

## ACCIDENT

<b>Aircraft Type and Registration:</b>	Cessna A152 Aerobat, G-BRCD	
<b>No &amp; type of Engines:</b>	1 Lycoming O-235-L2C piston engine	
<b>Year of Manufacture:</b>	1978	
<b>Date &amp; Time (UTC):</b>	25 August 2006 at 1225 hrs	
<b>Location:</b>	White Waltham Airfield, Berkshire	
<b>Type of Flight:</b>	Private	
<b>Persons on Board:</b>	Crew - 1	Passengers - 1
<b>Injuries:</b>	Crew - 1 (Minor)	Passengers - 1 (Minor)
<b>Nature of Damage:</b>	Extensive	
<b>Commander's Licence:</b>	Private Pilot's Licence	
<b>Commander's Age:</b>	53 years	
<b>Commander's Flying Experience:</b>	189 hours (of which 1.15 were on type) Last 90 days - 10 hours Last 28 days - 3 hours	
<b>Information Source:</b>	Aircraft Accident Report Form submitted by the pilot	

## Synopsis

The aircraft landed normally from a steeper than usual approach. During the landing roll the aircraft hit a bump and bounced twice, landing heavily. The nose wheel detached from the nose leg, causing the leg to dig into the grass surface. The aircraft pitched forward and came to rest upside down. Neither of the two occupants was seriously injured and both were able to vacate the aircraft. A fatigue fracture in the nose gear leg was considered a possible cause of the nose wheel detaching from the aircraft.

## History of the flight

The pilot had recently joined a syndicate which owned the aircraft. She had completed a check flight and one other flight in the aircraft prior to the accident flight. The

pilot had planned to fly with a colleague from her home airfield at Shoreham in Sussex to White Waltham. In preparation for the flight, and since it was her first visit to White Waltham, the pilot spent some time studying the airfield details, which included specific noise abatement procedures.

The flight to White Waltham was uneventful and conducted in fine conditions and light winds. An overhead join was flown for the grass Runway 25. When the aircraft was downwind, the pilot's colleague prompted her to turn finals, being aware of the noise abatement circuit pattern. The pilot thought this was a bit early but nevertheless commenced a turn onto base leg. As the aircraft became established on finals, it became clear to

the pilot that the aircraft was high on the approach, and she considered a go-around. However, as the aircraft was correcting to a normal approach path satisfactorily she continued the approach.

Although the final stage of the approach was still steeper than usual, the pilot reported that the touchdown itself appeared normal. The pilot was expecting the landing surface to be bumpy, but the initial roll-out was quite smooth. Then, after six or seven seconds, the aircraft hit a bump which caused it to become airborne again temporarily. The aircraft landed again heavily, apparently on all three wheels together, before bouncing a second time. When the aircraft came down again, the pilot felt the nose leg dig into the ground before the aircraft pitched forwards and turned over.

The aircraft suffered extensive damage but there was no fuel leak and no fire. Emergency services attended the scene, though both occupants had been adequately restrained by full harnesses and received only minor injuries. With minor damage to the cabin, they were able to leave via the main door.

### **Possible causes**

Engineering personnel at the airfield inspected the aircraft and commented to the pilot that there was

a possible fatigue fracture in the nose leg. From photographs supplied by the pilot, it was clear that the nose leg fork had detached from the scissor link assembly on the shock strut. Although the photographs showed signs of an overload failure in the fork attachment to the strut, it was not possible to say from the photographs whether the failure was caused in overload or precipitated by fatigue.

The pilot considered that it had not been practical to initiate a go-around at the time of the first bounce, as the aircraft had lost too much energy at that point and to attempt to do so may have made matters worse. She also considered whether a go-around would have been advisable from finals, particularly considering her lack of experience on the aircraft. However, she felt that the landing itself was good, so did not think the steeper than normal approach was a factor in the accident. As for the nose gear failure, the pilot thought that she had experienced several occasions when the nose gear had landed harder, so considered it likely that fatigue had indeed been a factor in the nose gear failure.