

**Aviation Safety Investigation Report
199800067**

**Hughes Helicopters
Hughes 500**

07 January 1998

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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: 199800067 **Occurrence Type:** Accident
Location: Ulan State Mines
State: NSW **Inv Category:** 4
Date: Wednesday 07 January 1998
Time: 1130 hours **Time Zone** ESuT
Highest Injury Level: Minor
Injuries:

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

Aircraft Manufacturer: Hughes Helicopters
Aircraft Model: 369D
Aircraft Registration: VH-HWD **Serial Number:** 110887D
Type of Operation: Commercial Construction Work
Damage to Aircraft: Substantial
Departure Point: Charm Haven NSW
Departure Time: 0615 ESuT
Destination: Ulan State Mine NSW

Crew Details:

Role	Class of Licence	Hours on	
		Type	Hours Total
Pilot-In-Command	Commercial	99.0	3000

Approved for Release: Tuesday, July 14, 1998

The MD500 helicopter was engaged in a sling operation to lift a powerline to the top of a transmission tower. The pilot was hovering the helicopter about 60 ft above the 30-ft tower, and had just passed the powerline to the linesman when the engine began to "spool down", resulting in a total loss of power. The pilot immediately banked the helicopter to the right to avoid personnel on and below the tower, and attempted a landing in light scrub. However, the helicopter came to rest on its right side, incurring substantial damage, and slightly injuring the pilot.

The maintenance investigation found that the engine fuel system was contaminated with water, discoloured fuel, and particle debris. After the engine fuel system was cleaned, the engine was successfully ground-run. The helicopter had spent 45 hours on firefighting duties in the 60 hours since the last maintenance inspection. During the firefighting operations, refuelling was routinely undertaken from an assortment of drum and mobile bowser fuel sources. "Hot" refuelling also accounted for a significant proportion of these refuelling operations. It is probable that the fuel system was contaminated during those refuelling operations.

SAFETY ACTION STATEMENT

As a result of this occurrence, the Bureau of Air Safety Investigation is currently analysing a possible safety deficiency. The deficiency identified involves the manufacturer-instigated modification of the fuel filtration system which removed the ability to do water/contamination tests at the engine driven fuel pump and filter assembly.

Any recommendation issued as a result of this analysis will be published in the Bureau's Quarterly Safety Deficiency Report.

