

**No: 5/90**

**Ref: EW/G89/11/10**

**Category: 1c**

**Aircraft Type and Registration:** Cessna T210H, G-AYVI

**No & Type of Engines:** 1 Continental TSIO-520-C piston engine

**Year of Manufacture:** 1968

**Date and Time (UTC):** 24 November 1989 at 1500 hrs

**Location:** Dods Farm, Lauder, Berwickshire, Scotland

**Type of Flight:** Private

**Persons on Board:** Crew - 1                      Passengers - None

**Injuries:** Crew - 1 (serious)              Passengers - N/A

**Nature of Damage:** Damaged beyond economic repair

**Commander's Licence:** Private Pilot's Licence with IMC and Night ratings

**Commander's Age:** 64 years

**Commander's Total Flying Experience:** 1,600 hours (of which 25 were on type)

**Information Source:** Aircraft Accident Report Form submitted by the owner, and information supplied by the National Air Traffic Services and the Meteorological Office at Bracknell

The aircraft was on a VFR flight from Rochester to Glenrothes; the departure time was about 1225 hrs and the ETA was 1515 hrs. The aircraft owner stated that, as far as the pilot could recall, a weather forecast was obtained from the Airmet forecast service, on the morning of the flight which, apart from isolated showers over the Borders region, indicated that the flight could be carried out in VMC without any icing problems. He also reported that, when the aircraft was between Newcastle and St Abb's Head, the pilot decided that he was clear of all danger areas and was in a position to alter course direct to Glenrothes. However, whilst carrying out the navigational calculations necessary to achieve this, he inadvertently entered cloud. He decided to climb above it but, as he was approaching clear air at about 10,000 feet, the engine faltered and continued to malfunction despite the selection of alternate air. A spiral descent was entered and several, unsuccessful, attempts were made to recover engine power. When the aircraft broke cloud, a field was selected for a forced landing and an approach was made with the landing gear down. The aircraft did not respond to the pilot's attempt to flare and it struck the rising ground in a steep nose-down attitude. The forward part of the fuselage was substantially damaged by the impact, the seat moved forward and the diagonal type harness failed to restraint the pilot who also moved forward and sustained serious injuries to his head, chest and back. He was assisted from the

aircraft by the rescue services who were promptly on the scene, the wreckage having been observed by a rescue helicopter which was employed on another task in the area.

The recorded speech transcript produced by the National Air Traffic Services Transcription Unit showed that, at 1444 hrs, the pilot called Scottish Control on frequency 124.5 MHz, reported his position as 30 miles south of the Newcastle DME at FL85 and requested permission to route direct to Glenrothes for landing. When asked for his estimate for Newcastle, the position was corrected to 30 miles north of Newcastle. The aircraft was identified, on radar, at 1446 hrs. At 1450 hrs the pilot said that he was changing frequency to Glenrothes, however, the controller advised him that he was still some way south of the airfield and asked whether he was experiencing navigational difficulties. The pilot said he was not and had "got their Beacon". This was acknowledged and shortly afterwards, having been asked to remain on the frequency, he advised that he had descended to "five five". The controller asked if he had "mode charlie" the pilot confirmed that he had but, when told that it was not being received, said that he was "on mode alpha". The time was 1450 hrs and 47.7 seconds and this was the last transmission recorded from G-AYVI.

The aircraft's track, and exchanges with the pilot, caused the East Scottish controller some concern and it was decided that the progress of G-AYVI would be monitored despite the fact that the pilot had not requested a radar service. At about 1455 hrs it was noted that the aircraft was on an approximate track of 325° and was heading for the Edinburgh TMA. The controller intended to coordinate with the Talla sector, however, before he could implement this, the aircraft radar contact disappeared from the screen. From just after 1457 hrs several attempts were made to contact G-AYVI to no avail.

A printout of the information available on Airmet Scottish, the area in which the aircraft was operating at the time of the accident, was obtained from the Meteorological Office at Bracknell. It was timed at 1000 hrs on the 24 November and covered the period from 1200 to 2000 hrs on that day. A cold north-north-east airstream covered the region and, mainly over the windward coast and hills, scattered showers were forecast, which were locally heavy with some snow or isolated hail. The freezing level was given as 1500 feet, 500 feet in isolated heavy snow, and airframe icing was forecast to be moderate, but severe in cumulonimbus cloud. Typically, the air temperature at 5000 feet was minus 7°C and, at 10,000 feet, minus 14°C.