

**Aviation Safety Investigation Report
199803860**

**Piper Aircraft Corp
Chieftain**

15 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: 199803860 **Occurrence Type:** Incident
Location: 113km NE Albury, Aerodrome
State: NSW **Inv Category:** 4
Date: Tuesday 15 September 1998
Time: 1812 hours **Time Zone** EST
Highest Injury Level: None

Aircraft Manufacturer: Piper Aircraft Corp
Aircraft Model: PA-31-350
Aircraft Registration: VH-MZI **Serial Number:** 31-8152131
Type of Operation: Air Transport Domestic Low Capacity Passenger
Scheduled
Damage to Aircraft: Minor
Departure Point: Canberra ACT
Departure Time: 1745 EST
Destination: Albury NSW

Approved for Release: Monday, March 22, 1999

The aircraft was maintaining 10,000 ft enroute from Canberra, ACT to Albury, NSW. The weather was a south-westerly airstream, resulting in cloud and rain along the flight path. Consequently, the aircraft was being flown in accordance with the Instrument Flight Rules (IFR).

At a position approximately 113km north east of Albury, the pilot reported that she had experienced problems with the right engine and had shut the engine down. A PAN was declared. Due to a steady 50 kt headwind to Albury, and maintaining flight on only one engine, the pilot chose to divert the aircraft for a landing at Wagga.

After holding south of Wagga, due to low cloud and inclement weather over the aerodrome, the pilot carried out an uneventful single engine landing.

The maintenance assessment carried out by the aircraft owner, determined that the right engine problem had occurred due to a failure of the impeller shaft bearing in the right turbocharger unit. This had resulted in a failure of the compressor impeller.

The aircraft owner then sent the turbocharger to the manufacturer for examination. This examination found that the impeller and bearing damage had occurred as a result of the ingestion of soft foreign material from an unknown source. Such soft material was stated to include, shop towels, water, paper, filter media or some plastics. The owner reported that no soft material was found following the engine failure.

Due to the conflicting examination reports, the reason for the turbocharger failure could not be determined.

During the investigation the passengers reported that some icing had been present on the aircraft wings. The investigation determined that some light icing had been present during the flight, however, the extent noted was insufficient to have had any significant effect on the aircraft's performance.

