ACCIDENT

Aircraft Type and Registration:	Piper PA-15, G-ALGA
No & Type of Engines:	1 Lycoming O-145-B2 piston engine
Year of Manufacture:	1949
Date & Time (UTC):	22 July 2006 at 1345 hrs
Location:	Marshland, Suffolk, (Farm Strip, East of Fenland)
Type of Flight:	Training
Persons on Board:	Crew - 1 Passengers - None
Injuries:	Crew - None Passengers - N/A
Nature of Damage:	Damage to left landing gear and propeller
Commander's Licence:	Private Pilot's Licence
Commander's Age:	69 years
Commander's Flying Experience:	760 hours (of which 30 were on type) Last 90 days - 12 hours Last 28 days - 10 hours
Information Source	Aircraft Accident Report Form submitted by the pilot

Synopsis

Following a normal landing, with a slight crosswind from the left, the left main landing gear failed at the shock strut end fitting. The aircraft came to a stop resting on the right main landing gear, the tail wheel and the left wing tip. Engineering investigation revealed that the incident was the result of progressive deformation of the end fitting bolt hole, which resulted in it failing in tensile overload.

History of the flight

The pilot reported that he made a normal approach onto Runway 03, which has a grass surface and is 850 m long. The weather was benign, with good visibility and a slightly gusty north-westerly wind at about 5 kt. Having considered the wind, the pilot flew the approach with the left wing slightly low, and touched down slightly left of the runway centreline. The pilot heard a *"*crack*"* as the left main landing gear and tail wheel touched down, and the left main landing gear immediately folded outwards. The propeller tips then contacted the ground and detached and the left wing tip then struck the ground. The aircraft slid along the ground for a short distance, coming to rest on the left wing tip, right main landing gear, and tail wheel. The pilot switched off the ignition and fuel and exited the aircraft without difficulty. There was no fire.

Engineering examination

Examination of the aircraft revealed that the collapse of the left landing gear was caused by the shock strut lower end fitting 'pulling' from the strut. The lower end

fitting, see Figure 1, fits into the strut and is secured by a bolt. While the aircraft is on the ground the fitting is under a tensile load. The hole for the securing bolt had become elongated in the direction of the load before failing in overload. A review of the aircraft log book failed to identify when this component was fitted, but its general condition indicated that it had been installed for a considerable time. The damage to the bolt hole could not have been seen with the fitting attached to the strut and there is no requirement to remove the fitting from the shock strut for inspection.

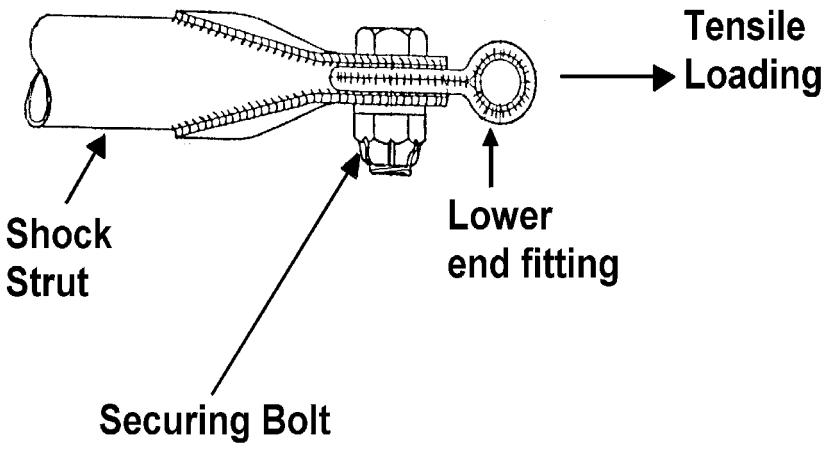

Figure 1