



Australian Government

Australian Transport Safety Bureau

Wheels up landing involving a Cessna 310, VH-TBE

Jabiru Airport, Northern Territory, 12 December, 2014

ATSB Transport Safety Report
Aviation Occurrence Investigation
AO-2014-188
Final– 22 April 2015

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

Publishing information

Published by: Australian Transport Safety Bureau
Postal address: PO Box 967, Civic Square ACT 2608
Office: 62 Northbourne Avenue Canberra, Australian Capital Territory 2601
Telephone: 1800 020 616, from overseas +61 2 6257 4150 (24 hours)
Accident and incident notification: 1800 011 034 (24 hours)
Facsimile: 02 6247 3117, from overseas +61 2 6247 3117
Email: atsbinfo@atsb.gov.au
Internet: www.atsb.gov.au

© Commonwealth of Australia 2014



Ownership of intellectual property rights in this publication

Unless otherwise noted, copyright (and any other intellectual property rights, if any) in this publication is owned by the Commonwealth of Australia.

Creative Commons licence

With the exception of the Coat of Arms, ATSB logo, and photos and graphics in which a third party holds copyright, this publication is licensed under a Creative Commons Attribution 3.0 Australia licence.

Creative Commons Attribution 3.0 Australia Licence is a standard form license agreement that allows you to copy, distribute, transmit and adapt this publication provided that you attribute the work.

The ATSB's preference is that you attribute this publication (and any material sourced from it) using the following wording: *Source:* Australian Transport Safety Bureau

Copyright in material obtained from other agencies, private individuals or organisations, belongs to those agencies, individuals or organisations. Where you want to use their material you will need to contact them directly.

Addendum

Page	Change	Date

Wheels up landing involving a Cessna 310, VH-TBE

What happened

On 12 December 2014, the pilot of a Cessna 310 (C-310) aircraft, registered VH-TBE (TBE), was completing a charter flight from Oenpelli to Jabiru, Northern Territory. On board were the pilot, two adults and three children.

TBE was one of several aircraft operating multiple flights between the two communities, and this was the fourth and final flight for the pilot that day. Due to the late arrival of a passenger on one of his earlier runs, the pilot had been delayed throughout the morning.

VH-TBE on side of runway



After departing Oenpelli, he made a left turn, and continued climbing to 2,000¹ ft for the short flight. An agreed local procedure between operators in this area was that flights from Oenpelli to Jabiru operated at 2,000 ft, and flights in the opposite direction at 1,500 ft.

The pilot reported that the three children on board were excited and a little disruptive, and he had kept a close watch on their activities. Concurrently, the passenger seated in the front seat coughed incessantly through the headset, which distracted him. Once he had the aircraft stable, he reached over and unplugged the passenger's headset.

After the completion of the top of descent (TOPD) checks, he manoeuvred to join a late downwind for a right circuit onto runway 27 at Jabiru. He commenced the pre-landing checks and reported verbalising "undercarriage down", but made a decision to leave this particular action until later on final approach. He elected to keep the aircraft speed slightly higher than normal; and as per the company procedures, kept a stable power setting and profile and only made small adjustments when needed at around 300 ft. He was also mindful of a Cessna 210 aircraft close behind TBE.

He then focussed on the passengers, especially the children, and made sure that they all had their seatbelts correctly fastened prior to landing. The children were still highly excited. He normally completed the remaining memory-recall PUFF² check on final approach, but on this occasion he did not.

The pilot flared the aircraft in preparation for landing. He became aware that the undercarriage remained retracted when TBE touched down on the runway centreline and he heard the propellers contacting the ground.

Mindful there was an aircraft in the circuit behind him, he used the remaining rudder effectiveness to move the aircraft slightly to the left of the runway. When the aircraft came to a stop, he checked on the welfare of his passengers and opened the door for them to exit, directing them to assemble in a safe area. After completing shutting down, he also exited the aircraft. There were no injuries to either the pilot or passengers; however, the aircraft was substantially damaged.

¹ Above mean sea level.

² A personal mnemonic applied by the pilot to check completion of the actions necessary to confirm the aircraft was in the landing configuration, including: set propeller pitch, undercarriage down, and flaps full down.

Figure 1: VH-TBE damage



Source: Grant Hampton

Pilot experience and comments

The pilot had about 1,739 hours total flying time, with around 335 of those on twin engine aircraft. He had about 12 hours on C-310 aircraft, having conducted his endorsement on a different company C-310R aircraft.

As he was relatively new to the C-310, he spent time preparing and refreshing himself on the performance data prior to the flight. Although TBE was the same model aircraft as he had been endorsed on, this particular aircraft differed slightly by having a vortex generator kit fitted.

The pilot reported it had been a busy, but fairly typical work day. For the first flight of the morning he had to remove several aircraft seats to fit and secure a cage suitable for transporting a dog. This had taken some time and he reported that in the heat and humidity it had been taxing. He always carried water when on duty, but had consumed all of his supply during this first activity and with a passenger arriving late for his flight, he had elected to wait until he had finished duty to re-hydrate.

He also reported that at no time during the approach did he hear TBE's gear warning horn³ activate. He was not aware if the gear horn was operational or set differently to the endorsement C-310, which he reported had a loud warning system. There is no procedure available to check the horn serviceability during the pre-flight check.

In hindsight, he felt it would have been beneficial to have been familiarised with all the annunciators on TBE prior to flying the aircraft.

He also confirmed the importance of using flow checks, backed up by a written checklist.

³ An audible intermittent horn warning

Landing gear warning horn on VH-TBE

The landing gear warning horn was controlled by the throttles and the flap preselect handle. Normally the warning horn sounds an intermittent note if either throttle is retarded below approximately 12 in of manifold pressure with the landing gear retracted, or if the flap handle is lowered past the 15° setting.

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.

Aircraft operator

As a result of the accident, the operator of VH-TBE sent a memo to all company pilots reminding them that:

- There is a requirement to use the checklist correctly. Do not skip any item with the intention to come back to it, as you may not remember to do so. The checklist is the final action to be taken during any stage of flight that requires checks to be completed.
- The intention of the checklist is to capture items missed during the systems flow.

Safety message

This incident highlights the impact a combination of distractions can have on aircraft operations.

Research conducted by the ATSB found that distractions were a normal part of everyday flying, and generally pilots respond to them fairly and efficiently. It also revealed that 13 per cent of accidents and incidents associated with pilot distraction between January 1997 and September 2004 occurred during the approach phase of flight.

The Flight Safety Foundation suggests that after a distraction source has been recognised, the next priority is to re-establish situation awareness by conducting the following:

- *Identify:* What was I doing?
- *Ask:* Where was I distracted?
- *Decide/act:* What decision or action do I need to take to get back on track?

Further reading is available at:

Dangerous Distraction: An examination of accidents and incidents involving pilot distraction in Australia between 1997 and 2004: www.atsb.gov.au/publications/2005/distraction_report.aspx

Flight Safety Foundation Approach-and-landing Briefing Note 2.4 – Interruptions/Distractions:

http://flightsafety.org/files/alar_bn2-4-distractions.pdf

General details

Occurrence details

Date and time:	12 December 2014	
Occurrence category:	Accident	
Primary occurrence type:	Wheels up landing	
Location:	Jabiru Airport, Northern Territory	
	Latitude: 12° 39.50' S	Longitude: 132° 53.58' E

Aircraft details

Manufacturer and model:	Cessna 310R	
Registration:	VH-TBE	
Serial number:	310R2119	
Type of operation:	Charter - passenger	
Persons on board:	Crew – 1	Passengers – 5
Injuries:	Crew – Nil	Passengers – Nil
Damage:	Substantial	

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.