



Australian Government

Australian Transport Safety Bureau

Airspace related event involving Kingair, VH-VAH and Ag-Cat, VH-IFE

Swan Hill aerodrome, Victoria, 21 November 2012

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Airspace related event involving Kingair, VH-VAH and Ag-Cat, VH- IFE

What happened

On 21 November 2012, at about 0942 Eastern Daylight-saving Time¹, a Beech 200 Kingair aircraft, registered VH-VAH (VAH), was on an aero-medical flight from Mildura to Swan Hill aerodrome, Victoria. On-board were the pilot and a paramedic. During descent, the pilot reported arranging separation with an outbound aircraft, prior to broadcasting that they were joining the circuit for runway 26. Turning onto the base leg, the pilot again broadcast as he configured the aircraft for landing. He advised that he received no response and did not hear any other aircraft operating on the Common Traffic Advisory Frequency (CTAF)². Apart from the outbound aircraft, there was no traffic visible on the Traffic Collision and Avoidance System (TCAS)³.

At about the same time, an Ag-Cat aircraft, registered VH-IFE (IFE), was approaching the circuit at Swan Hill after completing crop spraying at Robinvale, New South Wales. IFE (Figure 1) was tracking south-easterly and maintaining about 100 ft above ground level. The pilot conducted a look-out for other aircraft operating in the circuit area and specifically checked, but did not see any aircraft on final approach for runway 26. IFE commenced a right descending turn, about 500 m from the runway 26 threshold.

At the same time, VAH (Figure 2) was about 1.5 NM from the same runway threshold, about 400 ft above the ground and configured for landing, when the pilot noticed IFE at low-level. He immediately made a radio broadcast, but did not receive a response. The pilot of VAH then elected to continue the approach and monitor the agricultural aircraft.

The pilot of IFE continued a right descending oval approach (Figure 3) and landed short, on the grass to the right of the sealed section of runway 26. The aircraft then turned right and taxied back to the threshold, remaining close to the runway gable markers. At this point, the pilot of IFE then saw the lights of VAH on short final for runway 26. He manoeuvred to keep IFE as close to the northern gable markers as possible.

The pilot of VAH conducted a later than normal touchdown to stay clear of IFE.

Pilot comments – VAH

The pilot of VAH had not expected any aircraft in the circuit area, as there had been no response to his CTAF calls and since the departing aircraft, no other traffic in the aerodrome vicinity on the TCAS display.

The pilot believed the aircraft was landing on runway 22 and would be clear of VAH, as he had observed IFE arriving from the north-west, then commence a curved approach. However, he was unable to establish communication with IFE to confirm this expectation. He was surprised when IFE continued the turn and landed on the grass on the right side of runway 26. At this stage, he felt it was safer to continue the approach and land further down the runway.

The pilot commented on the need for pilots of smaller and slower aircraft to be appreciative of the scope of the flight envelope of high performance aircraft. In addition, they need to be mindful of the workload required to reconfigure a high performance aircraft, particularly in single-pilot operations.

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

² Prescribed frequency for all aircraft to use in the vicinity of a non-controlled airport

³ TCAS is an aircraft collision avoidance system. It monitors the airspace around an aircraft for other aircraft equipped with a corresponding active transponder and gives warning of possible collision risks.

Pilot comments – IFE

IFE is a single-seat bi-plane aircraft that was not fitted with a radio. The pilot normally maintained a listening watch on a hand-held radio device. However, to avoid damage from the weather and chemicals he removed the hand-held radio when the aircraft was not flying. On this occasion, the pilot had inadvertently left the radio at home.

The pilot reported conducting a thorough check of the runway 26 approach as he joined the circuit, but had not seen VAH.

Figure 1: VH-IFE



Source: Phil Vabre

Figure 2: VH-VAH



Source: George Canciani

Figure 3: Approximate flight path of both aircraft at Swan Hill Aerodrome



Source: Google earth

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-IFE

As a result of this occurrence, the operator of VH-IFE has advised the ATSB that, as a result of this occurrence they will be fitting the aircraft with a radio.

Safety message

Research into safety at non-towered aerodromes conducted by the ATSB found that of 709 safety occurrences at non-towered aerodromes during 2003-08, 388 were attributed to a breakdown in communication. It notes that some other challenges facing pilots operating in a CTAF include:

- the mixture of aircraft types, performance levels, and operation types
- the need to continually deal with threats and hazards that may be encountered, such as unannounced traffic, or unexpected manoeuvres by nearby aircraft.

The Aviation Research and Analysis Report: *A pilot's guide to staying safe in the vicinity of non-towered aerodromes* can be found at:

[www.atsb.gov.au/publications/2008/ar-2008-044\(1\).aspx](http://www.atsb.gov.au/publications/2008/ar-2008-044(1).aspx)

The ATSB's Safety Watch initiative highlights safety around non-towered aerodromes as one of the major safety concerns that arise from investigation findings and from the occurrence data reported by industry. Safety Watch can be found at:

www.atsb.gov.au/safetywatch.aspx

General details

Occurrence details

Primary occurrence type:	Airspace related event	
Occurrence category:	Serious incident	
Location:	Swan Hill Aerodrome, Victoria	
	Latitude: S 35° 22.55'	Longitude E 143° 31.97'

King Air, VH-VAH

Manufacturer and model:	Hawker Beechcraft Corporation B200C	
Registration:	VH-VAH	
Type of operation:	Aerial Work – Air Ambulance	
Persons on board:	Crew – 1	Passengers – 1
Injuries:	Crew – Nil	Passengers – Nil
Damage:	None	

Ag-Cat, VH-IFE

Manufacturer and model:	Schweizer Aircraft Corporation, G-164B	
Registration:	VH-IFE	
Type of operation:	Aerial Work – Aerial Agriculture	
Persons on board:	Crew – 1	Passengers – Nil
Injuries:	Crew – Nil	Passengers – Nil
Damage:	None	

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.