Time: 1309 hours **Time Zone** CST
Highest Injury Level: None

Aircraft Manufacturer: Cessna Aircraft Company
Aircraft Model: 210L
Aircraft Registration: VH-TIJ **Serial Number:** 21060591
Type of Operation: Charter Passenger
Damage to Aircraft: Substantial
Departure Point: Bamyili NT
Departure Time:
Destination: Hodgson River Station NT

Crew Details:

Role	Class of Licence	Hours on Type	Hours Total
Pilot-In-Command	Commercial	500.0	800

Approved for Release: Friday, December 20, 1996

Arriving at the destination the landing gear failed to extend when the pilot selected it down.

His attempts to extend it using the manual hand pump were unsuccessful as he was unable to build up enough hydraulic pressure in the system to operate the gear. Hydraulic fluid was then noticed seeping from behind the centre console which he identified as a serious leak from the power pak. He was able to replenish the lost hydraulic fluid with spare engine oil carried onboard the aircraft, but this failed to rectify the loss of hydraulic pressure.

After calculating the aircraft's endurance the pilot decided to return to Darwin where he carried out a wheels up landing.

An inspection revealed that one of the "O" ring seals located at the joint between the landing gear manifold and the power pak was split, causing an hydraulic fluid leak, and loss of hydraulic pressure.

The manifold had been removed the previous day to change the servo-valve, and it is possible the "O" ring was damaged during reinstallation. Several successful gear retraction tests had been carried out after completion of the work, followed by about 9 gear cycles in flight before the leak developed.

