Australian Government
Australian Transport Safety Bureau

Runway incursion involving a Cessna 172, VH-WGL, and a de Havilland DHC-8, VH-QQD

Toowoomba Airport, Queensland, 28 March 2014

ATSB Transport Safety Report
Aviation Occurrence Investigation
AO-2014-061
Final – 14 July 2014

Released in accordance with section 25 of the *Transport Safety Investigation Act 2003*

Publishing information

Published by: Australian Transport Safety Bureau
Postal address: PO Box 967, Civic Square ACT 2608
Office: 62 Northbourne Avenue Canberra, Australian Capital Territory 2601
Telephone: 1800 020 616, from overseas +61 2 6257 4150 (24 hours)
Accident and incident notification: 1800 011 034 (24 hours)
Facsimile: 02 6247 3117, from overseas +61 2 6247 3117
Email: atsbinfo@atsb.gov.au
Internet: www.atsb.gov.au

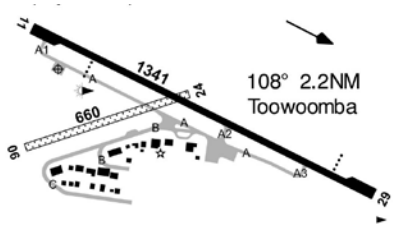
Addendum

Page	Change	Date

Runway incursion involving a Cessna 172, VH-WGL, and a de Havilland DHC-8, VH-QQD

What happened

Toowoomba Airport



Source: Airservices Australia

On 28 March 2014, the pilot of a Cessna 172, registered VH-WGL (WGL), conducted a private flight from Redcliffe aerodrome to Toowoomba Airport, Queensland. At about 1628 Eastern Standard Time (EST), the pilot broadcast on the common traffic advisory frequency (CTAF) that he was 10 NM to the north-east, inbound to Toowoomba, and intended to conduct a straight-in approach to runway 29.

At about the same time, a De Havilland DHC-8, registered VH-QQD (QQD), was parked on the itinerant apron at Toowoomba, adjacent to the A2 taxiway and about 50 m from the runway. The crew obtained a landing time in Brisbane of 1705 from Brisbane Air Traffic Control (ATC - flow control) and commenced start-up. While performing the start-up and associated checks, in accordance with standard company operating procedures, the crew did not have headsets on or the aircraft radio on speaker. During the after-start checks, the right stall warning illuminated. The crew actioned the appropriate checklist and assessed that the aircraft could be operated to Brisbane. This warning created a slight delay and the crew were conscious of the need to arrive in Brisbane at their allotted time.

At about 1631, the pilot of WGL broadcast on a 5 NM final and about 1 minute later, he broadcast on a 3 NM final for a full stop landing on runway 29. At about 1633, he broadcast on short final for runway 29. The aerodrome frequency response unit (AFRU) provided a beep-back for each of those calls, but no other response was heard on the CTAF.

About 20 seconds later, the first officer of QQD broadcast on the CTAF that QQD was taxying to runway 29, for a flight to Brisbane. The first officer reported that he heard the beep-back from the (AFRU), assumed it was due to an aircraft that had just completed circuits, and then contacted Brisbane Centre ATC and made a taxi call on that frequency as the aircraft approached the holding point. ATC replied with a transponder code for QQD. The first officer selected the transponder to standby prior to entering that code and checked the traffic collision avoidance system (TCAS) display for traffic.

As WGL flared to land, the pilot heard both taxi calls from QQD on the CTAF and Brisbane frequency and observed QQD taxi towards the runway. Approaching the holding point, the captain of QQD reported that he looked to the left and confirmed all clear, and the first officer looked to the right, did not sight any aircraft and confirmed clear to the right. The captain taxied QQD onto the runway and the first officer reported sighting the Cessna on the runway as QQD crossed the holding point.

At about 1634, WGL touched down about 5 m beyond the runway threshold, and the pilot observed QQD continue to taxi and turn onto the runway. He braked heavily and asked the crew of QQD whether they had heard his radio calls. The captain of QQD saw WGL on the runway and braked. He checked the TCAS, which he reported was selected to standby at that time, as no alert had been received. The pilot of WGL broadcast that he would backtrack and exit via taxiway A3. A brief communication between the crew of the two aircraft confirmed that they were both on the CTAF and that the crew of QQD had not heard any of the broadcasts from WGL. No further calls were heard from QQD on the CTAF.

Safety message

The ATSB SafetyWatch highlights the broad safety concerns that come out of our investigation findings and from the occurrence data reported to us by industry. One of the safety concerns is safety around non-controlled aerodromes www.atsb.gov.au/safetywatch/safety-around-aeros.aspx.

Research conducted by the ATSB found that, between 2003 and 2008, 32 runway incursions were recorded at non-towered aerodromes. Broadcasting on and monitoring of the CTAF is the key way for pilots to establish situational and traffic awareness. The ATSB *Limitations of the see-and-avoid principle* study found that the effectiveness of a search for other traffic is eight times greater when a radio is used effectively in combination with a visual lookout, than when no radio is used. *A pilot's guide to staying safe in the vicinity of non-towered aerodromes* is available at www.atsb.gov.au/publications/2008/avoidable-1-ar-2008-044(1).aspx.

General details

Occurrence details

Date and time:	28 March 2014 – 2039 EST	
Occurrence category:	Incident	
Primary occurrence type:	Runway incursion	
Location:	Toowoomba Airport, Queensland	
	Latitude: 27° 32.48' S	Longitude: 151° 54.75' E

Aircraft details: VH-WGL

Manufacturer and model:	Cessna Aircraft Company 172S	
Registration:	VH-WGL	
Serial number:	172S9271	
Type of operation:	Private	
Persons on board:	Crew – 1	Passengers – 1
Injuries:	Crew – Nil	Passengers – Nil
Damage:	Nil	

Aircraft details: VH-QQD

Manufacturer and model:	de Havilland Canada DHC-8	
Registration:	VH-QQD	
Operator:	Skytrans	
Serial number:	245	
Type of operation:	Air transport low capacity	
Persons on board:	Crew – 3	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.