

No: 4/91

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Category: 1c

Aircraft Type and Registration: Reims Cessna FR182, G-RING

No & Type of Engines: 1 Lycoming O-540-J3C5D piston engine

Year of Manufacture: 1979

Date and Time (UTC): 23 February 1991 at 1023 hrs

Location: Near Islip, Oxfordshire

Type of Flight: Private

Persons on Board: Crew - 1 Passengers - 3

Injuries: Crew - None Passengers - None

Nature of Damage: Aircraft beyond economical repair

Commander's Licence: Private Pilot's Licence

Commander's Age: 57 years

Commander's Total Flying Experience: 1,678 hours (of which over 1,000 were on type) plus an unknown amount on earlier log books which have been lost

Information Source: Aircraft Accident Report Form submitted by the pilot and supplementary investigations by AAIB

The aircraft had had its Certificate of Airworthiness renewed in January, ten flying hours previously, and had been refuelled and flown for 1:05 hours the day before the accident, during which time it had behaved satisfactorily. The next day the pilot performed a full preflight check in accordance with the expanded check list and taxiing, power and pre-take-off checks were all satisfactory. The take-off from Oxford was normal and the aircraft was levelling initially at 1000 feet and cruise set at 23 inches and 2300 rpm with mixture fully rich. The revs climbed a little to over 2400 and so the pitch was coarsened to bring them back to 2300.

About five miles east of Oxford the pilot climbed to 1400 feet and again adjusted settings for the cruise, once again the revs would not settle at 2300 and he twice adjusted them back by coarsening pitch. On the third occasion the revs climbed to 2450 and when an attempt was made to adjust them back on the vernier control the revs on the dial fell abruptly to nil and equally abruptly returned to 2400. There was no change whatever in the note of the engine and all other readings of pressures and temperatures remained normal.

The pilot who was by then approximately 18 nm east of Oxford, decided to return and set a reduced power of 21 inches and 2200 rpm and, as a precaution against possible icing, selected hot air. About five miles east of the airfield the engine failed without any warning of any sort. The pilot carried out a forced landing into a large field, crossing the fence at 65 kt. The ground was very soft and caused the aircraft to cartwheel and to come to rest inverted.

The pilot was aware that the prevailing weather conditions of 10° and high humidity were conducive to carburetor icing but did not notice any indications of icing occurring and does not believe that icing was the cause of the engine failure.

A witness saw the aircraft take-off accompanied by sounds of rough running, and another earwitness corroborated his statement. The pilot was reported to have denied that the engine was rough on take-off.

The aircraft was dismantled and taken to a repair organisation where an examination of the aircraft was carried out. Fuel samples were taken from the aircraft tanks and the carburettor bowl and these appeared free of water or any other contamination. The fuselage and engine was strapped to a trailer and a replacement propeller fitted to allow engine runs to take place using the aircraft's fuel. The original exhaust tailpipes were used during the runs and these had sustained damage during the accident and may have restricted the outflow of exhaust gases during the runs.

Tests were carried out with the engine both cold and hot, with checks on oil and fuel pressure, mag drops and carburettor heat. The propeller was exercised, feathered and unfeathered. All tests were satisfactory with no limit exceedences or other unserviceability.