Australian Government
Australian Transport Safety Bureau

Wirestrike involving a Robinson R66, VH-JRX

near Giru, Queensland, 20 August 2014

ATSB Transport Safety Report
Aviation Occurrence Investigation
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Addendum

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Wirestrike involving a Robinson R66

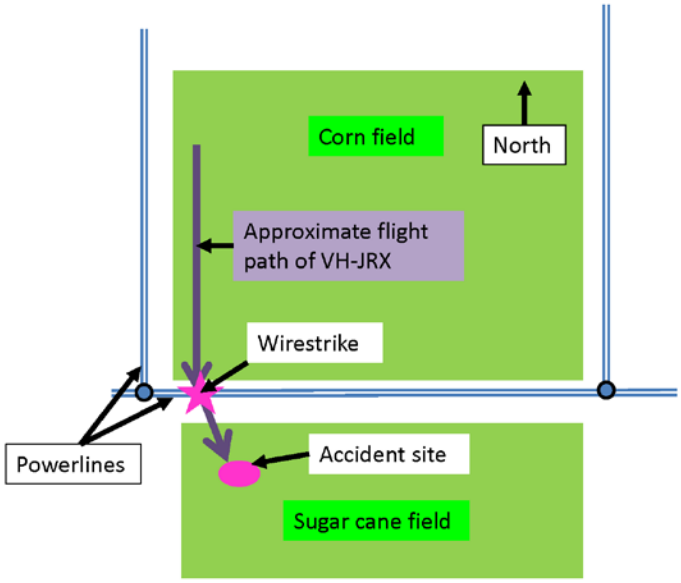
What happened

On 20 August 2014, the pilot of a Robinson R66 helicopter, registered VH-JRX, conducted a site inspection from a vehicle prior to commencing aerial spraying near Giru, Queensland. The pilot identified powerlines running along the eastern, southern and western boundaries of the paddock to be sprayed. He then conducted a flight over the paddock and assessed the hazards in the area and confirmed he was able to see all of the powerlines he had identified from the ground.

As the wind was from the east-north-east, at about 1500 Eastern Standard Time (EST), the pilot commenced aerial spraying in an east-west direction. At the end of each run, the pilot climbed the helicopter up and over the powerlines, turned north then descended once clear of the powerlines and sprayed the paddock in the opposite direction.

At about 1645, after completing 14 loads of spraying, the pilot commenced the final clean-up run. The helicopter was operating from north to south along the western boundary of the paddock, parallel to the powerlines (Figure 1). The pilot was aware of those powerlines, however when about 5 m from the southern boundary, he sighted the powerlines running perpendicular to the direction of flight. The pilot assessed that it was too late to climb over the powerlines and elected to fly underneath them. The crop was about 6 ft tall and the pilot wanted to ensure the helicopter remained above the crop.

Figure 1: Approximate flight path of VH-JRX



Source: Pilot recollection

The main rotor blade hub struck the powerlines and the helicopter collided with the ground. The helicopter was substantially damaged (Figure 2) and the pilot sustained minor injuries.

Figure 2: Damage to VH-JRX

Source: Operator

Pilot comments

The pilot of VH-JRX provided the following comments:

- He had sprayed parallel to the wire which JRX struck and his attention was on the other powerlines that he had to climb over on each run.
- Normally he would do an extra check of the paddock prior to commencing the clean-up run, but he omitted it on this day.

Safety message

Research conducted by the ATSB identified 180 wirestrike accidents between 2001 and 2010. Of these, 100 occurred during agricultural operations. The research report cautioned pilots to conduct an aerial reconnaissance to confirm wire locations and other hazards. Having a plan and a procedure to minimise the risk of wirestrike is a valuable mitigation strategy. The ATSB report *Wirestrikes involving known wires: A manageable aerial agriculture hazard* is available at www.atsb.gov.au/publications/2011/avoidable-2-ar-2011-028.aspx.

For further risk management strategies for agricultural operations, the Aerial Application Pilots Manual is available from www.aerialag.com.au/Home.aspx.

General details

Occurrence details

Date and time:	20 August 2014 – 1700 EST	
Occurrence category:	Accident	
Primary occurrence type:	Wirestrike	
Location:	near Giru, Queensland	
	Latitude: 19° 35.15' S	Longitude: 147° 05.20' E

Helicopter details

Manufacturer and model:	Robinson Helicopter Company R66	
Registration:	VH-JRX	
Serial number:	0151	
Type of operation:	Aerial agriculture	
Persons on board:	Crew – 1	Passengers – Nil
Injuries:	Crew – 1 (Minor)	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.