

## ACCIDENT

<b>Aircraft Type and Registration:</b>	Piper PA-28-161 Cherokee Warrior II, G-CGDJ	
<b>No &amp; Type of Engines:</b>	1 Lycoming O-320-D3G piston engine	
<b>Year of Manufacture:</b>	1981 (Serial no: 28-8116256)	
<b>Date &amp; Time (UTC):</b>	11 August 2016 at 1620 hrs	
<b>Location:</b>	Perranporth Airfield, Cornwall	
<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>	Aircraft destroyed by post-impact fire	
<b>Commander's Licence:</b>	Private Pilot's Licence	
<b>Commander's Age:</b>	64 years	
<b>Commander's Flying Experience:</b>	210 hours (of which 75 were on type) Last 90 days - 3 hours Last 28 days - 0 hours	
<b>Information Source:</b>	Aircraft Accident Report Form submitted by the pilot	

## Synopsis

On departure from Runway 27 at Perranporth Airfield the aircraft briefly became airborne but sunk back to the ground, impacting the upwind end of the runway. Both occupants sustained minor injuries in the accident, but managed to vacate the aircraft before fire consumed the majority of the fuselage. The cause of the accident was not determined.

## History of the flight

The pilot was flying from the Scilly Isles to Blackbushe Airport and decided to land at Perranporth Airfield to refuel. Refuelling was completed normally, with 30 litres of Avgas 100LL added to each of the left and right wing fuel tanks. The pilot reported that the surface wind was from 300° at 15 kt. He taxied to the departure end of Runway 27 using the left fuel tank, before changing to the right fuel tank and completing power and pre-takeoff checks, with no abnormalities noted. The pilot confirmed that the auxiliary electric fuel pump was selected to ON prior to takeoff.

The pilot described the initial part of the takeoff as normal, with the aircraft becoming airborne and climbing normally for 3 - 4 seconds. He reported that the aircraft then started to descend, in a nose-high attitude, and that he felt as if there was a loss of engine power, although he did not recall whether the engine rpm had reduced. Neither the pilot, nor his passenger, recalled hearing the stall warning horn during the takeoff.

The pilot checked that the fuel was selected ON, the mixture was set to RICH, the carburettor heat was COLD and the primer was locked closed, but the aircraft continued to descend, stalling just prior to impacting the runway nose-first, close to the upwind end of Runway 27. The aircraft came to rest on grass, a short distance to the north of Runway 27. The pilot reported that he saw smoke coming from under the engine, and that he switched the master switch to OFF and that he believed he had also turned the fuel selector to OFF.

Both pilot and passenger sustained minor injuries in the impact, but both were able to vacate the aircraft via the right cabin door. The aircraft continued to burn, with fire consuming the majority of the fuselage before fire-fighting appliances arrived and extinguished the fire.

### **Airfield information**

Perranporth Airfield is located on the north Cornish coast 6.5 nm southwest of Newquay, and has an elevation of 330 ft amsl. The airfield is adjacent to sea cliffs, and a popular UK VFR airfield guide contains the following warning in respect of the airfield:

***Warning: RWY 27 – Expect wind shear and severe turbulence in strong winds.***

### **Fuel**

The airfield operator confirmed that fuel from the bowser used to refuel the aircraft was tested and met the quality requirements specified for the daily fuel check. He also stated that aircraft receiving fuel before and after G-CGDJ refuelled had not reported any fuel-related problems.

### **Aircraft examination**

Photographs of the aircraft wreckage and runway impact marks were supplied to the AAIB. These showed that the aircraft had struck the runway in a right-wing low, nose-down attitude. The propeller and spinner assembly had detached from the aircraft during the ground impact. Both blade tips of the fixed-pitch metal propeller exhibited marked rearwards tip-curling, consistent with rotation under power at impact.

### **Discussion**

Damage to the aircraft's propeller indicates that at impact the engine was running and producing power, although it is not possible to determine accurately the power level based on propeller damage alone. As the takeoff and initial climb performance was described as normal, any power reduction that might have occurred must have happened during the latter stages of the takeoff. It is also possible that downdraft turbulence from the upwind sea cliffs may have caused, or contributed to, the descending flight path during the latter stages of the takeoff.