

No: 2/91

Ref: EW/G90/08/01

Category: 1b

Aircraft Type and Registration: Piper PA-34, G-BRXO

No & Type of Engines: 2 Continental TSIO-360E BIA piston engines

Year of Manufacture: 1979

Date and Time (UTC): 2 August 1990 at 1450 hrs

Location: 2 nm West of Manchester Airport

Type of Flight: Private

Persons on Board: Crew - 1 Passengers - None

Injuries: Crew - None Passengers - N/A

Nature of Damage: Both propellers bent, damage to fuselage lower surfaces and ailerons

Commander's Licence: Private Pilot's Licence with Instrument and Assistant Instructor ratings

Commander's Age: 54 years

Commander's Total Flying Experience: 2,065 hours (of which 12 were on type)

Information Source: Aircraft Accident Report Form submitted by the pilot, telephone discussion with a ground engineer and CAA Surveyor.

On 12 July 1990 the aircraft had been flown to Liverpool for type familiarisation and instrument training. The training flight, lasting about 1:45hr, proceeded without problems. Subsequently, during the pre-take off checks, the left propeller feathered and would not unfeather, and the aircraft was taxied back to be examined by an engineer. The pilot reported that the engineer managed to unfeather the propeller and assured the pilot that it would not feather again undemanded.

On the 1 August 1990 the aircraft was flown, without problems, from the Isle of Man to Liverpool for further training flights. At Liverpool, during the pre-take off *constant speeding* checks, the left propeller again feathered and the aircraft was taxied back for examination by ground engineering staff. The left constant speed unit (CSU), which controls propeller pitch, was dismantled and inspected before being re-assembled and re-installed on the aircraft. During ground checks it performed correctly and recovered correctly after being intentionally feathered.

On 2 August 1990 the aircraft was flown to Manchester where the pilot was due to take an Instrument Rating test. During the pre-take of checks at Manchester, the propeller again feathered undemanded and the flight was abandoned. Another aircraft was hired for the test and in the meantime G-BRXO was examined by ground engineers. Upon his return, the pilot was advised of the possible causes of the

problem and on the basis of this conversation, reported that he was given to understand that problems would not be encountered provided that the RPM was kept above 2500. The pilot opted not to have remedial work carried out at Manchester before departing for the Isle of Man.

Prior to *brakes-off*, the RPM was set at 2500 with 35 ins manifold pressure. At about 300 to 400ft on climb out from runway 24, the left engine RPM started to fall and the pilot concluded that the propeller was again feathering of its own accord. The landing gear was already retracted and at about 900ft QFE the pilot called the tower and advised them he had a problem. The tower offered him runway 06 and he accepted, making a right turn to return to the airfield.

The pilot reported that the landing gear was lowered during the landing checks and that he confirmed 3 greens on the panel. The approach was satisfactory but after touchdown the aircraft sank onto its underside, damaging the propellers, ailerons and lower fuselage skins. The pilot was not injured.

The aircraft was inspected shortly after the accident by a CAA surveyor, who noted that all three landing gears were fully retracted with their doors closed. The landing gear switch was in the *up* position at that time.

The pilot has pointed out that the temperature was relatively high on each occasion that the propeller control malfunctioned.