

Initial Airworthiness

Can manufacturers of raw materials obtain a Production Organisation Approval (POA) under Part 21 Subpart G?

Answer

Manufacturers of raw materials are not required to hold and cannot obtain a production approval. Only organisations responsible for the manufacturing and subsequent release of a 'product', 'parts' and 'non-installed equipment' as defined in the Basic Regulation Article 3 (3), (4), and (29) are required to hold a POA, if and as specified by Regulation (EU) No 748/2012, and are therefore eligible to apply for such an approval.

Last updated:

18/07/2019

Link:

https://www.easa.europa.eu/mt/faq/19007

How to use information and communication technologies for performing remote audits on to DOA, LoA/POA, AMO, CAMO, CAO and AMTO holders?

Answer

Please see FAQ published under Continuing Airworthiness.

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19/07/2020

Link:

https://www.easa.europa.eu/mt/faq/116562

How to remotely conduct in real-time tasks for the issuance of an 'EASA Form 1' for prototype and new produced parts, appliances, and products other than complete aircraft, using information and communication technologies (ICT)?

Answer

Objective of this FAQ:

This FAQ provides technical guidance on the use of remote ICT to support the issuance of 'EASA Form 1' for prototype and new produced parts, appliances and products other than complete aircraft. It is the responsibility of the production organisation to assess whether the use of remote ICT constitutes a suitable alternative to the physical inspection of the part, appliance or product in accordance with the applicable requirements. The production organisation intending to use the remote ICT for those purposes should first discuss its feasibility with the competent authority.

I. Terminology:

In the context of this FAQ the following terminology will be used:

- "Issue of an EASA Form 1" means "issue of an EASA Form 1" under Part-21, Subpart G by a certifying staff, "raise an EASA Form 1" under Part-21, Subpart F by an authorised person and "validation of an EASA Form 1" under Part-21, Subpart F by an inspector of the competent authority, except the cases of issuance of an EASA Form 1 for correction of error(s) on a previously issued certificate and for re-certification of an item from "prototype" to "new" provided that the design data has not changed;
- "Authorised staff" means "certifying staff" as defined in Part-21, Subpart G, "authorised person" and "competent authority inspector" as defined in Part-21, Subpart F;
- "Item" means any part, appliance or product other than a complete aircraft;
- "Applicable design data" means "non-approved design data" in case of prototype and "approved design data" in case of new produced item;
- "Task" means any inspection, test and/or verification, as described in a written procedure, needed to be performed by an authorised staff before signing an EASA Form 1;
- "Remote ICT" means any real-time video and audio communication tools using information and communication technologies (ICT), which aim at enabling performance of the tasks by the authorised staff from a location different than where is located the item (on-site).

II. Regulatory context:

According to:

- point 21.A.130(a), the holder of a letter of agreement issued in accordance with Part 21,
 Subpart F;
- point 21.A.130(d), the competent authority in the context of Part-21, Subpart F; and
- point 21.A.163(c), the holder of a production organisation approval (POA) in accordance with Part 21, Subpart G

may issue an EASA Form 1 for produced items in order to certify their conformity to the applicable design data and, in case of new items, their condition for safe operation.

The EASA Form 1 has to be issued by appropriately qualified authorised staff.

Part 21 does not require that the authorised staff has to be on-site when issuing the EASA Form 1, nor how the production organisation and the competent authority shall determine whether the part/appliance/product other than aircraft conforms to the applicable design data and, in case of a new item, is in condition for safe operation. These should be detailed in a written procedure accepted by the competent authority.

Part 21 requires:

- in point 21.A.130 (d) that the competent authority validates the EASA Form 1 after inspections performed in according to 21.B.135(b), "if it finds after inspection that the product, part or appliance conforms to the applicable design data and is in condition for safe operation"; and
- in point 21.A.165(c) that the POA holder has to:
 - 2. "determine that other products, parts or appliances are complete and conform to the approved design data and are in a condition for safe operation before issuing an EASA Form 1..."
 - 4. "determine that other products, parts or appliances conform to the applicable data before issuing an EASA Form 1...".

Typically compliance with these requirements is ensured through on-site presence of the authorised staff in order to guarantee appropriate access to the item, as needed.

However, compliance with these requirements may be also ensured in certain circumstances, determined as per the considerations described in chapter III, by remotely conducting the tasks which are needed before issuance of an EASA Form 1 by the use of remote ICT. The following considerations should be used as a guideline when the on-site presence of the authorised staff is to be replaced by virtual presence, using remote ICT.

III. Use of remote ICT to support the issuance of EASA Form 1

Remote ICT may have limitations that could render it unsuitable for some applications. Accordingly, careful consideration and risk management should be applied when making a determination when to use it. These considerations, listed below, are however not exhaustive and should not be treated as a checklist.

- 1. General considerations
- As an overarching principle, it needs to be determined whether the nature of the tasks to be performed by the authorised staff allows the use of remote ICT;
- the facility where the item is located:
- a) should be referred to in the EASA Form 65 or EASA Form 55, directly or indirectly by reference to the corresponding section of the manual or production organisation exposition, or

- b) in case of a POA, should be a facility from where a production organisation exposition's procedure related to point 21.A.139(b)1(xv) authorises the issuance of the EASA Form 1;
- The complexity, novelty, and safety criticality of the item to be released with the EASA Form 1, should be taken into account;
- The level of competence and experience of the personnel in the use of the particular procedures and equipment that will be used to conduct the tasks before issuing the EASA Form 1;
- Previous experience of the organisation / confidence in the organisation's Inspection system
 / Quality system / Management system; and
- The appropriateness of the inspection and test instruments and/or equipment, especially if used to evaluate qualitative aspects of a product, part or appliance.

2. Equipment and Setup Considerations

- The suitability of video resolution, fidelity and field of view for the task being conducted;
- The need for multiple cameras, imaging systems or microphones and whether the person performing or witnessing the tasks can switch between them or direct them to be switched and has the possibility to stop the process, ask a question, move equipment, etc.;
- The controllability of viewing direction, zoom and lighting;
- The appropriateness of audio fidelity for the evaluation being conducted;
- Whether real-time, uninterrupted communication between the person(s) authorised to remotely witness the activity (authorised staff) and the personnel conducting it exists at the location where the item is located;
- The need for unique testing devices or equipment (for examples, fast-frame cameras, special lighting conditions, sensitive listening devices, mobile phones with cameras for HD video calls);
- Whether personnel have been adequately trained in the proper set up, validation and use of the technology, tools and/or equipment to be used; and
- The need for recording the audio and video data, as well for retention of them or other information.

3. Cybersecurity considerations

There are cases where the facilities, where the tasks has to be performed, are subject to strict security limitations. When using remote ICT for the tasks needed before issuing an EASA Form 1, it is the responsibility of the organisation to provide an equivalent level of security, thus the IT security responsible person within the organisation should concur to the ICT technology before proceeding.

4. Documenting the use of remote ICT

The documented processes (procedures) developed by the holder of a letter of agreement or a POA should be accepted by the competent authority and describe:

- The risk assessment process needed to determine the appropriateness of the remote ICT taking into account the above mentioned considerations;
- The tasks to be performed, including preparation activities, inspections, tests, verifications to be done, personnel involved in the remote ICT activity and their level of competence;
- How authorised staff access to all necessary data (e.g. drawings, schematics, datasheets, etc.) needed to determine that the item conforms to the applicable design data, needs to be guaranteed;
- How remote ICT will be used in real-time (not pre-recorded) so that the authorised staff may
 direct the performance of the tasks as if conducted in-person, on-premises, with the aid of
 the equipment or the personnel supporting the activity at the remote location;
- Procedures for conducting a re-inspection if the equipment malfunctions or the process fails
 to yield acceptable results. A re-inspection using remote ICT may be accomplished after
 correcting the malfunction or process, or by an actual on-site inspection;
- How the authorised staff should record and communicate any difficulties or concerns regarding the process so that the organisation can improve its programme;
- How use of remote ICT will be documented in the required records; and
- How IT security is maintained throughout the remote ICT process (data protection and intellectual property of the organisations also need to be safeguarded).

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19/07/2020

Link:

https://www.easa.europa.eu/mt/fag/116563

EASA STC's being presented for approval when the pre-mod configuration is not EASA approved. What are EASA changes embedded in Non-EASA approved design?

Answer

Points 21.A.101 and 21.B.107 of Annex I of Regulation (EU) 748/2012 require that the changed product complies with the applicable certification basis. Therefore, the applicant needs to demonstrate that the change for which EASA has received an application is compliant with the EASA certification basis at a product level. It is not sufficient for the applicant to demonstrate compliance of the change at only change level.

The change, for which the applicant has requested EASA approval, must include all affected parts of the non-approved change that builds the interface to the EASA approved product and

all affected compliance demonstration (influences on the product and the non-approved interface change).

A limitation is likely to be necessary so that the STC cannot be installed on an EASA registered product as long as the interface change is not yet EASA approved.

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24/11/2021

Link:

https://www.easa.europa.eu/mt/faq/47411

Design Approval: FAA Supplementary Type Certificates (STC) approved by National Aviation Authorities (NAAs) before 28-09-03 are deemed to be approved by EASA. If the NAA has limited the approval in scope compared to the original FAA STC such that it does not cover all the models, how can we apply for an extension of the scope?

Answer

Any model, derivate or configuration not included within the 'Grandfathered' STC will need an approval by EASA or accepted through the provisions of the EU/US BASA (and TIP). The FAA would have to examine the differences between the FAA STC and the EASA/NAA STC and classify the modification as either 'Basic' or 'Non-Basic' in accordance with the TIP. 'Basic' modifications are accepted under the TIP and there would be no re-issue of an EASA STC. 'Non-Basic' modifications require an application to EASA, through the FAA. Minor modifications are also accepted through provisions of the BASA/TIP and no EASA approval is issued.

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https://www.easa.europa.eu/mt/faq/19009

According to point 21.A.95(c), minor changes to a type-certificate can be approved using Certifications Specifications which became applicable after those incorporated by reference in the type-certificate, provided that they do not affect the demonstration of compliance. Could you please clarify under which conditions the demonstration of compliance is not affected?

Answer

The 'demonstration of compliance' mentioned in point 21.A.95(c) is to be read as the 'demonstration of compliance' which the applicant would have performed in case 'the type certification basis and environmental protection requirements incorporated by references in the TC' are demonstrated compliant as required by point 21.A.95(b)(1).

If a later amendment of the CS is elected to be used as the certification basis for the minor change, the demonstration of compliance as per point 21.A.95(b)1 still needs to be covered.

This means that an analysis needs to be performed on the differences between the 'the type certification basis and environmental protection requirements incorporated by references in the TC' and the later amendment of the CS for the following items:

- Any applicable Special Condition needs to be covered appropriately;
- Any applicable Equivalent Level Of Safety needs to be covered appropriately;
- Any later CS paragraph needs to be applicable to the particular aircraft and compliance demonstration needs to feasible.

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Link:

https://www.easa.europa.eu/mt/faq/111630

Why and how must Parts and Appliances be marked, when are the letters EPA required, and which exceptions are acceptable?

Answer

To comply with EASA Part-21, Subpart D, 21.A.109, Subpart E, 21A.118A (b) and Subpart M, 21A.451(a) and (b), it is the obligation of the respective Holders of a Minor Change Approval, a STC, or a Major Repair Design Approval, to specify the required markings, including EPA letters as applicable, in their Design (read, 'Approved Data'), according EASA Part-21, Subpart Q.

Subpart Q, 21.A.804(a), and related GM, require proper identification of each Part and Appliance that is designed or redesigned, including parts designed to be incorporated in repairs (21A.451), by 'permanent and legible marking' hereof, and is applicable for Design Organisations and Manufacturers.

21.A.804(a) 1 and 2 clearly require marking of Parts and Appliances with 'name, trademark, or

symbol identifying the Manufacturer' and 'Part number', as defined in the applicable Design

According to the GM the Design Approval Holder shall identify in all its Design (TC, STC, ETSO, Repair, Change) approved after 28 December 2009, how the Manufacturer has to mark subject Parts and Appliances in accordance with 21A.804(a) 1; which can be limited to identifying a marking field and the method, without prescribing the actual text or symbols.

21.A.804(a) 3 requires additionally marking with the letters 'EPA' of all parts produced (manufactured) in accordance with data 'not belonging to the TC holder of the related product'.

Each interchangeable or removable Part or Appliance that is manufactured in accordance with a design issued by the Design Organisation, shall be permanently and legibly marked according to 21.A.804. The EPA marking was introduced in 2004; this was done to clearly identify any 'not original' Part, (which means any Part or Appliance not designed by the TC- or ETSO- Approval Holder), as a trigger for Maintenance Organisations and Accident or Incident investigators, in the light of Continuing Airworthiness. The intention was certainly not to require adding of the letters 'EPA' to mark repairs. In this context, EPA marking only applies to the new designed and manufactured parts to be incorporated in the repair. Especially where repairs have an impact on interchangeability, identification of incorporated new Parts is very important, and DO Procedures should address this item. Note that for parts referred to in 21.A.307(b), as amended with (EU)2021/699 (applicable from 18.05.2022), the EPA marking is not required as stated in 21.A.804(a)(3).

The only accepted exception with regard to Marking (including EPA), is defined in 21.A.804(b). This subparagraph offers the possibility to not physically mark the Part of Appliance, when it is too small or when marking hereof is otherwise impractical, but only after "Agency agreement". This wording allows an Applicant/Holder of a Design and the Agency to further define in detail how this 'agreement' can be obtained and will be formalised. DOATL should however ensure that the DOA Applicant/Holder reflects this approach in its DO Handbook or Procedures, requiring at least a justification of the reason for not marking physically, and details of the alternative way chosen for the identification, in accordance with 21A.804(b), to know on the authorised release document accompanying the Part or Appliance, or on its container.

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https://www.easa.europa.eu/mt/faq/20095

Should parts fabricated under a maintenance approval (Part 145) be marked

with an EPA (European Part Approval) marking in accordance with Part 21A.804(a)(3)?

Answer

A Part 145 approved organisation can only fabricate parts for its own use in accordance with approved design data (145.A.42(cb)(iii)). If that data comes from the Type Certificate holder; 21A.804(a)(3) would not be applicable and those parts will not need EPA marking. If the data comes from a Supplemental Type Certificate holder, minor change approval holder or repair approval holder, the parts will have to be marked as prescribed in the applicable data which should include an EPA marking since 28/3/2004 (*).

(*) – As from 18.09.2022, parts covered by 21.A.307(b) does need to be accompanied by an EASA Form 1 to be eligible for installation and therefore their manufacturers do not require to hold a POA or produce the parts under Subpart F of Part-21.

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Link:

https://www.easa.europa.eu/mt/faq/19010

How can I find one particular AMC-20 in the published AMC-20 amendments?

Answer

Since its amendment 18, all AMC-20 items are included in the latest published AMC-20 amendment.

In addition, Subpart B of AMC-20 includes a list of the different AMC-20 items and indication of which amendment of AMC-20 introduced or modified each AMC-20 item.

Please also consult the Easy Access Rules for AMC-20.

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Link:

https://www.easa.europa.eu/mt/faq/48205

Regulation (EU) 2021/699 introduced point 21.A.101(h) that refers, among others, to point 26.320 of Regulation (EU) 2015/640 but this point is not present in the said regulation. Could you please clarify? (IA)

Answer

Point 26.320 indeed does not exist. Point 21.A.101(h) will be corrected at the next opportunity to delete this reference.

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Link:

https://www.easa.europa.eu/mt/faq/127778

What is the mandate of the Agency for Environmental issues? What does the Agency concretely do?

Answer

The Agency's environmental mandate and standards are described in the smart environmental standards page.

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https://www.easa.europa.eu/mt/faq/19011

What is the definition of "Critical parts"?

Answer

The term "critical part" or "critical component" is used in various EASA requirements, certification specifications and also in the EU-US bilateral, however it is not always defined. A general definition does not exist because it depends upon the context in which the term is used.

There are currently basically three different definitions:

• for rotorcraft:

CS 27-29-VLR.602(a): A critical part is a part, the failure of which could have a catastrophic effect upon the rotorcraft, and for which critical characteristics have been identified which must be controlled to ensure the required level of integrity.

• for engines, propellers and APUs:

CS-E.510(c): It is recognised that the probability of Primary Failures of certain single elements cannot be sensibly estimated in numerical terms. If the Failure of such elements is likely to result in Hazardous Engine Effects, reliance must be placed on meeting the prescribed integrity specifications of CS-E 515 (Engine critical parts) in order to support the objective of an Extremely Remote probability of Failure (similar for CS-P.150(c) and CS-P.160 and also for CS-APU.210(c) and CS-APU.150)

in the EU-US bilateral:

A "Critical component" means a part identified as critical by the design approval holder during the product type validation process, or otherwise by the exporting authority. Typically, such components include parts for which a replacement time, inspection interval, or related procedure is specified in the Airworthiness Limitations section or certification maintenance requirements of the manufacturer's maintenance manual or Instructions for Continued Airworthiness.

Each of the above definitions should be used only within their own context and for their own purpose (i.e. the definition of the bilateral is only relevant for the automatic acceptance of PMA parts and repair design from the US). Where the term "critical part" is not defined, the dictionary meaning of "critical" should be used (i.e. crucial, decisive, important, etc.).

For the application of point Part 21.A.805 of Annex I (Part 21) of Regulation (EU) 748/2012, critical parts are those identified as such by the design approval holder, which for rotorcraft, engines, propellers and APUs as a minimum should be those using the definitions of the relevant CS.

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Link:

https://www.easa.europa.eu/mt/faq/19013

Can "Field Loadable Software" be delivered with an EASA Form 1 and is an EASA Form 1 required for installation?

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Answer

First of all it should be clear that the definition of "parts and appliances" (Refer to articles 3 and 140 of the Basic Regulation) includes software. This is software considered as an element of the aircraft as defined in the aircraft's type design. The rest of this response only refers to this type of software.

Secondly, "Subpart K - Parts and appliances" from Part-21 addressing installation, approval and release is applicable to this software and therefore:

1.this software must be part of the design data; and

2.the installation of this software in a type-certified aircraft is only accepted when it is accompanied by an EASA Form 1 and properly marked; and

3.the installation is approved. (Refer to 21A.303).

In order to achieve 1) and 2), the organisation that manufactures and releases the software must meet the requirements of Subpart F or G from Part-21. This means in particular that the software must be part of the scope of that production organisation and there must be a link between the design organisation and the production organisation.

The conclusion for Field Loadable Software is therefore that this software can be delivered with an EASA Form 1 when:

- it is part of design data for which approval has been applied or granted; and.
- it is produced by, and within the scope of a production organisation that meets the requirements of Subpart F or G.

Marking of this Field Loadable Software must be in accordance with Subpart Q of Part-21. For practical reasons the marking could be on the software "container" (e.g. the CD carrying the software).

Notwithstanding the above, paragraph 21.A.307(b) (as amended by EU 2021/699, in force in May 2022) alleviates certain parts from the need of being accompanied with an EASA Form 1 to be eligible for installation.

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Link:

https://www.easa.europa.eu/mt/faq/19012

From 18 May 2022, a new requirement 21.A.307 becomes applicable (refer to Regulation (EU) 2021/699). This means that certain new parts do not require an EASA Form 1 for installation during maintenance. What are the

implications of these regulatory changes, especially for General Aviation? Are 'standard parts' and 'owner-accepted-parts (former 21.A.307(c)-parts') impacted?

Answer

In essence, two new categories of new parts will be permitted to be installed during maintenance of European registered aircraft without the parts being accompanied with an EASA Form 1, but with an alternative document instead:

- parts with negligible safety effect as identified by the holder of the design approval (according to 21.A.307(b)3);
- parts with negligible safety effect as identified by EASA in CS-STAN for standard changes/repairs (according to 21.A.307(b)4)

This will permit fabrication of the above parts by organisations which are not approved as productions organisations (POA), which was considered too stringent for the manufacturing of parts having negligible safety impact in case of non-conformities.

Note that already for years, and after the new regulatory change will become applicable, 'standard parts' (parts i.a.w. 21.A.307(b)1) and 'owner-accepted-parts' (parts i.a.w. 21.A.307(b)2) are not required to be accompanied with an EASA Form 1 when they fulfil certain conditions.

For all the above-mentioned parts, as an alternative to the EASA Form 1, the rule requires a manufactured-issued document accompanying the part (for instance a certificate of conformity) to properly identify the part and trace it to the original manufacturer (refer to the new 21.A.307(c) for details). In respect of 'standard parts', this requirement is fulfilled with a 'dated delivery-note' from the manufacturer stating the name and the part-number (and the parts being engraved with that number). For parts obtained through a part's dealer, the dealer can add a scanned copy of the dated delivery note (or equivalent) from the manufacturer on the shipment of the parts. This also applies to 'owner-accepted-parts'.

Finally, note that the regulatory amendment excludes the need for 'EPA' marking (see new point 21.A.804(a)3) for all the above-mentioned parts, and that the requirements applicable for the maintenance of these parts are also alleviated as established in M.A.502 (d) and (e) and ML.A.502 (a) and (c) of regulation (EU) 2021/700.

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28/03/2022

Link:

Regulations (EU) 2022/201 and 2022/203 introduce new requirements to Part 21 such as SMS, Occurrence Reporting, AltMoC. What is the view of EASA on the transition of production organisations to these requirements?

Answer

Regulations (EU) 2022/201 and 2022/203 amend Regulation (EU) No 748/2012 and introduce new requirements for Part 21 production organisations, which apply from 07 March 2023.

This guide offers the view of EASA on the transition of Part 21 production organisations to the new requirements, including SMS, based on Articles 9(5) and 9(6) of Regulation (EU) No 748/2012, as amended by Regulation (EU) 2022/203 and corrected by Regulation (EU) 2022/1253.

This is not binding material.

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https://www.easa.europa.eu/mt/faq/137623

Instructions for Continued Airworthiness (ICA)

Case of a company being the original equipment manufacturer (OEM) - so supplier for a Type Certificate Holder (TCH) - and having their own DOA. If we take the example of the Component Maintenance Manual (CMM), provided that the CMM is in that case considered as an ICA, could you clarify if the OEM DOA can or cannot make changes to the CMM using e.g. Part 21 / Subpart E?

Answer

The supplier DOA cannot make a stand alone change to the CMM under Subpart E. According to 21.A.90C(b) such stand-alone changes can be made only by the DAH (in this case the TCH).

However, if the DAH has identified the specific CMM as ICA, they may also recognise the updated CMM as ICA (refer also to AMC3 21.A.7(a) DAH responsibility to check the supplier

data which is part of the ICA or referenced with the ICA).

If the change to the CMM is not recognised as ICA, it may still be 'acceptable' for the DAH. When the DAH confirms this (see GM3 21.A.7(a)) the respective change to the CMM can be considered applicable maintenance data under M.A.401(b)(4).

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04/07/2022

Link:

https://www.easa.europa.eu/mt/faq/136688

Standalone changes to ICA: could it be clarified which are the expectations in terms of DOA's involvement activities before release of the standalone changes to the ICA (review by compliance verification engineer, other Office of Airworthiness involvement, etc.)?

Answer

When subject to 21.A.90C(c) the stand-alone changes to ICA do not need to be processed as changes to the type design under Part 21/Subpart D, the expected DAH/DOA procedures should still address:

- preparation;
- proof reading;
- verification of technical consistency;
- verification of feasibility (when relevant); and
- approval for release.

In such a case, a CVE or airworthiness function involvement is not required. (see GM1 21.A.239(a), para. 3.1.5, Note).

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Link:

https://www.easa.europa.eu/mt/faq/136689

The applicability of 21.A.7 AMCs/GMs is not clear in the case of TCH without new production. Could you please clarify?

Answer

Indeed, this has not been clarified at the level of the respective AMC/GM. Certain parts of the AMC/GM may raise questions on 'retroactive' application.

- 1. In regard to the topic of ICA identification, AMC2 21.A.7(a) Identification of ICA and AMC 1 21.A.7(b) Identification of a complete set of instructions for continued airworthiness (ICA), should be applied for:
 - new design approvals (TC/STC) certified after the 18th of May 2022
 - for existing design approvals at the next opportunity of a TCDS/STC/STCDS update.
- 2. In regard to the topic of ICA format, GM2 21.A.7(b) ICA format, should be applied for a new design approval (S)TC applied after the 18th of May 2022.

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04/07/2022

Link:

https://www.easa.europa.eu/mt/faq/136690

With reference to AMC2 21.A.7(a) point (d): '(d) If the maintenance data made available by a DAH includes data from an operator (i.e. in order to customise the data for the operator, and created under the authority of the operator), the operator's data should be identified as such, and the DAH is not required to additionally evaluate it. Could you give an example for operators' data included in ICA?

Answer

Sometimes, the Type Certificate Holder (TCH) offers a service to the operator to publish the ICA for the operator fleet. This fleet may include design changes (e.g. Supplemental Type Certificates) or repairs which have not been developed / approved by the respective TCH but by other design approval holders. If these design changes or repairs have their own ICAs, these ICAs are outside TCH responsibility.

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With reference to GM2 21.A.7(a) point (4): '(4) If the ICA are defined at aircraft level, the following principles apply to the other supplier data that is

not related to the ALS nor to scheduled maintenance: (i) If the supplier data includes a maintenance instruction for an action identified in the aircraft-level ICA, including an engine or propeller, this supplier data should be referenced in the aircraft-level ICA and should be made available like any other ICA. As an alternative to linking such supplier data to the aircraft-level ICA (e.g. with cross references), it is possible to include the relevant data directly into the aircraft ICA. In such a case, the supplier data is not part of the aircraft ICA since the aircraft ICA already contain all the required information. [...]' What does it mean "In such case the supplier data is not part of the ICA, since the aircraft ICA already contain all the required information"? Is that avoiding duplication and potential disagreement?

Answer

Indeed, the purpose is to have a better control on supplier data (avoiding duplication and potential disagreements).

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With reference to GM2 21.A.7(a) point (4), what does it mean "In such case the supplier data is not part of the ICA, since the aircraft ICA already contain all the required information"? Is that avoiding duplication and potential disagreement?

Answer

The GM2 21.A.7(a) point (4) states:

'(4) If the ICA are defined at aircraft level, the following principles apply to the other supplier data that is not related to the ALS nor to scheduled maintenance:

If the supplier data includes a maintenance instruction for an action identified in the aircraft-level ICA, including an engine or propeller, this supplier data should be referenced in the aircraft-level ICA and should be made available like any other ICA. As an alternative to linking such supplier data to the aircraft-level ICA (e.g. with cross references), it is possible to include

the relevant data directly into the aircraft ICA. In such a case, the supplier data is not part of the aircraft ICA since the aircraft ICA already contain all the required information.

[...]

Indeed, the purpose is to have a better control on supplier data (avoiding duplication and potential disagreements).

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Link:

https://www.easa.europa.eu/mt/faq/136733

What is the purpose of the point (a)(2)(vii) in the AMC1 21.A.7(c)?

Answer

The AMC1 21.A.7(c), point (a)(2)(vii), states:

'If all ICA are made available to EASA at the time of entry into service, they should also be furnished at this time to the aircraft operator / aircraft owner and made available to any other person(s) required to comply with any of those instructions in accordance with points 21.A.21(c) (4), 21.A.44 and 21.A.7, without using the provision to delay certain parts of the ICA beyond the entry into service. For an EU holder/applicant, this should be supported as part of the DOA/ADOA procedure.'

The purpose is to ensure that the ICA will be available to the aircraft operator / aircraft owner at the time of entry into service.

AMC1 21.A.7(c) is providing three options for the availability of ICA (depending on the nature of the respective ICA):

- option 1 available at the time of design approval;
- option 2 available at the entry into service; and
- option 3 available after the entry into service.

In all three options, there is a provision making clear that 'availability' refers to availability to the owner / operator - i.e. it will not be sufficient to be available to EASA.

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With reference to AMC1 21.A.7(c) point a3 ix, does that mean EASA wants to see all ICA which are furnished (irrespective what option) at entry into service?

Answer

The AMC1 21.A.7(c), point (a)(3)(ix), states:

'(ix) It is assumed that for those ICA that are made available to EASA at the time of entry into service, they are also at the same time furnished to the aircraft operator / aircraft owner and made available to any other person(s) required to comply with any of those instructions in accordance with points 21.A.21(c)(4), 21.A.44 and 21.A.7. This is to satisfy EASA that such a delayed publication will not have an adverse effect on the continuing airworthiness of any individual aircraft. To allow the timely review and incorporation of a delayed part of the ICA into continuing airworthiness activities and processes (e.g. amendment of the aircraft Maintenance Programme) by the person or organisation responsible for the aircraft continuing airworthiness or for performing maintenance, the Agency considers that the delayed ICA should typically be made available two years before the actual ICA has to be used, when using normal revisions as a format. However, shorter time margins may be acceptable, provided that the format used ensures the prompt notification of the availability of the delayed ICA or the ICA itself, but they should not be less than 1 year before the ICA has to be used.'

This quoted point is belonging to Option 3 regarding the ICA availability - i.e. ICA available after the entry into service (EIS). Here the meaning is not that all ICA have to be seen by EASA (even if some are delayed) at EIS but that those which are not delayed - i.e. those available at EIS - should not be available only to EASA but should be available to owners/operators as well (see also the answer to the question 6, above).

EASA does not need to see systematically ICA furnished at EIS, ICA is an obligation of the approval holder. EASA may request involvement in the post-approval activities for ICA via a certification plan or dedicated actions raised.

See also AMC1 21.A.7(c) point a(3) (vi) and (vii).

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Can design approval holder's (DAH's) SB or Vendor Service Bulletins (VSB)

be ICA or is this limited to Manuals, like CMMs?

Answer

In general, DAH's SB and VSB could be an ICA, depending on the instructions contained.

The guidance material refers to CMMs as an example for supplier data, but that does not exclude other documents per se (refer to AMC2 21.A.7(a) Identification of ICA, para (b)).

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For scheduled tasks like restoration or functional check, which are performed off-aircraft, are the Aircraft Maintenance Manual "remove" and "install" instructions, as part of the ICA, enough?

Answer

If you have a restoration or a functional check you need accomplishment procedures to perform this task, remove / replace is not enough here (refer to GM1 21.A.7(a) Scope of ICA, their publication format and typical ICA data, para (c) and GM2 21.A.7(a) Determination of which supplier data is part of the ICA, para (a)(2) and (a)(4)(ii)).

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With reference to GM1 21.A.90C Stand-alone changes "[...] When a non-ALS ICA change is triggered by a change to the type design, this does not affect the overall classification of the type certificate change as per point 21.A.91 [...]." What is the purpose of this paragraph?

Answer

This is a simplification. For non-ALS ICA update/amendments resulting or done as part of a physical/functional change, this would not have in itself an impact on the classification of this

change to type certificate - e.g. if the type certificate change is minor (based on the design / functional criteria) it remains minor regardless the impact on non-ALS ICAs.

However, as a stand-alone non-ALS ICA change this may have an impact on the classification (see Appendix A to GM 21.A.91 Examples of major changes per discipline).

Note: For an ALS ICA update (either as standalone or as part of a change) this will typically trigger the major classification.

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With reference to GM1 21.A.90C 'Also, when the ICA are completed after the product (or change to the product) was approved, this is considered to be a stand-alone change to the ICA.' Is this to be understood that non-ALS ICA provided at EIS (and even after EIS) should be handled as standalone?

Answer

Indeed, this is correct.

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Does point 21.A.90C(c) imply that we may encounter non-ALS changes which can be minor with/without additional work to demonstrate compliance and major? Should a TCH process start with the identification of the affected requirements, to determine, for non-ALS ICA changes, if they can take benefit of point 21.A.90C(c)?

Answer

In general, type certificate changes can be minor without showing of compliance, minor with showing of compliance and major.

For non-ALS ICA changes, the GM1 21.A.90C is proposing a different perspective on how the stand-alone changes have to be considered:

[...] Stand-alone changes are usually straightforward changes, and are not considered to require additional work in order to show compliance. However, they must be managed in accordance with a process accepted by EASA under point 21.A.239 or point 21.A.14(b), for discharging the obligation to keep the ICA up to date and to cover aspects like preparation/verification/release in accordance with their respective AMC/GM material.

Examples of changes that may require additional activities in order to show compliance are changes to the CDCCL, and EWIS ICA.'

Also, App. A to GM 21.A.91, section 10, is listing cases where compliance needs to be demonstrated (in this respect, the section contains examples of **major changes**).

The TCH process may document this kind of approach - i.e. a list of examples of stand-alone changes which require additional compliance demonstration as either major or minor. When a change is within the list, a classification on airworthiness criteria should be performed (with the identification of applicable requirements).

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With reference to GM1 21.A.90C, what is meant by the terminology "to provide alternatives"?

Answer

The GM1 21.A.90C states:

'Changes to the ICA are considered to be stand-alone changes when they are not directly prepared together with a change to the type design. Stand-alone changes to the ICA are usually prepared and issued, for example, for the purpose of making corrections, improvements, to include feedback from users, or **to provide alternatives**.

[...]'

'to provide alternatives' should be understood, for example, to provide alternative ways to execute certain tasks.

It is to be noted that AMC2 21.A.7(a) is mentioning 'additional or optional maintenance

information'. The distinction between such information and 'alternative' may not always be clear and the DAH should clarify this by indicating if the 'alternative' is ICA or is actually non-ICA. This distinction will dictate the treatment under 21.A.7 requirements or not (e.g. availability).

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How does a Part 145 Maintenance Organisation know, if a Component Maintenance Manual (CMM) is released / approved by the design approval holder (DAH)?

Answer

A CMM is becoming ICA only when identified as such by the DAH - see AMC2 21.A.7(a), point (b)

When a CMM is identified as ICA, the DAH should perform the necessary verifications as for any other ICAs, however may choose to rely, in whole or in part, on the supplier's process under certain conditions - see AMC3 21.A.7(a). The provision '[...] may carry out a complete check[...]' should not be seen out of its context. In the case the DAH is not doing the check they are relying on their supplier to do this check (to say this differently: the DAH will authorise the supplier to do the check). The activity will be controlled under 'supplier control processes'. Similar methodology may be used for non-ICA supplier data but referenced together with the ICA - see GM3 21.A.7(a). For other non-ICA supplier data not referenced, but which can be used, the acceptability methodology is not further defined in GM3 21.A.7(a), however, this acceptability status may be documented in the form of a list.

The identification of the approval status of the manual for a component or article through a 21.A.265(h) statement in the CMM is not preferred as one CMM may potentially be recognised by several DAHs (e.g. same equipment used by different TCHs). However, this approval status may be then displayed on the level of a list - see GM3 21.A.7(b).

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