

Helicopter off-shore operations - new flotation systems (FS)



Contractor

DART Aerospace

Consortium Members

None

Contract period

25/06/2020 - 24/12/2023

Budget

1 475 000 €

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Main objectives

The main objective of this research study was to assess the feasibility of the introduction of an air pocket scheme utilising flotation units mounted high up on the helicopter fuselage. It had to provide confidence and evidence that proposed solutions were technically feasible and cost-effective without introducing undue disbenefits. These being essential aspects for EASA to make an informed decisions as to whether a regulatory action and safety promotion actions are justified and proportionate.

The following technical aspects had been identified for investigations:

- Inadvertent deployment in flight of the high-mounted inflatable flotation units, this may present a significant flight safety risk due to the potential for interference with the main rotor;
- Potential degradation of high-mounted stowed inflatable flotation units, due to impingement of hot engine exhaust gases;
- The possible requirement for external fuselage fairings to accommodate the stowage of additional high-mounted flotation units, potentially leading to adverse aerodynamic effects;
- The avoidance of damage to high-mounted inflating/inflated flotation unit(s), due to debris generated by break-up of the main rotor on contact with the water;
- The overall integration issues, caused by the required high-mounted flotation unit(s) interfering with other aspects of the helicopter design, e.g., maintenance accessibility and emergency exit availability (afloat, both upright and capsized).

Impacts & benefits

The results of this project will be used to continue the rulemaking task [RMT.0120](#) pending the positive outcome of a preliminary benefit analysis.

Furthermore, also an update of the Commission Regulation (EU) 2015/640 [Part-26](#) as well as an update of the Special Conditions for vertical take-off and landing and the means of compliance ([SC VTOL MOC](#)) are considered.

