

**ACCIDENT**

<b>Aircraft Type and Registration:</b>	Zenair CH 601HD Zodiac, G-BVAC	
<b>No &amp; Type of Engines:</b>	1 Rotax 912-UL piston engine	
<b>Year of Manufacture:</b>	1995 (Serial no: PFA 162-12504)	
<b>Date &amp; Time (UTC):</b>	22 August 2013 at 1724 hrs	
<b>Location:</b>	Gloucestershire Airport	
<b>Type of Flight:</b>	Private	
<b>Persons on Board:</b>	Crew - 1	Passengers - 1
<b>Injuries:</b>	Crew - None	Passengers - None
<b>Nature of Damage:</b>	Damage to propeller, nosewheel, cowling and right main landing gear	
<b>Commander's Licence:</b>	Private Pilot's Licence	
<b>Commander's Age:</b>	48 years	
<b>Commander's Flying Experience:</b>	587 hours (of which 217 were on type) Last 90 days - 11 hours Last 28 days - 7 hours	
<b>Information Source:</b>	Aircraft Accident Report Form submitted by the pilot	

**Summary**

During takeoff, the cockpit canopy became unlatched and started to lift. The pilot grabbed the canopy pull cord to prevent it lifting further, but the aircraft entered a shallow dive, resulting in the nose and right hand landing gears striking the runway. The nose gear collapsed and the propeller disintegrated after striking the ground.

**History of the flight**

The pilot and his passenger had planned to conduct a short flight to Oaksey Park. All the pre-flight preparations proceeded normally; the pilot briefed the passenger on the evacuation procedure and, after being given clearance from Gloucester Tower, lined up and took off on Runway 18. Immediately after becoming

airborne, the pilot levelled the aircraft to allow it to accelerate in ground effect. However, it then became apparent that the front-hinged canopy had become unlatched and was starting to lift. The pilot transferred his left hand from the throttle to the control column and grabbed the canopy pull cord with his right hand in an attempt to prevent the canopy from lifting further. He then looked towards his passenger and asked him to hold onto the cord. This diverted the pilot's attention such that the aircraft entered a shallow dive and struck the runway on the nose and right hand landing gears. The nose landing gear collapsed, allowing the propeller to strike the runway surface and disintegrate. The aircraft slid to a halt, the engine still running at full throttle, some

50 to 100 m further along the runway. The pilot shut the engine down, transmitted a MAYDAY call and, with his passenger, evacuated the aircraft.

### Discussion

Some examples of this type of aircraft are equipped with side-opening canopies. However G-BVAC's canopy was forward opening and supported by two struts mounted either side of the fuselage towards the front of the cockpit. These effectively functioned as a hinge and allowed the canopy to be opened by lifting from the rear. Gas struts were fitted, which enabled the canopy to be propped in the open position. Handles on either side of the cockpit operated a latch mechanism that locked the canopy in the closed position. There

was also a 'half latch' position that partially lifted the canopy so as to provide ventilation when the aircraft was on the ground, including taxiing.

The pilot subsequently stated that he may have left the canopy in the 'half latch' position prior to take off. In his attempts to deal with the lifting canopy, both hands were fully occupied and he was unable to close the throttle immediately. He was reluctant to release his hold on the canopy cord as he was aware of anecdotal reports that the aircraft would not fly with the canopy released. [Note: whilst there does not appear to be any documented record of test flights in this configuration, pilot experience suggests that although the aircraft is controllable, it will not maintain height.]