

No: 10/89

Ref: EW/G89/05/02

Category: 1c

Aircraft Type and Registration:	Piper PA-34-200-2, G-EXEC	
No & Type of Engines:	Lycoming IO-360-C1E6 (left) piston engine LIO-360-C1E6 (right) piston engine	
Year of Manufacture:	1974	
Date and Time (UTC):	17 May 1989 at 1104 hrs	
Location:	Halfpenny Green	
Type of Flight:	Training	
Persons on Board:	Crew - 2	Passengers - None
Injuries:	Crew - None	Passengers - N/A
Nature of Damage:	Both propellers and nose cone damaged	
Commander's Licence:	Commercial Pilot's Licence with IMC, Night and Full Instructor Ratings	
Commander's Age:	75 years	
Commander's Total Flying Experience:	14,600 hours (of which 500 were on type)	
Information Source:	Aircraft Accident Report Form submitted by the pilot and telephone inquiries by AAIB	

The aircraft was engaged on a training detail and joined the circuit for a landing on runway 16. The landing gear was lowered on the downwind leg and "three greens" observed. Confirmation of this was also made as part of the finals call.

The landing was normal on the mainwheels but, some six seconds after lowering the nosewheel onto the runway, the nose landing gear collapsed. The aircraft stopped without further incident. Examination showed that the nose gear had collapsed following failure of a fabricated bracket securing the retraction jack and down-lock link to the forward fuselage bulkhead. During a normal landing, this bracket would be unloaded since the drag link assemblies are over-centre in the locked-down configuration and are thus supporting any drag load on the landing gear leg.

In the case of a landing in an unlocked configuration, drag loads would be transmitted through the retraction jack which appears to have resulted in failure of the aforementioned bracket.

Piper aircraft corporation issued a Service Bulletin No. 413 in April 1974 calling for a once-off check of a certain dimension on the drag link assembly. This was to prevent "possible inadvertent nose gear retraction during a hard landing."

Post accident inspection showed that this dimension on G-EXEC was within the tolerances specified in the service bulletin but somewhat less than the figure specified as the optimum. No other possible reason for the failure has been found.