

AO-2012-016: VH-FUJ, Partial Power Loss

Date and time:	25 January 2012, 1600 EDT	
Location:	19 km 080 M Long Hill (ALA), Tasmania	
Occurrence category:	Accident	
Occurrence type:	Partial power loss	
Aircraft registration:	VH-FUJ	
Aircraft manufacturer and model:	Schweitzer Helicopter Company 300C	
Type of operation:	Aerial Work	
Persons on board:	Crew – 1	Passengers – Nil
Injuries:	Crew – Nil	Passengers – Nil
Damage to aircraft:	Serious	

FACTUAL INFORMATION

On 25 January 2012, at about 1600 Eastern Daylight-saving Time¹, a Schweizer helicopter company 300C helicopter (300C), registered VH-FUJ (FUJ), departed an agricultural property located near Scottsdale, for Devonport, Tasmania. The pilot was returning to his home base at the conclusion of the day's aerial spraying activities. The pilot was the only person on board the helicopter.

About 20 NM to the south-east of Devonport, while flying over heavily timbered country, the pilot noticed a bright flash on the ground to his left and commenced a left turn to investigate. The left turn was commenced at about 300 to 500 ft above ground level (AGL). Failing to identify the source of the flash, the pilot commenced a second left turn descending to about 100ft AGL.

Part way through the second turn the pilot heard what he described as "a loud groaning noise" accompanied by an unusual vibration. The pilot immediately lowered the collective, opened the throttle and pushed forward on the cyclic to increase airspeed to about 50 kts. However, the pilot was unable to arrest the descent and the helicopter impacted the tree canopy before coming to rest on the ground between several large trees (Figure 1).

The pilot was wearing a helicopter safety helmet and was uninjured. He immediately exited the helicopter and described seeing "steam or smoke" coming from the helicopter.

The pilot made his way to a small clearing and called his employer on a mobile phone to notify him of the accident. The pilot's employer arrived shortly after in another helicopter to pick him up. On becoming airborne in the second helicopter, the pilot noticed that the wreckage and surrounding bush were on fire and notified the local fire brigade (Figure 2).

The helicopter was seriously damaged by the fire and the cause of the partial power loss was not determined.

Figure 1: VH-FUJ



Image courtesy of the insurer

¹ Eastern Daylight-saving Time (EDT) was Coordinated Universal Time (UTC) + 11 hours.

Weather

The pilot reported the weather as clear and hot with a light wind from the north.

Pilot information

The pilot held a Commercial Pilot (Helicopter) Licence and a Private Pilot (Aeroplane) Licence with a total of 1013 hours total time on helicopters with 340 hours on the 300C.

Figure 2: Accident site



Image Courtesy of the Insurer

Pilot comment

The pilot reported impact damage to both sides of his helmet. The pilot stated that he was of the opinion that, "the helmet saved my life."

SAFETY MESSAGE

Helicopter safety helmets

This accident highlights the value of pilots wearing helicopter safety helmets.

A study conducted by the US Army concluded that head injuries occur in approximately 70 per cent of helicopter accidents and further that a pilot is six times more likely to suffer a fatal injury in an accident without a helmet². A helmet with the visor

down will significantly reduce facial and eye injuries resulting from secondary collisions³.

The Transportation Safety Board of Canada (TSB) advises that the effects of non-fatal head injuries can range from momentary confusion and inability to concentrate, to a full loss of consciousness. This effectively incapacitates a pilot and compromises a pilot's ability to quickly escape from a helicopter and assist passengers in an emergency evacuation⁴.

The following publications provide further information on Helicopter Safety Helmets:

- Helicopter Safety Helmets- A Hard S(h)ell;
www.tc.gc.ca/eng/civilaviation/publications/tp185-2-10-flightops-3719.htm
- Low Usage of Head Protection by Helicopter Pilots;
www.tc.gc.ca/eng/civilaviation/publications/tp185-2-10-flightops-3719.htm

² Injury in U.S Army Helicopter Crashes October 1979-September 1985 (1989) *The Journal of Trauma*, 29(4), 415-423

³ Helicopter Safety (1998) *Flight Safety Foundation* Vol 24

⁴ TSB Investigation A09A0016