Australian Government
Australian Transport Safety Bureau

Wheels up landing involving Cessna 210M, VH-PBV

Broome Airport, Western Australia, 23 February 2013

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Addendum

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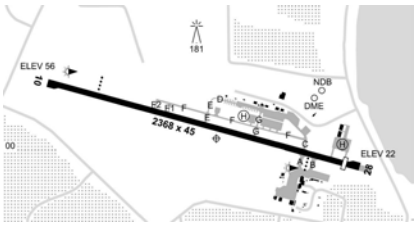
What happened

On 23 February 2013, a Cessna 210M, registered VH-PBV (PBV), was returning to Broome Airport, Western Australia, from Lombadina with a pilot and four passengers onboard.

The conditions on the day were windy and wet with thunderstorms and rain moving through the area, requiring the pilot of PBV to alter the aircraft's flight plan and flight path to divert around the weather.

Broome Airport



Source: Airservices Australia

The aircraft tracked to a position north of the airport, in order to land on runway 10. The pilot reported selecting the landing gear down as part of his landing checks, and a passenger later reported that he heard what he believed to be the landing gear being lowered.

The air traffic controller (controller) cleared PBV to land when the pilot reported turning base and advised the pilot of an 18 knot crosswind. Just prior to PBV crossing the runway threshold, the controller sighted the aircraft on short final and conducted a final scan of the runway to ensure it was still clear

Shortly before landing, at about 1410 Western Standard Time,[1] the pilot completed his final checks, but did not look out the window to visually check that the landing gear was down. However, he reported he did observe a green light, indicating that the landing gear was down and locked. To compensate for the crosswind, the pilot operated the aircraft at a slightly higher throttle setting, until flaring to land. PBV then landed on the runway with the landing gear retracted and skidded about 300 to 350 m down the runway on the underbelly (Figure 1). The controller activated the airfield emergency response.

The pilot later reported that the landing gear warning horn had not activated.

Insurance assessment

Following the accident, an assessment conducted by an insurance assessor found that the pilot did not extend the landing gear prior to landing. The assessor noted that the micro switch that activated the landing gear warning horn was set for a throttle setting lower than that used by the pilot during the landing.

[1] Western Standard Time (WST) was Coordinated Universal Time (UTC) + 8 hours.

Figure 1: VH-PBV on the runway

Source: FlightAware

Safety message

Bad weather and changed plans can distract attention away from a pilot's primary function – to safely fly the aircraft. However, the failure of the gear warning horn to activate removed a defence against landing with the landing gear retracted.

An accident investigation report produced by the United Kingdom Air Accidents Investigation Branch provides further information on the link between throttle settings and the activation of the gear warning horn in Cessna 210 aircraft. The report is available at: www.aaib.gov.uk/cms_resources.cfm?file=/dft_avsafety_pdf_507729.pdf

General details

Manufacturer and model:	Cessna Aircraft Company 210M	
Registration:	VH-PBV	
Type of operation:	Charter	
Occurrence category:	Serious incident	
Primary occurrence type:	Wheels up landing	
Location:	Broome airport, Western Australia	
	Latitude: 17° 56.98' S	Longitude: 122° 13.67' E
Persons on board:	Crew – 1	Passengers – 4
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.