

**Aviation Safety Investigation Report
198800730**

Piper PA23-250

4 August 1988

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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.

This accident was not the subject of an on site investigation.

Occurrence Number: 198800730 **Occurrence Type:** Accident
Location: Kimba SA
Date: 4 August 1988 **Time:** 815
Highest Injury Level: Nil
Injuries:

	Fatal	Serious	Minor	None
Crew	0	0	1	1
Ground	0	0	0	-
Passenger	0	0	0	0
Total	0	0	0	1

Aircraft Details: Piper PA23-250
Registration: VH-WGN
Serial Number: 27-7305233
Operation Type: Charter
Damage Level: Substantial
Departure Point: Cleve SA
Departure Time: N/K
Destination: Kimba SA

Approved for Release: June 27th 1989

Circumstances:

The pilot carried out a normal circuit at his destination and obtained a gear green indication. A visual check in the engine cowl mirror also showed the nose gear to be in the fully extended position. The pilot also recalled seeing three greens on his gear check on final approach. Following a normal touchdown, the nose gear collapsed and the aircraft slid to a stop on the runway. The aircraft was subject to an identical occurrence at Kimba on 16 June 1988. The hydraulic power pack was found to be in a poor condition at overhaul. The poppet-valves and check-valves were worn. The nose gear is held in the down position by hydraulic pressure and by an over-centre lock. When the gear selector is placed in the gear down position, the down line is pressurized and the gear extends. When the pressure in the down line reaches system pressure the gear selector lever automatically returns to neutral and forms a hydraulic lock in the down line. However, with the worn valves in the power pack this pressure bled away leaving only the over-centre feature to hold the nose gear in the extended position. The Kimba strip has a rough surface. It is believed that the rough surface caused the over-centre mechanism to become unlocked and since the hydraulic pressure had bled away, the nose gear collapsed.

Significant Factors:

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

1. The worn valves in the hydraulic power pack allowed hydraulic pressure to bleed away.
2. The rough condition of the landing strip probably caused the nose gear over-centre mechanism to unlock.