

Australian Government Australian Transport Safety Bureau

# Collision with terrain involving Kawasaki 369HS, VH-JWJ

near Inverloch Victoria, 19 August 2012

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## Collision with terrain involving Kawasaki 369HS, VH-JWJ

AO-2012-104

### What happened

On 19 August 2012, at about 1520 Eastern Standard Time<sup>1</sup>, a Kawasaki 369HS helicopter, registered VH-JWJ (JWJ), was transiting from Tyabb, Victoria (VIC), to Konwack, VIC on a private flight. As the the helicopter approached the intended landing site, at about 500 ft above ground level (AGL) and at about 110 to 125 kts, the 'engine out' caution light illuminated, accompanied by the low rotor revolutions per minute (RPM) horn and a loss of power.

#### Accident site



Source: Airclaims Australia

The pilot immediately lowered the collective to enter autorotation<sup>2</sup>, but then increased the position of the collective lever to clear a line of

trees about 100 to 150 m ahead, directly in the path of the helicopter. Clearing the trees at about 100 to 150 ft AGL, the pilot was able to maintain speed by keeping the nose of the helicopter down while descending at about a 45° angle.

The pilot aimed for a dry area in a muddy paddock, allowing the helicopter to turn gently left towards his aiming spot. The pilot reported that he flared too late, causing the tail boom and then the left skid to drag along the wet ground. As the left skid broke contact with the ground, the weight of the helicopter was transferred to the right side. The right skid contacted the ground and was torn off, taking the tail boom with it. The helicopter skidded for about 80 m before coming to rest (Figure 1).

Both the pilot and passenger were wearing a four-point harness and the pilot was wearing a helmet. The pilot was uninjured while the passenger sustained a minor head wound.

The helicopter was serviceable prior to the flight and no evidence of a mechanical fault was found following the accident. Prior to recovery, JWJ was de-fuelled showing that there was sufficient fuel for the expected approach and landing. The cause of the reported power loss could not be determined.

<sup>&</sup>lt;sup>1</sup> Eastern Standard Time (EST) was Coordinated Universal Time (UTC) + 10 hours.

<sup>&</sup>lt;sup>2</sup> Descent with power off, air flowing in reverse direction upwards through lifting rotor(s) causing it to continue to rotate at approximately cruise RPM. The pilot preserves usual control functions through pedals, cyclic and collective, but cannot alter steep 'glide path'. The rate of descent is reduced just before ground impact by an increase in collective pitch; this increases lift trading stored rotor kinetic energy for increased aerodynamic reaction of the blades, and should result in a gentle touchdown.

#### Figure 1: Cabin of VH-JWJ



Source: Airclaims Australia

## Safety message

The accident highlights the value of occupant restraints and safety helmets for both pilots and passengers.

The following publications provide further information on helicopter safety helmets:

- ATSB aviation occurrence report AO-2012-016 VH-FUJ, Partial power loss available at: <u>www.atsb.gov.au/publications/investigation\_reports/2012/aair/ao-2012-016.aspx</u>
- A hard-headed look at helmets, Flight Safety Australia, issue 87 July August 2012 available at: <a href="http://www.flightsafetyaustralia.aero/?xml=CASA\_Callout\_V2&iid=64732#folio=3">www.flightsafetyaustralia.aero/?xml=CASA\_Callout\_V2&iid=64732#folio=3</a>

## Aircraft details

Manufacturer and model:	Kawasaki Heavy Industries 369		
Registration:	VH-JWJ		
Type of operation:	Private		
Location:	near Inverloch Victoria		
Occurrence type:	Collision with terrain		
Persons on board:	Crew – 1	Passengers – 1	
Injuries:	Crew – Nil	Passengers – 1 (minor)	
Damage:	Destroyed		

## 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.