

**Aviation Safety Investigation Report
198801390**

Piper PA25-235/A1

14 April 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: 198801390

Location: 3 km SW Omeo VIC

Date: 14 April 1988

Highest Injury Level: Minor

Injuries:

Occurrence Type: Accident

Time: 1730

	Fatal	Serious	Minor	None
Crew	0	0	0	0
Ground	0	0	0	-
Passenger	0	0	0	0
Total	0	0	1	0

Aircraft Details: Piper PA25-235/A1

Registration: VH-GWS

Serial Number: 25-2490

Operation Type: Aerial Work

Damage Level: Substantial

Departure Point: Agricultural strip near
Omeo VIC

Departure Time: 1725

Destination: Agricultural strip near
Omeo VIC

Approved for Release: 26 October 1988

Circumstances:

The aircraft underwent a 100 hourly inspection six days prior to the accident. During that inspection three oil leaks were rectified. When the aircraft commenced operations again after the 100 hourly inspection, the engine again started to leak oil at a significant rate. The operation was remote from the maintenance organisation. The pilot did not determine the source of the oil leak nor monitor the oil consumption rate during the days prior to the accident. On the day of the accident the pilot had been spreading superphosphate since late morning. He had finished that task and had commenced spreading clover seed. On the second seeding sortie he sensed a loss of performance. He pushed the throttle lever forward but the engine did not respond. He checked the RPM and noted it was 2200 and decreasing. He then noted that the oil pressure was indicating zero. At this stage he was about 50 feet above the ground and operating in mountainous terrain. He turned the aircraft to the right to avoid an area of trees and try to land on a steep upslope. The aircraft stalled into the upslope and came to rest after a 25 metre ground-slide. The investigation revealed that the oil filter bolt and sleeve had failed as a result of high cycle low stress fatigue. This was consistent with the retaining bolt being under-torqued. This resulted in the oil filter separating from the engine, a consequent loss of engine oil and finally, loss of engine power.

Significant Factors:

It was considered that the following factors were relevant to the development of the accident

1. The engine developed an oil leak.
2. No attempt was made to isolate and rectify the leak.

3. The oil consumption rate was not monitored by the pilot.
4. The oil filter separated from the engine due to a fatigue failure of the retaining bolt and sleeve.
5. The engine oil escaped from the engine resulting in a power loss.
6. At the time of the power loss the aircraft was over terrain that was not suitable for a forced landing.

Reccomendations:

It is recommended that the C.A.A. take action to bring to the attention of pilots the dangers of continuing to operate an aircraft with a serious oil leak.