Piper PA-28, G-BXVC

AAIB Bulletin No: 6/99 Ref: EW/C98/08/14 Category: 1.3

Aircraft Type and Registration:	Piper PA-28, G-BXVC
No & Type of Engines:	1 Continental TSIO-360-FB1 piston engine
Year of Manufacture:	1979
Date & Time (UTC):	22 August 1998 at 1630 hrs
Location:	2 Miles east of Rye Town, Sussex
Type of Flight:	Private (Training)
Persons on Board:	Crew - 2 - Passengers - None
Injuries:	Crew - None - Passengers - N/A
Nature of Damage:	Landing gear, engine and propeller
Commander's Licence:	Airline Transport Pilot's Licence
Commander's Age:	28 years
Commander's Flying Experience:	4,000 hours
	Last 90 days - 240 hours
	Last 28 days - 70 hours
Information Source:	Aircraft Accident Report Form submitted by the pilot
	And engine strip examination at AAIB

As the aircraft was approaching Rye, there was a slight surge of power, followed by a rapid loss of oil pressure and the engine stopped. As the pilot was making an emergency call to Lydd, smoke started to appear from the engine cowling; a rapid rate of descent was initiated and the smoke ceased. A forced landing was achieved with full flap and a touchdown at 65 kt. At 20 kt during the ground roll, the pilot saw that he was heading for a ditch and tried to turn away from it. Unfortunately, the aircraft did not respond and as it crossed the ditch the nose and right landing gear gave way and the propeller struck the ground.

The aircraft was reported to have oil on the underside of the fuselage and additional oil had collected in the bottom of the rudder and was observed dripping out when the aircraft was moved. There were holes in the engine crankcase but the outer surfaces of the engine were not contaminated with oil. Such oil contamination can be caused by oil leaving the engine through the crankcase breather because of overpressure within the crankcase. This can be caused either by a gas leak past a piston, or by air entering through the oil filler tube, which is located in a zone subjected to high ram air pressure.

About 4 pints of oil were removed from the engine before it was sent to the AAIB for further examination. Internal examination showed that the big end bearings had overheated due to a lack of oil, especially at the rear of the engine. One connecting rod had been released from its big end and was found bent around the camshaft - indicating that very high temperatures had been achieved during the failure.

The oil filler cap was not with the engine when it was received at Farnborough and the loss of oil is consistent with the oil filler cap not being in place during the latter part of the flight.