Australian Government
Australian Transport Safety Bureau

Wheels up landing involving Piper PA-24-260, VH-DRB

Albany Airport, Western Australia, 11 April 2013

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Addendum

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What happened

On 11 April 2013, at about 1100 Western Standard Time[1] a Piper PA-24-260, registered VH-DRB (DRB), departed Albany Airport, Western Australia, to conduct an annual aeroplane flight review,[2] with the pilot and testing officer on board.

After conducting the aerial work component of the flight review, DRB returned to the circuit for a touch and go, followed by a flapless touch and go, on runway 14. On take-off after the flapless touch and go, the testing officer informed the pilot that the circuit would be at low-level for a full stop landing. On early downwind, the testing officer asked the pilot if a glide approach could be made for runway 23 and the decision was made to conduct a practice forced landing on runway 23. The pilot moved the throttle lever to reduce engine power and extended the flaps to slow the aircraft. On final, the testing officer thought she saw the pilot move his hand to the landing gear selector. The aircraft subsequently landed with the landing gear retracted just past the intersection with runway 14/32, skidded and then came to a stop (Figure 1). The pilot and testing officer were not injured and the aircraft sustained minor damage.

Figure 1: VH-DRB

Source: Aircraft owner

1 Western Standard Time (WST) was Coordinated Universal Time (UTC) + 8.0 hours.

2 Aeroplane flight review is a test of the aeronautical skills and aeronautical knowledge relevant to aeroplane flight of the person undertaking the review.

Pilot comment

The pilot reported that his most recent flying experience was in single-seat fixed landing gear aircraft.

The pilot stated that he would normally extend the gear at a mid-downwind circuit position, with an indicated air speed of about 130 knots and look for the green landing gear light. He would also normally do his pre-landing checks, which included checking the gear was down, as he turned onto base leg.

As the landing for runway 23 was initiated during a low-level circuit and on early downwind, the pilot reported that he was not following his normal pre-landing sequence. He expected to hear the landing gear warning horn activate as he closed the throttle in order to slow the aircraft for a landing on runway 23. The pilot remembered hearing the landing gear horn activate, but could not remember exactly when.

The approach appeared a little fast, however, the pilot reasoned that it was because the aircraft type normally floated a little on landing and there was a slight crosswind that may have had a small tailwind component.[3]

Testing officer comment

The testing officer reported that she did not have a lot of time in the aircraft type, and mainly flew aircraft with a fixed landing gear.

During final approach, she heard a horn and assumed that it was the stall warning horn, as she expected to hear it and she thought the pilot had selected the landing gear down.

She reported that while the approach looked a little fast, she reasoned that was because the runway has a slight down slope, there may have been a small tailwind component and it was similar to the speed of the prior flapless landing.

Safety message

This accident highlights that when practicing emergency procedures the defences that are usually in place, such as having a normal place in the circuit to put the gear down, audible alarms and checklist items can be missed or go un-actioned.

The US Federal Aviation Administration (FAA) has published a pamphlet *On Landings Part lll,* which focuses on some landing challenges, including the avoidance of gear-up landings. The pamphlet is available at www.faasafety.gov/files/gslac/library/documents/2011/Aug/56411/FAA%20P-8740-50%20OnLandingsPart%20III%20%5bhi-res%5d%20branded.pdf .

The Flight Safety Foundation[4] approach-and-landing accident reduction briefing note 6.1 – *Being prepared to go around* contains important lessons for general aviation including the elements of a stabilised approach and being prepared to abandon the approach if these elements are not met. The briefing note is available at www.flightsafety.org/files/alar_bn6-1-goaroundprep.pdf .

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[3] Pilot reported the wind was about 5 knots between 120° - 130°.

[4] The Flight Safety Foundation (FSF) is an independent international organisation that was formed in 1947 to pursue the continuous improvement of global aviation safety through research, auditing, education, advocacy and publishing.

General details

Manufacturer and model:	Piper PA-24-260	
Registration:	VH-DRB	
Type of operation:	Aerial work	
Occurrence category:	Serious incident	
Primary occurrence type:	Wheels up landing	
Location:	Albany Airport, Western Australia	
	Latitude: 34° 56.60' S	Longitude: 117° 48.53' E
Persons on board:	Crew – 1	Passengers – 1
Injuries:	Crew – Nil	Passengers – Nil
Damage:	Minor	

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.