



EASA
European Aviation Safety Agency

Part 21
Design Organisation Approval
(DOA)
Implementation
&
Product Certification Workshop
- Industry Session -

18-19 November 2015
“RHEINSAAL” HYATT Conference Room
Hyatt Regency Hotel
Cologne, Germany

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Group 4 – Rotorcraft Community Part

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TEAM

➤ Team involved

- Dirk Richard - EASA
- Enrico Rosina - EASA
- Bjarte Teigen - Airlift
- Henning Robberstad - Heli-One
- Tor Baustad - Heli-One
- Andreas Becker - Swiss Air Ambulance
- Davide Turati - AgustaWestland

TOPICS DISCUSSED

- Parts without EASA Form 1
- Personal Carrying Device System (PCDS)
- Flight Testing

PARTS WITHOUT EASA FORM 1

RMT0018 / RMT0571



Part 21

Subpart K Parts and appliances

21.A.307 Release of parts and appliances..

A part or appliance shall be eligible for installation in a type-certificated product when:

- (a) accompanied by an authorised release certificate (EASA Form 1)...
- (b) a standard part; or
- (c) in the case of ELA1 or ELA2 aircraft, a part or appliance that is: not life-limited, nor part of the primary structure, nor part of the flight controls;



Current responsibilities

Production is responsible for manufacturing in conformity to the design. Evidence by: EASA Form 1 or Form 52 or equivalent

End-user is responsible that parts are in a satisfactory condition, eligible for installation and has been appropriately released to service on an EASA Form 1 or equivalent



Rulemaking Concept

Design defines in the type design data a Safety Significance Level for the parts (e.g. from FAA SMS pilot project report):

SSL Level I for parts where a failure would:

- (i) cause a large reduction in functional capabilities or safety margin, or
- (ii) cause serious or fatal injury to an occupant, or
- (iii) for the flight crew cause physical distress or excessive workload impairs ability to perform tasks

SSL Level II for parts where a failure would:

- (i) cause a significant reduction in functional capabilities or safety margin, or
- (ii) cause physical distress to passengers possibly including injuries, or
- (iii) for the flight crew cause a physical discomfort or significant increase in workload.

SSL Level III for parts where a failure would:

- (i) cause a slight reduction in functional capabilities or safety margin, or
- (ii) cause physical discomfort for passengers, or
- (iii) for the flight crew cause a slight increase in workload or use of emergency procedures.

SSL Level IV for parts where a failure would:

- (i) have no effect on the aircraft operational capabilities or safety, or
- (ii) cause no inconvenience for passengers, or
- (iii) have no effect on flight crew.



Existing production processes

Design and Production principle process

Design
Part-21 aprovals: Subpart B ((TC/RTC) Subpart D (Changes to TC/RTC) Subpart D (Changes to TC/RTC) Subpart E (STC) Subpart M (Repairs) Subpart O (ETSO)

SSL	Production standard	Other Party control & release	Evidence/Form
I	Aviation (Part-21) Section A Subpart F/G	Aviation Authority (Part-21) Section B Subpart F/G	Acceptance with EASA Form 1 or equivalent
II	Aviation ASTM/IAQG/SAE etc.	Other party (Aviation) e.g. IAQG 9100 series	CofC & proof of producers qualification
III	Non-Aviation	Other party (Non-Aviation) e.g. ISO	CofC & proof of producers qualification
IV	Unknown	No other party control, industry 'self-release'	Statement of conformity

Discussion

- Group 4 opinion is that EASA's proposal is welcome, since it tackles difficulties, or impossibility to obtain an EASA Form 1 for some parts (e.g. Mission Equipment)
- More detailed discussion is to be made on which standards and certification bodies will be acceptable for validating manufacturers not under EASA control
- It is advisable that this rule is harmonised at international level

Personal Carrying Device System (PCDS)

PDCS

- Issue: PAD 15-117 mandates control of all PCDSs being used during Human External Cargo (HEC) operations
- In case of mountain rescuing, this is impractical since rescuees/rescuers equipment is unknown, and it's not always possible to use controlled equipment
- Stop operations?

- SOLUTION:
- EASA FAQ page on the website states that
 - *Some activities such as mountain rescue are not particularly mentioned in Article 1(2) of the Basic Regulation. Nevertheless, applying the criterion described above, it is assumed that mountain rescue is outside the scope of EASA.*
 - <http://www.easa.europa.eu/the-agency/faqs/easa>
- PROBLEM SOLVED

FLIGHT TESTING

Flight Testing

- By January the 1st, 2016, a Flight Testing Operations Manual for all Design Organisations (conducting flight tests) must be approved by EASA
- AMC published November 2015
- Very limited time to comply

Flight Testing

- Availability of qualified Flight Test Pilots and Engineers is limited
- Most FT Pilots have a military background, but rating not yet transferred to a civil license
- This recognition has to be provided by National Authorities, which release the authorisation

Flight Testing

- Aircraft is transferred from the operator to the DOA for the prototype building and Flight Testing
- Agreement must be in place to define responsibilities (insurance, flight operations, simultaneous maintenance, etc.) between operator and DOA
- EASA capacity to approve all applicable FTOMs in time?

CONCLUSIONS

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- Thanks to EASA for providing this opportunity
- The session gave different parts of industry (STC DOA, Operators, OEM) the chance to openly discuss topics of interests, with direct feedback from EASA
- Suggestion for improvement: sometimes information is available on the EASA website, but it's difficult to find

Thanks for your attention