

**Aviation Safety Investigation Report
198902567**

Bell 206-B

3 July 1989

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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: 198902567
Location: 17km NE Sydney Airport NSW
Date: 3 July 1989
Highest Injury Level: Nil
Injuries:

Occurrence Type: Accident
Time: 1245

	Fatal	Serious	Minor	None
Crew	0	0	1	1
Ground	0	0	0	-
Passenger	0	0	0	2
Total	0	0	0	3

Aircraft Details: Bell 206-B
Registration: VH-PHX
Serial Number: 2814
Operation Type: Aerial Work
Damage Level: Substantial
Departure Point: Sydney Airport NSW
Departure Time: 1231
Destination: Sydney Airport NSW

Approved for Release: 2nd October 1989

Circumstances:

The helicopter had operated normally during the first flight of the day. After DEPARTURE on the second flight the aircraft overflow Pymont before heading east along Sydney Harbour. As it approached the Sydney Heads, at 500 feet above sea level, the engine failed. The pilot gave a mayday call and successfully ditched the helicopter some 500 metres from two Army landing craft. After landing in the water the helicopter rolled inverted and floated for about 10 minutes. The crew escaped from the aircraft and after spending five minutes in the water were picked up by the landing craft. Prior to leaving the water the pilot attached a line from the landing craft to the helicopter. The helicopter subsequently sank but remained attached to the line and was towed to Balmoral Beach. An inspection of the wreckage revealed that a material failure of the acceleration bellows in the engine fuel control unit had caused the engine failure. The reason for the material failure was not established. The component has been forwarded to the manufacturer for further examination.

Significant Factors:

1. Material failure of the acceleration bellows in the fuel control unit.
2. The helicopter was over unsuitable terrain at low level when the engine failure occurred.

Recommendaions:

The pilot stated that he had difficulty opening the front right door after the aircraft became inverted in the water. During the descent he had been fully occupied manipulating the controls and was unable to open the door. Similar aircraft operated by the Australian Army are fitted with a door jettison system. Due to the nature of police helicopter

operations it is recommended that the NSW Police Air Wing give consideration to the fitment of a door jettison system to their helicopters.