European Union Aviation Safety Agency

DOA Capabilities (technical fields)

My company is involved in software / complex electronic hardware installation. What are the expectations of the Agency in this field of expertise?

Answer

Design Organisations involved in the certification of products integrating Software (SW) or Airborne Electronic Hardware (AEH) must have competence on how compliance will be demonstrated to applicable requirements (CS XX.1301 and CS XX.1309), taking into account the related AMC (AMC 20-1, AMC 20-3 and AMC 20-115) and international standards (Eurocae ED-12, ED-80). A key aspect to be considered is the classification of the failure condition associated to the function installed, the so-called DAL (Design Assurance Level).

When an equipment has its own approval (e.g. ETSOA or equivalent national equipment approval), this may be used to demonstrate compliance with some requirements of the established certification basis, particularly for those requirements and for those functions which are covered by the equipment approval standard. However, appropriate demonstration and verification of compliance with regards to aspects of the installation of the equipment must be provided by the DOA holder (in line with AMC xx.1309 aspects related to “Highly Integrated Systems” and applicable references). Note that the outcome of this activity is directly dependent on the classification of the failure condition associated to the malfunction of the function(s) ensured by the equipment [DAL].

If installation is requesting additional requirements (CS-xx, CRIs, etc.), and unless the latter have been as well covered by the applicant in the demonstration of compliance to ETSO standards, the compliance to these additional requirements/functions has to be assessed by the DOA holder. Hence the DOA holder should have access to the DDP and, when required, also to corresponding SW/AEH documentation (e.g. PSAC/PHAC, SAS/HAS, SCI/HCI). This SW/AEH documentation ensures to the DOA holder the DALs, the compliance of development process to SW and AEH standards, and provide information on SW/AEH and equipment Part Numbers, ETSO compliance, etc.

Please also check out the presentation on Investigation and Surveillance of Organisations performing Software and Airborne Electronic Hardware activities published as best practices on the EASA website.

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Link:

https://www.easa.europa.eu/hr/faq/20162

What are the expectations of the Agency in respect to environmental protection (EP) competences within a design organisation?

Answer

DOA holders should have knowledge of the EASA EP certification specifications (ICAO Annex 16 Volumes I and II, CS-36 and CS-34) and the associated GM and AMC (Appendix A to GM 21.A.91 section 8 and the ICAO Environmental Technical Manual) applicable to the scope of their DOA.

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Can a DOA Holder issue a compilation of EASA approved revisions to the Airworthiness Limitations Section (ALS) of the Instructions for Continued Airworthiness (ICA)?

Answer

Already approved temporary revisions to the ALS of the ICA can be compiled as a new revision and released by one DOA Holder under privilege 21.A.263(c)(3) provided the following conditions are met:

- the new ALS revision must consist only in compiling already EASA approved data (temporary revisions or any other means proposed to update the ALS);
- the revision must include clear information about the EASA approval of the technical content of the ALS, with references to the relevant approval letters;
- the DOA approval statement of 21.A.263(c)(3) can be used but with explanations that it is only related to the compilation of previously EASA approved data, with no further technical change

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What scope of work / competences are needed for a DOA holder to approve external livery design changes (e.g. painting or adhesive films)?

Answer

Design changes introducing external livery modifications can be approved after compliance is demonstrated with requirements from a combination of disciplines such as Cabin Safety, Structures and Flight/Performance, depending on the type of aircraft, extension of the livery and the location. The effect on existing instructions for continued airworthiness must be also assessed.

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Can I, as DOA holder, approve a permanent minor repair design as a revision of the same repair dossier which was initially approved as a temporary minor repair solution?

Answer

A permanent minor repair design could be a revision of an initial temporary/time limited minor repair design, provided that the permanent repair would be similar to the temporary repair design. Aspects to be considered are:

- The classification of the permanent repair design shall not be different from the classification of the temporary repair.
- The limitations associated to the temporary repair design should be updated and/or removed through the permanent repair design.
- It shall be clearly marked on the design data whether it concerns the temporary repair design or the permanent repair design.
- Any additional compliance demonstration activities shall be added to the design data for the permanent repair design.
- New / updated repair instructions shall be issued for the permanent repair design.

- Documentary traceability of both the temporary repair design and the permanent repair design shall be kept and ensured.

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Can a DOA Holder replace pages of an approved Aircraft Flight Manual (AFM)? Which constraints should be kept in mind?

Answer

With new privilege 21.A.263(c)(4) published in Commission Regulation (EU) No 748/2012, DOA Holders can now approve revisions affecting the approved sections of the AFM. This privilege is not an EASA 'delegation', but a right given to DOA Holders. Consequently, the statement "EASA approved" traditionally shown on each page of the AFM shall be deleted or replace by a statement "Approved" in pages revised and approved by the DOA Holder. The AFM log of revisions shall indicate who has approved each revision, whether EASA or one DOA Holder. Supplements to the AFM proposed as part of an STC will remain EASA approved.

For non-TC holders, the publication of a revision to an AFM is only possible as a supplement.

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What are the expectations of the Agency in respect to DOA competencies and procedures in relation to the approval of changes to jet fuel specifications?

Answer

Particular DOA procedures/instructions as well as competencies to deal with jet fuel aspects at engine/aircraft level will have to be ensured by the DOA holder.

The EASA Certification Memorandum ref. EASA CM – PIFS – 009 is intended to present the EASA policy on approval of fit for purpose fuels by means of appropriate specification control bodies and the inclusion of these fuel specifications in the aircraft AFM/RFM limitations.

As part of the certification processes for aircraft, engines and auxiliary power units, applicants are required to establish the list of fuel grades and fuel specifications, including the fuel additives specifications, which are compatible and fit for purpose with their product. The list that specifies the approved fuels at product level is regarded as defining the Operating Limitations of that product.

For engines and APUs, the list of compatible fuel and fuel additives (especially mandatory additives) should be given in the instructions for installing the engine or APU (ref CS-E 20, CS-APU 20). At aircraft level, the fuel designations and fuel additives are recorded in the aircraft TCDS and in the AFM/RFM as a limitation.

Because the approved fuels and fuel additives are operating limitations, a change to an existing fuel specification and/or fuel additives leading to a change in the list of approved fuels and/or additive listed in the AFM or RFM, or the introduction of a new fuel specification and/or additive at product level, is a major design change to the type design.

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https://www.easa.europa.eu/hr/faq/20136