Piper PA-28-180 Cherokee, G-BASJ

AAIB Bulletin No: 2/97 Ref: EW/G96/11/09 Category: 1.3

Aircraft Type and Registration:	Piper PA-28-180 Cherokee, G-BASJ
No & Type of Engines:	1 Lycoming O-360-A4A piston engine
Year of Manufacture:	1972
Date & Time (UTC):	23 November 1996 at 0930 hrs
Location:	Bristol Airport
Type of Flight:	Private
Persons on Board:	Crew - 1 - Passengers - 3
Injuries:	Crew - None - Passengers - None
Nature of Damage:	Fire damage to engine and cowlings
Commander's Licence:	Private Pilot's Licence
Commander's Age:	33 years
Commander's Flying Experience:	89 hours (of which 87 were on type)
	Last 90 days - 2 hours
	Last 28 days - None
Information Source:	Aircraft Accident Report Form submitted by the pilot

The aircraft had been left outside in freezing temperatures overnightand required de-icing before being boarded by the pilot and passengers. The engine was primed as usual for a cold start, but it did notstart upon operating the starter motor. The pilot attributedthis to a combination of the cold temperature and the battery,which he considered was delivering less than maximum power. Furtherattempts were made to start the engine, and included additionalpriming. However, it was apparent that the battery was becomingseriously depleted. When a final attempt resulted in a backfirefrom the engine, it was decided to summon help from the flyingclub. Following the backfire, a small amount of smoke was seenissuing from the engine bay, and so the electrical and fuel systemswere selected off and the occupants then evacuated the aircraft.

After the evacuation, some smoke was still visible, and so thepilot recovered a fire extinguisher from the aircraft and dischargedit into the engine bay. However this had little effect and afire ensued. The Airport Emergency Services were called and theyextinguished the fire, which was confined to the engine bay.

A subsequent examination of the aircraft revealed no obvious defect,such as a disconnected or broken fuel line, that could have accountedfor the fire. The flying club concluded that the incident hadoccurred due to over-priming of the engine, causing excess fuelto collect in the induction system with subsequent ignition asa result of the backfire.