

AAIB Bulletin No: 12/95

Ref: EW/G95/09/07

Category: 1.3

Aircraft Type and Registration: Piper PA-28-161 Cherokee Warrior II, G-BUJO

No & Type of Engines: 1 Lycoming O-320-D3G piston engine

Year of Manufacture: 1977

Date & Time (UTC): 10 September 1995 at 1535 hrs

Location: Halfpenny Green Airport, West Midlands

Type of Flight: Private (Training)

Persons on Board: Crew - 2 Passengers - None

Injuries: Crew - None Passengers - N/A

Nature of Damage: Damage to right landing gear torque link, landing gear fairing and right wing flap

Commander's Licence: Basic Commercial Pilot's Licence with Instructor Rating

Commander's Age: 36 years

Commander's Flying Experience: 9,500 hours (of which 4,000 were on type)
Last 90 days - 225 hours
Last 28 days - 65 hours

Information Source: Aircraft Accident Report Form submitted by the pilot

The instructor and student pilot had just completed four practice 'bad weather' circuits on Runway 34. The first three approaches were converted to 'go-arounds' for the purpose of inspecting the chosen landing area. The final circuit ended in a short field landing. The weather was fine with a light north-westerly wind good visibility and broken cloud at 1,500 feet.

The aircraft touched down normally and, as it decelerated, the right wing began to drop. The instructor took control believing the problem to be due to a collapsed oleo. The wing however continued to drop and the aircraft deviated to the right. The instructor shut down the engine, switched off the electrics and, by using a combination of full left aileron, left rudder and left brake, was able to contain most of the swing to the right. The aircraft eventually came to rest on the grass two feet from the runway edge. Both occupants vacated the aircraft uninjured.

The aircraft had completed 472 hours in the previous 6 months of which 70% of the time had been spent in circuit training.

After the accident the instructor found the right wheel and oleo intact and undamaged close to Runway 34 threshold and noticed that the lower torque link bolt was missing. When the bolt was eventually found it was seen that it had sheared approximately half way along its length. The instructor believes that as the oleo could not come out of its location with the aircraft on the ground it must have happened at some time after takeoff remaining attached and dangling by a broken hydraulic hose until touchdown.

Subsequent examination by the maintenance organisation showed that the bolt had failed due to fatigue. They reported that there is no requirement to inspect these bolts on a regular basis either in the maintenance schedule or the Light Aircraft Maintenance Schedule (LAMS) but there is a CAA Airworthiness Directive (AD) to inspect the centre torque link bolt every 100 hours. As a result of this accident the maintenance organisation has instigated a 1,000 hour bolt replacement programme for all upper and lower torque link bolts on all Piper PA-28 aircraft maintained by them.