



EASA's flight plan for Sport Aviation

WORKSHOP ON INITIAL AIRWORTHINESS

**AERO-EXPO 2008
PRAGUE-PRIBRAM**

25 April 2008



Contents of the presentation

➤ The Agenda for today (I):

- ★ **10.00 – 10.15 Opening of the workshop and welcoming speech (A Leroy)**
- ★ **10.15 – 10.20 Presentation of the agenda (*A Leroy*)**
- ★ **10.20 – 12.00 NPA Initial Airworthiness (*Y Morier*)**
- ★ **12.00 – 13.00 Lunch**



Contents of the presentation

- **Part I: the Agenda for today (II):**
 - ★ **13.00 – 15.00 Discussion on NPA Initial Airworthiness, with following speakers:**
 - **A Leroy**, *Head of Product Certification Department, Certification Directorate – EASA and Chairman Group MDM.032*
 - **J Fridrich**, *Vice President Light Aircraft Association of the Czech Republic – LSA in the USA and possible development in Europe*
 - **G Newby**, *Chief Executive of Light Aircraft Association*
 - ★ **15.15 – 15.45 Press Conference**
 - ★ **15.45 Closure of the workshop**



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- ★ **Extension of scope**
- ★ **Sharing of responsibilities with Member States**
- ★ **Annex II**



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 - ★ **Review of the actual text**



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Contents of the presentation

➤ Summary/ Conclusions



European Aviation Safety Agency

Part I: General presentation of EASA

- **Based on Regulation (EC) 216/2008:**
- **An independent Agency that is:**
 - ✧ **Safety regulator, certification authority and advisory body**
- **Mission: to set and maintain the highest common safety and environmental Standards**
- **Method: part of the EU system in partnership with National Authorities**



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Part I: General presentation of EASA

- The **Parliament** and the **Council** define the **Scope of Powers** transferred to the Community
- They adopt the **Essential Requirements** specifying the objectives to be met

Basic Regulation
Regulation (EC) 1592/2002 of 15 July 2002
Replaced on 8 April 2008 by
Regulation (EC) 216/2008 of 20 February 2008

Annex I : Essential Requirements for Airworthiness
Annex II : Excluded Aircraft
Annex III: Essential requirements for pilot licensing
Annex IV: Essential requirements for air operations
Annex V: Criteria for qualified entities



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Part I: General presentation of EASA

- The **Commission** adopts **standards** for implementing the essential requirements

Regulation (EC) 1702/2003 on Airworthiness and Environmental Certification

Annex (Part 21)

Section A: Application Requirements

Section B: Administrative Procedures

Appendices: EASA forms

Regulation (EC) 2042/2003 on Continuing Airworthiness

Annex I (Part-M):
Continuing Airworthiness Requirements

Annex II (Part-145):
Maintenance Organisation Approvals

Annex III (Part-66):
Certifying Staff

Annex IV (Part-147):
Training Organisation Requirements

Section A: Technical Requirements

Section B: Administrative Procedures

Appendices: EASA forms



Part I: General presentation of EASA

- The **Agency** adopts **non binding standards** (“**soft law**”) for implementing the essential requirements

AMC & Guidance Material

Part 21

Certification Specifications

AMC 20

CS 25

CS 34

CS 36

CS E

CS P

CS APU

CS AWO

CS ETSO

CS Definitions

CS 22

CS 23

CS 27

CS 29

CS VLA

CS VLR

AMC & Guidance Material

Parts M, 145,
66, 147



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Part I: General presentation of EASA

- Previous Basic Regulation establishes Community competence only for the regulation of the **airworthiness** and **environmental compatibility of products**
- Scope of this regulation is extended to **air operations** and **flight crew licensing**
 - ★ **New Basic regulation published on 20 February 2008**
 - ★ **Implementing rules: 1 year later**



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Part I: General presentation of EASA

- Ultimately it could also cover the safety regulation of **airport operations** and **air traffic control services**:
 - ★ Opinion for aerodromes was issued in December 2007
 - ★ Opinion for ATM/ANS was published in April 2008
 - ★ Legislative proposal for both could be issued by the Commission in June 2008
 - ★ EASA remit fully complete by say 2012?



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Part I: General presentation of EASA

Standards Certificates

➤ Airworthiness/Environment

✧ Type certificate	Agency/EC	Agency
✧ Design organisation approval	Agency/ EC	Agency
✧ Other Individual certificates	Agency/EC	NAA

➤ Maintenance

✧ EU country	Agency/EC	NAA
✧ Non-EU country	Agency/EC	Agency



Part I: General presentation of EASA

	Standards	Certificates
➤ Air operations:		
✧ EU operators	Agency/ EC	NAA
✧ Third Country	Agency/EC	Agency
➤ Licensing:		
✧ Licenses	Agency/EC	NAA
✧ EU Organisations	Agency/EC	NAA
✧ Third country	Agency/EC	Agency



Part I: General presentation of EASA

➤ Annex II: Recital 5 from regulation 216/2008

- ★ *(5) It would not be appropriate to subject all aircraft to common rules, in particular aircraft that are of simple design or operate mainly on a local basis, and those that are home-built or particularly rare or only exist in a small number; such aircraft should therefore remain under the regulatory control of the Member States, without any obligation under this Regulation on other Member States to recognise such national arrangements.*
- ★ *However, proportionate measures should be taken to increase generally the level of safety of recreational aviation. Consideration should in particular be given to aeroplanes and helicopters with a low maximum take-off mass and whose performance is increasing, which can circulate all over the Community and which are produced in an industrial manner. They therefore can be better regulated at Community level to provide for the necessary uniform level of safety and environmental protection.*



Part II: Update on MDM.032

➤ **The Advance-NPA 14/2006**

- ★ **Envisaged a concept for better regulation for general aviation:**

➔ http://www.easa.europa.eu/ws_prod/r/r_archives.php

- ★ **The comment response document CRD-14-2006 was published on 9 November 2007:**

➔ http://www.easa.europa.eu/ws_prod/r/r_archives.php

- ★ **The attachment 1 of the explanatory note provide background for A-NPA and CRD**



Part II: Update on MDM.032

➤ Continuing airworthiness

- ★ **NPA 2007-08 envisaged many simplifications to Part-M including pilot owner maintenance:**

→ http://www.easa.europa.eu/ws_prod/r/r_archives.php

- ★ **Comment response document 2007-08 was published on 06 March 2008 and is open for reaction until 06 May 2008:**

→ http://www.easa.europa.eu/ws_prod/r/r_crd.php

- ★ **Opinion to be published mid-May**



Part II: Update on MDM.032

- **Aircraft mechanics licensing**
 - ★ **NPA 2008-03 Licences for non-complex aircraft maintenance engineers was published on 28 March 2008 and is open for comment until 28 June 2008:**
 - ➔ http://www.easa.europa.eu/ws_prod/r/r_npa.php
 - ★ **Opinion to be adopted before the end of this year**



Part II: Update on MDM.032

➤ Pilot licensing

- ✧ **Leisure Pilot Licence (LPL)**
- ✧ **Publication date of the NPA: May/June 2008**
- ✧ **Workshop FCL in Cologne: June 2008**
- ✧ **Implementing rule should address:**
 - **Common requirements**
 - **Specific requirements for the basic LPL-aeroplane and helicopter categories**
 - **Specific requirements for LPL aeroplanes LPL(A)**
 - **Specific requirements for LPL helicopters LPL(H)**
 - **Specific requirements for LPL sailplanes LPL(S)**
 - **Specific requirements for LPL balloons LPL(B)**
 - **LPL Flight Instructor and Flight examiner**
 - **LPL Medical**



Part II: Update on MDM.032

➤ Operations:

★ Publication of the NPA June/July 2008

★ General operating rules (Part OPS GEN General operating and flight rules):

- Subpart A: General
- Subpart B: Operational procedures
- Subpart C: Aircraft performance and operating limitations
- Subpart D: Instruments, data and equipment
- Subpart E: Manuals, logs and records
- Subpart F: Security



Part II: Update on MDM.032

➤ General aviation:

- ★ **means all non-commercial activities of aircraft other than complex-motor-powered aircraft**

➤ Commercial activities (216/2008):

- ★ 'commercial operation' shall mean any operation of an aircraft, in return for remuneration or other valuable consideration, which is available to the public or, when not made available to the public, which is performed under a contract between an operator and a customer, where the latter has no control over the operator;



Part II: Update on MDM.032

➤ **Complex-motor-powered aircraft means (216/2008):**

★ ***(i) an aeroplane:***

- with a maximum certificated take-off mass exceeding 5,700kg or;
- certificated for a maximum passenger seating configuration of more than nineteen, or
- certificated for operation with a minimum crew of at least two pilots, or
- equipped with (a) turbojet engine(s) or more than one turboprop engine, or

★ ***(ii) a helicopter certificated:***

- with a maximum certificated take-off mass exceeding 3,175kg or;
- For a maximum passenger seating configuration of more than nine or
- certificated for operation with a minimum crew of at least 2 pilots; or

★ ***(iii) a tilt rotor aircraft;***



Part II: Update on MDM.032

➤ **Industry standard:**

- ★ **Standards established or published by an official body whether having legal personality or not, which are widely recognised (by consensus) by the aviation community as constituting good practices**



Part III: Presentation of NPA 2008-07

➤ Overview:

- **The intention is to create a lighter regulatory regime based around a new process for the European Light Aircraft (ELA).**
- **ELA is not a new category of aircraft defined by criteria such as stalling speed or certification code, but is a substantially simpler new process for the regulation of aircraft and related products, parts and appliances.**
- **The intention is to issue type certificates for the type and certificates of airworthiness for the individual aircraft.**
- **The ELA is sub-divided into two sub-processes: ELA 1 and ELA 2**



Part III: Presentation of NPA 2008-07

➤ Overview

➔ Items common to the two sub-processes:

- ➔ Reliance on qualified entities (QE) for design and for production
- ➔ Production organisation approvals (POA): the intent is to use subpart G of Part-21 where the quality system is replaced by organisational reviews.
- ➔ Approval of parts: creation of a system of parts that need a form 1 and parts that doesn't. Part that would continue to need a form 1 would be life limited parts, primary structure and flight controls.



Part III: Presentation of NPA 2008-07

➤ Overview

★ ELA 1

- A non-complex aeroplane, sailplane or powered sailplane with a Maximum Take-Off Mass (MTOM) less than 1000kg
- A balloon with a maximum design lifting gas or hot air volume of not more than:
 - 3400 m3 for hot-air balloons
 - 1050 m3 for gas balloons
 - 300 m3 for tethered gas balloons
- An airship designed for not more than two occupants and a maximum design lifting gas or hot-air volume of not more than:
 - 2500 m3 for hot-air airships
 - 1000 m3 for gas airships
- A piston engine installed in aircraft referred to in this paragraph
- A propeller installed in aircraft referred to in this paragraph



Part III: Presentation of NPA 2008-07

➤ Overview

★ ELA 1:

➔ ***Demonstration of capability for design:***

➔ Approval of certification programme by EASA in lieu of DOA or AP to DOA although the applicant may elect to have a higher design approval.

➔ ***Creation of a Certification Specification- Light Sport Aeroplanes (CS- LSA) to complement existing CS (CS-22 for sailplanes and powered sailplanes, CS-VLA for very light aeroplanes, etc):***

➔ this CS would define the applicability (criteria include maximum take-off mass of 600Kg) and refer to the ASTM standard that is used in the FAA light sport aircraft rule.



Part III: Presentation of NPA 2008-07

➤ Overview

✧ ELA 2:

- A non-complex aeroplane with MTOM less than 2000kg
- A balloon not in ELA 1
- A hot-air airship not in ELA 1
- A manned gas airship meeting all the following elements:
 - (i) 3% maximum static heaviness
 - (ii) Non vectored thrust (except reverse thrust)
 - (iii) Conventional and simple design of:
 - » **Structure**
 - » **Control system**
 - » **Ballonet system**
 - Non power assisted control
- A very light rotorcraft
- A piston engine installed in aircraft referred to in this paragraph
- A propeller installed in aircraft referred to in this paragraph



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Part III: Presentation of NPA 2008-07

➤ Overview

★ ELA 2:

➤ *Demonstration of capability for design:*

➤ **Alternative Procedures to DOA will apply although the applicant may elect to have a higher design approval.**



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Part III: Presentation of NPA 2008-07

➤ Overview

- ★ Creation of a system of standard changes and standard repairs:
 - ➔ **Applicable to aircraft below 5700 kg MTOM; rotorcraft below 3175 MTOM, sailplanes, powered sailplanes, balloons and airships.**



Part III: Presentation of NPA 2008-07

➤ **Regulatory Impact Assessment:**

★ **Two options envisaged:**

- ➔ Do nothing
- ➔ Develop an ELA process

★ **Qualitative assessments for the impacts**

★ **Conformity to ICAO Annex 8 has been checked**

★ **Foreign comparable regulations were listed**

★ **Develop an ELA process was retained**



Part III: Presentation of NPA 2008-07

➤ Competent Authorities:

- ★ **'Definition' is provided in the explanatory note**
- ★ **Clarify the possibility for a Member State to nominate more than one competent authority provided there is no overlap**
- ★ **An AMC will be developed in due course**



Part III: Presentation of NPA 2008-07

➤ Qualified Entities (QE) (I):

- ★ **Need careful review**

- ★ **Concept clarified by Regulation 216/2008**

 - ➔ “Qualified Entity” means a body which may be allocated a specific certification task by, and under the control and the responsibility of, the Agency or a national authority.

 - ➔ Appendix 5 defines *criteria* for QE

- ★ **Can not issue certificate or legal approval**

- ★ **Agency intent to use them in addition to already accredited national Authorities**



Part III: Presentation of NPA 2008-07

- **Qualified Entities (QE) (II):**
 - ★ **Will need modification to the Management Board decision on guidelines for allocation of tasks to national authorities**
 - ★ **Will need to define appropriate accreditation and oversight procedures**
 - ★ **Will need to define effective working procedures**
 - ★ **Attachment 1 and 2 of the explanatory note provide more explanations**



Part III: Presentation of NPA 2008-07

➤ Design approvals:

- ★ **ELA 1: approval by the agency of a certification programme detailing the means for compliance demonstration**
 - Same applies to STC and major repairs for ELA 1
 - Issue of transferability of TC or STC
- ★ **ELA 2: Alternative procedures for DOA (AP-DOA)**
 - Scope for AP-DOA has been increased



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Part III: Presentation of NPA 2008-07

➤ Production approvals:

- ★ **ELA 1 and 2: subpart G applies but with the quality system replaced by organisational reviews**



Part III: Presentation of NPA 2008-07

➤ **Combined POA/DOA:**

- ★ **Optional**
- ★ **Included in a new subpart L**
- ★ **Concept needs careful review**
- ★ **Lead to the issue of one certificate in the Member State make use of article 20 2 (b) (ii) of regulation 216/2008**
- ★ **In all other cases, two certificates**
- ★ **Specific wordings have been included in the new Subpart L**



Part III: Presentation of NPA 2008-07

- **Limiting the number of parts that need a form 1:**
 - ★ **Limit the burden**
 - ★ **Safeguards**
 - ★ **More open for ELA 1 than ELA 2**
 - ★ **Modification to Paragraph 21A.307 in Subpart K**
 - ★ **Specific question asked:**
 - Limit to aircraft used for non-commercial purposes?



Part III: Presentation of NPA 2008-07

➤ Creation of a CS for light sport aeroplanes:

★ 3 paragraphs:

- Applicability
- Categories
- Airworthiness code

★ Refer to ASTM international F 2245



Part III: Presentation of NPA 2008-07

- **Introduction of standard changes and standard repairs:**
 - ★ **Applicable beyond ELA**
 - ★ **Similar to the US concept of AC 43-13 1B and 2B**
 - ★ **Two new paragraphs 21A.96 and 21A.436**
 - ★ **Idea is to issue specific Certification Specification**
 - This create a legal act by the Agency
 - Ensure proper safety level



Part III: Presentation of NPA 2008-07

- **Fees and charges:**
 - ★ **Difficult issue**
 - ★ **Fees and Charges Regulation does not envisage that fees are levied directly by QE**
 - ★ **Need further study**



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Part III: Presentation of NPA 2008-07

➤ Next steps:

- ★ **AMC to be produced or modified**
- ★ **Review of comments received**
- ★ **Intend is to issue the Opinion on Part-21 by the end of the year**
- ★ **MDM.032 group will continue augmented by two independent experts**



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Part III: Presentation of NPA 2008-07

- **Comment period open until 18 July 2008**

- ★ http://www.easa.europa.eu/ws_prod/r/r_npa.php

- **Review of actual text:**





Summary/ Conclusions

- Brief introduction to EASA
- Overview of MDM.032
- Presentation of the NPA 2008-07
- **We strongly encourage you to comment**



- **Thank you for your attention**
- **Questions are welcome**