Australian Government
Australian Transport Safety Bureau

Windshear event involving a Eurocopter EC120B, VH-BGB

near Port Hedland Airport, Western Australia, on 21 October 2014

ATSB Transport Safety Report
Aviation Occurrence Investigation
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Addendum

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Windshear event involving a Eurocopter EC120B, VH-BGB

What happened

On 21 October 2014, the pilot of a Eurocopter EC120B helicopter, registered VH-BGB, conducted a charter flight from a ship about 24 nautical miles north-north-west of Port Hedland to transfer two marine pilots to Port Hedland Airport, Western Australia. The flight was conducted under the night visual flight rules.

Prior to take-off, the pilot observed the windsock on board the ship indicating calm wind conditions. At about 2240 Western Standard Time, the helicopter lifted off and the pilot commenced the climb and transitioned to a forward airspeed of about 15 knots. As the helicopter passed over the bow of the ship, it encountered windshear. Approaching about 350 feet above sea level, the pilot observed the airspeed indicating about 5 knots. He reported that his focus had momentarily been on the radar altimeter and he had not detected the airspeed decaying. He immediately applied forward cyclic[1] to increase the airspeed, and then continued the climb to 1,500 feet and proceeded to Port Hedland without further incident.

The pilot did not receive any warnings and the helicopter remained in stable flight throughout.

Pilot comments

The pilot reported that in a normal climb, by about 400 feet he would expect the airspeed to be approaching 40 knots. He believed that his delay in recognising the decreasing airspeed was due to feeling unwell. He had some symptoms of a cold prior to the flight. The next morning he sought medical attention and was prescribed antibiotics. He had been on duty for about 22 hours prior to the incident and had slept for about 2 hours during that time. The base pilots were operating on a 24 hour shift cycle, with a minimum 5 hours' sleep to be taken during that period.

Figure 1: VH-BGB

Source: Operator

[1] The cyclic pitch control, or cyclic, is a primary flight control that allows the pilot to fly the helicopter in any direction of travel: forward, rearward, left and right.

Safety action

Helicopter operator

As a result of this occurrence, the helicopter operator issued a Safety Notice to all company pilots reminding them of the importance of managing fatigue and fitness to fly in accordance with their Fatigue Management policy.

Safety message

The ATSB report *Pilot Incapacitation: Analysis of Medical Conditions Affecting Pilots Involved in Accidents and Incidents*, www.atsb.gov.au/publications/2007/b20060170.aspx, found that the majority of pilot incapacitation events between 1 January 1975 and 31 March 2006 did not involve a chronic or pre-existing medical condition.

One of the CASA's 'Out-N-Back' six part video series focuses on pilot decision making in regard to fitness to fly. It directs pilots to Civil Aviation Order (CAO) 48. This publication sets out clear guidelines in regard to fatigue assessment and management. The Civil Aviation Advisory Publications (CAAP) 48-1 offers further guidance. This Out-N-Back video and article can be found at:
www.services.casa.gov.au/outnback/inc/pages/episode3/episode3_Fatigue_management.shtml.

In addition, this 'I'm safe checklist' provide a means of self-checking one's current readiness to conduct a flight, www.ampl.ma/attachements/publication/509.pdf.

General details

Occurrence details

Date and time:	21 October 2014 – 2240 WST	
Occurrence category:	Incident	
Primary occurrence type:	Windshear event	
Location:	near Port Hedland Airport, Western Australia	
	Latitude: 20° 22.67' S	Longitude: 118° 37.58' E

Helicopter details

Manufacturer and model:	Eurocopter EC120B	
Registration:	VH-BGB	
Serial number:	1347	
Type of operation:	Charter – passenger	
Persons on board:	Crew – 1	Passengers – 2
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.