Druine D 62B Condor, G-AWFN, 18 May 1997

AAIB Bulletin No: 8/97 Ref: EW/G97/05/10 Category: 1.3

Aircraft Type and Registration:	Druine D 62B Condor, G-AWFN
No & Type of Engines:	1 Rolls-Royce Continental O-200-A piston engine
Year of Manufacture:	1968
Date & Time (UTC):	18 May 1997 at 1900 hrs
Location:	Shobdon Airfield, Herefordshire
Type of Flight:	Private
Persons on Board:	Crew - 1 - Passengers - None
Injuries:	Crew - None - Passengers - N/A
Nature of Damage:	Damage to both wings
Commander's Licence:	Private Pilot's Licence
Commander's Age:	53 years
Commander's Flying Experience:	1,600 (all on type)
	Last 90 days - 28 hours
	Last 28 days - 12 hours
Information Source:	Aircraft Accident Report Form submitted by the pilot and further enquiries by AAIB

The aircraft was flown to Shobdon by the owner, where the passengertransferred to the left hand seat for the solo return flight. After completion of the ground checks, the aircraft took offfrom Runway 27 (grass) and at a height of 30 feet experienceda total engine failure. The pilot elected to land on the parallelRunway 27 (hard) to his left. He decided that he could not stopbefore the boundary fence and so attempted to touchdown just beforethe fence and then hop over it. However, the aircraft had insufficientenergy remaining and only rose 12 inches before contacting thefence.

Fuel flow checks were carried out after the accident and a flowof 8 gallons per minute was obtained from electric pump, and zerofrom mechanical pump. A strip inspection of the AC Delco mechanicalpump showed that the diaphragm was made of three layers of redrubber moulded over cotton, fitted with a steel push/pull rod;it had no identifying markings and was probably produced as acar part. The push/pull rod was corroded and worn, the end ofthe slot which housed the engine

driven pump operating arm hadcompletely corroded through and allowed the operating arm to disengage.

An engine overhaul agent stated that Teledyne Continental motorssupply new pumps, they also supply kits containing a filter andtwo washers to enable an annual inspection to be carried out onsome pumps to comply with an AD. These have Teledyne part numbers;otherwise no other source of aircraft rated parts was known.

AC Delco are thought not to have produced aircraft rated pumpparts for some 15 years, however, some bogus parts to fit AC pumpshave been produced in far eastern factories using the same mouldidentification numbers as the original items.

The electric pump should have provided sufficient fuel on itsown, as shown by the flow check. However, its outlet valve, whichconsisted of a brass disc and a wire circlip, contained a 1/4inch curl of drill swarf which was free to move and in some positionsprevented the outlet valve from opening.