

**Aviation Safety Investigation Report  
199301404**

**Aerospatiale  
Squirrel**

**19 May 1993**

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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](http://www.atsb.gov.au).**

The Bureau did not conduct an on scene investigation of this occurrence. The information presented below was obtained from information supplied to the Bureau.

<b>Occurrence Number:</b> 199301404	<b>Occurrence Type:</b> Accident
<b>Location:</b> "Tin Hut" 27km NW Jindabyne	
<b>State:</b> NSW	<b>Inv Category:</b> 4
<b>Date:</b> Wednesday 19 May 1993	
<b>Time:</b> 0935 hours	<b>Time Zone:</b> EST
<b>Highest Injury Level:</b> None	

<b>Aircraft Manufacturer:</b> Aerospatiale	
<b>Aircraft Model:</b> AS.350D	
<b>Aircraft Registration:</b> VH-PTH	<b>Serial Number:</b> 1653
<b>Type of Operation:</b> Miscellaneous Other	
<b>Damage to Aircraft:</b> Substantial	
<b>Departure Point:</b> Waste Point, 7km N Jindabyne	
<b>Departure Time:</b> 0925 EST	
<b>Destination:</b> "Tin Hut", 27km NW Jindabyne	

**Approved for Release:** Wednesday, August 24, 1994

The helicopter departed Waste Point helipad at about 0925 to resupply huts with rations and fuel, and to undertake feral animal control. Apart from the cargo, a second crewmember and a passenger were carried.

The aircraft approached the first hut (Tin Hut) in clear sky conditions with nil wind. The pilot said he carried out an aerial inspection of the landing area before commencing a landing towards the north. As the aircraft turned onto final approach at an altitude of about 6000 feet, with speed reducing to 20 knots, the engine lost power and the main rotor RPM drooped below the green arc. With about 100 metres left to run to the landing area, and unable to increase engine power, the pilot attempted an autorotation approach. The helicopter landed heavily and bounced before the tail rotor struck the ground. At the time of the accident the aircraft was being flown at about maximum gross weight. Manufacturer information indicated that the aircraft should have been capable of hovering in ground effect with regard to the ambient altitude/temperature conditions.

The engine was subsequently removed from the aircraft and bench tested. No operational problems were revealed. The fuel control unit was then removed from the engine and tested. The test revealed that the fuel control unit had a slower than acceptable acceleration response time. This was due to contamination of the fuel control unit with what appeared to be sand. It is considered likely that in a marginal situation of high gross weight and altitude, any delay in fuel control response for increased engine power may have resulted in a considerable loss of height whilst the fuel control unit was responding to demand.

The reason why the fuel control unit was contaminated could not be positively determined. The fuel control filter was serviceable and should have prevented the passage of grit into the fuel control unit. However, prior to engine start with the aircraft boost pump operating, fuel from the aircraft fuel supply can bypass the fuel pump and filter. Such contamination of the fuel supply need only have happened once, leaving the fuel control unit contaminated in such a way as to only become apparent at some later stage when engine response was critical.