

ACCIDENT

Aircraft Type and Registration:	Cessna 120, G-AJJS	
No & Type of Engines:	1 Continental Motors Corp O-200-A piston engine	
Year of Manufacture:	1947	
Date & Time (UTC):	9 May 2010 at 1245 hrs	
Location:	Near Bicester Airfield, Oxfordshire	
Type of Flight:	Private	
Persons on Board:	Crew - 1	Passengers - 1
Injuries:	Crew - None	Passengers - None
Nature of Damage:	Damage to landing gear, one wing, fuselage and engine cowlings	
Commander's Licence:	Private Pilot's Licence	
Commander's Age:	48 years	
Commander's Flying Experience:	428 hours (of which 5 were on type) Last 90 days - 5 hours Last 28 days - 5 hours	
Information Source:	Aircraft Accident Report Form submitted by the pilot and subsequent enquiries by the AAIB	

Synopsis

The aircraft suffered a power loss of unknown cause whilst in the cruise. The subsequent forced landing resulted in significant damage to the aircraft.

History of the flight

The aircraft took off from Sywell (Northampton) Airfield at 1310 hrs for a flight to Popham Airfield with the pilot and a passenger on board. The aircraft used Mogas and both wing tanks were completely filled before departure.

The pilot reported that while cruising at 1,800 ft he applied carburettor heat several times as a precaution. After the aircraft had been airborne for about

30 minutes, the engine suddenly lost power so he applied carburettor heat again and turned the aircraft towards Bicester Airfield, which was nearby. Engine power was temporarily restored, but reduced again shortly afterwards. The pilot confirmed there was still fuel indicated in the selected tank, but did not switch to the other tank. He also confirmed that both magnetos were selected ON and that the mixture was rich.

Unable to maintain altitude, the pilot continued to fly towards Bicester in order to make a forced landing there, but when the engine stopped completely at about 200 ft he landed the aircraft at the edge of an adjacent field. During the landing the aircraft suffered severe damage

but both the pilot and his passenger were uninjured and able to leave the aircraft unaided.

Possible cause

The use of Mogas has been associated with vapour lock, a condition where vapour forming in the fuel system prevents fuel getting to the engine. It is less likely to occur in high-wing aircraft and under the prevailing conditions described by the pilot is considered unlikely in this case.

An aftercast of weather covering the route indicates that, at the level flown, the temperature was approximately 5°C and the dew point approximately 2.0°C. This would have placed the aircraft at risk of severe carburettor icing at any power setting. Despite the pilot's statement that

he had used carburettor heat periodically during the flight and again when the engine lost power it is possible that this was insufficient to prevent the build-up of ice in the carburettor or to remove it once the engine's loss of power became significant.

It is possible that debris in the fuel system restricted fuel flow. Had this been the case it might have been possible to restore power by selecting the other fuel tank.

The aircraft was probably damaged beyond economic repair and the owner has, at the time of writing, not carried out any further inspection. It therefore remains possible that the power loss was caused by an additional, still unidentified, problem with the engine or fuel system.