

## ACCIDENT

<b>Aircraft Type and Registration:</b>	Robin CEA DR400/120 Petit Prince, G-BKDJ	
<b>No &amp; Type of Engines:</b>	1 Lycoming O-235-L2A piston engine	
<b>Year of Manufacture:</b>	1982 (Serial no: 1584)	
<b>Date &amp; Time (UTC):</b>	15 April 2014 at 1555 hrs	
<b>Location:</b>	Ross-on-Wye, approx 12 nm NW of Gloucestershire Airport	
<b>Type of Flight:</b>	Private	
<b>Persons on Board:</b>	Crew - 1	Passengers - 2
<b>Injuries:</b>	Crew - None	Passengers - None
<b>Nature of Damage:</b>	Damage to nose leg, front bulkhead, cowling and propeller	
<b>Commander's Licence:</b>	Commercial Pilot's Licence	
<b>Commander's Age:</b>	60 years	
<b>Commander's Flying Experience:</b>	1,724 hours (of which 600 were on type) Last 90 days - 28 hours Last 28 days - 18 hours	
<b>Information Source:</b>	Aircraft Accident Report Form submitted by the pilot	

## Synopsis

The aircraft had been airborne for about 10 minutes when the engine stopped and could not be restarted. A forced landing in a ploughed field was carried out but the aircraft was damaged when the nose landing gear collapsed. Upon examination, it was found that very little fuel remained in the tank and that the fuel quantity indication sender was defective. In addition, the metal strip used to dip the tank had the potential to give a false indication.

## History of the flight

The pilot and two passengers were intending to fly from Gloucestershire Airport to Ross-on-Wye and return, a journey the pilot had calculated would involve 35 minutes airborne time or 45 minutes brakes-off to brakes-on. He dipped the fuel tank and found that it was between  $\frac{1}{3}$  and  $\frac{1}{2}$  full, equating to 40 litres or an endurance of 1 hour 20 minutes. After engine start, he noted that the cockpit fuel gauge was also reflecting the dipped figure.

After completing the pre-takeoff checks with no abnormal indications, the aircraft took off at 1541 hrs, turning west direct to Ross and levelling at 2,300 ft QNH. Upon reaching his destination at 1550, the pilot performed a left orbit around the periphery of the town. As he levelled out on an easterly heading to return to Gloucestershire Airport, "the engine note dropped". He applied carburettor heat and scanned the gauges and warning lights for indications of a problem. He saw that the low fuel contents warning light was not illuminated

but the low fuel pressure light was on. The pilot therefore focussed his attention on fuel management, including checking that the electric fuel pump was on; he pumped the throttle but to no avail.

Establishing a glide at 75 kt, he turned the aircraft downwind for a forced landing whilst trying to diagnose the problem. A further restart attempt was unsuccessful and the pilot declared a MAYDAY whilst noting that smoke from a bonfire indicated that the wind was from the northeast, enabling him to select a suitable into-wind field. However, having briefed his passengers and secured the aircraft, he noted that his intended field had been ploughed at right angles to the aircraft's heading, so he adjusted the glide to land in the next field further on. Although the furrows in this field were oriented more advantageously, they were quite deep and the ground was soft. The aircraft touched down on its left main landing gear first, slewing it to the left and collapsing the nose landing gear as it came to a halt rapidly. The pilot and passengers evacuated the aircraft normally through the sliding canopy.

### **Additional information**

The owner of the aircraft reported that, upon inspection after the accident, he found about 5 litres of fuel remaining in the fuel tank which is close to, or below, the unusable fuel quantity. In addition, he stated that there was a defect in the fuel gauging system sender, causing it to over-read and he further believed that the flexible metal strip used to dip the tanks might have given a false indication.