

**Aviation Safety Investigation Report  
199905547**

**Piper Aircraft Corp  
Chieftain**

**24 November 1999**

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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).**

**Occurrence Number:** 199905547      **Occurrence Type:** Incident  
**Location:** Sydney, Aerodrome  
**State:** NSW      **Inv Category:** 4  
**Date:** Wednesday 24 November 1999  
**Time:** 1736 hours      **Time Zone** ESuT  
**Highest Injury Level:** None

**Aircraft Manufacturer:** Piper Aircraft Corp  
**Aircraft Model:** PA-31-350  
**Aircraft Registration:** VH-XLA      **Serial Number:** 31-7952206  
**Type of Operation:** Air Transport Domestic Low Capacity Passenger Scheduled  
**Damage to Aircraft:** Nil  
**Departure Point:** Sydney NSW  
**Departure Time:** 1736 ESuT  
**Destination:** Cowra NSW

**Crew Details:**

Role	Class of Licence	Hours on Type	Total
Pilot-In-Command	ATPL		8200

**Approved for Release:** Wednesday, January 5, 2000

The Tower controller observed some smoke emanating from VH-XLA on departure from runway 16R. The Tower controller informed the pilot of the smoke and consequently, the pilot conducted a precautionary circuit and landing without further incident. The engine continued to deliver full power and there were no abnormal engine indications from the cockpit engine instruments. A full emergency was declared and the aerodrome was closed. The emergency co-ordination was hampered by problems with the common crash call (CCC) line between the Tower and the Terminal Operations Controller (TOC).

After an uneventful landing, XLA taxied back to the terminal area under an aerodrome fire services escort. The pilot shutdown the aircraft and there was no sign of fire or damage to the left engine. A replacement aircraft was sent to Sydney to retrieve the six passengers.

A post-flight engineering inspection of the left engine revealed a partially blocked fuel injector nozzle and a default overly rich fuel mixture. During the ground run, a minor puff of black smoke emanated from the left engine at full power. This is not an uncommon consequence of a slightly rich mixture. A company LAME cleaned the fuel injector nozzle. As a further pre-cautionary measure, the fuel control unit was also changed. The left engine operated normally after these items had been actioned.

This occurrence also revealed that the CCC to the TOC did not function which delayed the aircraft pre-crash co-ordination. The TOC end of the CCC is the responsibility of the airport operator. The circuit commissioning was a 4 wire system at the airport operator's request. The other subscribers to the CCC had complied with this 4 wire circuit system. A telecommunications company was then sub-contracted to perform maintenance on this line for the airport operator. The telecommunications company had then altered the line circuit arrangement to a 2 wire system without apparently informing or co-ordinating this change with the airport operator and Airservices. The new 2 wire system was found to be incompatible with the Airservices 4 wire system. This lack of inter-agency co-ordination has resulted in an inability to efficiently co-ordinate relevant pre-crash taskings in a timely manner. As a result of this occurrence, this problem has been resolved. Airservices has modified its' end of the line to a 2 wire system. The airport operator and Airservices now use fully compatible 2 wire circuit systems to communicate between the Tower and the TOC. This emergency communications system has been tested and is now fully functional.

