



Australian Government

Australian Transport Safety Bureau

Pilot incapacitation involving a Piper PA-28-180, VH-PXB

Forbes aerodrome, New South Wales, 25 January 2014

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Addendum

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Pilot incapacitation involving a Piper PA-28-180, VH-PXB

What happened

On 25 January 2014, at about 1300 Eastern Daylight-savings Time (EDT),¹ a Piper PA-28-180 (Cherokee) aircraft, registered VH-PXB (PXB), taxied at Forbes aerodrome, New South Wales, for a private local flight with the pilot and one passenger on board.

The pilot of a Piper PA-25 (Pawnee) glider tug observed PXB take off from runway 27 and heard a broadcast on the common traffic advisory frequency (CTAF), advising that PXB was departing on a left downwind leg at low level to remain clear of gliders and hang gliders operating in the area.

The passenger of PXB reported that, about 10 minutes after take-off, the pilot appeared to suffer a seizure and lost consciousness, and only regained consciousness a few times briefly during the flight. The passenger took control of the aircraft and ensured the unconscious pilot remained clear of the controls. He turned the aircraft back towards Forbes aerodrome, following the Eugowra – Forbes Road, and used the aircraft radio to call for help.

At about 1312, after the pilot of the Pawnee had launched one glider and was back-tracking on the grass runway 27 Right at Forbes, he heard the passenger of PXB call for help on the CTAF.

He asked the passenger to identify the aircraft he was in, and the assistance required. He ascertained that the passenger was able to control the aircraft at that time, but had not landed an aircraft previously. PXB was at about 2,000 ft above mean sea level (AMSL) and the passenger advised that he was going to try to land back at Forbes.

The pilot of the Pawnee asked gliding club members on the ground to call emergency services. The Pawnee then took off and the pilot communicated with the passenger of PXB, determined that PXB had about 3 hours of fuel on board, and reassured the passenger that he would assist him.

The pilot of the Pawnee broadcast a 'MAYDAY'² call on the CTAF on behalf of PXB. He established that PXB was then at about 1,400 ft AMSL, or about 500 ft above ground level (AGL) and on descent. The pilot of the Pawnee talked the passenger through climbing PXB up to 2,000 ft AMSL using the throttle to increase power. He continued talking to the passenger, attempting to keep him calm, refrain from attempting a landing immediately, and to set the aircraft up to conduct orbits to the north of the aerodrome and maintain about 2,000 ft AMSL and an engine power setting of about 2,300 revolutions per minute.

The pilot of the Pawnee asked the glider and hang gliders airborne at the time to land, to clear the airspace for PXB. He then communicated with the pilot of an aircraft operating nearby under instrument flight rules (IFR), who relayed the distress call to Melbourne Centre air traffic control (ATC). He continued to maintain separation with PXB while keeping the aircraft in sight and continued communicating with the passenger.

He then contacted Melbourne Centre (ATC) and requested assistance to talk the passenger through landing PXB. A rescue helicopter and the IFR aircraft with an instructor on board both diverted to Forbes to provide assistance.

Forbes aerodrome



Source: Google earth

¹ Eastern Daylight-savings Time (EDT) was Coordinated Universal Time (UTC) + 11 hours.

² Mayday is an internationally recognised radio call for urgent assistance.

At about 1341, after orbiting the aerodrome for about 22 minutes, the passenger advised that the pilot was conscious and had taken control of the aircraft to return to land at the aerodrome. The pilot of the Pawnee became concerned as he observed PXB descending and heading south-west, away from the aerodrome. He communicated with the pilot, querying the altitude and heading of PXB, and with the assistance of the passenger, PXB turned towards the aerodrome.

The pilot of the Pawnee alerted the pilot to a left crosswind and broadcast a downwind call for PXB. A few minutes later, at about 1345, PXB landed just short of the threshold of runway 27, bounced once and veered off the runway during the landing roll.

The pilot of PXB was assessed by paramedics and transported to Orange hospital in the rescue helicopter. He did not recall any of the flight after the initial climb, until when the aircraft was lined up for a landing on runway 27.

Pilot comments (VH-PXB)

The pilot of PXB provided the following comments:

- he was feeling unwell during the morning prior to the flight
- he had had a late night and consumed a moderate amount of alcohol, prior to sleeping for about 5 to 6 hours on the night before the flight
- it was a hot day, with temperatures around 36 to 38 °C
- he had no pre-existing medical conditions
- in the morning he had a cup of coffee but no other liquids or food prior to the flight
- his doctor advised the most probable cause of loss of consciousness was dehydration.

Safety message

The ATSB report *Pilot Incapacitation: Analysis of Medical Conditions Affecting Pilots Involved in Accidents and Incidents*, www.atsb.gov.au/publications/2007/b20060170.aspx, found that the majority of pilot incapacitation events between 1 January 1975 and 31 March 2006 did not involve a chronic or pre-existing medical condition.

The Federal Aviation Administration (FAA) publication *Alcohol and flying: A deadly combination*, www.faa.gov/pilots/safety/pilotsafetybrochures/media/alcohol.pdf, advises that even after complete elimination of all of the alcohol in the body, there are undesirable effects, or hangover-effects, that can last 48 to 72 hours following the last drink. The minimum guidelines from the FAA are to wait for at least 8 hours after drinking alcohol before commencing a flight however, a more conservative approach is to wait 24 hours from the last use of alcohol before flying. The symptoms of hangovers include headache, dizziness and impaired judgment.

The Civil Aviation Safety Authority (CASA) conducts random drug and alcohol testing, with the prescribed limit for a blood alcohol concentration of 0.02%. The Civil Aviation Safety Regulations 1998 (CASR 1998) Part 99 can be accessed from: www.casa.gov.au/scripts/nc.dll?WCMS:STANDARD::pc=PC_91041.

One of the CASA's 'Out-N-Back' six part video series focuses on pilot decision making in regard to fitness to fly. It directs pilots to Civil Aviation Order (CAO) 48. This publication sets out clear guidelines in regard to fatigue assessment and management. The Civil Aviation Advisory Publications (CAAP) 48-1 offers further guidance. This Out-N-Back video and article can be found at: www.services.casa.gov.au/outnback/inc/pages/episode3/episode3_Fatigue_management.shtml.

In addition, this 'I'm safe checklist' provide a means of self-checking one's current readiness to conduct a flight, www.ampl.ma/attachements/publication/509.pdf

General details

Occurrence details

Date and time:	25 January 2014 – 1325 EST	
Occurrence category:	Serious incident	
Primary occurrence type:	Crew incapacitation	
Location:	Forbes aerodrome, New South Wales	
	Latitude: 33° 21.82' S	Longitude: 147° 56.10' E

Aircraft details

Manufacturer and model:	Piper Aircraft Corporation PA-28-180	
Registration:	VH-PXB	
Serial number:	28-7405236	
Type of operation:	Private	
Persons on board:	Crew – 1	Passengers – 1
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.