



Australian Government

Australian Transport Safety Bureau

Runway excursion involving a Fairchild SA226, VH-OGX

Archerfield Airport, Queensland, 23 January 2014

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Addendum

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Runway excursion involving a Fairchild SA226, VH-OGX

What happened

On 23 January 2014, the pilot of a Fairchild SA226 aircraft, registered VH-OGX, conducted a charter flight from Thangool to Archerfield, Queensland, with 11 passengers on board.

Prior to departure, the pilot received the weather forecast for Archerfield and, based on the forecast conditions, planned to conduct an instrument approach on arrival.

At about 1520 Eastern Standard Time (EST), the aircraft departed Thangool. En-route, the pilot received the current Automatic Terminal Information Service (ATIS) for Archerfield, which indicated there were 'Few' (1-2 oktas¹) of cloud at 800 ft, 'Broken' (5-7 oktas) at 1900 ft and that the runway was 'wet'.

VH-OGX



Source: Operator

At about 1615, the pilot commenced a non-directional beacon (NDB) approach to Archerfield. Approaching the western boundary of the aerodrome, the pilot sighted the runway and circled the aerodrome at 900 ft above ground level (AGL) before approaching to land on runway 10 Left.

Due to the low cloud in the area, the pilot kept the aircraft close to the runway to ensure the runway remained in sight. When lined up on final, the aircraft was to the right of the extended runway centreline and the pilot elected to conduct a go-around.

The second circle was still tight, due to low cloud to the west of the runway, and the pilot reported that the aircraft was about 30 to 50 m right of the extended runway centreline when on final approach. It was raining heavily as the aircraft touched down close to the runway centreline and about 300 m beyond the runway threshold. The pilot reported that as the wheels touched down, the aircraft commenced sliding towards the right, possibly due to aquaplaning. He reduced the power levers to the ground idle setting. The aircraft veered off the right side of the runway and onto the grass. The pilot then attempted to steer the aircraft back onto the sealed surface and momentarily increased the power on the right engine to assist in regaining control of the aircraft.

The aircraft then slid along the runway and veered off to the left side. As the left main landing gear entered the grass, the aircraft slowed, coming to rest at an angle of about 30 degrees to the runway and with the main landing gear on the grass.

A runway inspection revealed standing water up to 50 mm deep on the right side of the runway near the threshold. After the incident, aquaplaning marks were visible on the runway.

Bureau of meteorology report

In a report provide to the ATSB by the Bureau of Meteorology, 51.6 mm of rain fell at Archerfield Airport between 1500 and 1635.

Airservices Australia comments

The ATIS described the runway condition as 'wet'. The descriptive terms used to describe water on a runway were:

- DAMP – the surface shows a change of colour due to moisture.
- WET – the surface is soaked but there is no standing water.

¹ Cloud coverage is reported by the number of 'oktas' (eighths) of the sky that is occupied by cloud.

- WATER PATCHES – patches of standing water are visible.
- FLOODED – extensive standing water is visible.

Airservices Australia advised that the runway condition was usually determined using a combination of local knowledge after considering factors such as the amount of rain received (obtained from visual observation and electronic readout), pilot reports, and any comments that may have been received from the aerodrome safety officer after the morning inspection. The oversight of runway condition was difficult from the tower perspective as the runway was up on a rise and appeared as just a thin slither of bitumen. Any pooling or extensive standing water was not easily visible from the tower cab.

No other aircraft arrived at Archerfield during the period of the flight from Thangool to Archerfield.

Archerfield Airport Corporation comments

The Airport Operations & Technical Officer advised the ATSB that the safety officer conducted a runway inspection each morning. Any further inspection may be carried out if requested either by an aircraft operator or the tower controller.

Figure 1: VH-OGX nose landing gear



Source: Operator

Safety action

Whether or not the ATSB identifies safety issues in the course of an investigation, relevant organisations may proactively initiate safety action in order to reduce their safety risk. The ATSB has been advised of the following proactive safety action in response to this occurrence.

Operator of VH-OGX

As a result of this occurrence, the aircraft operator has advised the ATSB that they have taken the following safety actions:

Amendment to standard operating procedures

The operator of OGX will introduce procedures for flight crew regarding runway contamination events.

The operator has also advised the ATSB that they have written to the airport operator and suggested changes to improve safety.

Safety message

The ATSB found that of the 15 runway excursions at Archerfield Airport reported to the ATSB between 2004 and 2014, this was the only incident that occurred during wet weather. This incident demonstrates the importance of communication between the pilot, aircraft operator, air traffic control and the aerodrome safety officer to ensure runway conditions are known. In particular, during an extreme weather event, pilots of inbound aircraft should be notified of potentially unsafe runway conditions.

A go-around, the procedure for discontinuing an approach to land, is a standard manoeuvre performed when a pilot is not completely satisfied that the requirements for a safe landing have been met. The need to conduct a go-around may occur at any point in the approach and landing phase, but the most critical go-around is one initiated close to the ground.

The pilot of OGX reported that the weather conditions necessitated low-level manoeuvring from the circling approach. If a straight-in approach to runway 28 had existed at Archerfield, it may have avoided the need for low level manoeuvring.

This incident highlights the importance of conducting a go-around as soon as landing conditions appear unfavourable.

The following link provides some useful information on go-arounds: *Aviation safety explained – Go-arounds* www.casa.gov.au/scripts/nc.dll?WCMS:STANDARD:1001:pc=PC_91481

General details

Occurrence details

Date and time:	23 January 2014 – 1625 EST	
Occurrence category:	Serious incident	
Primary occurrence type:	Runway excursion	
Location:	Archerfield Airport, Queensland	
	Latitude: 27° 34.22' S	Longitude: 153° 00.48' E

Aircraft details: VH-OGX

Manufacturer and model:	Fairchild Industries SA226-TC	
Registration:	VH-OGX	
Serial number:	TC-395	
Type of operation:	Charter – passenger	
Persons on board:	Crew – 1	Passengers – 11
Injuries:	Crew – Nil	Passengers – Nil
Damage:	Nil	

About the ATSB

The Australian Transport Safety Bureau (ATSB) is an independent Commonwealth Government statutory agency. The ATSB is governed by a Commission and is entirely separate from transport regulators, policy makers and service providers. The ATSB's function is to improve safety and public confidence in the aviation, marine and rail modes of transport through excellence in: independent investigation of transport accidents and other safety occurrences; safety data recording, analysis and research; and fostering safety awareness, knowledge and action.

The ATSB is responsible for investigating accidents and other transport safety matters involving civil aviation, marine and rail operations in Australia that fall within Commonwealth jurisdiction, as well as participating in overseas investigations involving Australian registered aircraft and ships. A

primary concern is the safety of commercial transport, with particular regard to fare-paying passenger operations.

The ATSB performs its functions in accordance with the provisions of the *Transport Safety Investigation Act 2003* and Regulations and, where applicable, relevant international agreements.

The object of a safety investigation is to identify and reduce safety-related risk. ATSB investigations determine and communicate the safety factors related to the transport safety matter being investigated.

It is not a function of the ATSB to apportion blame or determine liability. At the same time, an investigation report must include factual material of sufficient weight to support the analysis and findings. At all times the ATSB endeavours to balance the use of material that could imply adverse comment with the need to properly explain what happened, and why, in a fair and unbiased manner.

About this report

Decisions regarding whether to conduct an investigation, and the scope of an investigation, are based on many factors, including the level of safety benefit likely to be obtained from an investigation. For this occurrence, a limited-scope, fact-gathering investigation was conducted in order to produce a short summary report, and allow for greater industry awareness of potential safety issues and possible safety actions.