

**Aviation Safety Investigation Report
198903760**

Piper PA38-112

29 March 1989

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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: 198903760

Occurrence Type: Accident

Location: Toowoomba Aerodrome QLD

Date: 29 March 1989

Time: 1035

Highest Injury Level: Nil

Injuries:

	Fatal	Serious	Minor	None
Crew	0	0	2	2
Ground	0	0	0	-
Passenger	0	0	0	0
Total	0	0	0	2

Aircraft Details: Piper PA38-112

Registration: VH-KTR

Serial Number: 38-82A0115

Operation Type: Aerial Work

Damage Level: Substantial

Departure Point: Toowoomba Aerodrome
QLD

Departure Time: 1010

Destination: Toowoomba Aerodrome
QLD

Approved for Release: June 27th 1989

Circumstances:

The aircraft was being used for circuit training. During the third touch-and-go landing the left main gear separated from the aircraft. The left wing struck the runway and the aircraft slewed to a halt. Specialist investigation confirmed that one of the main gear retaining bolts was fatigued. Widespread surface corrosion was present on the shank of the bolt. The specialist considered that the initial fatigue fractures are corrosion related. Investigation revealed that this type variant is fitted with large wheels and that failure of the gear retaining bolts occurs more frequently with this variant than that fitted with small wheels. The occurrence was not the subject of an on-site examination.

Significant Factors:

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

1. Main gear attachment bolt failed due to fatigue fracturing.
2. Surface corrosion was present on the shank of the failed bolt.
3. The left main gear separated during the landing roll.

Recommendations:

The Civil Aviation Authority consider applying a temporary time/life limit on the gear retaining bolts until an evaluation of their suitability can be conducted. The Civil Aviation Authority consider suggesting to maintenance

organisations the advantage of painting creep marks on the bolts as an aid to visual inspection between scheduled maintenance.