



# EASA

European Aviation Safety Agency

# Additive Manufacturing: MRO specific aspects

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# MRO specific aspects: Acceptance of parts

- Parts to be used by a maintenance organisation have to satisfy 145.A.42

Use of AM?

Standard parts	Certificate of conformity to an industry standard	
Raw material	Material specification, appropriate traceability	
Serviceable components	EASA Form 1 or equivalent	
Fabrication of parts by the maintenance organisation	Subject to MOE procedures approved by the competent authority	



# Fabrication of parts under Part-145

## ➤ 145.A.42(c)

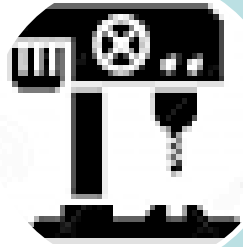
The organisation may fabricate a restricted range of parts to be used in the course of undergoing work within its own facilities provided procedures are identified in the exposition.

➤ AMC 145.A.42(c)

➤ EASA Foreign Part-145 approvals **UG.CAO.00131-001**



# Key Ideas



Fabrication, inspection assembly and test should be clearly within the technical and procedural capability of the organisation.

WHAT



Fabrication data should be part of the maintenance data provided TC/STC holder or issued under Part-21.

HOW



Items fabricated may only be used “in-house” in the course of maintenance. Fabrication for external supply is not allowed.

WHY



# What can be fabricated?

- Bushes, sleeves and shims.
- Secondary structural elements and skin panels (primary structural elements excluded).
- Control cables.
- Flexible and rigid pipes.
- Electrical cable looms and assemblies.
- Formed or machined sheet metal panels for repairs.
- Critical parts are excluded.



# How to fabricate? Fabrication data

- a) Instructions for continuing airworthiness issued by TCH, STCH or any organisation required to issue such data by Part-21/ bilateral agreement.  
(AMM,CMM,SRM)
- b) Modification or repair data issued under Part-21/ bilateral agreement.
- c) Other approved data not included in a) and b) such as manufacturing drawings provided by TCH, STCH or a production organisation.



# How to fabricate? Fabrication data

- Applicable to the concerned part; up to date and legally obtained.
- Including all necessary information of part numbering, dimensions with tolerances, materials, processes, and any special manufacturing techniques, special raw material specification and/or incoming inspection requirement.
- Include an inspection stage before and independently from, any inspection of its installation to establish full compliance with the relevant manufacturing data.



# Why fabrication of parts?

- Fabrication of parts to be used in the course of overhaul, maintenance, modifications, or repair of aircraft or components undergoing work within the maintenance facility.
- Fabrication is performed by the organisation within its maintenance facility.
- Subcontracting of part of the fabrication is allowed. In particular special processes such as heat treatment, plating, etc.





# Why fabrication of parts?

- Fabricated parts can not be issued an EASA Form 1
- Fabrication for external supply or long term storage is not allowed.



# Conclusion

Using AM for fabrication of parts by a maintenance organisation requires that the “***fabrication data***” includes required information to ensure conformity of the fabricated item to its design, such as:

- Material specification to be used and any required incoming inspection, preservation, etc, process.
- Detailed information for implementing AM process.
- Final inspection procedures of the fabricated parts.



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**Thanks for your attention.  
Questions?**

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