European Union Aviation Safety Agency

FAQ n.19013

FAQs:

Initial Airworthiness, Regulations

Question:

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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