

HELICOPTERS

### No. 3281-S-28

# **SAFETY INFORMATION NOTICE**

#### SUBJECT: FUEL

AS350/H125/EC130 Crash Resistant Fuel System Retrofit Options and compliance with § 27.952

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For the attention of

AIRCRAFT CONCERNED	Version(s)		
	Civil	Military	
AS350	B, BA, B1, B2, B3, D		
EC130	B4, T2		

The aim of revision 2 of this Safety Information Notice is to communicate on the availability of updated configurations and extended applicability of the Airbus Helicopters Crash Resistant Fuel System (AH CRFS).

CS27.952 outline the latest requirements for Crash Resistant Fuel System (CRFS) applicable to newly certified helicopters. The requirements of § 27.952 are designed to increase the level of safety in the event of a survivable crash by either decreasing the likelihood or delaying the onset of post-crash fire. Features were added to minimize crash-induced fuel leaks and their contact with potential fuel ignition sources during and after the crash. They were also added to increase the time to egress before a post-crash fire becomes critical.

Airbus Helicopters has recently developed and certified:

- An update of the CRFS for AS350-B3e compliant with CS27.952 for cargo swing operations (previously only compliant for passenger transportation missions). This was mainly achieved through the reinforcement of the CRFS fuel plate. This new CRFS version will be systematically implemented on forward fit H125 and will be available for retrofit (by Service Bulletin) from Q4 2020.
- Extension of the AS350-B3e CRFS to the AS350 B3 version (as a retrofit solution) compliant with CS27.952 for both passenger transportation missions and cargo swing operations. This new CRFS version will be available for retrofit (by Service Bulletin) from Q4 2020.
- Extension of the CRFS for the EC130 B4 version (available as a retrofit solution since Q2 2020) compliant with CS27.952 for passenger transportation (no underbelly installations installed). Cargo swing operation remains allowed but compliance with CS27.952 has not been demonstrated when the cargo swing is installed.

These modifications are certified by EASA and FAA, compliance with other Airworthiness authorities needs to be checked by the operator.

The different existing configurations and the way to upgrade to the latest certified RRFT/CRFS\* configurations are highlighted on the following pages.

\* Rupture Resistant Fuel Tank (RRFT) means installation compliant with CS27.561 Crash Resistant Fuel System (CRFS) means installation compliant with CS27.561 & CS27.952

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#### AH Existing CRFS Configurations (as per SIN-3281-rev1):

The available retrofit modifications that were needed to obtain a CS27.952 compliant CRFS excluding cargo swing installation (cargo swing operation remains possible but not compliant with CRFS requirements) are listed below:

- Aircraft equipped with the conventional AH fuel system can be upgraded with an Airbus Helicopters Rupture Resistant Fuel Tank (RRFT) through Service Bulletin No. AS350-28-10-03 (R2).
- Aircraft currently equipped with the AH RRFT can be upgraded to a CRFS through Service Bulletin No. AS350-28.00.28-STC to obtain compliance with § 27.952 as per EASA STC ST7500 (without underbelly installations).

<u>Note</u>: Swing operation remains possible by validating STC 7501 (compliance with §27.952 no longer covered). These modifications will remain available until the upgraded CRFS configuration has been certified by all local authorities or upon specific request.

#### AH Upgraded CRFS Configuration (as per SIN-3281-rev2):

The available retrofit modifications that are needed to obtain a CS27.952 compliant CRFS including cargo swing installation\*\* (EASA certification obtained in December 2019) are listed below:

- Aircraft equipped with the conventional AH fuel system can be upgraded through Service Bulletin No. AS350-28-10-03 (R3 and further revisions) to obtain compliance with § 27.952 (including cargo swing installation\*\*).
- Aircraft currently equipped with an RRFT or CRFS certified as per EASA STC ST7500 or ST7501 can be upgraded through Service Bulletin No. AS350-28.00.49 to obtain compliance with § 27.952 for cargo swing installation\*\* (superseding STC7500/7501).

\*\* Airbus Helicopters CRFS Design is certified and compatible with cargo swing operation (System covered: AH Cargo swing with Onboard Hook: OP 3218 / For AH Cargo swing with SIREN hook: upgrade necessary through SB 25-00-87). Compatibility of underbelly STC installations needs to be checked by the operator with the STC holder. For information: Onboard is actively working to cover 27.952 on their STC SWING with a light installation update.

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#### AH Existing Retrofit Solution (as per SIN-3281-rev2):

The available retrofit modification to install the Airbus RRFT on the AS350 B3 is listed below:

- Aircraft equipped with the conventional AH fuel system can be upgraded to a Rupture Resistant Fuel Tank (RRFT) through Service Bulletin No. AS350-28-10-05 (R0).
- Compliance with §27.952 is not covered (STC ST7500 not applicable to AS350 B3).
- It is possible to upgrade in a second step from the RRFT to a fully compliant CRFS (see below).

This modification will remain available until the upgraded CRFS configuration has been certified by all local authorities or upon specific request.

#### AH CRFS Upgraded Retrofit Configuration (as per SIN-3281-rev2):

The available retrofit modifications that are needed to obtain a CS27.952 compliant CRFS including cargo swing installation\*\* (EASA certification obtained in December 2019) are listed below:

- Aircraft equipped with a conventional AH fuel system can be upgraded through Service Bulletin No. AS350-28-10-05 (R1 and further revisions) to obtain full compliance with § 27.952 (including cargo swing installation\*\*).
- Aircraft equipped with an AH RRFT can be upgraded through Service Bulletin No. AS350-28.00.49 to obtain full compliance with § 27.952 including cargo swing installation\*\*.

\*\* Airbus Helicopters CRFS Design is certified and compatible with cargo swing operation (System covered: AH Cargo swing with Onboard Hook: OP 3218 / For AH Cargo swing with SIREN hook: upgrade necessary through SB 25-00-87). Compatibility of underbelly STC installations needs to be checked by the operator with the STC holder. For information: Onboard is actively working to cover 27.952 on their STC SWING with a light installation update.

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#### AH CRFS Transport Mission retrofit configuration (as per SIN-3281-rev2):

The available retrofit modifications to install the Airbus RRFT (without cargo swing capability) on the EC130-B4 and the method to achieve CS27.952 compliance with CRFS requirements excluding underbelly installations (EASA certification obtained in January 2020) are listed below:

- Aircraft equipped with a conventional AH fuel system can be upgraded to an AH RRFT through Service Bulletin No. EC130-28-10-06 (R0). This modification (available since Q2 2020) does not allow cargo swing operations as the related cradles do not have any provisions for the installation of the cargo swing.
- Aircraft equipped with the AH RRFT can be upgraded to a CRFS through Service Bulletin No. EC130-28-009-STC to obtain compliance with § 27.952 as per EASA STC ST7500 R1 (without underbelly installations).

#### AH CRFS Aerial work retrofit (as per SIN-3281-rev2):

The available retrofit modifications to install the Airbus RRFT (with cargo swing capability) and the method to achieve CS27.952 compliance with CRFS requirements excluding cargo swing installation (cargo swing operation remains possible but not compliant with CRFS requirements) (EASA certification obtained in January 2020) are listed below:

- Aircraft equipped with a conventional AH fuel system can be upgraded to the AH RRFT through Service Bulletin No. EC130-28-10-06 (R1 and further revisions). This modification (available from Q1 2021) includes cradles with provisions to install the cargo swing.
- Aircraft equipped with the AH RRFT can be upgraded through Service Bulletin No. EC130-28-009-STC to obtain compliance with § 27.952 as per EASA STC ST7500 (without underbelly installations).

Note: Swing operation remains possible by validating STC 7501 (compliance with §27.952 no longer covered).

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As a gesture of our commitment to continuous safety improvement, Airbus Helicopters is offering its CRFS retrofit kit at specific commercial conditions. To order an Airbus Helicopters CRFS kit, please contact your Airbus Helicopters customer interface.

Airbus Helicopters strongly recommends that operators retrofit their helicopters with a CRFS and in general with any other equipment enabling the enhancement of the safety and reliability of the fleet.

For more information on AH CRFS or the requirements outlined in <u>§ 27.952</u>, you can contact Airbus Helicopters at the following e-mail address: <u>airbus-helicopters.technical-support.ah@airbus.com</u> In the USA, you can contact Airbus Helicopters Inc. (Jason Spade) at the following e-mail address: <u>Jason.spade@airbus.com</u>

#### Alternative CRFS solutions for AS350 B, B1, D, BA, B2, B3, H125 (B3e), EC130 B4:

Besides the Airbus Helicopter CRFS, Standard Aero has also developed a § 27.952 compliant Crash Resistant Fuel Tank (CRFT) retrofit solution for the AS350 B, B1, D, BA, B2, B3, H125 (B3e), EC130 B4 and thus also covers versions prior to the AS350 B3 and EC130 B4.

To order a StandardAero kit, please contact Standard Aero at +1-604-514-5285 or Carl Hessberger at <u>Carl.Hessberger@vectoraerospace.com</u> or Website direct link: <u>http://standardaero.com/CustomSolutions/CrashResistantFuelTank.aspx</u>

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#### SUMMARY BY AIRCRAFT CONFIGURATION & RELATED MISSION CAPABILITIES

A summary of the AH RRFT/CRFS retrofit options and their compliance with § 27.952 for the AS350 B3 / B3e variants and the EC130 B4 is provided below.

Model	Related Missions	CRFS Retrofit Solution (AH Service Bulletin)	AH MOD to be embodied
H125 (B3e)	CRFS kit certified without underbelly installations (by STC) / RRFT kit for cargo swing operation*	AS350-28-10-03 (R2) + AS350-28-00-28-STC*	07-4605 + 07-4791 (prior) + ECST7500 & 7501
	Upgrade of CRFS (certified without under belly installations) to also cover compliance for missions with Cargo Swing installed**	AS350-28.00.49 (R0) (from Q4 2020)	07-20034
	CRFS kit including Cargo Swing installation Certification**	Airbus Helicopters Service Bulletin AS350-28-10-03 (R3 and further revisions) (from Q4 2020)	07-4605 + 07-4791 + 07-20034
AS350 B3	RRFT without compliance with §27.952	Airbus Helicopters Service Bulletin AS350-28-10-05 (R0) (from Q1 2020)	ECMC 8019
	Upgrade of CRFS (certified without under belly installations) to also cover compliance for missions with Cargo Swing installed**	Airbus Helicopters Service Bulletin AS350-28-00-49 (from Q4 2020)	07-20034
	CRFS kit including Cargo Swing installation Certification**	Airbus Helicopters Service Bulletin AS350-28-10-05 (R1 and further revisions) (from Q4 2020)	ECMC 8019 + 07-20034
EC130 B4	CRFS certified without Cargo Swing/underbelly installation capabilities*	Airbus Helicopters Service Bulletin EC130-28-10-06 (R0) + EC130-28-009-STC * (from Q2 2020)	ECMC8020 (Prior) + ECST7500 & 7501
	CRFS certified without underbelly installations, but with cargo swing capabilities / RRFT kit for cargo swing operation*	Airbus Helicopters Service Bulletin EC130-28-10-06 (R1 and upper) + EC130-28-009-STC* (from Q1 2021)	ECMC8020 & 8023 (Prior) + ECST7500 & 7501

\*As per EASA STC ST7500, the fuel system complies with § 27.952 as long as the aircraft is not equipped with installations that have not yet been demonstrated to be compatible with the CRFS such as a ferry flight tank, cargo sling or cargo swing. When capabilities are installed on aircraft, underbelly installation is possible applying STC7501, the fuel system compliance with §27.952 has not been demonstrated.

\*\* Airbus Helicopters CRFS Design is certified and compatible with cargo swing operation (System covered: AH Cargo swing with Onboard Hook: OP 3218 / For AH Cargo swing with SIREN hook: upgrade necessary through SB 25-00-87). Compatibility of underbelly STC installations needs to be checked by the operator with the STC holder. For information: Onboard is actively working to cover 27.952 on their STC SWING with light installation update.

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