

# **Piper PA-38 Tomahawk, N91437, 3 April 1996**

**AAIB Bulletin No: 8/96 Ref: EW/G96/04/05 Category: 1.3**

**Aircraft Type and Registration:** Piper PA-38 Tomahawk, N91437

**No & Type of Engines:** 1 Lycoming O-235-L2C piston engine

**Year of Manufacture:** 1982

**Date & Time (UTC):** 3 April 1996 at 1434 hrs

**Location:** RAF Lakenheath, Suffolk

**Type of Flight:** Training

**Persons on Board:** Crew - 2 Passengers -None

**Injuries:** Crew - None Passengers - N/A

**Nature of Damage:** Damage to right main landing gear, its attachment point, right wing tip, aileron and flap

**Commander's Licence:** FAA Air Transport Pilot's Licence

**Commander's Age:** 34 years

**Commander's Flying Experience:** 2700 hours (of which 95 were on type)

Last 90 days - 156 hours

Last 28 days - 57 hours

**Information Source:** Aircraft Accident Report Form submitted by the pilot, and telephone enquires by the AAIB

The aircraft was being operated by the Aero Club at RAF Lakenheath, which is run by USAF personnel stationed at the base. On this occasion a student pilot was undertaking an 'upgrade' flight with an instructor in the right seat. The runway at Lakenheath, uncommon with most military airfields, is equipped at each end with an arresting wire which traverses the runway and is held just clear of the surface by collars spaced along its length. The relatively small diameter wheels fitted to most light aircraft are unsuitable for 'tramping' these wires and such aircraft are customarily operated from the runway between the wires, in this case a distance of some 4500 feet is being available.

The aircraft was flying an approach to this usable section of Runway 06, with the intention of making a 'touch-and-go', but reportedly landed firmly in the region of the arresting wire. A short

time later, the aircraft became airborne again to fly another circuit. Although it was probable that the right main gear had been damaged at this time, neither the crew or person on the ground were aware of this until the next landing, when a severe vibration was experienced after an apparently normal touchdown. At this point the instructor assumed control and took the aircraft back into the air. As he climbed away, he saw what he thought was a tyre falling from the aircraft, but which later was identified as the complete right main landing gear. The aircraft was flown around locally for a time to consume most of the fuel on board before it was brought back for a landing. After discussion with the ATC Tower and Aero Club officials, the instructor elected to land on Runway 13 and was able to keep the aircraft straight and the right wing from touching the runway until late in the landing roll. This resulted in minimal damage to the airframe and both occupants were able to leave the aircraft unaided.

Subsequent examination of the aircraft revealed damage to the right main tyre consistent with striking the arrestor wire, and deformation of the right main gear attachment bracket in the wing. The three bolts securing the gear to the wing had failed, an engineering assessment by the Aero Club indicated that two bolts had probably failed as a result of landing firmly onto the wire, and the third had failed on the following landing.