

No: 3/91

Ref: EW/G91/01/01

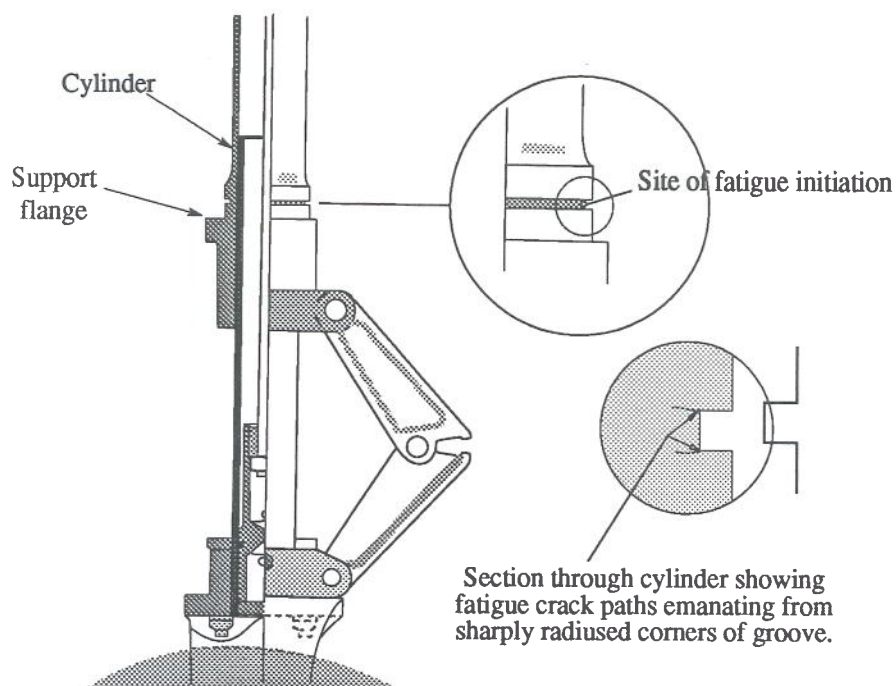
Category: 1c

Aircraft Type and Registration:	Piper PA-38-112, G-BMVL
No & Type of Engines:	1 Lycoming O-235-L2C piston engine
Year of Manufacture:	1979
Date and Time (UTC):	13 January 1991 at 1320 hrs
Location:	Wycombe (Booker) Air Park, Buckinghamshire
Type of Flight:	Private
Persons on Board:	Crew - 1 Passengers - None
Injuries:	Crew - None Passengers - N/A
Nature of Damage:	Nose landing gear strut failed, propeller and underside of engine cowling damaged and engine shock-loaded
Commander's Licence:	Student Pilot
Commander's Age:	31 years
Commander's Total Flying Experience:	38 hours (all on type)
Information Source:	Aircraft Accident Report Form submitted by the pilot and engineering examination of the nose landing gear by AAIB.

The pilot had been intending to undertake a solo cross-country exercise but, after take-off, had found the visibility too poor for it to be advisable to continue. He therefore returned to the airfield and made a normal rejoin, circuit and approach.

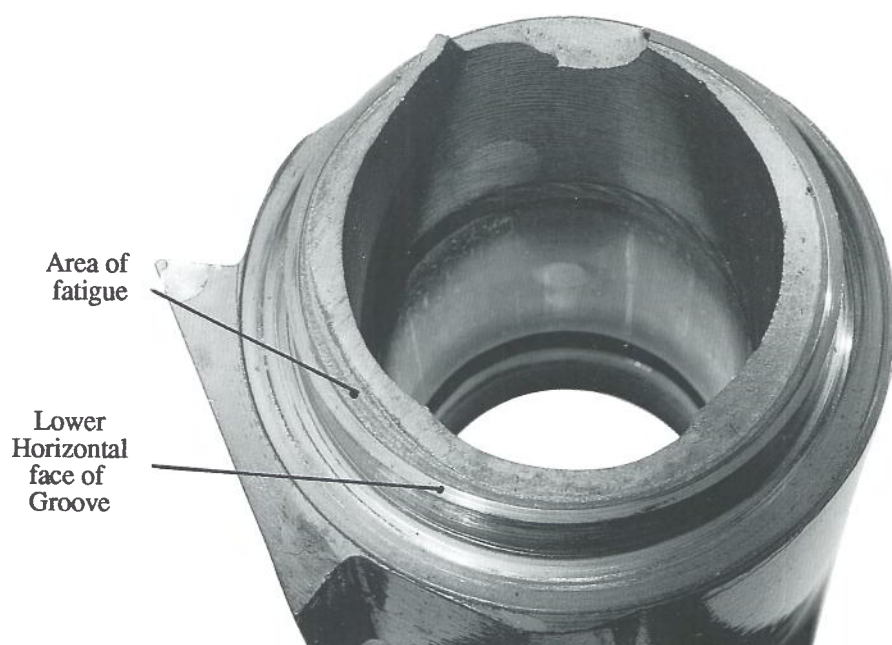
After making a normal touchdown, the aircraft began to veer slightly to the left and the pilot found that he was unable to correct this by applying rudder. The nose of the aircraft then dropped, the propeller struck the runway and the aircraft subsequently came to rest on the left of the runway, having skidded on the underside of the engine cowling.

Engineering examination showed that the nose landing gear strut cylinder had failed at a groove just above the lower support flange. Metallurgical examination showed that this failure stemmed from multiple origin fatigue cracking which had initiated in the sharp radiused corners of the groove. The failure is shown in the accompanying drawing and photographs.



**Half Section of PA38
(Tomahawk) Nose Leg**

**Failed Oleo
Cylinder**



Fracture - on lower piece of cylinder