## **Aviation Safety Investigation Report 198800136**

**Robinson R22** 

**6 October 1988** 

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NOTE: All air safety occurrences reported to the ATSB are categorised and recorded. For a detailed explanation on Category definitions please refer to the ATSB website at www.atsb.gov.au.

Occurrence Number: 198800136 Occurrence Type: Accident

**Location:** Flora Valley Station WA

**Date:** 6 October 1988 **Time:** 705

**Highest Injury Level:** Minor

**Injuries:** 

	Fatal	Serious	Minor	None
Crew	0	0	0	0
Ground	0	0	0	-
Passenger	0	0	0	0
Total	0	0	1	0

**Aircraft Details:** Robinson R22

**Registration:** VH-JVB **Serial Number:** 106

**Operation Type:** Aerial Work **Damage Level:** Substantial

**Departure Point:** Flora Valley Station WA

**Departure Time:** 0705

**Destination:** Flora Valley Station WA

**Approved for Release:** 31st August 1989

## **Circumstances:**

The pilot noticed what sounded like a slight misfiring noise coming from the engine after start up, however, all other indications, including a magneto check, were normal. The pilot flew the aircraft to a one metre hover, carried out a power and handling check, which was normal, and entered translational flight for a DEPARTURE from the heli-pad. Shortly after entering translational flight the aircraft began to descend. The pilot opened the throttle and raised the collective lever, however, this did not correct the descent. The pilot observed that both engine and rotor rpm were decreasing. At this point the aircraft was approaching a one metre high post and wire fence and the pilot assessed that the aircraft would clear the fence and touchdown in the open area on the other side of the fence. Both skids collided with the top of the fence causing the pilot to lose control of the helicopter which fell to the ground on the far side of the fence. A post accident engineering inspection disclosed that the movement of the exhaust valve in the No. 2 cylinder was restricted by a build up of carbon deposits. The top end of the engine had been overhauled, in Canada, 442 hours prior to the accident. It is likely that the sticking exhaust valve caused the loss of power reported by the pilot. Sticking valves is a known problem with the engine model fitted to the accident aircraft and the manufacturer, the Civil Aviation Authority and the operator had already taken action to correct it.

## **Significant Factors:**

The following factors were considered relevant to the development of the accident

- 1. A build up of carbon deposits on the exhaust valve in No. 2 cylinder caused restriction of the valve's movement and this in turn led to the loss of power reported by the pilot.
- 2. The pilot misjudged the height of the aircraft above the fence line during the emergency landing.