



Australian Government

Australian Transport Safety Bureau

Wirestrike involving Robinson R22, VH-HRL

63 km W of Blackall Airport, Queensland, 27 July 2016

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Addendum

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Wirestrike involving Robinson R22, VH-HRL

What happened

On 27 July 2016, at about 0930 Eastern Standard Time (EST), the pilot of a Robinson R22 Beta helicopter, registered VH-HRL (HRL), completed mustering operations at a property about 33 km south of Blackall, Queensland. The helicopter then departed from the property on a ferry flight and tracked towards the pilot's home about 110 km to the west-northwest. The pilot was the sole occupant of the helicopter.

At about 1002, the pilot's GPS tracker indicated that the helicopter had stopped moving, about 41 km from its destination and on the helicopter's direct track. The helicopter had struck a powerline and subsequently collided with terrain. At about 1030, a local landowner notified the energy provider of a power outage. Two line workers from the energy provider later departed from Blackall to determine the source of the power outage.

At about 1500, while inspecting the powerlines in the area, the line workers located the wreckage of HRL. The windshield and right skid of the helicopter had struck the single wire, which was strung east-west across a cleared area, 4.8 m above the ground. The first point of impact of the helicopter was about 31 m beyond the powerline and it then collided with the ground inverted about 18 m further away. During that impact, it appeared that the pilot's seatbelt sheared through and the pilot was ejected from the helicopter sustaining serious injuries. The wire had been stretched about 30 m, two power poles broke off and another two were pulled out of the ground. The helicopter was destroyed (Figure 1).

The line workers called emergency services using a satellite phone, and remained with the pilot until police and paramedics arrived at about 1700.

Figure 1: Accident site showing damage to VH-HRL



Source: Queensland Police

Accident site

The helicopter struck the powerline in a clearing, mid-span between two power poles about 250 to 300 m apart. The helicopter was travelling across the direction of the powerline.

An aircraft warning marker may be installed on an overhead cable or its supporting structures to warn pilots of their presence. The powerline struck in this incident was not, and was not required to be, marked with aircraft warning markers according to the relevant Australian Standard (AS3891.1).

Based on the forward speed indicated by the distance of the wreckage from the wires, and the marks left in the ground by the helicopter main rotor blades, the helicopter engine was probably producing power at the time it struck the wire.

ATSB comment

Due to the injuries sustained in the accident, the pilot was unable to recall the event or provide any comments for the investigation.

Safety message

Low-level flight carries an increased risk of striking hazards, such as powerlines, many of which are difficult to see in flight. The ability of pilots to detect powerlines depends on many factors, including the physical characteristics of the powerline (such as the spacing of power poles and the orientation of the wire), prevailing weather and light conditions, and the nature of surrounding terrain and vegetation.

General details

Occurrence details

| | | |
|--------------------------|-----------------------------------------------|--------------------------|
| Date and time: | 27 July 206 – 1002 EST | |
| Occurrence category: | Accident | |
| Primary occurrence type: | Operational – Terrain Collisions – Wirestrike | |
| Location: | 63 km W of Blackall Airport, Queensland | |
| | Latitude: 24° 28.57' S | Longitude: 144° 48.57' E |

Helicopter details

| | | |
|-------------------------|---------------------------------|----------------|
| Manufacturer and model: | Robinson Helicopter Company R22 | |
| Registration: | VH-HRL | |
| Serial number: | 3490 | |
| Type of operation: | Aerial Work – Test & Ferry | |
| Persons on board: | Crew – 1 | Passengers – 0 |
| Injuries: | Crew – 1 (Serious) | Passengers – 0 |
| Aircraft 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 operations involving the travelling public.

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.