

Piper PA-34-200T, G-CTWW

AAIB Bulletin No: 12/98 **Ref:** EW/G98/06/10 **Category:** 1.3

Aircraft Type and Registration: Piper PA-34-200T, G-CTWW

No & Type of Engines: 2 Continental LTSIO-360-EB1 piston engines

Year of Manufacture: 1979

Date & Time (UTC): 7 June 1998 at 1641 hrs

Location: RAF Shawbury, Shropshire

Type of Flight: Private

Persons on Board: Crew - 1 - Passengers - 2

Injuries: Crew - None - Passengers - None

Nature of Damage: Right landing gear destroyed, right flap and propeller damaged, right wing skin holed

Commander's Licence: Private Pilot's Licence with IMC Rating

Commander's Age: 48 years

Commander's Flying Experience: 792 hours (of which 30 were on type)
Last 90 days - 39 hours
Last 28 days - 10 hours

Information Source: Aircraft Accident Report Form submitted by the pilot

The pilot had just performed three landings at Welshpool and was departing the circuit with two passengers on board, both pilots. During the climb-out one of the passengers commented that the right landing gear leg did not appear to be retracted. The pilot recycled the landing gear three or four times and the right wheel remained in what appeared to be the locked down position. On rejoining the circuit at Welshpool the pilot lowered the landing gear and confirmed that he had got all three green lights, denoting the gear 'down and locked'. Upon touchdown, however, the right landing gear leg began to collapse and the pilot applied full power, aborted the landing and commenced a 'go-around'.

The pilot then performed a low fly-past at Welshpool for an experienced instructor on the ground, who observed that the right leg appeared to be 'dangling' at an unusual angle. The pilot of G-CTWW elected to divert to a longer and wider runway, with comprehensive emergency support, and diverted to RAF Shawbury, which is nearby. Meanwhile, the instructor telephoned to Shawbury to give the emergency services advanced notice.

Being a Sunday, organising the emergency services at Shawbury took some time so the pilot had time to plan his emergency landing. Before landing, he shutdown the right engine and feathered its propeller and, in the landing flare, cut the left engine and landed with power and electrics off, door catches open and fuel off. The crosswind helped to keep the right wing up during the landing roll and little further damage was done to the aircraft.

A licensed engineer who inspected the aircraft confirmed that no further damage had occurred at Shawbury than had already been caused in the first landing, at Welshpool. He found that the trunnion pin, which retains the aft face of the mounting at the top of the right landing gear leg, had migrated rearwards and this had, eventually allowed the top of the leg to move upwards under landing loads, puncturing the wing upper skin. The trunnion pin is normally held in place by a retaining bolt, running through the centre of the pin, and a barrel nut mounted in the upper part of the landing gear leg. After the accident, the trunnion pin and the retaining bolt were found loose in the aft portion of the wing but the barrel nut was not found and it could not be determined at what point it had departed from the leg.