

## ACCIDENT

<b>Aircraft Type and Registration:</b>	Pierre Robin HR200/120B, G-MFLC	
<b>No &amp; Type of Engines:</b>	1 Lycoming O-235-L2A piston engine	
<b>Year of Manufacture:</b>	1997 (Serial no: 317)	
<b>Date &amp; Time (UTC):</b>	20 June 2014 at 1516 hrs	
<b>Location:</b>	Leeds Bradford Airport	
<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>	Substantial damage to aircraft and aerodrome glideslope aerial	
<b>Commander's Licence:</b>	Student pilot	
<b>Commander's Age:</b>	20 years	
<b>Commander's Flying Experience:</b>	37 hours (of which all were on type) Last 90 days - 11 hours Last 28 days - 10 hours	
<b>Information Source:</b>	Aircraft Accident Report Form submitted by the student pilot, including comment from his flying instructor, and CCTV footage	

## Synopsis

The accident occurred during the student pilot's first solo takeoff. The aircraft rotated rapidly to an exaggerated nose-up attitude before landing and bouncing. The student detected a drift to the runway side and abandoned the takeoff. However, the aircraft ran off the edge of the runway and collided with a glidepath aerial. Both the aircraft and the aerial suffered substantial damage, although the pilot was uninjured.

## History of the flight

On the day of the accident, the student pilot flew a circuit training detail with his instructor, during which he completed five circuits to a high standard. The instructor considered that his student was ready for his first solo flight, so briefed him accordingly. This briefing included changes in performance the student could expect without the weight of the instructor onboard.

The student pilot carried out normal pre-flight procedures and checks in preparation for a takeoff on Runway 32, entering the runway at Taxiway 'L'. The weather was fine, with a surface wind from 270° at 7 kt. The pilot reported that he initiated rotation at 60 kt but, as the aircraft became airborne, it immediately started to deviate to the left. He applied right rudder, and right aileron, but neither appeared to correct the deviation. The pilot decided to abandon the takeoff attempt and lowered the nose to land back on the runway while reducing power.

As the full runway came back into view, the pilot realised that the aircraft was close to the left hand edge. The aircraft landed hard and began a series of bounces, during which it ran onto the adjacent grass surface. The aircraft travelled across the grass and collided with the Runway 14 glidepath aerial. The pilot, who was uninjured, vacated the aircraft in the normal manner.

The student pilot's instructor, who had flown with him on eight occasions in the previous 14 days, watched the takeoff. He commented that the aircraft appeared to over-rotate on takeoff, before landing heavily and bouncing, landing again, and running off the runway edge.

### **Video analysis**

CCTV Video footage provide to the AAIB confirmed a rapid rotation, to an attitude measured (within the limitations of the recording quality) at about 15° nose-up, followed immediately by a wing drop, which was corrected. The aircraft's pitch attitude reduced rapidly and it descended back to the runway, bounced and pitched up again a similar amount, before landing once more and running onto the grass.

The footage appeared to show that, after the initial rapid rotation, the aircraft was subject to a pilot induced oscillation in pitch. A significant nose-down input was followed by a further significant nose-up input as the aircraft descended and landed heavily, causing it to become airborne again with an exaggerated attitude.