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Australian Transport Safety Bureau

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ATSB TRANSPORT SAFETY INVESTIGATION REPORT
Aviation Occurrence Investigation No. AO-2008-026
Preliminary

Collision with water – 19 km SE Sydney, NSW
9 April 2008

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Abstract

On 9 April 2008, a Fairchild Industries Metro III aircraft departing Sydney, NSW was observed on radar to be turning contrary to air traffic control instructions. The pilot reported that he had a '...slight technical fault...'. Recorded radar data showed the aircraft then completed a turn to the left before turning back to the right and disappearing from radar at an altitude of 3,900 ft. Searchers later discovered a small amount of aircraft wreckage floating in the ocean, south of the last recorded radar position. The pilot was fatally injured and the aircraft was destroyed. The investigation is continuing.

FACTUAL INFORMATION

The information contained in this preliminary report is derived from 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.

On 9 April 2008 at 2316 Eastern Standard Time[1], the pilot of a Fairchild Industries Inc. SA227-AC (Metro III) aircraft, registered VH-OZA (Figure 1), taxied at Sydney, NSW on a freight charter flight to Brisbane, Qld. The flight was operated under the Instrument Flight Rules (IFR) and the pilot was the sole occupant.

Figure 1: VH-OZA

Photograph courtesy of Brian Wilkes

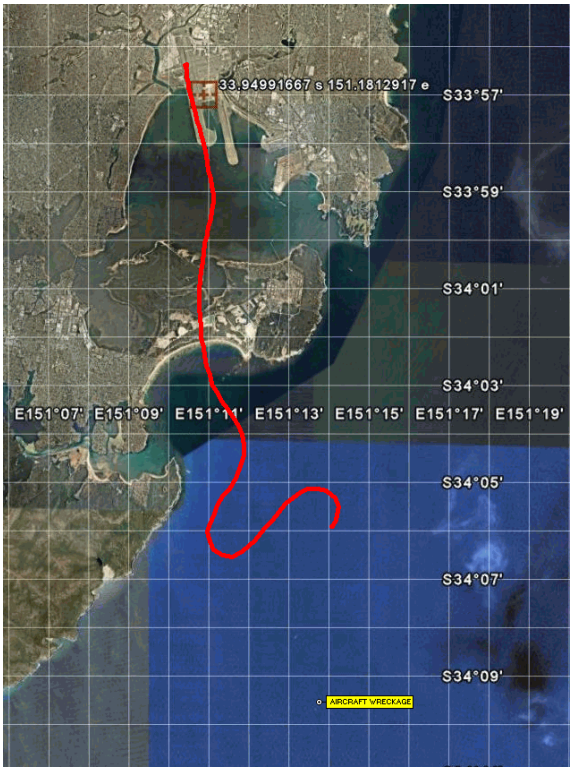
At 2321:43, the Sydney aerodrome controller had issued the pilot a take-off clearance from runway 16 Right. Airservices Australia recorded information later showed that the aircraft had become airborne at 2323:15 and shortly afterwards the pilot had been instructed to transfer to the departures controller's radio frequency.

On first radio contact with that controller, the pilot was advised that the aircraft was identified on radar. At 2325:30, the controller instructed the pilot to turn left onto a heading of 090 degrees, which was acknowledged. Instead of the expected left turn, the radar returns indicated that the aircraft was turning right, towards the south-west. At 2325:54, the controller confirmed with the pilot that he was to turn left and at 2325:59 the pilot once again acknowledged the left turn and added 'I've got a slight technical fault here'.

No further transmissions were received from the pilot. The radar returns over the next 70 seconds showed the aircraft completed a left turn followed by a right turn before disappearing from radar (Figure 2). The last recorded radar return indicated an altitude of 3,900 ft.

1 The 24-hour clock is used in this report to describe the local time of day, Eastern Standard Time (EST), as particular events occurred. Eastern Standard Time was Coordinated Universal Time (UTC) + 10 hours.

Figure 2: Radar track of aircraft on departure



Wreckage information

The subsequent search and rescue response located floating wreckage and freight believed to be from the aircraft at 0444 on 10 April 2008. This was to the south of the last recorded radar position, as shown at the bottom of Figure 2.

Preliminary examination of the recovered wreckage (Figure 3) indicated that the aircraft had impacted the water at high speed. The pilot was fatally injured and the aircraft was destroyed.

Figure 3: Recovered floating wreckage

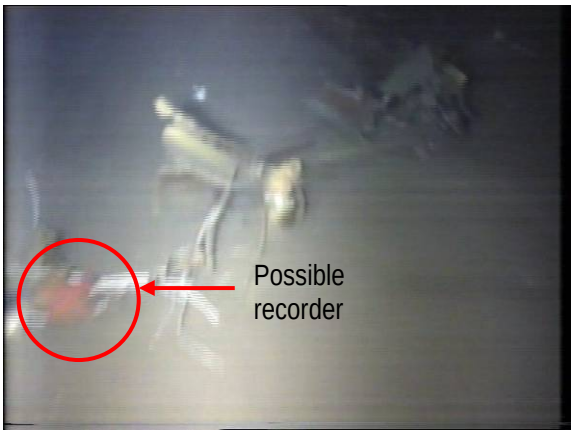
After reviewing the available recorded data, witness reports and other known facts, the Australian Transport Safety Bureau (ATSB) investigation team commenced a search for the main wreckage, with the assistance of the New South Wales Water Police. Those initial efforts focused on locating the onboard recorders (see Aircraft information for details) using underwater acoustic pinger locating equipment After confirming audio signals from an acoustic pinger near the identified search area, the search area was further refined.

Under ATSB supervision, commercial operators were contracted to locate and record aircraft wreckage/components. Those operations included towed array side-scan sonar and underwater remote operated vehicles (ROV) fitted with video cameras. Poor weather conditions on the ocean surface hampered and delayed both of the commercial operations and the ATSB's earlier work locating the pinger.

The ocean depths in the search area ranged from 95 m to 110 m. The depths were beyond the safe range of conventional SCUBA[2] diving operations. Subsequent operations determined that there was little natural light and the visibility on the seabed was limited.

On 12 May 2008, a significant wreckage field was identified and recorded by the ATSB investigation team (Figure 4). That wreckage was spread over an area approximately 1,200 m long and 400 m wide. While it was believed that the aircraft recorders were contained within this field, they were unable to be retrieved at that time.

Figure 4: Wreckage on the ocean floor



2 Self Contained Underwater Breathing Apparatus.

Aircraft information

The Fairchild Industries Inc. SA227-AC (Metro III) aircraft, serial number AC-600, was manufactured in 1984 in the US. It was first registered in Australia on 25 February 1998. It was powered by two Garrett TPE331-11U turboprop engines, fitted with four-bladed Dowty Rotol full-feathering propellers. The aircraft was of a tricycle, retractable landing gear design.

The aircraft was issued with a valid maintenance release on 21 February 2008. That release remained current until 21 February 2009 or 32,355.8 hrs total time in service (TTIS). On the day prior to the accident, records indicated that the aircraft had logged 32,339.5 hrs TTIS and 46,710 landings.

There were no annotated defects on the last recorded maintenance documentation available to the investigatiion.

The aircraft had been fitted with a Fairchild A100A Cockpit Voice Recorder and a Sundstrand Universal Flight Data Recorder (UFDR). The UFDR records pressure altitude, indicated airspeed, magnetic heading, vertical acceleration and microphone keying.

Both recorders were fitted with water activated acoustic pingers to assist with their location when submerged.

Pilot information

The pilot held a Civil Aviation Safety Authority Air Transport Pilot (Aeroplane) Licence ATP(A)L and had a valid class 1 medical with no restrictions.

Prior to the day of the accident the pilot's logbooks showed a total of 4,873.0 flight hours. The pilot had been endorsed on the Metro III aircraft in December 2007 and the logbooks showed a total of 175.2 hrs on type, including 113.3 hrs in the previous 90 days.

The pilot was reported to have been fit, healthy and well rested on the day of the accident flight.

Meteorological information

Meteorological information broadcast on the Sydney Airport computerised automatic terminal information system (CATIS) at the time of the accident indicated that the wind was 230 degrees at 6 kts, visibility was greater than 10 km and the cloud was few[3] at 2,800 ft.

Further investigation

The investigation is continuing and will include:

- continuing efforts to locate, identify and recover aircraft wreckage/components
- investigation of recorded information, including radar data and flight recorder information when recovered
- investigation of aircraft maintenance and loading documentation

3 Cloud amounts are reported in oktas. An okta is a unit of sky area equal to one-eighth of total sky visible to the celestial horizon. Few = 1 to 2 oktas, scattered = 3 to 4 oktas, broken = 5 to 7 oktas and overcast = 8 oktas.