

AAIB Bulletin No: 12/95 **Ref: EW/G95/10/17** **Category: 1.3**

Aircraft Type and Registration: Piper PA-32-300 Cherokee Six, G-BADO

No & Type of Engines: 1 Lycoming IO-540-K1A5 piston engine

Year of Manufacture: 1966

Date & Time (UTC): 28 October 1995 at 1435 hrs

Location: Near St Briavels, Gloucestershire

Type of Flight: Private (Training)

Persons on Board: Crew - 2 Passengers - None

Injuries: Crew - None Passengers - N/A

Nature of Damage: Minor damage to propeller and fuselage; engine frame distorted and damage to leading edge of both main planes

Commander's Licence: Basic Commercial Pilot's Licence with IMC and Assistant Flying Instructor Ratings

Commander's Age: 39 years

Commander's Flying Experience: 3,285 hours (of which 11 were on type)
Last 90 days - 67 hours
Last 28 days - 30 hours

Information Source: Aircraft Accident Report Form submitted by the pilot and telephone enquiries by the AAIB

The instructor was carrying out a type conversion on a PPL qualified pilot. The weather was good with a light surface wind, visibility of 10 km and scattered cloud at 6,000 feet agl. After approximately 30 minutes flight time, during which the converting pilot had practised general handling including stalling, the instructor initiated a practice forced landing (PFL) from 3,000 feet by selecting the fuel lever to 'OFF'; he then noted a time interval of 20 seconds before the engine stopped. Thereafter, he monitored the other pilot's actions and aircraft handling. At approximately 2,500 feet, the instructor selected the fuel to the left main tank and shortly afterwards asked the handling pilot to confirm his intended landing area. As G-BADO was turned towards this area, the instructor opened the throttle but noted no response from the engine. He selected the mixture fully rich from the previous position of $\frac{2}{3}$ open and confirmed that the magnetos and fuel were 'ON' and that the primer was 'OFF'. After further unsuccessful attempts to restart the engine, the instructor left the throttle $\frac{1}{4}$ open, took control of the aircraft and selected a field to land. Using full flap and sideslip, he carried out a forced landing and touched down approximately $\frac{1}{4}$ way into his target field. However, a ridge

in the middle of the field caused the aircraft momentarily to get airborne again and G-BADO then came to rest in the perimeter hedge adjoining a minor road. Both pilots escaped through the right hand door.

Subsequently, the instructor commented that he occasionally switched the fuel off during flights to demonstrate to students the need for fuel awareness. Additionally, throughout this flight, the left main tank was the only fuel source used, as it was indicating almost full while the other three tanks were each indicating approximately 1/4 full; for this reason he had not tried an alternate tank during the attempts to restart the engine. He also commented that, after the accident, he realised that, throughout the engine shut down and attempted restarts, the fuel pump had been 'ON'; he considered that this may have adversely affected his attempts to restart the engine. Finally, he stated that he had considered broadcasting a 'MAYDAY' but decided that the surrounding terrain would have blanked the transmission.

Following aircraft recovery, it was confirmed that there was usable fuel in all tanks and that there were no apparent faults with the engine.