Stakeholder Advisory Body

SAB Champion subcommittee report (Ver 2)

SAB Plenary Meeting: SAB17 (2022-3)
SAB TEC/COM name: R.COM
Details/date of last subcommittee meeting:
1. R-COM Plenary 22-23/06/2022

Issues identified for the attention of the SAB Plenary

1. Agenda Items of the last RCOM:
    - Regulatory update AIRCREW (Learning objectives and language issues in current approach to ground school testing for CPL (H), tests in national languges)
    - Certification & airworthiness (most notable NPA 2022-10, see below)
    - HTAWS (terrain and obstacle data), analysis to be performed to add obstacle data down to 100ft AGL
    - Regulatory update AIR OPS (numerous smaller changes, e.g. inclusion of piston engine to perform CAT.POL.H.305 operations)
    - Safety data (ESAG-R), focus on obstacles clearance during final approach and take-off
    - Safety Promotion (ESPN-R initiative in coordination with global efforts done under VAST, e.g. Safety Rating Scheme)
2. Overload of the industry due to too high rate of change. We would like to point out again that the current rate of regulation is too high and in many cases not adapted to the majority of the rotorcraft industry. One example is psychological testing. This requirement has only been partially implemented across Europe with some operators only now thinking about how to best address these requirements. Even if the entry into force is published and some text has been written in the manuals, this does not mean that it has been implemented. EASA should focus on implementing regulation rather than publishing new regulation. This leads to an ever-increasing gap between work as imagined and work as being done.
3. Regulatory framework in many European countries prohibit the best use of the helicopter. The helicopter is an ideal tool to operate in three dimensions with the capability to operate and land anywhere. These capabilities have the potential to serve communities, provide efficient transport and crane capabilities. However, there are several European countries that prohibit off-airport landings as well as providing services below minimum safe altitude. Such regulations basically eliminate any advantages the helicopter has to offer.

Issues identified for the attention of other TECs and COMs

1. NPA 2022-10: Crash-Resistant Fuel Systems (CRFS)
   The objective of this Notice of Proposed Amendment (NPA) is to mitigate the risks linked to a post-crash fire involving a rotorcraft. This NPA proposes to mandate the installation of a crash-resistant fuel system (CRFS) onto existing rotorcraft designs that are still in production and the retrofit of existing rotorcraft that are operated in the EASA Member States.
   Several accident investigation boards put forward safety recommendations (SRs) on the lack of CRFSs for rotorcraft that had been certified before the significant improvements of the rules for fuel system crash resistance were introduced in the 1990s. The proposed amendments are expected to increase safety and improve the survivability of rotorcraft occupants by significantly reducing the likelihood of a post-crash fire.
   The NPA requires the installation of crash resistant fuel systems the latest in 2038. EASA lines out 6 options.

TABLE 5 – PROPOSED OPTIONS FOR RMT.0710 PHASE 1 THAT ADDRESSES THE CRFS

Option No	*Short title*	*Description*	Affected fleet
0	No change	No changes in occupant protection for new and existing rotorcraft	38 types/ 2 327 rotorcraft
1	Minimal changes to introduce retroactive CRFS requirements for newly manufactured rotorcraft as of 2025	Amend Part/CS-26 to require compliance with the minimum CFRS requirements for newly manufactured aircraft that are operated or registered in Europe	14 types/ 1 191 rotorcraft
2	Option 1 plus: as of 2030, retroactive CRFS requirements for existing EU-registered rotorcraft that were type-certified in or after 1978	Amend Part/CS-26 to require compliance with the minimum CRFS requirements for newly manufactured rotorcraft and existing rotorcraft that are certified in or after 1978	18 types/ 1 310 rotorcraft (incl. Option 1)
3	Option 1 plus: as of 2030, retroactive application of CRFS requirements to the whole existing EU rotorcraft fleet	Amend Part/CS-26 to require compliance with the minimum CRFS requirements for newly manufactured rotorcraft and the whole existing rotorcraft fleet	24 types/ 2 443 rotorcraft (incl. Option 1)
4	Option 1 plus: as of 2030, retroactive application of CRFS requirements to the existing fleet of rotorcraft with five or more seats	Amend Part/CS-26 to require compliance with the minimum CRFS requirements for newly manufactured rotorcraft and the existing rotorcraft with five or more seats	22 types/ 2 128 rotorcraft (incl. Option 1)
5	Option 1 plus: as of 2038, retroactive application of CRFS requirements to the whole existing EU rotorcraft fleet	Amend Part/CS-26 to require compliance with the minimum CRFS requirements for newly manufactured rotorcraft and the whole existing rotorcraft fleet	24 types/ 1 851 rotorcraft (incl. Option 1)

The industry expects that about 2000 aircraft will be affected. Given the long use of helicopters we can assume that operators will continue to use helicopters that do not have a CRF system installed. There are many arguments to be made against such a rule. Below is an economic argument.

The implementation of this regulation has the potential to kill small to medium size operators. The reason being that on the one hand, operators will not install a system that costs about 100'000 EUR. An operator with a revenue margin of 5% would have to generate 2'200'000 EUR more revenues over a period 5-8 years to compensate the investment. This is unrealistic.

On the other hand, the book and resale value of the helicopter drops significantly as it can no longer be sold freely in the market. This will lead to significant corrections in the balance sheet of operators, forcing them to take losses on their books. This cannot be mitigated. The losses must be taken by the industry. If we calculate a reduction in resale value of about 150'000 to 200'000 EUR per aircraft we are looking at write-offs (2'000 aircraft) on the scale of 300 to 400 Mio EUR.

The OEM and the operators do not have a unified position on this. Also, it is very hard to argue against the safety of crew and passengers. However, the consequences of this NPA are extreme for the industry and must be addressed. Below I copy in some comments that we received. While not all operators will share these views, it is clear that majority of small

to medium size operators (70% of the industry) would subscribe to the points below. Some parts were deleted because they did not relate to CRF systems.

"On one side, there is not too much doubt, that crash resistant fuel systems will save lives. Therefore, the implementation of this systems, also into existing helicopters would be a good thing.

One of other side, and this is the crux behind everything we do, we have no clue in EASA land where the risks of helicopter operation really are. We do not have any usable accident statistic in the form that we know, the type of accidents per flight hour. We only have absolute numbers of accidents (…).If we do not know, on which knob we turn with a regulation and how much impact it might have, we have a fundamental problem to judge for the regulation, to prioritize important regulations against nice to have (…) regulations. The problem becomes worse after the implementation of regulation as we are blind afterwards, we are never able to judge whether a regulation really helped to increase safety or not, because no statistics will tell us. That's IFR flying without proper instrumentation. Nevertheless, it is how we build up the complete bunch of overregulation and administrative burden and an end is not in sight (…).

The third point, also from the other side is, that EASA tries to heal a problem, that EASA itself caused and still makes it worse. Since the last century, crash resistant tanks are mandatory for helicopters. The EC120 certified in 1997 already has crashworthy tanks. The problem that the authorities create are the fact that with overregulation and administrative burden also in the development process the development in helicopters and especially light helicopters comes slowly to a complete stop. We still fly around with helicopter models originating from 1977 and 1982 to name two of the best sold models. Heliswiss just bought a 60-year-old Vertol to replace its KA 32 for heavier sling load operations. This might be an extreme case, but it shows that we have a problem (…).
This is not new; we face it since years it is not the only but one point that in helicopter world innovation is rare. With the MDR to take another example of crazy EU overregulation we see the dying of innovation and companies executed even faster. MDR proofs in a faster industry, in shorter time, that regulations bring innovation and new developments to zero if they are implemented without common sense. And common sense is definitively not one of the strengths I can find in EASA regulations. In this aspect, the difference between an enthusiastic and fast proceeding when it comes to eVTOL and drones versus the painful proceeding in the case of helicopters is additionally annoying.

And what do the three above mentioned points have to do with the implementation of crashworthy tanks on existing helicopters?
We try to implement again something that looks politically good, we try to implement in this seldom case something that is also technically good. But we do not have any idea whether it will bring safety forward. We have not even tried to solve the underlying problem. The problems which are (among) others the completely overaged fleets (which are modern in EASA land, compared with USA) due to overregulation, the overregulation in areas where it does not help to bring safety forward. We do not even have a plan to bring back the helicopter world into a functional form. We want to make better regulations but at least I do not feel something that leads in that direction. Implementation of crashworthy tanks on the existing helicopter fleet is another step where nobody at the end can prove a positive or negative effect because there is no measurement available. A step that will cost some operators quite a lot of money and resources to be fulfilled.

The actual discussion emerged first from FAA. In FAA it was not only about crashworthy tanks it was also about emergency landing certification from 1989. This certification mainly influences the helicopter seats. If we start to change fuel tanks in existing helicopters, we will also need to think about the implementation of the emergency landing requirements in existing helicopters. It does not improve the situation for the pilot if the dead body through high impact loads looks fully intact, because no post-crash fire developed. The problem with this regulation is, that it is very hard to be implemented in all helicopters where the seat structure is part of the fuselage."

Summary of group response to requests for AB Consultations

1. The R.COM has responded to all consultations sent to it.

Next meeting: 20./21.6. at ADAC Academy in Munich