

Surviving 'Engine Out' in a Helicopter

It's the scenario nobody likes to think will happen to them. But if it does, a clear head makes all the difference.

There was a spike in the number of helicopter power loss occurrences in the first quarter of 2017, with seven reported.

There wasn't a common thread found across the occurrences, but we saw the jump in numbers as an opportunity to describe the experience of one of those seven pilots whose power suddenly failed.

Founder of Alpine Springs Helicopters, Bill Hales – a pilot with more than 40 years experience – found himself facing an emergency landing when his Hughes 500 suddenly lost power during a hunting flight at Graf Creek in the Southern Alps.

"We were on a normal cruise around the bush edge when I heard an abnormal noise, which was the 'engine out' warning. I remember having another look at the dash, and it

took a split second to work out we really were losing the engine," said Bill.

It's moments like these that truly test a pilot, and Bill attributes his rapid response to both instinct, and training.

"Quickly establishing what had gone wrong was the key to it. As soon as I saw the engine out light and the rotor RPM dropping, I put the collective lever through the floor and was trying to get it away from the hill."

In the twenty seconds it took to bring the helicopter down, Bill had the presence of mind to activate the ELT beacon.

"As we were going down, I had the thought that this was going to hurt. It's good to know where the ELT button is, because if we'd been injured we at least knew we had turned the beacon on," he said.



This wasn't the first time Bill had experienced a major mechanical failure mid-flight.

"Two years ago we had a brand new transmission blow to pieces, and the steps were the same. We identified what went wrong, but in the case of a transmission failure you don't put the lever to the bottom. We flew the aircraft to the ground, having found a road to land it on."

Back to Graf Creek, and he was looking for a place to set down.

"They say people should be doing a lot of things during an autorotation, but my head was out the door trying to figure out where to put the aircraft. I never had time to get up to 60 knots, but I slammed the lever down and kept what airspeed I had."

He emphasised that there was no panic in the cabin. Bill simply advised his passenger, shooter Mickey Broadhurst, that the aircraft was coming down, before setting to work.

"The words of veteran Hughes 500 pilot Mel Cain were going through my head. He said that if you were ever going to put it down in a difficult spot, make sure you don't have any forward speed.

"We were lucky as we skimmed the moss off the top of a big rock on the way in and landed slightly forward on rough scrubby ground with another big rock under the belly. It sat there, without ever putting a mark on the machine. We landed so gently, you wouldn't have spilled a glass of water in your hand," he said.

"All the systems worked, the ELT was going, we put her down and we activated Spidertracks. The rescue helicopter was on its way; everything was on the move within ten minutes of landing."

A clear head, good experience, and good training saw a positive outcome.

"The big thing was not panicking. The key was to 'fly the bloody aircraft'. Even without an engine you can still fly it," said Bill.

After a fractured P3 air pressure signal line was replaced the following day, the 500 was fit to fly again and Bill returned to work.

"There were no great heroes out of this, it was just a good outcome from a bad spot." ■

Introducing Anna Adams

This public law specialist has joined the five-member Board of the CAA.

Anna Adams brings 20 years of health and safety, law of government, regulatory, and governance expertise to the CAA.

As a lawyer, Anna has represented both regulators and the communities they regulate, including in reviews and inquiries, prosecutions, and in policy development.

"I've also worked extensively with the health sector, which has quite a technical professional aspect to it. Both the aviation and health sectors are very safety-focussed and are heavily regulated.

"It's helped me as a lawyer to witness the 'coalface' impact of public health and safety initiatives, for instance, in public hospitals. I hope that experience will be helpful to the CAA Board as it develops strategies to enable the good functioning of the civil aviation system."

Chairing the board of Meredith Connell, an Auckland firm of 140 lawyers, whet Anna's appetite for work in governance.

"Just over half of the lawyers at Meredith Connell are women, and about a quarter of those are partners. I was interested in getting involved in governance in the public sector, partly to promote gender diversity. I have found it promotes a better exchange of ideas around the board table."

Anna sees the challenges currently facing the CAA as often involving a balancing act, ensuring public safety while not being any form of handbrake on innovation.

"The CAA is also having to weigh the needs of traditional aviation participants, and the needs of its rapidly growing non-traditional constituency of drone users."

"Dealing with risks of terrorism in aviation is another complex balancing act because it necessarily involves intrusion on people's freedom of movement, and economic productivity."

"So those are all challenges. But I think they're interesting challenges to have!" ■

