



Australian Government

Australian Transport Safety Bureau

Wheels-up approach and go-around involving a Piper PA-31-350, VH-TXK

Townsville Airport, Queensland, 9 January 2015

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Addendum

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Wheels-up approach and go-around involving Piper PA-31-350, VH-TXK

What happened

On 9 January 2015, a pilot in-command-under-supervision (ICUS), and a supervising pilot, operated a Piper PA-31-350 aircraft, registered VH-TXK, on a charter flight from Palm Island to Townsville, Queensland, with seven passengers on board. At about 1630 Eastern Standard Time (EST), air traffic control (ATC) cleared the aircraft to conduct a visual approach via a left base, to runway 07 at Townsville Airport.

When about 4 NM from the runway, the pilot ICUS performed the pre-landing checks, but omitted to extend the landing gear. The supervising pilot confirmed the mixture, fuel pumps and landing lights had been set correctly, and assumed the rest of the checks had been similarly completed. As the aircraft turned from base to final for runway 07, the supervising pilot alerted the pilot ICUS that the aircraft was too high, which the pilot ICUS immediately corrected by selecting full flap and a lower nose attitude. As the aircraft was then slightly higher and faster than for a normal approach, the pilot ICUS reduced the throttle to idle slightly earlier than normal. As he flared the aircraft to land, he anticipated the landing gear touching down on the runway, but as it did not occur when he expected, he commenced a go-around. At the same time, the supervising pilot expected the landing gear to touch down and called 'go around'. Neither of the pilots heard an aural gear warning horn sound.

As the pilot ICUS commenced the go-around, a VHF antenna fitted to the underside of the aircraft fuselage contacted the runway and both pilots heard a scraping sound. The pilots broadcast 'going around' and did not receive a response. After a second call to ATC also did not elicit a response, the supervising pilot selected the second VHF radio (COMM2) and was then able to communicate with ATC. When at about 50 ft above ground level (AGL), the pilot ICUS observed the landing gear lever in the UP position, and was then unsure whether he had omitted to select the landing gear DOWN during the pre-landing checks, or whether a technical fault had occurred.

The supervising pilot assumed that there was a technical fault with the landing gear and prepared to perform a manual gear extension. The pilot ICUS established the aircraft in a slow cruise configuration at about 1,400 ft (AGL), extended flap and, when the aircraft was below the maximum gear extension speed, selected the landing gear lever to the extended position. The landing gear extended and locked and three green lights indicated a safe extension. The pilot ICUS confirmed visually that the nose landing gear was extended. The pilots discussed the option of conducting a fly-by to verify the landing gear had extended fully, but elected to return for a landing. The aircraft subsequently landed on runway 07 without further incident.

The VHF antenna was found on the runway, having broken off from the underside of the aircraft after striking the runway (Figures 1 and 2). Two aerodynamic fins also sustained minor scrapes from the runway. The pilots and passengers were uninjured in the occurrence and a subsequent engineering inspection found that the landing gear warning horn was serviceable.

Figure 1: Broken antenna



Source: Aircraft operator

Figure 2: Photo of new antenna fitted to VH-TXK



Source: Aircraft operator

Pilot comments

The pilots provided the following comments:

- The pre-landing and finals checks were conducted from memory, rather than a written checklist. With a pilot ICUS and supervising pilot, the pilot may have vocalised the checks as they were being performed, but on this flight the pilot ICUS could not recall vocalising the checks and the supervising pilot did not recall hearing them. The company did not have standard procedures for ICUS flights.
- Neither pilot completed checks when on final to confirm the landing gear indicated three green lights. The supervising pilot reported that when landing on runway 07 late in the afternoon, the position of the sun often made the cockpit display, including the landing gear indication, appear to be illuminated.
- The stall warning would normally sound during the landing phase in that aircraft. Neither pilot recalled hearing the aural stall warning or landing gear warning horn. As the aircraft was on a slightly higher and faster approach than normal, the pilot ICUS reduced the throttle to idle earlier than for a normal landing. This should have activated the landing gear warning, unless the throttle levers were not retarded to a position fully against the idle stops.
- The pilot ICUS had used written checklists when operating other aircraft, but had been trained to perform checks from memory for the PA-31.

Aircraft operator comments

The pilot ICUS held the appropriate endorsements for the aircraft and had 47.7 hours experience on the aircraft type. His total flying time was 319.5 hours. The aircraft insurer required a pilot to hold a minimum of 600 hours total time to operate the aircraft as pilot in command, hence the pilot was operating under supervision.

As they do not normally conduct two-pilot operations, they did not have a training program in place for such operations.

Department of Defence investigation

The Department of Defence conducted an internal investigation into the incident and reported that, during normal operations, the Tower controller was required to scan an aircraft during critical stages of flight. This included monitoring that the aircraft was on the appropriate track, level and positioned for the correct runway. They were also required to scan for any abnormalities with the aircraft. It was normal process for all Townsville air traffic controllers to visually scan the undercarriage status of all aircraft on final approach.

The Tower controller could not recall specifically observing the position of the aircraft's landing gear when scanning the aircraft on final approach, but the position of the sun at the time of the incident may have affected the Tower controller's ability to observe the aircraft's landing gear.

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 this occurrence, the aircraft operator has advised the ATSB that pilots will henceforth require a minimum of 600 hours total aeronautical experience prior to operating that aircraft type. Company pilots will receive additional experience and training prior to operating as supervising pilots.

Department of Defence

As a result of this occurrence, the Department of Defence has advised the ATSB that they are taking the following safety actions:

- A safety awareness poster was created and displayed in prominent locations for Townsville based controllers to view, describing an 'effective scan'.
- Townsville controllers were briefed on the importance of proper scan technique during the critical stages of an aircraft's flight. Particular mention was made of the importance of checking the status of the landing gear when an aircraft is cleared to land.

Safety message

This incident is a reminder for pilots and operators of the limitations of human performance and highlights the need to follow procedures and complete checklists diligently.

General details

Occurrence details

Date and time:	9 January 2015 – 1635 EST	
Occurrence category:	Serious incident	
Primary occurrence type:	Wheels up landing	
Location:	Townsville Airport, Queensland	
	Latitude: 19° 15.15' S	Longitude: 146° 45.92' E

Aircraft details

Manufacturer and model:	Piper Aircraft Corporation, PA-31-350	
Registration:	VH-TXK	
Serial number:	31-7405189	
Type of operation:	Charter – passenger	
Persons on board:	Crew – 2	Passengers – 7
Injuries:	Crew – Nil	Passengers – Nil
Damage:	Nil	

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.