



**Australian Government**

**Australian Transport Safety Bureau**

# Loss of control involving a Robinson R22, VH-HVW

70 km SW of Lake Nash Station, Northern Territory, 1 September 2013

**ATSB Transport Safety Report**  
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#### **Addendum**

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# Loss of control involving a Robinson R22, VH-HVW

## What happened

*The following is based on the recollection of witnesses and observations of the aircraft owner.*

On 1 September 2013, the pilot of a Robinson R22 helicopter, registered VH-HVW, refuelled at a stock camp located about 40 NM (70 km) south-west of Lake Nash Station, Northern Territory in preparation for a flight to Argardargada Station.

At about 1600 Central Standard Time, the helicopter departed in a north-easterly direction. At that time, the wind was about 17 kt from the north-east.

Shortly after take-off, the helicopter was observed by witnesses at the stock camp to commence a steep climbing left turn. As the helicopter turned into a downwind position, a number of the witnesses reported that the wind appeared to affect the controllability of the aircraft. It appeared that the pilot attempted to respond to the situation, however, there was insufficient altitude to recover. The helicopter skids contacted the ground and became separated. The helicopter slid along the ground and then flipped over a number of times before coming to rest near the stock camp. During the accident sequence, the pilot was ejected from the helicopter and sustained serious injuries; the helicopter was destroyed (Figure 1).

**Figure 1: Damage to VH-HVW**



Source: Helicopter owner

The aircraft owner attended the accident site, and based on his observations and that of the witnesses, believed that when the helicopter was in a downwind position, a negative G<sup>1</sup> situation may have occurred. During the subsequent attempted recovery, the pilot appeared to have pushed the nose of the helicopter forward in an attempt to regain airspeed; however, the helicopter contacted the ground.

## Safety message

Wind direction and velocity are important considerations for helicopter pilots. It is crucial that pilots maintain an awareness of the wind and be aware of the consequential effects on helicopter performance. This will assist pilots with responding promptly and appropriately to a situation and preventing a loss of control.

## General details

### Occurrence details

Date and time:	1 September 2013 – 1600 CST	
Occurrence category:	Accident	
Primary occurrence type:	Loss of control	
Location:	70 km south-west of Lake Nash Station, Northern Territory	
	Latitude: 21° 21.98' S	Longitude: 137° 23.67' E

### Helicopter details

Manufacturer and model:	Robinson Helicopter Company R22 Beta	
Registration:	VH-HVW	
Serial number:	3135	
Type of operation:	Aerial work	
Persons on board:	Crew – 1	Passengers – Nil
Injuries:	Crew – 1 (Serious)	Passengers – Nil
Damage:	Destroyed	

## 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.

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<sup>1</sup> Helicopters are mostly designed to have weight (gravity pulling down to the earth) and lift opposing that force of gravity. Low-G or negative G manoeuvres occur when this balance is disturbed.

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.