



Australian Government

Australian Transport Safety Bureau

Aircraft proximity event between a Piper PA-28, VH-TXH and a Cessna 172S, VH-EWX

Moorabbin Airport, Victoria, 22 March 2013

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Addendum

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Aircraft proximity event between a Piper PA-28, VH-TXH and a Cessna 172S, VH-EWX

What happened

On 22 March 2013, circuits were being conducted to both runway 31 Left (31L) and 31 Right (31R) at Moorabbin Airport, Victoria. The aircraft in the two circuits were operating on different frequencies and being controlled by different air traffic controllers under the visual flight rules (VFR).¹

At about 1625 Eastern Daylight-saving Time,² a Cessna 172S aircraft, registered VH-EWX (EWX), entered the Moorabbin control zone from the south-east and was instructed to track for base as number 1 in the landing sequence for runway 31R. Another aircraft, a Piper PA-44 aircraft, had been instructed to follow EWX as number 2 and a Piper PA-28 aircraft, registered VH-TXH (TXH), was number 3. A number of aircraft were operating to the west of Moorabbin in the circuit for runway 31L.

As EWX approached base, at about 1626, the pilot became aware of TXH in his 2 o'clock³ position, tracking contrary to the runway 31R circuit pattern (Figure 1). TXH was observed to pass under the nose of EWX, about 100 to 150 m in front and about 50 ft below. To avoid the other aircraft and to keep it in sight, the pilot of EWX turned to track behind and subsequently follow TXH. As the pilot executed this manoeuvre, Moorabbin Tower broadcast a safety alert.

TXH crossed the runway centreline for both runway 31R and 31L before joining final for runway 31R from the west. Both aircraft subsequently landed without further incident.

Pilot comments (VH-TXH)

The pilot of TXH held a student pilot licence and was conducting solo circuit training. He had about 65 hours flying experience and had not flown in the previous 3 weeks. The pilot reported that he had not conducted a pre-flight brief with his instructor regarding operations on runway 31 and felt apprehensive, as he had only once operated on that runway. As the pilot was unfamiliar with the runway in use, he took time to note down headings for the various legs of the runway 31 circuit. Also, the pilot had initially taxied out in another aircraft, but had to return it due to an unserviceability, before being assigned TXH.

The pilot believed he may have inadvertently aligned his circuit with the runway 35 direction and that, when he turned base he had already crossed the centreline for runway 31R and 31L. He stated he could not conduct a 'go around' as he was well past the position from where such a manoeuvre could be commenced. The pilot reported seeing no traffic at the base position or subsequently.

Moorabbin Airport



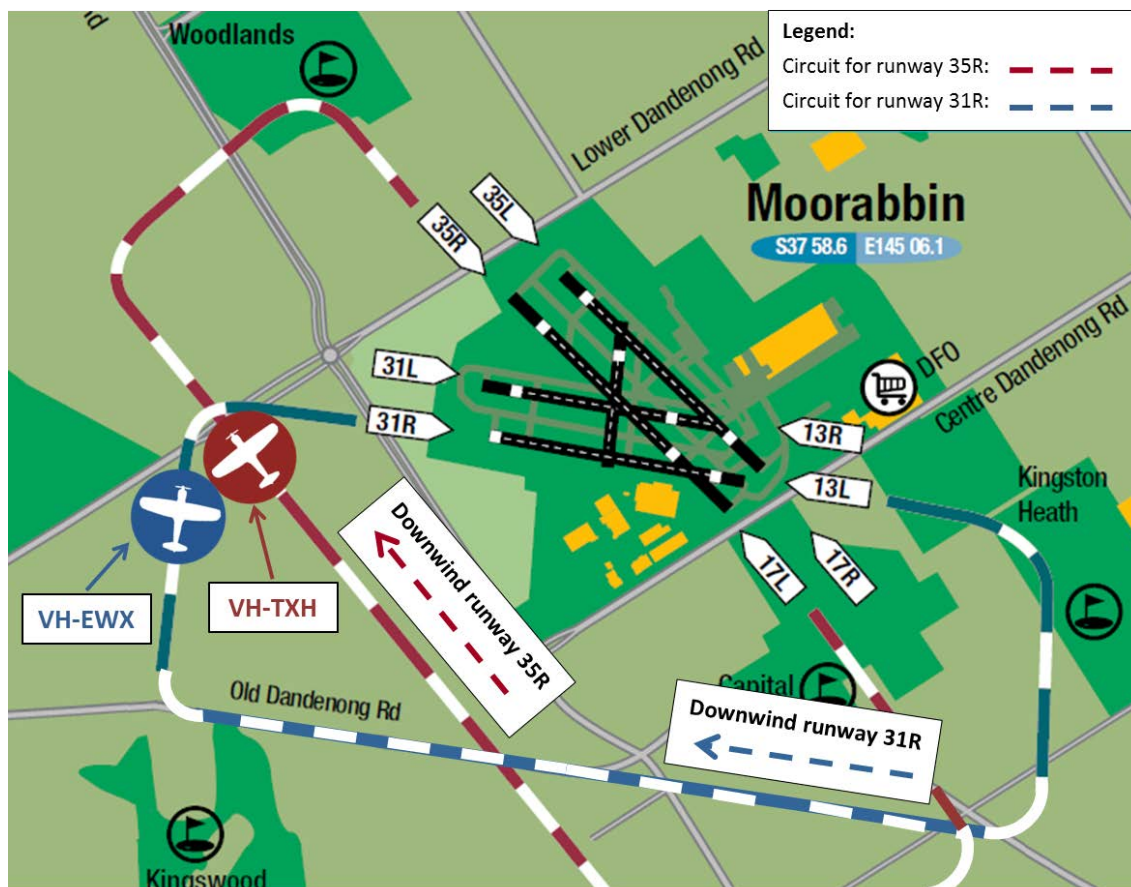
Source: Google earth

¹ Visual flight rules (VFR) are a set of regulations which allow a pilot to only operate an aircraft in weather conditions generally clear enough to allow the pilot to see where the aircraft is going.

² Eastern Daylight-saving Time was Universal Coordinated Time (UTC) + 11 hours.

³ The clock code is used to denote the direction of an aircraft or surface feature relative to the current heading of the observer's aircraft, expressed in terms of position on an analogue clock face. Twelve o'clock is ahead while an aircraft observed abeam to the left would be said to be at 9 o'clock.

Figure 1: Approximate positions of VH-TXH and VH-EWX in relation to circuit directions



Source: Civil Aviation Safety Authority

Safety message

While pilots conduct a pre-flight inspection of their aircraft to determine airworthiness, this incident highlights the importance of pilots also assessing their own status. Personal minimums⁴ should be considered prior to flight, as well as the impact of stressors such as being unfamiliar with operations from a particular runway or the need to change aircraft due to an unserviceability.

This incident highlights the importance of conducting a self-brief or having a discussion with someone who is familiar with operations when using an unfamiliar airfield or an unfamiliar runway.

The Civil Aviation Safety Authority (CASA) has developed a number of tools to assist in assessing your personal minimums, including PAVE:

- Pilot,
- Aircraft,
- enVironment, and
- External pressures.

CASA’s *Flight Planning Kit*, that includes information about PAVE, was designed to assist low-hour VFR pilots with good flight planning habits and is available from the CASA Online Store. Such a checklist enables a pilot to determine if they are physically and mentally prepared for a flight.

The following links provide additional information on operations at Moorabbin and on the impact of stress in the aviation environment.

⁴ Personal minimums are conditions, pre-determined by the pilot, which must be met if a flight is to proceed.

- *Class D Airspace Procedures* is available at www.casa.gov.au/scripts/nc.dll?WCMS:STANDARD::pc=PC_100101
- *On Track* is available at www.casa.gov.au/scripts/nc.dll?WCMS:STANDARD::pc=PC_100138
- *Visual Pilot Guides* are available at www.casa.gov.au/scripts/nc.dll?WCMS:STANDARD::pc=PC_90007

The CASA Online Store is available at www.casa.gov.au/scripts/nc.dll?WCMS:STANDARD::pc=PC_91316

The Federal Aviation Authority (FAA) has extensive training material and their Airman Education Program (Human Factors Series) includes *Stress in the Aviation Environment* and is available at www.faa.gov/pilots/training/airman_education/hf_videos/

General details

Occurrence details

Date and time:	22 March 2013 – 2245 EST	
Occurrence category:	Serious incident	
Primary occurrence type:	Airprox	
Location:	Moorabbin Airport, Victoria	
	Latitude: 37° 58.55' S	Longitude: 145° 06.13' E

Piper PA-28-161, VH-TXH

Manufacturer and model:	Piper Aircraft Corporation PA-28-161	
Registration:	VH-TXH	
Type of operation:	Flying training – solo	
Persons on board:	Crew – 1	Passengers – Nil
Injuries:	Crew – Nil	Passengers – Nil
Damage:	Nil	

Cessna 172S, VH-EWX

Manufacturer and model:	Cessna Aircraft Company 172S	
Registration:	VH-EWX	
Type of operation:	Flying training – solo	
Persons on board:	Crew – 1	Passengers – Nil
Injuries:	Crew – Nil	Passengers – Nil
Damage:	Nil	

About the ATSB

The Australian Transport Safety Bureau (ATSB) is an independent Commonwealth Government statutory agency. The Bureau 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.