

**Aviation Safety Investigation Report
199803764**

**Piper Aircraft Corp
Turbo Lance II**

06 September 1998

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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: 199803764 **Occurrence Type:** Accident
Location: Broken Hill, Aerodrome
State: NSW **Inv Category:** 4
Date: Sunday 06 September 1998
Time: 1123 hours **Time Zone** CST
Highest Injury Level: None

Aircraft Manufacturer: Piper Aircraft Corp
Aircraft Model: PA-32RT-300T
Aircraft Registration: VH-KEF **Serial Number:** 32R-7887055
Type of Operation: Charter Passenger
Damage to Aircraft: Substantial
Departure Point: Birdsville QLD
Departure Time: 0800 CST
Destination: Broken Hill NSW

Crew Details:

Role	Class of Licence	Hours on	
		Type	Hours Total
Pilot-In-Command	Commercial	180.0	1130

Approved for Release: Thursday, October 15, 1998

The pilot reported that the alternator failed while the aircraft was between Birdsville and Broken Hill. The pilot reduced the aircraft's electrical load to preserve battery power. On arrival at Broken Hill the battery was flat, and the pilot was unable to lower the landing gear either by normal or emergency methods. After emergency services were in position the aircraft was landed with the landing gear retracted.

When the aircraft was raised by engineers the landing gear was able to be extended normally.

The investigation disclosed that the alternator body securing bolts had loosened thereby allowing the rotor to contact the windings, shorting out the electrical supply. The battery had depleted prior to arrival at Broken Hill; therefore the electrically powered hydraulic pump that normally retracts and extends the landing gear was rendered inoperative.

No fault was found with the landing gear system. Upon reflection the pilot advised that he most probably did not hold the emergency gear extend lever down long enough to bleed off the hydraulic pressure and allow the landing gear to extend. The pilots operating handbook advises that under normal conditions the lever should be held down for approximately 10 seconds. However, industry experience is that it can take up to 20 seconds.



The pilot advised that during his endorsement training on this aircraft he was taken through the emergency extend procedures but did not activate the system. He therefore did not have an appreciation of either the effort or the length of time the handle was required to be held down.

