Australian Government
Australian Transport Safety Bureau

Near collision involving a Grob G115, VH-BBJ and a Grob G115, VH-ZIM

near Merredin (ALA), Western Australia on 21 May 2014

ATSB Transport Safety Report
Aviation Occurrence Investigation
AO-2014-103
Final – 27 January 2015

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

Publishing information

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Addendum

Page	Change	Date

Near collision involving a Grob G115, VH-BBJ and a Grob G115, VH-ZIM

What happened

On 21 May 2014, a Grob G115, registered VH-BBJ (BBJ) and a Grob G115, registered VH-ZIM (ZIM) (Figure 1) were both conducting dual flight training in the northern training area, near Merredin aeroplane landing area (ALA), Western Australia. BBJ and ZIM each had a flight instructor and a student pilot on board. The flights were conducted in visual meteorological conditions.

Figure 1: Grob G115 VH-BBJ

Source: David Eyre

Grob G115 VH-ZIM

Neville Murphy

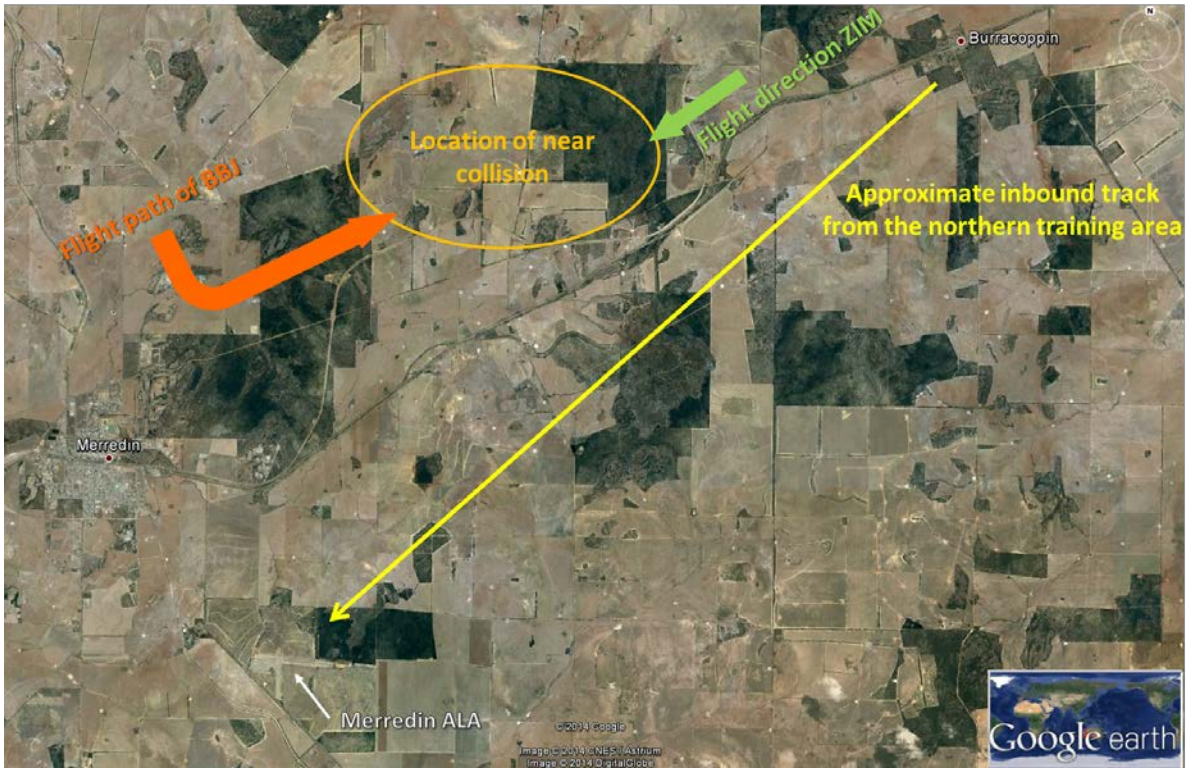
The student pilot of ZIM was conducting a pre-licence general flying progress test (GFPT). After completion of the training area component of the test in the northern training area, the student pilot navigated to the Merredin inbound reporting point near Burracoppin, at an altitude of about 3,500 feet above mean sea level (AMSL). The student broadcast on the common traffic advisory frequency (CTAF) the inbound call to Merredin ALA (Figure 2). During the flight, the student became disorientated and tracked toward the town of Merredin, instead of Merredin ALA. The student was not able to located Merredin ALA and the instructor provided assistance by pointing out land features.

At about the same time, the instructor of BBJ had just completed basic instrument flying with the student in the northern training area. The student tracked to the south-east, toward Burracoppin at 3,500 feet AMSL. The aircraft remained clear of the inbound track from Burracoppin to Merredin ALA. The instructor broadcast their intentions on the CTAF.

As ZIM turned to navigate toward Merredin ALA, the instructor observed BBJ, which appeared to take up almost the entire windscreen. She took control of the aircraft and took evasive action, by pushing the control column forward and descending. At about the same time, the instructor of BBJ observed ZIM straight ahead, at or just below the horizon coming towards them and took control of the aircraft from the student to take evasive action, pulling the control column rearward and climbing.

Both aircraft returned to Merredin without further incident. The pilots of both aircraft were uninjured and neither aircraft was damaged.

Figure 2: Approximate location of near collision



Source: Google earth

Instructor comment BBJ

The instructor of BBJ reported hearing the broadcast on the CTAF made by ZIM at the inbound reporting point to Merredin ALA.

The instructor indicated that although the exact location of ZIM was not known prior to the incident, they were clear of the inbound track, and therefore assumed they were clear of any possible conflict.

The instructor reported that, at the time of the incident, he was instructing the student and this may have reduced the ability to see ZIM earlier.

The first thing that drew the instructor's attention to ZIM was that it was getting larger, it did not appear to be moving. The instructor indicated that the distance between the two aircraft was very close (less than 20 meters) and if they had banked away from each other, instead of changing altitude, they may have collided.

The instructor indicated that there was nothing that affected visibility.

Instructor comment ZIM

The instructor of ZIM reported that, at the time of the incident, she was instructing the student on identifying features to navigate to Merredin ALA, and this may have reduced the ability to see BBJ earlier.

The instructor estimated that they had come within about 10 feet of BBJ. The instructor indicated that when first sighted, BBJ took up almost the whole windscreen. It was traveling in the opposite direction and appeared to be at the same level as they were.

The instructor indicated that there was nothing that affected visibility.

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 not been advised of any proactive safety action in response to this occurrence.

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-towered aerodromes www.atsb.gov.au/safetywatch/safety-around-aeros.aspx.

This serious incident highlights that it is difficult for pilots to sight another aircraft through visual observation alone. The ATSB often receives reports from pilots that another aircraft is flying too close to them in uncontrolled airspace. About three quarters of these reports involve pilots flying within 10 nautical miles (18.5 km) of a non-controlled aerodrome.

Insufficient communication between pilots operating in the same area is the most common cause of safety incidents near non-controlled aerodromes.

SafetyWatch highlights the importance of:

- Getting a radio, and always make sufficient broadcasts so that other pilots know your intentions – even when you think there is no nearby traffic.
- Maintaining a lookout for other aircraft at all times. Do not rely solely on monitoring your radio to achieve traffic awareness.
- Achieving radio alerted see-and-avoid by making all the recommended broadcasts within 10 nautical miles of a non-towered aerodrome. A search for other traffic is eight times more effective when a radio is used in combination with a visual lookout than when no radio is used.
- Using the same procedures at all non-towered aerodromes, unless otherwise stated in the En Route Supplement Australia. Following known, standard traffic procedures helps pilots to anticipate the likely position of other aircraft.

Other relevant resources:

- The ATSB booklet *A pilot's guide to staying safe in the vicinity of non-towered aerodromes* outlines many of the common problems that occur at non-towered aerodromes, and offers useful strategies (available at www.atsb.gov.au/publications/2008/avoidable-1-ar-2008-044(1).aspx).
- The Civil Aviation Safety Authority (CASA) has produced several publications and resources that provide important safety advice for operations at, or in the vicinity of non-controlled aerodromes (available at www.casa.gov.au/scripts/nc.dll?WCMS:STANDARD::pc=PC_100058).
- The ATSB publication *Limitations of the See-and-Avoid Principle* available at www.atsb.gov.au/publications/1991/limit_see_avoid.aspx.

General details

Occurrence details

Date and time:	21 May 2014 – 1615 WST	
Occurrence category:	Serious incident	
Primary occurrence type:	Near collision	
Location:	near Merredin (ALA), Western Australia	
	Latitude: 31° 25.30' S	Longitude: 118° 22.32' E

Aircraft details VH-BBJ

Manufacturer and model:	Grob G115	
Registration:	VH-BBJ	
Serial number:	82026/C2	
Type of operation:	Flight training	
Persons on board:	Crew – 2	Passengers – Nil
Injuries:	Crew – Nil	Passengers – Nil
Damage:	None	

Aircraft details VH-ZIM

Manufacturer and model:	Grob G115	
Registration:	VH-ZIM	
Serial number:	82080/C2	
Type of operation:	Flight training	
Persons on board:	Crew – 2	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 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.