

**Aviation Safety Investigation Report
198903798**

Grumman AA5B

14 August 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: 198903798

Occurrence Type: Accident

Location: Surfers Gardens ALA QLD

Date: 14 August 1989

Time: 1050

Highest Injury Level: Nil

Injuries:

	Fatal	Serious	Minor	None
Crew	0	0	1	1
Ground	0	0	0	-
Passenger	0	0	0	1
Total	0	0	0	2

Aircraft Details: Grumman AA5B

Registration: VH-IGI

Serial Number: AA5B-0991

Operation Type: Private

Damage Level: Substantial

Departure Point: Surfers Gardens QLD

Departure Time: N/A

Destination: Goondiwindi QLD

Approved for Release: 2nd January 1990

Circumstances:

The pilot had flown from Archerfield to Surfers Gardens to pick up a passenger, and made a normal landing on strip 12. About 20 minutes later he was taxiing for takeoff on strip 12 when the nosewheel strut collapsed, and the propeller struck the ground. The ALA had only recently been reopened after having been closed for some time due to a soft wet surface. The nosewheel had entered a slight depression prior to the strut collapsing but the depression should not have been sufficient to overload the strut to the point of failure at normal taxiing speed. Examination of the nosegear showed that the metal to metal epoxy bonding which attaches the torque tube to the airframe end fittings had failed. This failure allowed the torque tube to rotate inside the end fittings, to the extent that all normal suspension action was lost. The nosegear strut assembly then folded upwards into the engine cowl, and the propeller struck the ground. The epoxy bonding had deteriorated to the extent that the load carrying capacity of the nosegear had been substantially reduced.

Significant Factors:

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

1. The nosewheel entered a depression whilst the aircraft was being taxied.
2. The epoxy glue which bonds the nose landing gear torque tube to the attachment fittings failed.

Recommendations:

The engineer involved in the recovery of the aircraft had previously experienced a similar failure on this type of aircraft. As a result he had sought assistance from the American distributor. The distributor confirmed that as a

result of many USA operators experiencing similar defects, a Supplemental Type Certificate (STC) number SA3564SW, had been issued allowing modification of the torque tube and end fittings. This simple modification places taper pins through the torque tube and end fittings, effectively preventing movement even if the epoxy bonding deteriorates. The Civil Aviation Authority should examine the above aspects with a view to recommending incorporation of a similar modification to all high-houred aircraft of this type.