

**Aviation Safety Investigation Report  
199202509**

**Piper Aircraft Corp  
Chieftain**

**28 October 1992**

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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](http://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:** 199202509                      **Occurrence Type:** Incident  
**Location:** Sydney  
**State:** NSW    **Inv Category:** 4  
**Date:** Wednesday 28 October 1992  
**Time:** 1930 hours                                      **Time Zone**                      ESuT  
**Highest Injury Level:** None

**Aircraft Manufacturer:** Piper Aircraft Corp  
**Aircraft Model:** PA-31-350  
**Aircraft Registration:** VH-NDU    **Serial Number:** 31-8152083  
**Type of Operation:** Air Transport Domestic Low Capacity Passenger  
Scheduled  
**Damage to Aircraft:** Nil  
**Departure Point:** Sydney NSW  
**Departure Time:** 1914 ESuT  
**Destination:** Forbes NSW

**Approved for Release:** Wednesday, August 3, 1994

Approaching the top of climb the left engine began to surge moderately. Engine temperature and pressure appeared normal. Although the pilot carried out trouble checks the surging continued and moderate vibration was noticed. The pilot decided to return to Sydney, but two minutes later an audible 'crack' was heard from the engine. The propeller was feathered, the engine secured, and the aircraft continued to Sydney for an uneventful single engine landing.

It was later determined that the left engine crankshaft had suffered a fatigue failure at the forward crankweb. The shaft was on its second life and had completed 265 hours since the engine was last reconditioned. No rework had been performed on the shaft during reconditioning.