



Australian Government

Australian Transport Safety Bureau

Collision with terrain involving a Robinson R22, VH-YPS

28 km E of Fitzroy Crossing Aerodrome, Western Australia, 22 March 2014

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Published by: Australian Transport Safety Bureau
Postal address: PO Box 967, Civic Square ACT 2608
Office: 62 Northbourne Avenue Canberra, Australian Capital Territory 2601
Telephone: 1800 020 616, from overseas +61 2 6257 4150 (24 hours)
Accident and incident notification: 1800 011 034 (24 hours)
Facsimile: 02 6247 3117, from overseas +61 2 6247 3117
Email: atsbinfo@atsb.gov.au
Internet: www.atsb.gov.au

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Addendum

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Collision with terrain involving a Robinson R22, VH-YPS

What happened

On 22 March 2014, the pilot of a Robinson R22 helicopter, registered VH-YPS, was conducting aerial mustering on a property about 28 km east of Fitzroy Crossing aerodrome, Western Australia. The pilot had refuelled the helicopter from a jerry can and then secured the empty can in the passenger seat using the seatbelt.

At about 1530 Western Standard Time (WST), the pilot manoeuvred the helicopter to the rear of a mob of cattle. From about 300 ft above ground level (AGL), the pilot conducted a balanced descending turn.

When at about 10 ft AGL, he applied right pedal and as he raised collective¹ to climb away, a gust of wind blew through the left door opening and dislodged the jerry can from the seatbelt. The can became wedged between the seat and the cyclic² control. The pilot applied forward cyclic and the nose of the helicopter lowered. As he then attempted to apply aft cyclic to raise the nose, he realised the cyclic was jammed. As a result of the low nose attitude and minimal height above the ground, the pilot used collective in an attempt to flare the helicopter. The front of the landing skids collided with the ground and the helicopter rotated forwards. The main rotor blades chopped through the tail boom and the helicopter continued rotating forwards and bounced back up to about 50 ft AGL before coming to rest inverted.

The pilot reported that the impact dislodged the top of the front dash board and struck his helmet. He was uninjured and the helicopter sustained substantial damage (Figure 1).

Figure 1: Damage to VH-YPS



Source: Owner

Damage to VH-YPS



Source: Owner

¹ The collective pitch control, or collective, is a primary flight control used to change the pitch angle of the main rotor blades. Collective input is the main control for vertical velocity.

² 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

The pilot reported that following this incident, the property manager has advised pilots that jerry cans are not to be carried in the helicopters during mustering operations.

Safety message

This incident highlights the importance of ensuring all items are securely stowed. It also provides a timely reminder to pilots of the benefits of safety equipment such as a helmet.

General details

Occurrence details

Date and time:	22 March 2014 – 1530 WST	
Occurrence category:	Accident	
Primary occurrence type:	Collision with terrain	
Location:	28 km E Fitzroy Crossing aerodrome, Western Australia	
	Latitude: 18° 11.67' S	Longitude: 125° 49.25' E

Helicopter details

Manufacturer and model:	Robinson Helicopter Company R22	
Registration:	VH-YPS	
Serial number:	4509	
Type of operation:	Private	
Persons on board:	Crew – 1	Passengers – Nil
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.