

Aircraft type and registration: Piper PA32 R301 G-BMJA

No & Type of engines: 1 Lycoming 10-540-K1G5D piston engine

Year of Manufacture: 1981

Date and time (UTC): 12 December 1986 at 1210 hrs

Location: Takely, Nr Stansted Airport

Type of flight: Training

Persons on board: Crew — 2 Passengers — 1

Injuries: Crew — None Passengers — 1 (minor)

Nature of damage: Lower engine cowling, propeller and nose landing gear damaged

Commander's Licence: Airline Transport Pilot's Licence

Commander's Age: 40 years

Commander's Total Flying Experience: 7500 hours (of which 300 were on type)

Information Source: Aircraft Accident Report Form submitted by the pilot and engineering report by an aircraft engineering organisation

After take-off from Stansted Airport the pilot selected the landing gear up but found that the three green landing gear down and locked lights remained illuminated and the red landing gear unsafe light came on. The flight was continued while the non-handling pilot attempted to rectify the landing gear problem when, without any warning (rough running or vibration) the engine lost power. Normal emergency procedures, which included changing the fuel tank selection, were carried out but engine power was not restored. A successful forced landing was made in a lightly ridged field of young winter crop but when the nose landing gear contacted the ground it collapsed almost instantly and the aircraft came to rest after sliding on its nose.

On-site examination of the propeller showed that all three blades were bent rearwards in gentle 45 degree curving arcs indicating that the propeller was rotating at impact. The aircraft's fuel tanks were found to be virtually full and all the drain points were checked for fuel contamination or water. None was found. The aircraft was jacked and the nose landing gear examined and it was found that the downlock hook had fractured due to overload during the ground run. While the aircraft was on jacks a landing gear retraction was carried out. With the landing gear selected up it was noted that the landing gear failed to retract, the "gear unsafe" light illuminated and the hydraulic pump did not run. Override of the auto extend system was selected but the landing gear still failed to retract. Upon inspection the squat switch on the landing gear was found to be stuck in the "anti retract" position. This should have activated to permit landing gear retraction as the oleo leg extended. The switch was exercised by hand several times during which it "freed off". The retraction system then functioned normally.

A preliminary examination of the engine and its systems was carried out. During pressurization of the fuel system a fuel weep was found at the fuel line connection from the injector to the fuel manifold. There was no evidence of fuel staining in the area. The connection was tightened and an attempt was made to start the engine. It started normally but was immediately shut down to prevent further damage. To date no explanation for the engine failure has been found.