Aviation Safety Investigation Report 198800130

Hughes 269C

6 September 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: 198800130 **Occurrence Type:** Accident
Location: 100 km South East of Derby WA
Date: 6 September 1988 **Time:** 1150
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: Hughes 269C
Registration: VH-THY
Serial Number: 860525
Operation Type: Aerial Work
Damage Level: Substantial
Departure Point: Luilugi WA
Departure Time: 0630
Destination: Luilugi

Approved for Release: 14 February 1989

Circumstances:

The pilot was hovering the helicopter at about 60 feet above ground level and about 30 feet above a large tree, when the engine began to lose power and the aircraft commenced to vibrate. The pilot was unable to maintain height with the power that was available and he lowered the nose and flew clear of the tree. At this stage the rotor RPM began to decrease. The pilot selected the only clear area and attempted to land the aircraft. He used the collective pitch control in an attempt to cushion the landing but overpitched the main rotor blades at approximately 10 feet above the ground. The aircraft landed heavily, bounced forward 5 metres and collided with a large tree. The technical inspection revealed that the most probable cause for the loss of power was the breakdown in performance of the spark plugs of number 4 cylinder, due to a build-up of lead fouling. The reason for the fouling in this cylinder and not in the others was not determined. There is an inherent danger in stock mustering with helicopters in that there could be an engine failure or loss of power at a low altitude which will preclude an autorotational descent. On this occasion there was a narrow safety margin for the operation due to the ambient temperature and the aircraft weight, which meant that any loss of power required a forced landing.

Significant Factors:

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

1. Malfunction of spark plugs resulting from lead fouling.

2. Loss of engine power at a critical phase of flight.

3. The pilot was forced to land on unsuitable terrain.

4. Operational hazard - mustering operations at low altitude.