



**Australian Government**

**Australian Transport Safety Bureau**

# Ground collision with a refuelling vehicle, involving a Grob G-115, VH-ZYM

Jandakot Airport, Western Australia, 6 June 2014

**ATSB Transport Safety Report**  
Aviation Occurrence Investigation  
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#### **Addendum**

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# Ground collision with a refuelling vehicle, involving a Grob G-15, VH-ZYM

## What happened

On 6 June 2014, a Grob G-115 CS aircraft registered VH-ZYM, departed Merredin for Jandakot, Western Australia on a dual navigation exercise. An instructor and a student pilot were on board.

The flight progressed without incident, and after landing at Jandakot, the crew taxied the aircraft to company parking on the southern apron (Figure 1). The student then had a break for lunch.

After the break, the student was briefed on circuit procedures at Jandakot from another instructor. This briefing included runway procedures, radio calls, and a reminder about appropriate taxi speeds. After the briefing, the student conducted a dual session of circuits with a third instructor, followed by 3-4 solo circuits.

At the completion of the solo circuits, at about 1530 western standard time (WST), the student taxied back to the southern apron, to park the aircraft. As the aircraft arrived at the company parking area, the student saw the fuel truck operator refuelling an aircraft on the left side of the taxiway. He assessed that there was sufficient room to taxi past the vehicle, and entered this taxiway, with the vehicle on his left (Figure 1).

Shortly after, the aircraft's left wing struck the front grille of the vehicle and the aircraft swung rapidly left. The student quickly applied the brakes, and the aircraft came to a stop with the propeller a few centimetres from the truck's diesel tank (Figure 2). The diesel tank was located directly beneath an 8,450 L Avgas tank. The fuel vehicle operator had seen the aircraft taxiing in, and realising a collision was imminent, had pressed the emergency stop button to stop the flow of Avgas through the refuelling hose. He ran around the front of the truck and called to the pilot to shut down the aircraft. He also sought assistance from nearby students to help convey that message. About half a minute later, the student (who later reported being in shock) shut down and then exited the aircraft. The student pilot was not injured; however, the aircraft and fuel vehicle sustained minor damage.

### ***Student pilot comments***

The student commented that it was several months since he had flown out of Jandakot and he was not current, nor familiar with all the procedures.

When he first noted the fuel vehicle, as it was parked close to the left of the taxiway, he felt there was sufficient space for the aircraft to taxi past. He had heard other students calling to him as he turned and started to taxi past the truck, but could not understand what they were saying.

He stated he was not specifically briefed on the rule regarding how close to the fuel truck the aircraft should taxi.

He also reported feeling tired, as he had undertaken three separate training flights during that day.

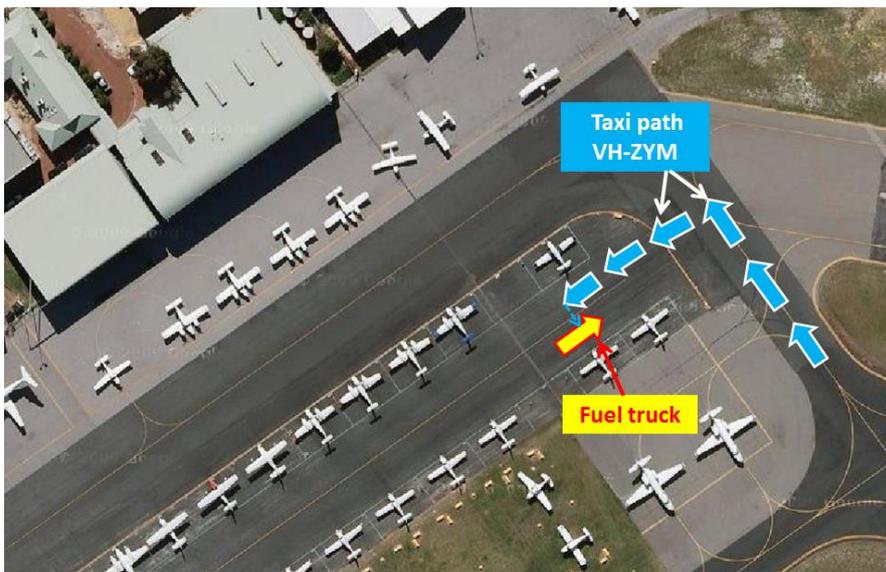
In hindsight, he conveyed the importance of having a full understanding of all the relevant procedures at an unfamiliar airport.

**VH-ZYM and fuel vehicle**



Source: Refuelling operator

**Figure 1: Jandakot Airport southern apron parking area**



Source: Flying College and Fuel Company

**Figure 2: Position where VH-ZYM came to a stop**



Source: Fuel Company

### ***Operator of refuelling vehicle***

The operator of the refuelling vehicle reported that a similar incident had occurred in July 2013. A Grob had taxied into his vehicle. Hence, when refuelling on the southern apron, he kept a vigilant eye on traffic movements. He felt it was this heightened awareness that led to him pressing the emergency stop button as quickly as he did.

The fuel vehicle was parked about 1.5 -2 metres off the taxilane for that taxiway, and the taxiway was about 10 metres wide.

He was surprised at the amount of people that arrived on the scene post-incident, and had to remind some personnel of the dangers of using electronic equipment, such as mobile phones, in

the area. The refuelling operator's procedures require that no electronic device be operated within 15 metres of the vehicle.

## 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.

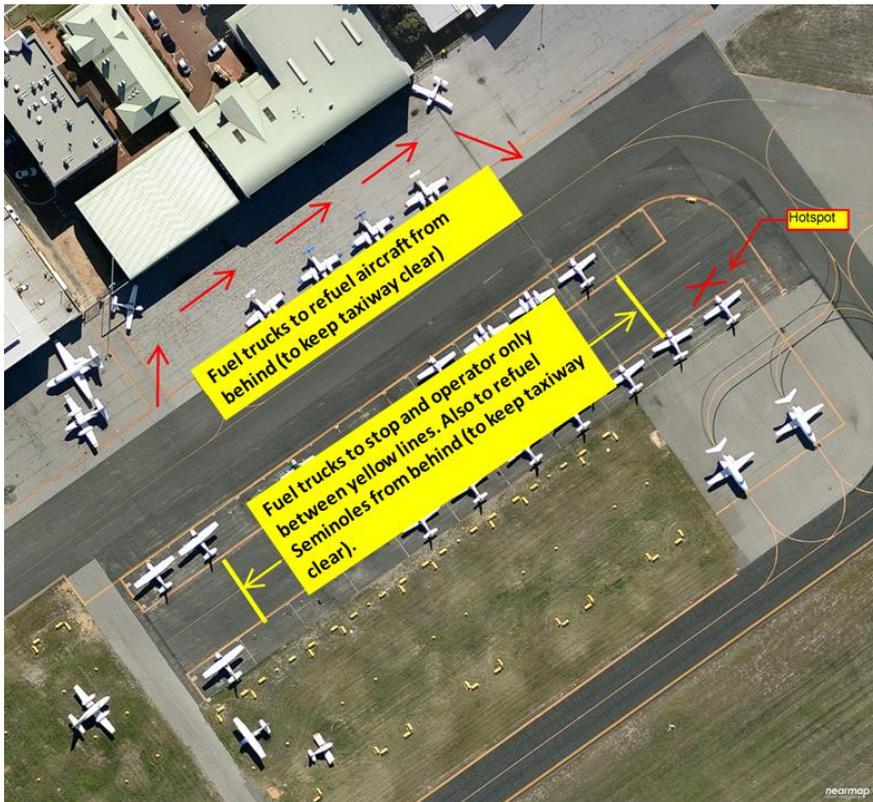
### ***Collaborative Safety Action: Airport operator / Flying College / Refuelling Company***

As a result of the three key stakeholders working toward risk mitigation against future occurrences, a new refuelling and taxiing plan has been developed for the southern apron area at Jandakot Airport.

The main points from this collaborative safety action are:

- As per Figure 3, when refuelling aircraft on the main apron, fuel vehicles will refuel from behind the aircraft
- When refuelling in between the two other sealed parking areas, refuelling must only occur between the two marked yellow lines (that is, not next to the two parking bays either end of the line)

**Figure 3: Direction of travel for refuelling truck**



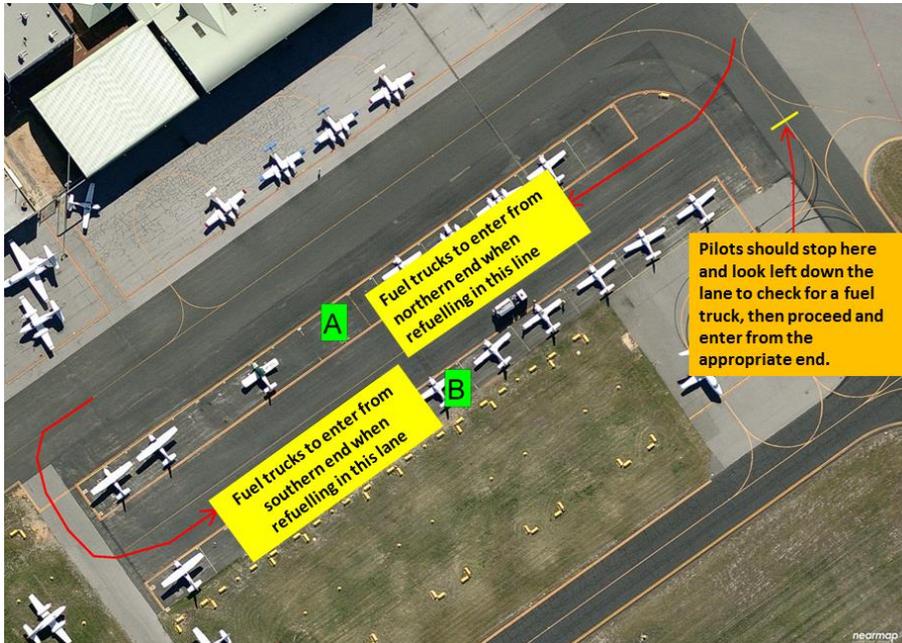
Source: Airport operator

In addition (Figure 4), refuelling vehicles wishing to refuel aircraft in lane A should enter from the northern end and refuel from behind the parked aircraft. When refuelling in lane B, vehicles are to enter from the southern end and refuel from in front of parked aircraft.

Pilots taxiing aircraft into the southern apron area from taxiway Golf, should momentarily stop and check for refuelling vehicles in either lane A or B. If there is any issue or parking congestion, they

are to continue to taxi and park either on an open parking bay on the apron or continue to the grassed parking area and hold until the fuel truck has completed its duties and left the apron.

**Figure 4: New procedures when accessing lane A or B**



Source: Airport operator

### ***Flying College***

As a result of these occurrences, the flying school management has advised the ATSB that they are taking the following safety actions:

#### ***Use of taxiways in the southern apron parking area***

Temporarily, to mitigate any possible future occurrences, the taxiways into the parking lines have ceased to be used. Operational staff have been briefed and trained on safe manoeuvring of aircraft in this area.

Also, as part of the company Safety Induction Training, all students will participate in a Fuel Hazards training course conducted by the fuel company. Students will have to complete all relevant training modules, before they commence flying training.

Management have recommended to all operational personnel, the importance of maintaining a focus until the aircraft has been completely shut down. The necessity to maintain situational awareness is just as relevant on the ground as it is in the air.

There is now a restriction of no longer than 8 hours of duty for students.

They also advise that the Airport Proprietors are currently conducting a survey of the apron and taxiway areas of the southern apron. A possible contribution to the solution may be to extend the apron width to allow more room.

### ***Refuelling company***

The refuelling company advised that a procedure was already in place, advising that an aircraft under power cannot be within 15 m of the refuelling vehicle, whether it was actively refuelling or not.

The company advised they had a meeting with the flying college management a few days after the incident, and the following was discussed:

- The fuel vehicle operators may return to the practice of placing cone markers around the vehicle during refuelling
- The fuel company will continue and expand on the Fuel Hazards induction courses to each new intake of students, covering safety and best practice around aircraft and fuel vehicles. Students

### **Refuelling regulations**

Further information on Aircraft Safety Precautions during Fuelling Operations can be found in the CASA Civil Aviation Orders 20.9 part 4.5 at:

- [www.comlaw.gov.au/Details/F2011C00881/Download](http://www.comlaw.gov.au/Details/F2011C00881/Download)

## **General details**

### **Occurrence details**

Date and time:	6 June 2014 – 1530 WST	
Occurrence category:	Serious incident	
Primary occurrence type:	Ground operations – taxiing collision	
Location:	Jandakot Airport, Western Australia	
	Latitude: 32° 05.85' S	Longitude: 115° 52.87' E

### **Aircraft details**

Manufacturer and model:	Grob – Burkhart Flugzeugbau	
Registration:	VH-ZYM	
Serial number:	82015/C2	
Type of operation:	Flying training - solo	
Persons on board:	Crew – 1	Passengers – Nil
Injuries:	Crew – Nil	Passengers – Nil
Damage:	Minor	

## **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.