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Australian Transport Safety Bureau

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ATSB TRANSPORT SAFETY INVESTIGATION REPORT
Aviation Occurrence Investigation No. AO-2008-035
Preliminary

Collision with terrain, VH-IDM, Cessna 210L
83km NE Georgetown, Qld
15 May 2008

Abstract

On 15 May 2008 at approximately 1000[1] Eastern Standard Time, a Cessna Aircraft Company C210L aircraft, registered VH-IDM, being operated on low-level geophysical survey operations, struck trees prior to impacting the ground 83km north-east of Georgetown, Qld. The pilot, who was the sole occupant of the aircraft, was fatally injured.

The investigation is continuing.

FACTUAL INFORMATION

The information contained in this preliminary report is derived from the initial investigation of the occurrence. Readers are cautioned that there is the possibility that new evidence may become available that alters the circumstances as depicted in the report.

History of flight

On 15 May 2008, the pilot of a Cessna Aircraft Company C210L aircraft, registered VH-IDM (IDM), was conducting a low-level geophysical survey flight, under the visual flight rules. The aircraft departed Karumba Airport, Qld at about 0650 and tracked to the east to position for a series of parallel survey lines orientated in an east-west direction.

The pilot intercepted and flew the pre-programmed survey lines at 280 ft above ground level using electronic track and height guidance. The pilot completed five survey lines that were between 100 and 200 km long without any apparent problems. At the end of the fifth run, it was planned that pilot would track north for approximately 40 km before flying a final 200 km line to the west. The aircraft was due back at Karumba at 1115.

At approximately 1000, Australian Search and Rescue (AusSAR) reported that an Emergency Locator Transmitter (ELT) transmission had activated in the area. At approximately 1300, the aircraft accident was located by helicopter and the pilot was reported to be deceased.

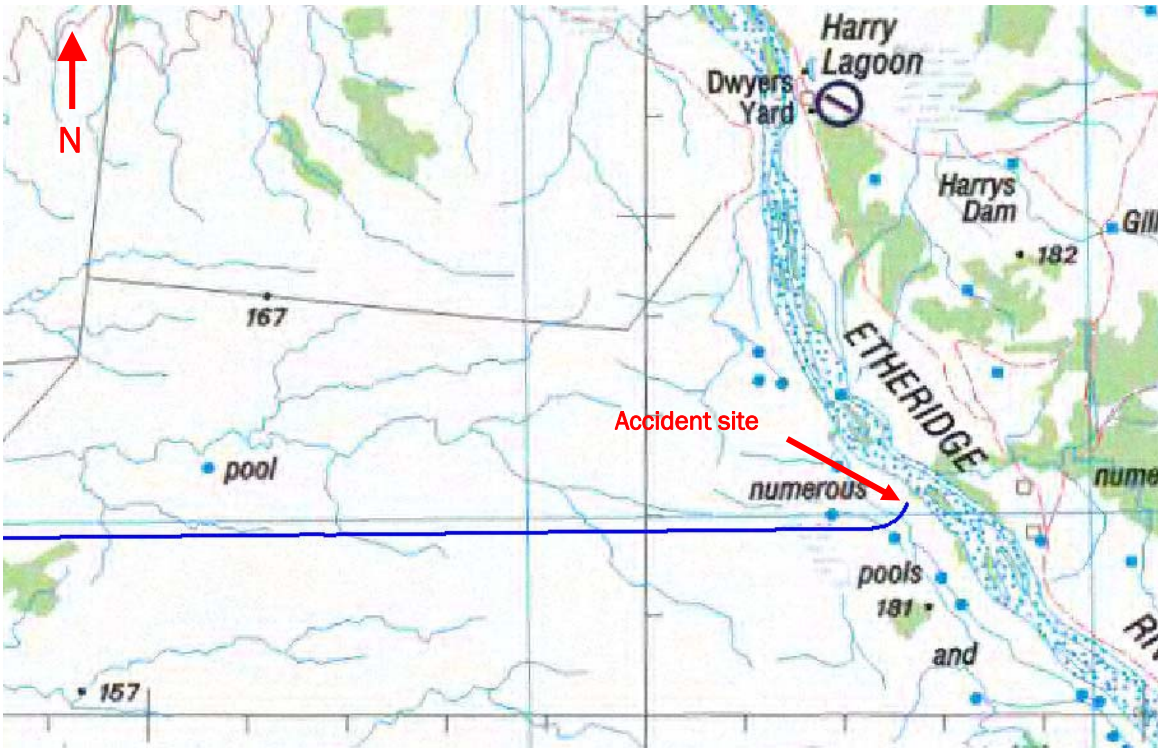
An onboard device transmitted IDM's location, altitude, heading, and speed at ten-minute intervals to a central recording location via satellite. That information was also monitored by the operator. The last transmitted data, recorded at 0957, showed IDM to be on-track near the end of the fifth line. The aircraft wreckage was located approximately 6 km from that position, outside the survey area.

The onboard survey equipment recorded IDM's location and altitude at half-second intervals. The data was downloaded for the Australian Transport Safety Bureau (ATSB) and showed that the pilot had accurately completed the survey line and turned to the north (Figure 1). During the left turn, IDM began to lose altitude. The last recorded data was approximately 2 seconds prior to the accident.

The weather at the time of the accident was reported to have been fine with light and variable winds. On the day of the accident, the maximum temperature recorded in Georgetown, 83km south-west of the accident site, was 30°C.

1 The 24-hour clock is used in this report. Eastern Standard Time (EST) was Coordinated Universal Time (UTC) + 10 hours.

Figure 1: Aircraft track recorded by the survey equipment



Pilot information

The pilot held a Commercial Pilot (Aeroplane) Licence issued in March 1992. He had an Agricultural rating Class 1 and Night VFR Agricultural rating. His Class 1 Medical Certificate was valid until September 2008. The pilot also held a Commercial Pilot (Helicopter) Licence issued in March 2007.

The pilot's flying logbook had entries up to 31 March 2008. The logbook showed that the pilot had approximately 9,700 flying hours of mainly agricultural flying. Between 21 January 2008 and 16 March 2008, the pilot had flown approximately 90 hours in the Cessna 210 aircraft type. That flying was related to low-level geophysical survey operations.

The pilot had arrived in Karumba on 9 May 2008, to operate IDM for a week as a relief pilot. On the first 3 days, the pilot flew survey operations, and on 12 May 2008, he flew IDM to Ingham, Qld. for scheduled maintenance. He spent the following day in Ingham at the maintenance facility and on 14 May 2008, the day prior to the accident, he returned IDM to Karumba.

Aircraft information

The aircraft was manufactured in the US in 1974. It was powered by a Continental Motors IO-520-L engine and fitted with a constant-speed, three-bladed propeller. It was first registered in Australia on 14 May 1999, and was registered to the current owner on 07 April 2008. It had accumulated approximately 3,445 hours in service at the time of the accident.

The most recent maintenance was the 100-hour inspection completed at Ingham the day before the accident. The CASA-approved maintenance provider reported that the inspection was routine and the only additional work was replacement of the vacuum, pitot and static hoses, park brake shaft and tube, and the right main landing gear wheel rim. The pilot's push-to-talk switch was also repaired and a new maintenance release was issued.

On the morning of the accident, the pilot refuelled IDM with 218 L of 100 LL AVGAS. It was reported that the pilot's practice was to operate with full fuel tanks on survey operations.

As a result of the accident, the aircraft fuel tanks were significantly disrupted, so the fuel quantity at the time of the accident could not be determined.

Wreckage and accident site information

The location of some parts of the wreckage, ground marks and damage to trees indicated that IDM impacted several trees in an inverted attitude while heading in a northerly direction. The left wingtip and aileron separated after the impact with one of the first trees encountered. Those components were located on the right side of the wreckage trail.

The aircraft then travelled through a substantial tree, breaking the tree into a number of pieces. Sections of the tree were located up to 75 metres away. It then impacted the ground, with evidence of the right wingtip contacting the ground to the left of the fuselage. Further on, the tail assembly separated from the fuselage and was located against a tree.

The fuselage and most of the wing structure came to rest approximately 66 metres from the ground impact point (Figures 2 and 3) with the engine found nearby. The fuselage was upright and facing back in the direction of approach. Damage to the forward fuselage was severe and the wing structure had detached from the upper fuselage.

All flight control surfaces were accounted for and control system continuity was established. The wing flap actuator was in the retracted position. One main landing gear was extended, but not locked; this was consistent with it being dislodged during the accident sequence.

The investigation is continuing and will include the following:

- data retrieval from onboard electronic equipment
- examination of flight instruments
- examination of engine, engine components and propeller
- a review of the pilot's medical history.

Figure 2: Accident site and aircraft wreckage

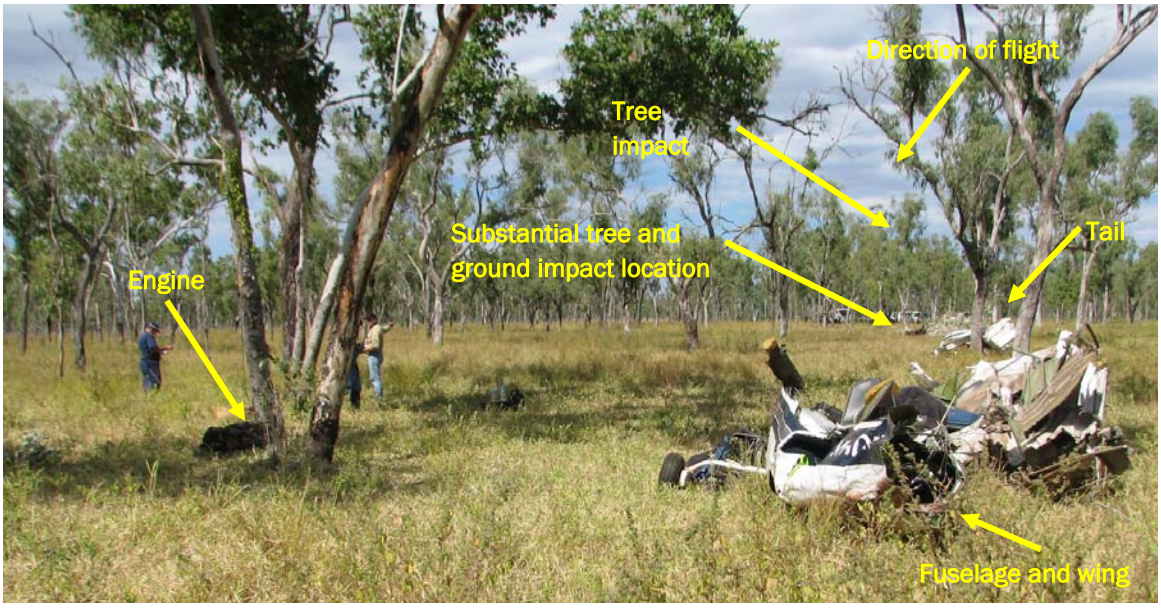


Figure 3: Aerial view of accident site