European Union Aviation Safety Agency

FAQ n.116563

FAQs:

Initial Airworthiness, Regulations

Question:

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/en/faq/116563