

**ACCIDENT**

<b>Aircraft Type and Registration:</b>	Piper PA-28-140 Cherokee, G-BYCA	
<b>No &amp; Type of Engines:</b>	1 Lycoming O-320-E2A piston engine	
<b>Year of Manufacture:</b>	1971	
<b>Date &amp; Time (UTC):</b>	15 August 2008 at 1105 hrs	
<b>Location:</b>	Caernarfon Airport, Gwynedd	
<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>	Propeller and cowling damaged, nosewheel collapsed	
<b>Commander's Licence:</b>	Student	
<b>Commander's Age:</b>	46 years	
<b>Commander's Flying Experience:</b>	114 hours (of which 60 were on type) Last 90 days - 5 hours Last 28 days - 5 hours	
<b>Information Source:</b>	Aircraft Accident Report Form submitted by the pilot and further enquiries by the AAIB	

**Synopsis**

During the landing roll the student pilot lost control of the aircraft in a gusty crosswind and as a result the aircraft departed the runway. The nosewheel subsequently collapsed causing the propeller to strike the ground, shock-loading the engine. The aircraft was damaged beyond economic repair.

**History of the flight**

The student pilot stated that she was on a solo cross-country navigation exercise from and to Caernarfon Airfield, Gwynedd. On contact with Caernarfon radio they informed her they had just changed from Runway 20 to Runway 26 and the surface wind was 230°/13 kt.

During the final approach to asphalt Runway 26 the pilot was aware of a crosswind from the left. In the flare the aircraft began to drift to the right so she executed a go-around. During the subsequent approach there was no drift and the aircraft landed without any problems. On the landing roll the aircraft was subjected to a large gust of wind that caused it to yaw to the left. The pilot tried to counteract this with right rudder but was physically unable to keep the rudder applied and the aircraft yawed back to the left. As she attempted to maintain the right rudder, the aircraft heading oscillated with increasing frequency. The aircraft then abruptly yawed left through 90 degrees and departed the runway. As it left the paved surface, the nosewheel went over a shallow drainage

ditch and collapsed. The propeller struck the ground, shockloading the engine and the aircraft came to rest about 10-15 m off the runway. On vacating the aircraft uninjured, the pilot observed that the wind was gusting 90 degrees to the runway. The aircraft was damaged beyond economic repair.

The pilot added that although the aircraft had a 17 kt crosswind limit, she lacked the physical strength to hold the required amount of rudder in a strong crosswind landing.

### **Surface wind**

An aftercast provided by the Met Office estimated that the surface wind was 190°-200°/15 kt gusting 20-25 kt. This gave a crosswind component of approximately 17 kt.

### **Discussion**

The pilot encountered a gust of wind close to the aircraft limits during her landing roll. Her subsequent difficulty in physically controlling the aircraft led to the aircraft departing the runway.