

**Aviation Safety Investigation Report
198803429**

Air Tractor AT 301

2 February 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.

Occurrence Number: 198803429 **Occurrence Type:** Accident

Location: Nr Brookstead 57 km WSW Toowoomba QLD

Date: 2 February 1988 **Time:** 730

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: Air Tractor AT 301

Registration: VH-FAA

Serial Number: 301-0197

Operation Type: Aerial Work

Damage Level: Substantial

Departure Point: Nr Brookstead QLD

Departure Time: 0700

Destination: Nr Brookstead QLD

Approved for Release: October 25th 1988

Circumstances:

The pilot had just commenced a procedure turn at the end of a spray run, at a height of 200 feet above ground level, when the engine failed without warning. During the ensuing forced landing the aircraft landed heavily and overturned. The engine failure was caused by separation of number nine cylinder link rod end, which resulted in the piston lifting the head off the cylinder. The cause of the failure could not be positively determined, but was probably due to the link pin bush being worn away, and excessive tolerance between the link rod and link pin causing a fatigue failure of the link rod. Aircraft records showed that the engine had completed 184 hours since overhaul, but the internal appearance of the engine was that of an engine that had operated for a longer time. The reason for the unusual condition of the engine could not be established.

Significant Factors:

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

1. The pilot was committed to land on unsuitable terrain when the engine failed.
2. The cause of the engine failure was fatigue failure of the number nine cylinder link rod.