

Gulfstream AA-5B, G-PENN

AAIB Bulletin No: 7/2000 **Ref:** EW/G2000/04/14 **Category:** 1.3

Aircraft Type and Registration: Gulfstream AA-5B, G-PENN

No & Type of Engines: 1 Lycoming O-360-A4K piston engine

Year of Manufacture: 1978

Date & Time (UTC): 24 April 2000 at 1119 hrs

Location: Denham Aerodrome, Middlesex

Type of Flight: Private

Persons on Board: Crew - 1 - Passengers - 3

Injuries: Crew - None - Passengers - None

Nature of Damage: Minor damage to wing leading edges and underside of engine cowling

Commander's Licence: Basic Commercial Pilot's Licence with Flying Instructor Rating

Commander's Age: 25 years

Commander's Flying Experience: 1,585 hours (of which 75 were on type)

Last 90 days - 101 hours

Last 28 days - 36 hours

Information Source: Aircraft Accident Report Form submitted by the pilot

The purpose of the flight was a Flying Club check of a qualified private pilot on a cross channel sector from Denham to Le Touquet; he was under the supervision of the Flying Instructor (FI). The surface wind was 180°/15 kt; there was no other significant weather.

The usual power and pre take off checks were completed and the aircraft departed from Runway 24. The pilot had turned the aircraft right at about 700 feet agl when the engine began to run roughly. The FI took control and, while still climbing slowly, turned the aircraft back towards the airfield to position right downwind on Runway 24; he made a Pan call stating his intention to make an immediate landing.

The engine continued to run roughly. He switched off each magneto in turn and selected carburettor air to Hot, however there was no improvement. The FI felt that the engine may fail completely at

any time, consequently he planned his circuit with this in mind, turning base leg at a point where a glide landing on the runway would still be possible. He selected full flap on final approach and the aircraft touched down normally but slightly further down the runway than ideal. This, combined with the fact that the aircraft was heavy and there was very little headwind component, contributed to the FI being unable to bring it to a halt before it ran into a small fence just beyond the runway end. The groundspeed was very low and little damage was done.

The AFS was rapidly on the scene but all four occupants, who were wearing lap and diagonal upper torso restraint, were able to escape unaided via the main canopy; there were no injuries.

The subsequent investigation by the maintenance organisation found that one spark plug in the left magneto bank was breaking down, and another in the right magneto bank had a cracked ceramic insulator. Both were replaced and the engine performed normally. It was their opinion that this was the cause of the rough running experienced in flight.