

ACCIDENT

Aircraft Type and Registration:	Piper PA-38-112 Tomahawk, G-TOMS	
No & Type of Engines:	1 Lycoming O-235-L2C piston engine	
Year of Manufacture:	1979	
Date & Time (UTC):	26 November 2010 at 1125 hrs	
Location:	Brecon Beacons, Wales	
Type of Flight:	Private	
Persons on Board:	Crew - 1	Passengers - None
Injuries:	Crew - None	Passengers - N/A
Nature of Damage:	Severe damage to airframe and engine	
Commander's Licence:	Private Pilot's Licence	
Commander's Age:	66 years	
Commander's Flying Experience:	266 hours (of which 100 were on type) Last 90 days - 4 hours Last 28 days - 1 hour	
Information Source:	Aircraft Accident Report Form submitted by the pilot	

Synopsis

The pilot became lost in a snow storm and descended to establish VMC. He noticed that he was set to collide with terrain and opened the throttle to regain a safe altitude. There was no response from the engine and the aircraft made a heavy landing, which caused it to pitch over onto its canopy.

History of the flight

The aircraft departed Swansea at 1045 hrs on a flight to Sleaf for a 50-hour service. The pilot reported that he obtained weather data from the Met Office website prior to departure. The Met Office forecast for weather below 10,000 ft, valid from 0800 to 1700, predicted 20 to 40 km visibility in some areas, with isolated areas of snow and hail of varying intensity up to severe across Wales and

the Midlands. Visibility was predicted to reduce to 400 m in severe conditions at fronts and troughs. Fronts and zones on the Met Office chart were valid at 1200 and the chart showed an occluded front on the west Wales coast moving west. The pilot dressed for extreme cold.

The pilot reported that conditions were clear at departure. He took a course north from Swansea and reported VMC past Ammanford before he encountered snow. There was "occasional borderline VMC" in the snow. The pilot, who did not have an instrument rating, decided to continue to Sleaf.

The pilot reported that snow from the west was "much more widespread and severe than forecast". At some

point, he turned east to try to “outrun” the snow at 4,000 ft, but he became disorientated and decided to head back to the coast around Swansea and set a course of 215°.

The pilot descended to 3,000 ft to establish position. He expected to be able to maintain 200 to 300 ft clearance from the terrain at that altitude, but the ground appeared to “come up from beneath” him. He applied throttle to regain altitude but there was no response from the engine. The pilot had not experienced engine problems until that point in the flight.

The pilot reported that the aircraft approached the ground “steeper than would have been normal for a landing” and that the aircraft tipped over onto its nose on contact with the ground and came to rest inverted (Figure 1). The pilot was wearing a full harness and exited the aircraft through the cabin side window.

Pilot’s estimate of the cause

The pilot became lost in a snow storm, which prompted him to descend to establish VMC, placing the aircraft in the proximity of terrain. He considered the loss of engine response was either due to carburettor icing or a blocked air intake. Carburettor heating had been applied “diligently” and that heating may have “exacerbated carburettor icing” just prior to impact. The pilot also reported that it is possible that snow flakes blocked the carburettor air intake.

Lessons learned

The pilot reported that he would approach conditions of deteriorating visibility more cautiously in the future and would make an earlier decision to seek less marginal weather conditions if he found himself in a similar situation.



Figure 1

G-TOMS inverted on hillside
(photograph courtesy of Cambrian Flying Club)