

# Helicopter Crash Resistant Fuel Systems

## BACKGROUND

ICAO has provisions for crash resistant fuel systems for all helicopter for which certification was applied for after 2007. Within the US, the FAA adopted helicopter fuel system crash resistant standards<sup>1</sup> in 1994. Yet over the ensuing quarter of a century, most newly built helicopters have not met these requirements given that the type certificates for the aircraft predate these requirements.

As an example of what can be achieved when a regulator recognizes the importance of mandating these critical safety modifications, the Australian Civil Aviation Safety Authority in 2013 required that all R44 helicopters in the country have a bladder fuel tank retrofit installed to improve fuel system crash resistance<sup>2</sup>.

The NTSB noted in a 2015 report that only about 15 percent of the helicopters in the United States have fuel systems that met the 1994 requirements. This follows NTSB investigations involving at least 135 helicopter crashes between 1994 and 2013 that involved fires. Those crashes claimed 221 lives. Only three helicopters met the fuel system requirements.

In a recent announcement<sup>3</sup>, the operator of the tour helicopter that crashed in the Grand Canyon announced that they will install crash resistant fuel systems in the remaining 40 aircraft of their 48-aircraft fleet.

In 2016 the NTSB<sup>4</sup>, responding to several accidents that were survivable but where the occupants perished in post-crash fires, recommended that variants of the AS350 and EC130 be retrofitted with crash-resistant fuel systems. The February 2018 crash of an EC130 in the Grand Canyon resulting in the deaths of five passengers and severe burns to the other two occupants, is evidence that such recommendations are not sufficiently being adhered to by industry.

## POSITION

IFALPA believes that all helicopter should have fuel systems that meet the highest standards for crash resistance. Reasonable timeframes must be established to move toward full implementation of crash resistant fuel systems to prevent further loss of life in otherwise survivable aircraft accidents/incidents.

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1 FAR 27.562 and FAR 29.562

2 CASA AD/R44/23

3 AIN Online, 'AIN, Papillion Ink Crash Resistant Fuel Tank Deal'

4 NTSB Safety Recommendation, 23rd July 2015