

**Aviation Safety Investigation Report
199300692**

**Piper Aircraft Corp
Chieftain**

29 March 1993

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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: 199300692 **Occurrence Type:** Incident
Location: 40km W Sydney
State: NSW **Inv Category:** 3
Date: Monday 29 March 1993
Time: 1852 hours **Time Zone** EST
Highest Injury Level: None

Aircraft Manufacturer: Piper Aircraft Corp
Aircraft Model: PA-31-350
Aircraft Registration: VH-TXK **Serial Number:** 31-7405189
Type of Operation: Air Transport Domestic Low Capacity Passenger Scheduled
Damage to Aircraft: Nil
Departure Point: Cowra NSW
Departure Time: 1815 EST
Destination: Sydney NSW

Crew Details:

<u>Role</u>	<u>Class of Licence</u>	<u>Hours on Type</u>	<u>Hours Total</u>
Pilot-In-Command	Commercial	200.0	973

Approved for Release: Monday, September 27, 1993

The aircraft departed Sydney at 0752 hours EST on a scheduled commercial air transport flight, landing at Cowra and Young before terminating at Forbes at 0940 hours. The aircraft subsequently departed Forbes at 1545 hours for the return flight to Sydney via West Wyalong, Forbes, Young, and Cowra, departing Cowra at 1815 hours with six passengers on board.

During the flight the pilot was monitoring the fuel state, and became concerned that there may not be sufficient fuel on board to reach Sydney. When the aircraft was overhead Camden, the pilot saw the right hand fuel contents gauge indicating near empty and immediately decided to divert to Bankstown. Sydney Approach advised the pilot that the aircraft was closer to Hoxton Park. As a result, the pilot elected to divert to Hoxton Park, landing at 1856 hours at an estimated weight of 2765 kg. The aircraft was refuelled, departed Hoxton Park and landed safely at Sydney. Hoxton Park has a pavement restriction which restricts normal aircraft operations to aircraft up to a maximum takeoff weight of 1350 kg.

Prior to departing Forbes, the pilot had calculated the aircraft fuel requirements, and was satisfied that adequate fuel remained to complete the flight without refuelling. However, he had made an error in his calculations, and had omitted to take into account fuel consumed during takeoff and climb as required by the company fuel policy.

SIGNIFICANT FACTORS

The following factors were considered relevant to the development of the incident.

1. The pilot failed to accurately determine the total fuel required for the flight from Forbes to Sydney.
2. During the sector from Cowra to Sydney, the pilot realised there was insufficient fuel in the aircraft to safely complete the flight.
3. As a result of the late appreciation of the aircraft's critically low fuel state, the pilot was forced to divert to an aerodrome suitable for Piper PA 31 operations only in emergency situations.