Aviation Safety Investigation Report 199000008

Bell Helicopter Co 206

7 June 1990

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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: 199000008 **Occurrence Type:** Accident
Location: 25 km SW Yulara NT
Date: 7 June 1990 **Time:** 850
Highest Injury Level: Nil
Injuries:

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

Aircraft Details: Bell Helicopter Co 206
Registration: VH-BKG
Serial Number: 3129
Operation Type: Aerial Work
Damage Level: Substantial
Departure Point: 25 km Sw Yulara NT
Departure Time: N/A
Destination: 25 km SW Yulara NT

Approved for Release: 17th June 1991

Circumstances:

The pilot was tasked to lift bundles of steel rods about 100 metres to the top of a small knoll. He briefed a fellow fixed wing pilot on hooking procedures and, as no lifting devices were available at Yalara, instructed him to wrap the load's chain twice around the hook to form a loop and prevent the load from slipping. The accident occurred on the second flight to the knoll. As the helicopter began to move forward, a partial power failure was experienced. The front of the load then dug into the ground and the rear swung up until it struck the tail rotor. The helicopter began to rotate to the left followed by a left roll. The pilot rapidly applied full right cyclic to level the helicopter before it struck the ground. During the sequence, the pilot attempted to release the load three or four times using the electric release button. He then reached for the manual release handle but was unable to operate it before the helicopter struck the ground. The helicopter had a history of recent, unreported engine chip detector warning light illuminations which included at least one precautionary landing. It also had a history of high engine oil consumption which was supported by the high level of sooting on the exhaust stacks. The absence of engine oil in the oil tank and the pilot's reported grinding feeling through the airframe indicate a malfunction with the engine. A specific reason for the power failure could not be determined, although the fuel system was found to be in a very poor condition and a section of the drive spline for the power turbine governor was missing.

Significant Factors:

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

1. The helicopter had a history of unreported engine chip detector light warnings and high engine oil consumption.

2. The pilot was tasked to conduct a hook operation without the correct equipment being supplied.

3. The helicopter suffered a partial power failure.

4. The load support chain jammed in the hook and the load could not be released.

5. The helicopter's tail rotor struck the load and the helicopter struck the ground heavily.