



Australian Government

Australian Transport Safety Bureau

Collision with terrain involving a Bell 206, VH-FHX

94 km ENE of Jabiru, Northern Territory on 14 September 2014

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Addendum

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Collision with terrain involving a Bell 206, VH-FHX

What happened

On 14 September 2014, the pilot of a Bell 206 helicopter, registered VH-FHX, conducted a charter flight from Myra mine camp, Northern Territory with 3 passengers on board. The pilot was tasked to fly to a number of locations identified by latitude and longitude, and land as close as possible to each location.

After arriving overhead the eighth location for that day, the pilot conducted an orbit at about 500 ft above ground level (AGL) to assess the area for a suitable landing site. After identifying a site, the pilot then conducted a second orbit at about 100 ft AGL. During this orbit, the pilot noted the hazards including a tree stump to the left of the target landing area and a tall tree to the right.

At about 1218 Central Standard Time, the pilot conducted an approach and, when at about tree-top height, completed a final appraisal of the site and elected to continue the approach to land. The pilot then conducted a vertical descent into the selected landing site. When at about 1 ft AGL, the passenger seated in the left front seat alerted the pilot to the tree stump on the left, observing that he thought it may be tall enough to strike the main rotor. Due to the sense of urgency in the passenger's voice, the pilot immediately manoeuvred the helicopter up and to the right. During this manoeuvre, the pilot heard the helicopter strike a tall tree (Figure 1).

Figure 1: Tree damage following helicopter strike



Source: Operator

The pilot conducted a climb away from the site, an orbit and a second approach to land. After landing, the pilot shut down the helicopter and the passengers disembarked. The pilot then conducted an external inspection of the helicopter and assessed the damage to the main and tail rotor blades to be minor and unlikely to affect the safety of the flight. No alerts or caution lights illuminated and the pilot did not detect any vibrations following the tree strike.

After completing the charter flight and returning the passengers to Myra, the pilot again inspected the helicopter. The damage had not increased during the flight and the pilot elected to conduct a solo ferry flight to return to the helicopter base in Jabiru.

About 20 minutes later, after landing at Jabiru, the pilot inspected the helicopter and found the damage to the main rotor blade had worsened significantly (Figure 2). The pilot then assessed the

helicopter as unserviceable and contacted the senior base engineer. The engineer subsequently determined that the main rotor blade and tail rotor blade had sustained substantial damage and required replacement.

Figure 2: Damage to main rotor blade tip



Source: Operator

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.

Helicopter operator

As a result of this occurrence, the helicopter operator has advised the ATSB that they have taken the following safety actions:

- Updated the company induction procedures to include post incident actions.
- Reissued a flight safety instruction with the following requirements:
 - An incident must be assessed for its potential to have caused an accident. If an accident nearly occurred due to an aircraft anomaly, the aircraft is to be deemed unserviceable until advised by the chief pilot or engineering manager.
 - Any warning generated by the helicopter warning system or abnormal flight characteristics is to be discussed with the senior base engineer or engineering manager prior to continuing or commencing flight.
- Purchased satellite telephones for company pilots operating in remote areas.
- Issued a flight safety instruction directing company pilots to brief passengers seated in the co-pilot seat that: they are not to touch any instruments other than headphones; they are not to act erratically, loudly or irresponsibly; and when taking off or landing between ground and 500 ft, the cockpit should remain sterile and conversation other than immediately related to flight is forbidden.

Safety message

This incident highlights the challenges of operating in confined areas and the risks posed by distractions. It is also a reminder to ensure an aircraft is fully serviceable prior to flight, particularly following an incident.

General details

Occurrence details

Date and time:	14 September 2014 – 1218 CST	
Occurrence category:	Accident	
Primary occurrence type:	Collision with terrain	
Location:	94 km ESE of Jabiru aerodrome, Northern Territory	
	Latitude: 12° 25.37' S	Longitude: 133° 43.45' E

Helicopter details

Manufacturer and model:	Bell Helicopter Company 206B	
Registration:	VH-FHX	
Serial number:	2822	
Type of operation:	Charter	
Persons on board:	Crew – 1	Passengers – 3
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.