

## ACCIDENT

<b>Aircraft Type and Registration:</b>	Cessna 150F, G-BSZV
<b>No &amp; Type of Engines:</b>	1 Continental O-200-A piston engine
<b>Year of Manufacture:</b>	1965
<b>Date &amp; Time (UTC):</b>	15 March 2007 at 1031 hrs
<b>Location:</b>	Sandown Airport, Isle of Wight
<b>Type of Flight:</b>	Training
<b>Persons on Board:</b>	Crew - 1                      Passengers - None
<b>Injuries:</b>	Crew - None                      Passengers – N/A
<b>Nature of Damage:</b>	Noseleg detached, engine frame and cowling distorted, engine and propeller damaged. Minor damage to fuselage skin
<b>Commander's Licence:</b>	Student Pilot
<b>Commander's Age:</b>	69 years
<b>Commander's Flying Experience:</b>	31 hours (of which 31 were on type) Last 90 days - 11 hours Last 28 days - 3 hours
<b>Information Source:</b>	Aircraft Accident Report Form submitted by the pilot

### Synopsis

The aircraft unexpectedly rolled left shortly before landing and bounced. The subsequent touchdown was on the nosewheel and the nose landing gear leg collapsed.

### History of the flight

The student pilot was making an approach to grass Runway 23 at Sandown to complete his first solo landing of the day, having earlier conducted two landings with an instructor. The wind was reported to be 230°/10 kt. During what he considered to be a normal approach, the student selected full flap at 400 ft agl, advised the AFISO that he was on finals, selected carburettor heat COLD at 250 ft and crossed the runway threshold at approximately

10 ft. He stated that as he raised the nose to flare for touchdown a gust of wind, which he judged was from the north-northwest, caused the aircraft to roll to the left. He applied right rudder and right aileron inputs but was unable to level the aircraft.

The student judged that the aircraft was unstable and decided not to attempt a go-around. On touchdown, with full right rudder still applied, the nose landing gear leg collapsed and the aircraft continued for a short distance before coming to rest in a nose-down attitude with the base of the engine cowling on the runway surface. There was no fire. The student switched off electrical power and

vacated the aircraft, uninjured and without assistance. The aerodrome fire and rescue service attended shortly afterwards.

Although the student pilot did not recall it, the AFISO on duty at the time of the accident stated that the aircraft bounced following its first touchdown and that the subsequent touchdown was on the nosewheel. Ground marks identified by the AFISO as having occurred during the accident sequence indicated that the aircraft had touched down more than once.

### **Engineering inspection**

The nose leg failed at its attachment to the engine mount and rotated aft, causing damage to the base of the engine cowling and lower fuselage skin aft of the firewall. Contact with the runway damaged the propeller and shock-loaded the engine. There was no evidence of

any pre-existing mechanical defect which might have contributed to the incident.

### **Discussion**

Inexperienced pilots might be tempted to control a bounce on touchdown by lowering the nose of the aircraft, which will usually result in a touchdown on the nosewheel with a high rate of descent. The nose landing gear of most aircraft is intended to provide stability and control on the ground but not to support the loads encountered on first contact with the runway during landing. Also, the nosewheel of the Cessna 150 is turned whenever an input is made on the rudder pedals. Consequently, when the student pilot landed with full right rudder applied, the nosewheel would also have been turned to the right, increasing the load on the nose landing gear leg when the nosewheel touched the runway surface.