NOTICE OF PROPOSED AMENDMENT (NPA) NO 2008-07

DRAFT OPINION OF THE EUROPEAN AVIATION SAFETY AGENCY

FOR A COMMISSION REGULATION AMENDING COMMISSION REGULATION (EC) No 1702/2003, laying down implementing rules for the airworthiness and environmental certification of aircraft and related products, parts and appliances, as well as for the certification of design and production organisations

"ELA process" and "standard changes and repairs"

and

DRAFT DECISION OF THE EXECUTIVE DIRECTOR OF THE EUROPEAN AVIATION SAFETY AGENCY

for creating

"Certification Specifications for Light Sport Aeroplanes"

TABLE OF CONTENTS

A. EXPLANATORY NOTE

I. General

1. The purpose of this Notice of Proposed Amendment (NPA) is to envisage amending Commission Regulation (EC) No 1702/2003[1]. As the amendments are only affecting the Annex (Part-21) of this regulation, all references hereafter will be to Part-21. The scope of this rulemaking activity is outlined in ToR MDM.032 and is described in more detail below.

2. This NPA addresses only the initial airworthiness aspects of A-NPA 14-2006. The other elements (operations, licensing and maintenance) will be covered by NPAs:

   - The NPA on Maintenance is NPA 2007-08
   - The NPAs on Operations and licensing are not yet issued.
   - The NPA 2008-03 on licence for non-complex aircraft maintenance engineers was issued on 28 March 2008.

3. The European Aviation Safety Agency (the Agency) is directly involved in the rule-shaping process. It assists the Commission in its executive tasks by preparing draft regulations, and amendments thereof, for the implementation of the Basic Regulation[2] which are adopted as "Opinions" (Article 19(1)). It also adopts Certification Specifications, including Airworthiness Codes and Acceptable Means of Compliance and Guidance Material to be used in the certification process (Article 19(2)).

4. When developing rules, the Agency is bound to follow a structured process as required by article 52(1) of the Basic Regulation. Such process has been adopted by the Agency's Management Board and is referred to as "The Rulemaking Procedure"[3].

5. This rulemaking activity is included in the Agency's rulemaking programme for 2008. It implements the rulemaking task MDM.032 "Regulation of aircraft other than complex motor powered aircraft, used in non-commercial activities"

6. The text of this NPA has been developed by the Agency based on the work of group MDM.032. The NPA is submitted for consultation of all interested parties in accordance with Article 52 of the Basic Regulation and Articles 5(3) and 6 of the Agency rulemaking procedure.

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[1] Commission Regulation (EC) No 1702/2003 of 24 September 2003 laying down implementing rules for the airworthiness and environmental certification of aircraft and related products, parts and appliances, as well as for the certification of design and production organisations (*OJ L 243, 27.9.2003, p. 6)*. Regulation as last amended by Commission Regulation (EC) No 287/2008 of 28 March 2008 (OJ L 87, 29.3.2008, p. 3).

[2] Regulation (EC) No 216/2008 of the European Parliament and of the Council of 20 February 2008 on common rules in the field of civil aviation and establishing a European Aviation Safety Agency, and repealing Council Directive 91/670/EEC, Regulation (EC) No 1592/2002 and Directive 2004/36/EC *(OJ L 79, 19.03.2008, p.1)*

[3] Management Board decision concerning the procedure to be applied by the Agency for the issuing of opinions, certification specifications and guidance material ("rulemaking procedure"), EASA MB 08-200703, 13.6.2007

II. Consultation

7. To achieve optimal consultation, the Agency is publishing the draft decision of the Executive Director on its internet site. Comments should be provided within 3 months in accordance with Article 6(4) of the EASA rulemaking procedure.

CRT: Send your comments using the Comment-Response Tool (CRT) available at http://hub.easa.europa.eu/crt/

E-mail: Only in case the use of CRT is prevented by technical problems comments can be submitted by email. In this case problems should be reported to the CRT webmaster and comments sent by email to NPA@easa.europa.eu.

Correspondence: If you do not have access to internet or e-mail you can send your comment by mail to:
Process Support
Rulemaking Directorate
EASA
Postfach 10 12 53
D-50452 Cologne
Germany

Comments should be received by the Agency by 18 July Month 2008. If received after this deadline they might not be taken into account.

III. Comment response document

8. All comments received in time will be responded to and incorporated in a Comment Response Document (CRD). The CRD will be available on the Agency's website and in the Comment-Response Tool (CRT).

IV. Content of the draft opinion and of the draft decision

Introduction

In the past years there has been a decrease in the activity of "classical" leisure aviation and the development of the microlight movement in Europe. Feedback from industry and operators has suggested that the regulatory framework applied to recreational aircraft has become progressively too heavy for the nature of the activities involved and places too high a regulatory burden on designers and manufacturers of these types.

The Agency created a rulemaking task MDM.032 in order to address these concerns. As the task had a broad scope the Agency issued in 2006 an advance NPA to discuss a concept for better regulation in General Aviation. The concept addressed initial and continuing airworthiness, operations and licensing. Attachment 1 provide more information on the options discussed for initial airworthiness; the comments received and the general strategy adopted by the Agency which lead to the proposals included in this NPA.

The Agency took also into consideration the introduction of the Light Sport Aircraft (LSA) rule by the Federal Aviation Administration (FAA) that has highlighted a reduction in harmonisation between the Agency and FAA in the regulation of recreational aviation. The majority of LSA types in the US are of European origin, but these cannot operate legally in the EU unless they have a take-off weight below 450 kg (and consequently come under Annex II of the Basic Regulation) or have been certificated to CS-VLA (Very Light Aeroplane) or some higher code.

The proposals included in this NPA do not apply to Annex II aircraft (in particular micro-light) as they outside the scope of the Agency.

Overview of the proposals included in this NPA:

The intention is to create a lighter regulatory regime based around a new process for the **European Light Aircraft (ELA)** and to introduce **a concept of standard changes and repairs.**

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.

Items common to the two sub-processes:

- *Reliance on qualified entities 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.
- *Limiting the number of parts that need a Form 1:*
- Creation of a *combined DOA/ POA* that would be optional

ELA 1:

Definition:

- An aeroplane, sailplane or powered sailplane with a Maximum Take-Off Mass (MTOM) less than 1000 kg that is not classified as complex-motor-powered aircraft
- A balloon with a limited maximum design lifting gas or hot air volume
- A non-complex airship designed for not more than two occupants and a limited maximum design lifting gas or hot-air volume
- An engine installed in aircraft referred to in this paragraph
- A propeller installed in aircraft referred to in this paragraph

Demonstration of capability for design:

Approval of certification programme by the Agency 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 Aeroplane (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 would include maximum take-off mass of 600 kg) and refer to the ASTM standard that is used in the FAA light sport aircraft rule.

ELA 2:

Definition:

- An aeroplane, sailplane or powered sailplane with MTOM less than 2000 kg that is not classified as complex-motor-powered-aircraft
- A balloon
- A hot-air airship

- A manned gas airship meeting a criteria reflecting simplicity in its design
- A Very Light Rotorcraft
- An engine installed in aircraft referred to in this paragraph
- A propeller installed in aircraft referred to in this paragraph

Demonstration of capability for design:

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

***Creation of a system of standard modifications and standard repairs*:**

This introduction is intended to limit the burden on stakeholders while maintaining the level of safety and limiting the recourse to illegal practices. The applicability would be limited to aeroplanes below 5700 kg, rotorcraft below 3175 kg MTOM, sailplanes, powered sailplanes, balloons and airships.

Further considerations on the European Light Aircraft Process

To address the concerns in the area of initial airworthiness (design, certification and production) and relative to burdensome rules and procedures, the Agency proposes to introduce a simplified regulatory regime based around a new process for the **European Light Aircraft (ELA).** This process includes the use of qualified entities to which the Agency can allocate certification tasks to increase the proximity with applicants and at the same time respecting the Agency's legal responsibilities. In line with current certification practices, the Type Certificate will not limit the aircraft to a specific category of operations. 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 that come within the following definition:

ELA 1

- An aeroplane, sailplane or powered sailplane with a Maximum Take-Off Mass (MTOM) less than 1000 kg that is not classified as complex motor-powered aircraft.
- A balloon with a maximum design lifting gas or hot air volume of not more than:
  - 3400 m^3 for hot-air balloons
  - 1050 m^3 for gas balloons
  - 300 m^3 for tethered gas balloons
- A non-complex airship designed for not more than two occupants and a maximum design lifting gas or hot-air volume of not more than:
  - 2500 m^3 for hot-air airships
  - 1000 m^3 for gas airships
- An engine installed in aircraft referred to in this paragraph
- A propeller installed in aircraft referred to in this paragraph

In addition, it is recognised that there needs to be in intermediate step between 1000 kg and 2000 kg where the processes are some way between the simplified processes of ELA 1 and the normal processes that apply above 2000 kg. To this end, a second category is proposed:

ELA 2

- An aeroplane, sailplane or powered sailplane with MTOM less than 2000 kg that is not classified as complex motor-powered-aircraft
- A balloon
- A hot-air airship
- A 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 the:
        - Structure
        - Control system
        - Ballonet system
    - (iv) Non power-assisted controls
- A Very Light Rotorcraft
- An engine installed in aircraft referred to in this paragraph
- A propeller installed in aircraft referred to in this paragraph

ELA 2 aeroplanes and rotorcraft are likely to have respectively up to 8 and 2 occupants. The ELA 2 balloons and airship can accommodate a higher number of occupants. One could say that there is an inconsistency here. However the proposals for ELA 2 Balloons and airship reflect the present experience in certification of balloons and airship.

Aircraft below 1000 kg and associated products, parts and appliances would normally benefit from the ELA 1 process, but could voluntarily elect to comply with the ELA 2 process or full Agency standards. For aircraft above 2000 kg and associated products, parts and appliances, the normal processes for initial airworthiness defined in Commission Regulation (EC) No 1702/2003 will apply.

There is no obligation on an applicant to choose ELA processes: applicants may still elect to comply with full Agency standards if this is deemed to be advantageous for sales.

The conformity to ICAO Annex 8 of such changes is an important issue and the situation can be summed-up as follows: ICAO Annex 8 Part V applies only to aircraft above 750 kg MTOM intended for the carriage of passengers or cargo or mail in international air navigation. Sailplanes, LSA and VLA are below this limit. The only issue could be powered sailplanes (The MTOM allowed by CS-22 is 850 kg for such machines) but their use is not the one intended by ICAO Annex 8 Part V: they are mainly intended for recreational flying or flight instruction and therefore they are not intended for the carriage of passenger, cargo or mail in international air transportation. The Agency considers therefore that ICAO Annex 8 certificates of airworthiness could be issued for ELA 1 and 2. The Agency rulemaking inventory contains plans to increase

the MTOM of VLA above 750 kg: this increase will be done taking into account the text of ICAO Annex 8 Part V.

Qualified Entities

Today the Agency can only allocate tasks to accredited national authorities. This is defined by Management Board decision 04-2005 dated 3 May 2005[4]. When doing so the Agency remains responsible to issue the relevant certificates or approvals. The limitation to accredited national authorities only was due to the fact that the previous basic regulation (Regulation (EC) No 1592/2002) did not provide criteria for qualified entities. Present Basic Regulation (Regulation (EC) No 216/2008) has clarified the concept of qualified entities (QE) in particular in introducing an Annex stating the requirements they need to comply with. The Agency will use such QE in the certification process when it will be found to improve the overall efficiency of the process and because it could increase the proximity with applicants and cope for the case where national authorities don't have the resources to be allocated tasks by the Agency.

QEs are defined in Regulation 216/2008 and the definition reads as follows:

"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.

QEs for design issues will be appointed by the Agency and are organisations that have demonstrated to the Agency that they have the technical capability and independence to confirm findings of compliance (The criteria for appointing Qualified Entities is included in the Appendix V of the Regulation that replaces the Basic Regulation). The concept is that QEs would be derived from existing or new Sporting Organisations. QEs may be specialised, limiting their terms of approval to specific categories of aircraft: sailplanes, LSA, Very Light Rotorcraft, etc. Within each member state there may therefore be more than one QE.

These QEs would be used by the Agency in addition to the already accredited national authorities.

QEs for production may be appointed by a Competent Authority of the member state because Member States are competent to issue Production Organisation Approvals.

It is clear that qualified entities have no legal competences and can not issue certificates or legal approvals. That would remain the competence of the Agency or the Competent Authority.

In addition to accreditation and oversight procedures for QE involved in design, There will be a need to define appropriate working procedures between the Agency and those qualified entities so that the ELA process is fully effective and that the QE are the day to day interface with applicants.

Competent Authorities

The second level of regulatory oversight is provided by the **Competent Authorities** (CA). A Competent Authority may be a ministry, an aviation national authority, or any aviation body designated by the member sate. A Member State may designate more than one competent authority to cover different areas of responsibility, as long as the decision contains a list of competencies of each authority and there is only one competent authority responsible for each given area of responsibility. CAs may also be derived from existing or new Sporting Organisations or General Aviation sections of existing NAAs and are appointed by the national

[4] Decision of the Management Board on guidelines for the allocation of certification tasks to national aviation authorities or qualified entities. Indeed the Management Board is responsible to define guidelines for allocating such tasks in accordance with Article 33(2)d of the Basic Regulation.

Department of Transport or its equivalent, not by the Agency. There could be more than one CA in a member state but there must be no overlap in responsibilities.

ELA: Who does what?

The roles of the key organisations are explained in attachments: Attachment 2 explains the relative roles in the context of ELA 1; Attachment 3 explains the roles in the context of ELA 2.

These tables are limited to explaining the roles. The Agency will propose to the Management Board a policy for allocating certification tasks that will reflect these tables.

Design and Production Organisation Approvals

The demonstration of capability for design is envisaged as follows:

- ELA 1: Approval of certification programme by the Agency in lieu of DOA or Alternative Procedures (AP) to DOA although the applicant may elect to have a higher design approval.

- ELA 2: AP to DOA will apply although the applicant may elect to have a higher design approval.

- Above 2000 kg and associated products; full DOA will apply.

Production Organisation Approvals (POA) will be handled as at present except that a simplified process is introduced for ELA. More specifically the requirement for a quality system is to be replaced by a requirement for organisational reviews. This is seen by the affected stakeholders as beneficial. It should be noted that similar simplification has been envisaged for Part-M. Production Organisation for ELA 1 will have the privilege to maintain the products they have manufactured and to issue the corresponding release into service.

Additionally, the option of a combined DOA/POA is introduced for ELA. This takes the form of a new Subpart L that put together the requirements for production and the requirements for design that would have to be complied by such an organisation.

It will lead to the issue of one certificate if the Member State would request the Agency to issue the certificate for production in accordance to article 20(2)b(ii) of the Basic Regulation. In such instance the benefits would be maximised: on set of fees and charges; one set of audits and one team.

If this does not happen, the concept would still work but in order to comply with the Basic Regulation, two certificates would have to be issued: one by the Agency, one by the Member State. The Agency could allocate the tasks of the DOA investigation to the Competent Authority of the Member State. In such case the benefits would be limited to one team, one set of audits but there would be separate certificates and separate fees and charges.

This situation is reflected into the new Subpart L: specific wordings have been introduced to respect the legal responsibilities established by the Basic Regulation.

It is agreed that the concept is a difficult one but it has been proposed as optional and the affected stakeholders see benefits to it.

Limiting the number of parts that need a Form 1

The purpose here is again to limit the burden on stakeholders while maintaining an acceptable level of safety. Several options were explored including envisaging a system of owner-produced parts comparable to the one that exists in the US. The intention is to limit the applicability of limiting the number of parts that need a form 1 to ELA 1 and ELA 2. This would only be possible for parts which are produced under the responsibility of the aircraft owner for

installation on his own aircraft. For ELA 1 this possibility would be open to all parts but for ELA 2 it would be limited to those that are not life limited parts and appliances, not primary structure and not flight controls. Maintaining an acceptable level of safety would be achieved by following two safeguards:

- The airworthiness review by the Competent Authority or the CAMO
- The requirement that the part must comply with an approved design

This change to Part-21 takes the form of a modification to paragraph 21A.307 in Part-21 subpart K.

During the drafting of the NPA the point was raised to limit such possibility to aircraft that are used for non-commercial purposes.

Question 1:

The Agency is interested to know the views of the stakeholders on the appropriateness of limiting the possibility to release parts without a Form 1 as described above to aircraft that are used for non-commercial purposes.

Creation of a Certification Specification for Light Sport Aeroplanes:

This Certification is envisaged to allow such aeroplanes that are currently produced in Europe to be sold and used in Europe, which is currently not the case. The definition of Light Sport Aeroplane is slightly different from the one used in the USA based on the experience of European industry. However the airworthiness code is the ASTM International standard F2245 that is also used in the USA and other countries for the airworthiness approval of such aeroplanes.

The envisaged certification specification incorporates by reference this standard. This standard has been chosen because it is used without adverse service experience in several countries.

The Agency intends to participate in the ASTM International standard development process to ensure the standard provides an adequate level of safety. The Agency reserves the right to complement this standard in the CS-LSA when justified by service experience.

Light Sport Aeroplanes would become one of the aircraft categories covered by the ELA process.

Further considerations on the introduction of standard changes and standard repairs

This introduction is intended to limit the burden on stakeholders while maintaining the level of safety and limiting the recourse to illegal practices. Indeed if the requirements for changes and repairs are too burdensome, applicants may be tempted to perform them without declaring it. The Agency envisages introducing in the EASA system a system comparable to the one existing in the US (Advisory Circular 43-13 1B and 2B). These documents may be found at:

http://www.airweb.faa.gov/Regulatory_and_Guidance_Library/rgAdvisoryCircular.nsf/0/11E144125D63FE548625740A00731B4A?OpenDocument&Highlight=ac%2043.13

http://www.airweb.faa.gov/Regulatory_and_Guidance_Library/rgAdvisoryCircular.nsf/0/99C827DB9BAAC81B86256B4500596C4E?OpenDocument&Highlight=ac%2043.13

For example, AC 43-13 2B pertains to acceptable methods, techniques and practices for aircraft alterations. Its purpose states:

This advisory circular (AC) contains methods, techniques, and practices acceptable to the Administrator for the inspection and alteration on non-pressurized areas of civil aircraft of 12,500 lbs gross weight or less. This AC is for use by mechanics, repair stations, and other certificated entities. This data generally pertains to minor alterations; however, the alteration data herein may be used as approved data for major alterations when the AC chapter, page, and paragraph are listed in block 8 of FAA Form 337 when the user has determined that it is:

- *Appropriate to the product being altered,*
- *Directly applicable to the alteration being made, and*
- *Not contrary to manufacturer's data.*

These AC describe data acceptable to the Administrator that can therefore be used as approved maintenance data in the US system.

Achieving a comparable system to the US one is done by adding two specific paragraphs 21A.96 for standard changes and 21A.436 for standard repairs into Part-21. The two paragraphs are very similar and envisage the following:

The applicability would be limited to aeroplanes below 5700 kg, rotorcraft below 3175 kg MTOM, sailplanes, powered sailplanes, balloons and airships. No application would be needed and the change/repair would be deemed approved by the Agency when in accordance with dedicated Certification Specifications (CS) that would detail such changes and repairs. The dedicated CS will be based on AC 43-13 1B and 2B as appropriate. It may be necessary to do a proper evaluation of these two AC when developing the CS. As the Agency will approve the dedicated CS after a rulemaking process leading to decisions by the Executive Director, it is considered that this act is comparable to the direct approval of individual modifications. The CS would be adopted by the Agency following the usual rulemaking process and the benefit of such consultation is to ensure that the contents of the CS achieve the proper level of safety.

AMC and GM to be produced or modified

The Agency intends to develop several AMCs and GMs. They are intended to be developed in parallel with the consultation of this NPA. These AMCs and GMs are listed below:

Paragraph 21.1:

- Clarify that Member States can nominate more than one Competent Authority provided there are no overlaps as it has been done for as in Regulation (EC) No 2042/2003[5] (Part-M)

- Propose to confirm the possibility for Member States to allocate production organisation related certification tasks to QE

Paragraphs 21A.47 and 21A.116:

- Need for an AMC/GM to further describe the procedures for the organisation that would be the new TC holder in case of transfer of TC: the purpose of such procedures is to set-out their activities to discharge their new obligations as TC holder.

[5] Commission Regulation (EC) No 2042/2003 of 20 November 2003 on the continuing airworthiness of aircraft and aeronautical products, parts and appliances, and on the approval of organisations and personnel involved in these tasks (*OJ L 315, 28.11.2003, p. 1*). Regulation as last amended by Regulation (EC) No 376/2007 (*OJ L 94, 4.4.2007, p. 18*).

Paragraphs 21A.096 and 21A.436:

- Need for an AMC/GM to better explain the concept of standard changes and standard repairs. In addition to this AMC/GM there is likely to be the need of a certification procedure

Paragraph 21A.112B:

- GM need to be modified: this GM is related to the demonstration of capability for STC.

Fees and charges

Fees for type certificates and annual fees for an EASA type certificate holders are defined in Commission Regulation (EC) No 593/2007[6] which can be found at http://www.easa.europa.eu/doc/Regulation/l_14020070601en00030020.pdf.

Initial certification of a light aircraft type costs 6000 euros per year of on-going certification. This means that the price will depend on the duration of the process which on average takes 2 to 3 years. The annual fee for the continuous oversight of such an approved type of product is 900 euros; there is a capping system avoiding the accumulation of such fees for multiple TC holders so that the fee per type decreases by 10% for each additional product and there is no charge anymore from the 11th.

The possibility that fees are directly levied by Qualified Entities is not envisaged by the present Regulation. According to this Regulation, fees for certain certification tasks carried out by the Agency can not be dependant whether the task is carried out by the Agency itself or through NAAs and QE.

The whole issue will deserve further study in particular because the actual cost of Qualified Entities are not yet known as such entities do not yet exist: they would have to comply with the criteria laid down in Appendix V of the Regulation that replaces the Basic Regulation. These criteria require taking insurance for liability.

V. Regulatory Impact Assessment

1. Purpose and intended effect:

a. Issue which the NPA is intended to address:

In the past years there has been a decrease in the activity of “classical” leisure aviation and the development of the microlight movement in Europe. Feedback from industry and operators has suggested that the regulatory framework applied to recreational aircraft has become progressively too heavy for the nature of the activities involved and places too high a regulatory burden on designers and manufacturers of these types.

b. Scale of the issue:

There are around 80000 such aircraft registered in EASA Member States. There are in Europe about 35 manufacturers of such aeroplanes, sailplanes, balloons and airships. This number does not include around 20 European manufacturers of LSA that could be affected by these proposals. In the future this could potentially affect

[6] Commission Regulation (EC) No 593/2007 of 31 May 2007 on the fees and charges levied by the European Aviation Safety Agency (*OJ L 140, 01.06.2007, p. 3*).

other aircraft that are currently excluded from the scope of Community competence, by reason of Annex II of the Basic Regulation.

c. Brief statement of the objectives of the NPA:

The aim of this task is to develop a concept of suitable regulations for the initial airworthiness of aircraft other than complex-motor-powered aircraft. Initial airworthiness means the activities regulated by Part-21.

2. Options:

a. All options identified

Option 1. Do nothing:

Option 2: Develop an ELA process

b. The preferred option selected:
Please see paragraph V-5 below.

3. Sectors concerned:

Are directly affected:
Manufacturers of light sport aircraft (LSA) currently exported to the USA;
Manufacturers of Sailplanes and Powered Sailplanes,
Manufacturers of Very Light Aircraft (VLA)
Manufacturers of CS-23 'basic aircraft'
Manufacturers of Balloons and Airships (except manufacturers of commuter and transport airships)
Manufacturers of Very Light Rotorcraft (VLR)
Manufacturers of engines installed on the above aircraft
Manufacturers of propellers installed on the above aircraft
Manufacturers of parts and appliances installed on the above aircraft
Owners of the above aircraft
Maintenance Organisations for the above aircraft
Sporting associations that are involved in the oversight of microlight or LSA aircraft
EASA, Competent Authorities and Qualified Entities

4. Impacts:

a. All identified impacts

i. Safety

A qualitative comparison of safety records of the regulated sector and the less regulated sectors indicates that there are no significant differences in the statistical safety records. Objective statistical evidence may not support the qualitative comparison but such evidence is often difficult to obtain given the nature of the activity. On the available evidence, the heavier regulation of the regulated sector does not appear to have resulted in any safety benefit. The proposals in this NPA will result in reduced oversight of all sectors as described in paragraph 3 above. The safety levels intended are consistent with the expectations of the stakeholders who understand that recreational aviation is inherently riskier than commercial air transportation. An essential part of these proposals is that the stakeholders take a greater responsibility for the products that they design, manufacture, maintain and operate.

No European-wide statistics are available as there are no common standards for recording data. However available studies coming from Member States and other countries were consulted and their review tends to show that the major fatalities risks for General Aviation are loss of control and controlled flight into terrain and that the design related failure rate appears to be very low in all cases. Human performance and weather are contributing factors. The impact to non-involved third parties is known to be statistically insignificant.

- Option 1:

This option will have no direct effect on safety however the regulatory constraints put on designers may prevent them from investing in safety enhancing innovations and in the development of new aircraft.

- Option 2:

ELA 2 should not have a negative effect on safety as it keeps the main principles of Part-21 as shown by the tables 'ELA who does what' but reduces the burden on General Aviation by proposing focused alleviations to Part-21. These alleviations are proportionate to the general characteristics of ELA 1 and 2 and/or are complemented by safeguards. ELA 1 departs from well proven certification principles and may have a negative impact on safety if the designers and manufacturers are not made fully aware of their responsibilities. The perceived reduction in safety level created by simplified regulations should be compensated by the possibility to certify more easily safety enhancing features and new designs. Simplification of procedures should mean cheaper certification and as a consequence cheaper flying hours. This could in turn lead to an increase of the average number of hours flown by the pilots and more safety through more experience.

ii. Economic

General Aviation represents a significant activity with direct and indirect benefits for the economy. There are in Europe about 35 manufacturers of GA aeroplanes, sailplanes and balloons. Most European based manufacturers selling their products in Europe are faced with a current situation of small market numbers. In turn, the investment risks for developing new products are high and this is driven partly by the substantial front-end costs including regulatory compliance which have to be recovered over relatively low volumes.

In addition, for 2006 approx. 75% of the Light Sport Aircraft type aircraft sold in USA are produced in Europe outside of Part-21. Unfortunately, these aircraft cannot be flown within the EU. There is a risk of transfer of this activity outside the EU.

There are approximately 300,000 private pilots and 80,000 such aircraft in Europe. However this only represents 25% of the General Aviation aircraft registered in the USA that has a comparable population and economy to Europe. Furthermore, in recent years, these numbers have been decreasing in the European General Aviation sectors whose operations are regulated in a stringent manner. It should be noted that the development of certain activities such as microlights and sailplanes in some countries (e.g. France, Czech Republic, and Germany) has been closely linked to the less stringent regulation of the activity in those countries.

- Option 1:

The burden generated by present rules on GA will not be alleviated. This option could lead to a further decrease of GA activity with a risk of terminal decline.

- Option 2:

This will generate more activity through simplified procedures: DOA not required for ELA 1 and 2 (although AP to DOA is required for ELA 2), simplified POA. The combined POA/DOA offered as an option may reduce the regulatory burden of organisation approvals. However, it should be noted that this combined approval will only achieve its full potential in when a Member State will have requested the Agency to perform the POA approval as envisaged by article 20(2)b(ii) of the Basic Regulation. Altogether, these amendments will help the development of new aircraft and will ease the development of modifications and repairs of existing aircraft. The use of industry standards (ASTM international F2245 in this case) for LSA that will be cross referenced into a Certification Specification will also contribute to reducing the cost of certification. The alleviation of requirements for EASA Form 1 and the development of standard modifications and repairs will also have a positive impact.

The setting-up of Qualified Entities will generate costs: they will have to comply with the criteria set-up in appendix V of the basic regulation, in particular they will have to take insurance to protect themselves for liability reasons. . It should be pointed out that this option relies on the need for industry to organise itself.

iii. Environmental

The environmental impact will be directly linked to the variation of the activity resulting from these new rules. The development of new aircraft / engines will have a positive environmental effect. This task however does not address this dimension that will be treated separately.

iv. Social

- Option 1:

This option could lead to a further decrease of GA activity. As a consequence, employment sector related to the GA field may be adversely affected.

- Option 2:

This option should lead to an increase of GA activity and should have a positive impact on employment in the sector. On the other hand reduced work load in the Agency product certification activities (Technical visas issued by NAA or QE) will be compensated partially by increased workload of oversight of QEs.

v. Other aviation requirements outside the Agency scope

The conformity to ICAO Annex 8 of such changes is an important issue and the situation can be summed-up as follows: ICAO Annex 8 Part V applies only to aircraft above 750 kg MTOM intended for the carriage of passengers or cargo or mail in international air navigation. Sailplanes, LSA and VLA are below this limit. The only issue could be powered sailplanes (The MTOM allowed by CS-22 is 850 kg for such machines) but their use is not the one intended by ICAO Annex 8 Part V: they are mainly intended for recreational flying or flight instruction and therefore they are not intended for the carriage of passenger, cargo or mail in international air transportation. The Agency considers therefore that ICAO Annex 8 certificates of airworthiness could be issued for ELA 1 and 2. The Agency rulemaking inventory contains plans to increase the MTOM of VLA above 750 kg: this increase will be done taking into account the text of ICAO Annex 8 Part V.

Furthermore this option may lead our international partners to include these new approaches in the bilateral agreements or working arrangements.

vi. Foreign comparable regulatory requirements

United States, Canada and Australia are among the 19 countries outside the EU that have recently modified their regulatory regimes to simplify the airworthiness of certain aircraft through the light sport aircraft rule. It should be noted that this rule is applicable only to certain aircraft with a Maximum Take-Off Mass below 600 kg and do not envisage the issue of TC and C of A. The ELA concept is broader in scope and allows for the issue of TC and C of A. The adoption of Option 2 also gives EASA a mechanism for the validation and import of foreign LSA but this mechanism will be different from the usual validation processes such as EASA-FAA TVP (Type Validation Principles).

b. Equity and Fairness issues

None have been identified for Option 1.. Option 2 will create ELA 1 and ELA 2 that are simplified processes and they are optionally available at the discretion of stakeholders. There will always be the option of a product certification done on the Agency internal resources instead of using qualified entities.

5. Summary and Final Assessment:

a. Comparison of the positive and negative impacts for each option evaluated

ELA 2 can be implemented rapidly as it does not depart from well known principles. ELA 1 will function better if Qualified Entities are established. Both meet the goal of alleviating the burden on GA design and manufacturing industry.

Other less regulated aviation sectors have demonstrated innovative developments successfully such as sailplanes and microlights and this can be seen as a possible model. Option 1 would not alleviate the present burden on General Aviation.

b. A summary of who would be affected by these impacts and issues of equity and fairness

- Designers, organisations involved in design, manufacturers of aircraft other than complex motor powered aircraft and associated parts and appliances
- Competent Authorities and Qualified Entities

No issues of equity and fairness were identified for Option 1. Option 2 will create ELA 1 and ELA 2 that are simplified processes and they are optionally available at the discretion of stakeholders. There will always be the option of a product certification done on the Agency internal resources instead of using qualified entities.

c. Final assessment and recommendation of a preferred option

After due consideration the Agency believes that the preferred option is Option 2

Attachment 1
Background

The Advance Notice of Proposed Amendment (A-NPA) 14-2006 entitled 'A concept for better regulation in General Aviation' was published on 14 August 2006 and proposed a number of options to obtain feedback from stakeholders. The CRD corresponding to the A-NPA was published on 9 November 2007. Both documents are available on the Agency website[7].

Three options for initial airworthiness (aircraft certification) were envisaged by the A-NPA:

- Option 1: Relaxation of the current system
- Option 2: Industry monitoring
- Option 3: Industry monitoring with self declaration

The A-NPA asked several questions relative to the proposed concept for better regulation of general aviation and one question (Question 3) was relative to the airworthiness options. This question 3 is repeated below.

Question 3

The Agency is interested in knowing the opinion of stakeholders on the classification of airplanes for initial airworthiness based on weight limits. The agency would also be interested in the stakeholders' opinion on the possibility of fixing weight limits for other types of aircraft and other activities. Finally, should a maximum threshold be fixed for recreational pilot licences below the one fixed for complex motor powered aircraft?

The following is an excerpt of the Comment Response Rocument (CRD):

The vast majority of stakeholders supports either Option 2 (Industry monitoring) or Option 3 (Industry monitoring with self certification). Some of the stakeholders supporting Option 3 were also supporting Option 1 (Relaxation of the current system) for aircraft above 2000 kg where the Agency had proposed no changes to Part-21. Some other stakeholders supporting Option 3 considered it more for the long term and would support Option 1 in return.

A number of stakeholders proposed the creation of a category comparable to the US Light Sport Aircraft rule.

Other stakeholders (including many National Aviation Authorities) supported the use of Option 1.

Some stakeholders proposed simplified regulations for aircraft using power and weight limits as criteria.

One National Authority was concerned by the potential increase of risk in adopting either of the Options 1 to 3 and did not advocate changes.

Mixed views were expressed on the one-man DOA or DER.

Concerning weight criteria, the stakeholders were almost unanimous in accepting an upper limit of 2000 kg for the relaxation of the present system of Part-21. The comments received regarding a weight limit below which a very simple certification process would be acceptable shows no such unanimity. The upper boundary of these suggestions was generally 850 kg (powered two seat sailplanes). Other suggestions supported the A-NPA proposal of 750 kg (Sailplanes and Very Light Aeroplanes) whilst some stakeholders suggested 600 kg to be consistent with the FAA LSA category.

[7] http://www.easa.europa.eu/ws_prod/r/r_archives.php

The following summarise the strategy adopted by the Agency after reviewing the comments:

In view of that feedback the Agency continues to support the introduction of Assessment Bodies as proposed in Option 2 and Option 3. The Agency will therefore consider preparing the necessary changes to the Basic Regulation to allow such an option in the future. This could be the subject of a future NPA.

In the meantime, the Agency envisages a solution close to Option 3 for aircraft below 1000 kg and nearer to Option 1 for aircraft between 1000 and 2000 kg. This is the purpose of the present NPA.

As a reminder the Options 1 and 3 proposed by the A-NPA are shown below.

Option 1:

- Scope: All non complex aircraft
- Design capability: simplified DOA or AP DOA with privileges
- Basis for Type Certificate (TC): EASA in consultation with TCH based on simplified CS adopted by EASA (For aircraft of less than 2000 kg)
- Body issuing the TC: EASA (on the basis of TC Holder recommendation)
- Certification basis for changes and repairs: EASA in consultation with TC Holder or STC Holder
- Approval of design changes and repairs: TC Holder or STC Holder with one-man-DOA
- Type of individual aircraft certificate: certificate of airworthiness
- Body issuing individual aircraft certificate: Member State
- Production capability: POA with the possibility of a one–man POA depending of scope
- Approval of Aircraft Flight Manual and Instructions for Continuing Airworthiness: TC Holder or STC Holder
- Activities relative to continuing airworthiness of design: TC Holder or STC Holder
- Body issuing Airworthiness directives: the Agency in consultation with TCH

Option 3:

This option creates three categories of aircraft: (i) Maximum Take-Off Mass above 2000 kg; (ii) Maximum Take-Off Mass between 750 kg and 2000 kg, (iii) Maximum Take-Off Mass below 750 kg.

The same conditions as for Option 1 would apply for aircraft with a Maximum Take-Off Mass above 2000 kg.

The following criteria would apply to aircraft with a Maximum Take-Off Mass between 750 kg and 2000 kg: (same as Option 2 for below 2000 kg):

- Design capability: compliance with an Industry standard checked by an Assessment Body
- Basis for Type Certificate (TC): defined by the TC holder using an Industry Standard
- Body issuing the TC: Assessment Body
- Certification basis for changes and repairs: TC or STC Holder based on Industry Standard

- Approval of design changes and repairs: TC or STC Holder
- Type of individual aircraft certificate: Certificate of Airworthiness
- Body issuing individual aircraft certificate: Member State
- Production capability: compliance with an Industry Standard checked by an Assessment Body
- Approval of Aircraft Flight Manual and Instructions for Continuing Airworthiness: TC or STC Holder
- Activities relative to continuing airworthiness of design: TC or STC Holder
- Body issuing Airworthiness directives: the Agency or the Agency following recommendation of the Assessment Body

The following criteria would apply to aircraft with a Maximum Take-Off Mass below 750 kg (introduce the concept of self-certification):

- Design capability: compliance with a Industry standard checked by an Assessment Body
- Basis for Type Certificate (TC): defined by the TC holder using an Industry Standard
- Body issuing the TC: TC Holder
- Certification basis for changes and repairs: TC or STC Holder based on Industry Standard
- Approval of design changes and repairs: TC or STC Holder
- Type of individual aircraft certificate: certificate of airworthiness
- Body issuing individual aircraft certificate: Member State
- Production capability: compliance with a Industry standard checked by an Assessment Body
- Approval of Aircraft Flight Manual and Instructions for Continuing Airworthiness: TC or STC Holder
- Activities relative to Continuing Airworthiness of design: TC or STC Holder
- Body issuing Airworthiness directives: the Agency in consultation with TCH

Attachment 2
Who Does What
Initial and Continued Airworthiness
ELA 1

Activity	EASA	Competent Authority	NAA or Qualified Entity	Design Organisation	Production Organisation	Comments
Certification						
Proposal for selecting QE or NAA				x		The intent is to allow the Design Organisation to select a proposed QE from a list of QE approved by EASA.
Notification of QE or NAA	x					
Establishment of certification basis				x		Depending of type of aircraft: CS-VLA, CS-22, CS-23, CS-LSA, CS-31 as appropriate. Industry standards available for CS-LSA: process to update CS-LSA TBD but close to dynamic reference.
Consultation on Special conditions (SC), Equivalent Safety Finding (ESF) as appropriate	x					
Drafting Comment response documents for the SC, ESF as appropriate			X			
Publication of CRD	X					
Agreement of certification basis in view of approval of certification plan			x			Certification Review Item (CRI) A1.
Approval of certification plan	x					Purpose is demonstration of capability for the designer: this activity will also define involvement of EASA/QE. Involvement reduced in case the designer has opted for DOA.
Statements of compliance				x		Compliance with agreed certification basis.
Confirmation of compliance			x			Equivalent to CVE (compliance verification engineer) function
Approval of flight manual and limitations			x			EASA issue of TC implies approval by EASA of AFM and limitations because they are included or referred to into the TCDS.
Establishment of flight conditions for permit to fly				x		Development work
Technical visa for Approval of flight conditions for permit to fly			x			Development work
Approval of flight conditions	X					Could also be the Design organisation if they have DOA with appropriate privileges.

Approval of limitation section of instructions for continued airworthiness (ICA)			x			EASA issue of TC implies approval by EASA of ICA and limitations because they are included or referred to into the TCDS.
Recommendation for issue of TC			x			Includes drafting of TCDS.
Issue of TC	x					
Post TC approvals						
Classification of changes			x			Design Organisation if DOA or combined approval
Recommendation for major change or STC approval			x			Issue of technical visa
Major change approval	x					Article 15 of Regulation 1592/2002
Technical visa Minor change approval			x			Unless there is a DOA privilege.
Approval of minor change	X					A procedure will be defined to limit burden on applicant.
STC approval	x					Article 15 of Regulation 1592/2002
Approval of flight manual and ICA limitation section changes			x			EASA issue of STC or approval for major change implies approval by EASA of ICA and limitations because they are included or referred to into the TCDS or STC.
Individual aircraft						
Issue of permit to fly		x.				Development work
Presentation of a statement of conformity					x	
Issue of Certificate of Airworthiness		x				C of A is issued without further showing to POA
Classification of repairs			x			Design Organisation if DOA or combined approval
Technical visa for Approval of minor repairs			x			Unless there is a DOA privilege.
Approval of minor repair	X					A procedure will be defined to limit burden on applicant.
Recommendation for major repair approval (technical visa)			x			
Approval of major repairs	x					Article 15 of Regulation 1592/2002 unless the DOA of the TC holder has the privilege.
Validation of third country TC						If the third country does not issue a TC, then full certification process applies.
Proposal for selecting QE or NAA				x		The intent is to allow the Design Organisation to propose a QE from a list of QE approved by EASA.
Notification of QE and NAA	X					
Establishment of certification basis				x		Industry standards available
Agreement of certification basis			x			Certification Review Item (CRI) A1.

Approval of validation plan	x					DOA equivalent to approval of certification plan must be in place
Statements of compliance				x		
Confirmation of compliance			x			Equivalent to CVE function
Recommendation for issue of TC			x			
Issue of TC	x					
Organisation Approval						
Design Organisation Approval	Not applicable					Approval of certification plan instead of DOA
Production Organisation Approval		x				
Combined approval	x	x				Practically can work • when both EASA and the CA for production use the same appropriately qualified QE to make findings for both POA and DOA • When EASA has accredited the CA for production as a QE for DOA • When the MS has requested EASA to issue the POA. Fees and charges systems should be adapted so that the combined approval cost less than two separate approvals.
Continued Airworthiness						
In-service monitoring	x	x	x	x	x	In accordance with their remit/obligations
Recommendation for issue of mandatory continuing airworthiness information			x	x		
Issue of mandatory continuing airworthiness information	x	x				EASA for design issues; CA for production and maintenance issues.
Response to safety recommendations	x	x	x	x	x	Depending who the addressee is
Accreditation and Surveillance						
Accreditation of QE	x	x				EASA for QE for design; CA for QE for production. Same issues exist here for 'combined' QE as for combined approval.
Audit of CA	x					
Audit of QE	x	x				EASA for QE for design; CA for QE for production Same issues exist here for 'combined' QE as for combined approval.
Audit of Design Organisation			x			Only if the Design Organisation has opted to DOA or combined DOA/POA
Audit of Production Organisation			x			Only when the CA uses QE for production.

Attachment 3
Who Does What
Initial and Continued Airworthiness
ELA 2

Activity	EASA	Competent Authority	NAA or Qualified Entity	Design Organisation	Production Organisation	Comments
Certification						
Selection of NAA/QE	x					
Establishment of certification basis				x		Depending of type of aircraft: CS-23, CS-31, CS-VLR, industry standards as appropriate.
Consultation on Special Conditions (SC), Equivalent Safety Finding (ESF) as appropriate	x					
Comment Response Documents for the SC; ESF			x			
Agreement of certification basis	x					We are talking of the CRI A1 here.
Investigation of AP-DOA			x			
Agreement of AP-DOA procedure	x					
Statements of compliance				x		
Confirmation of compliance			x			Equivalent to CVE (compliance verification engineer) function
Approval of Flight Manual and limitations			x			EASA issue of TC implies approval by EASA of AFM and limitations because they are included or referred to into the TCDS.
Establishment of flight conditions for permit to fly				x		Development work
Technical visas for Approval of flight conditions for permit to fly			x			Development work
Approval of flight conditions for permit to fly	X					Could also be the Design organisation if they have DOA with appropriate privileges.
Approval of limitation section of Instructions for Continued Airworthiness (ICA)			x			EASA issue of TC implies approval by EASA of ICA and limitations because they are included or referred to into the TCDS.
Recommendation for issue of TC			x			Includes drafting of TCDS.
Issue of TC	x					

Post TC approvals						
Classification of changes			x			Design Organisation if DOA or combined approval
Recommendation for major change or STC approval (technical visa)			x			
Major change approval	x					
Technical visa for Minor change approval			x			Unless there is a DOA or combined approval privilege. A procedure will be defined to limit burden on applicant.
Minor change approval						
STC approval	x					
Approval of Flight Manual and ICA limitation section changes			X			EASA issue of STC or approval for major change implies approval by EASA of ICA and limitations because they are included or referred to into the TCDS or STC.
Individual aircraft						
Issue of permit to fly		x.				Development work
Presentation of a statement of conformity					x	
Issue of Certificate of Airworthiness		x				C of A is issued without further showing to POA
Classification of repairs			x			Design Organisation if DOA or combined approval
Technical visa for Approval of minor repairs			x			Unless there is a DOA privilege. A procedure will be defined to limit burden on applicant
Approval of minor repairs	X					
Recommendation for major repair approval (technical visa)			x			
Approval of major repairs	x					Unless the DOA of the TC holder has the privilege
Validation of third country TC						General: in accordance to Bilateral Agreements or working arrangements
Selection of NAA/ QE	x					
Establishment of certification basis				x		Depending of type of aircraft: CS-23, CS-31, CS-VLR, Industry Standards as appropriate.
Agreement of certification basis	x					
Statements of compliance				x		
Confirmation of compliance			x			Equivalent to CVE function
Recommendation for issue of TC			x			
Issue of TC	x					

Organisation Approval						
Design Organisation Approval	x					Or alternative procedures to DOA
Production Organisation Approval		x				
Combined approval	x	x				Practically can work • when both EASA and the CA for production use the same appropriately qualified QE to make findings for both POA and DOA • When EASA has accredited the CA for production as a QE for DOA • When the MS has requested EASA to issue the POA. Fees and charges systems should be adapted so that the combined approval cost less than two separate approvals.
Continued Airworthiness						
In-service monitoring	x	x	x	x	x	In accordance with their remit/obligations
Recommendation for issue of mandatory continuing airworthiness information			x	x		
Issue of mandatory continuing airworthiness information	x	x				
Response to safety recommendations	x	x	x	x	x	Depending who the addressee is
Accreditation and Surveillance						
Accreditation of NAA/ QE	x	x				Same issues exist here for 'combined' QE as for combined approval.
Audit of CA	x					
Audit of QE	x	x				Same issues exist here for 'combined' QE as for combined approval.
Audit of organisation		x	x			

B DRAFT OPINION AND DRAFT DECISION

The text of the amendment is arranged to show deleted text, new text or new paragraph as shown below:

- deleted text is shown with a strike through: ~~deleted~~
- new text is highlighted with grey shading: new
- ….

  Indicates that remaining text is unchanged in front of or following the reflected amendment.

I AMENDMENTS TO PART-21

SECTION A

SUBPART B

21A.14 Demonstration of capability

(a) Any organisation applying for a Type Certificate or restricted Type Certificate shall demonstrate its capability by holding a Design Organisation Approval, issued by the Agency in accordance with Subpart J.

(b) By way of derogation from paragraph (a), as an alternative procedure to demonstrate its capability, an applicant may seek Agency agreement for the use of procedures setting out the specific design practices, resources and sequence of activities necessary to comply with this Part, when the product is one of the following:

~~1. a very light aeroplane or rotorcraft, a sailplane or a powered sailplane, a balloon, a hot air airship; or~~
~~2. a small aeroplane meeting all of the following elements:~~
~~(i) Single piston engine, naturally aspirated, of not more than 250 hp Maximum Take-Off Power (MTOP);~~
~~(ii) Conventional configuration;~~
~~(iii) Conventional material and structure;~~
~~(iv) Flights under VFR, outside icing conditions;~~
~~(v) Maximum 4 seats including the pilot and maximum take off mass limited to 3000 lb. (1361 kg);~~
~~(vi) Unpressurised cabin;~~
~~(vii) Non-power assisted controls;~~
~~(viii) Basic aerobatic flights limited to +6/-3g; or~~
~~3. a piston engine; or~~
~~4. an engine or a propeller type-certificated under the applicable airworthiness code for powered sailplanes; or~~
~~5. a fixed or variable pitch propeller.~~

- An aeroplane, sailplane or powered sailplane with a MTOM less than 2000 kg that is not classified as complex-motor-powered aircraft
- A balloon
- A hot-air airship
- 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
    - (iv) Non power assisted controls
- A Very Light Rotorcraft
- An engine installed in aircraft referred to in this paragraph
- A propeller installed in aircraft referred to in this paragraph.

(c) By way of derogation from paragraph (a), an applicant may elect for demonstration of capability through Agency approval of a certification programme detailing the means for compliance demonstration when the product is one of the following:

- An aeroplane, sailplane or powered sailplane with a MTOM less than 1000 kg that is not classified as complex-motor-powered aircraft
- A balloon with a maximum design lifting gas or hot air volume of not more than:
    - 3400 m^3 for hot-air balloons
    - 1050 m^3 for gas balloons
    - 300 m^3 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 m^3 for hot-air airships
    - 1000 m^3 for gas airships
- An engine installed in aircraft referred to in this paragraph
- A propeller installed in aircraft referred to in this paragraph

21A.35 Flight Tests

(a) Flight testing for the purpose of obtaining a Type Certificate shall be conducted in accordance with conditions for such flight testing specified by the Agency.(b) The applicant shall make all flight tests that the Agency finds necessary:

1. To determine compliance with the applicable Type Certification basis and environmental protection requirements, and
2. For aircraft to be certificated under this Section, except:
    - sailplanes and powered sailplanes, ~~and except aeroplanes of 2722 Kg or less Maximum Take-Off Mass (MTOM)~~,
    - balloons and
    - airships defined in paragraph 21A.14(b) and (c) and
    - aeroplanes of 2730 kg or less Maximum Take-Off Mass (MTOM),

    to determine whether there is reasonable assurance that the aircraft, its parts and appliances are reliable and function properly.

(d) (Reserved)

(e) (Reserved)

(f) The flight tests prescribed in subparagraph (b)(2) shall include:

1. For aircraft incorporating turbine engines of a type not previously used in a type-certificated aircraft, at least 300 hours of operation with a full complement of engines that conform to a Type Certificate; and
2. For all other aircraft, at least 150 hours of operation.

21A.47 Transferability

Transfer of a Type Certificate or restricted Type Certificate may only be made to a natural or legal person that is able to undertake the obligations under 21A.44, and, for this purpose, has demonstrated its ability to qualify under the criteria of 21A.14 except for aircraft defined in 21A.14 (c) has sought the Agency agreement for the use of procedures setting out its activities to undertake these obligations

SUBPART D

21A.96 Standard changes

By way of derogation to paragraph 21A.91, the following applies to standard changes:

(a) Applicability: This paragraph is applicable only to aeroplanes below 5700 kg, rotorcraft below 3175 kg Maximum Take-Off Mass, sailplanes, powered sailplanes, balloons and airships as defined in paragraph 21A.14 (b) and (c).

(b) Standard changes are defined in a certification specification adopted by the Agency. The certification specification will contain acceptable methods, techniques and practices for such changes and will include the associated instructions for continuing airworthiness.

(c) The standard change is deemed to be approved by the Agency when it is designed in accordance with the certification specification mentioned in paragraph (b).

SUBPART E

21A.112B Demonstration of capability

(a) Any organisation applying for a Supplemental Type Certificate shall demonstrate its capability by holding a Design Organisation Approval, issued by the Agency in accordance with Subpart J.

(b) By way of derogation from paragraph (a), as an alternative procedure to demonstrate its capability, an applicant may seek Agency agreement for the use of procedures setting out the specific design practices, resources and sequence of activities necessary to comply with this Subpart.

(c) By way of derogation from paragraph (a) and (b), an applicant may elect for demonstration of capability through Agency approval of a certification programme detailing the means for compliance demonstration for an STC on an aircraft, engine and propellers defined in paragraph 21A.14 (c):

21A.116 Transferability

A Supplemental Type Certificate shall only be transferred to a natural or legal person that is able to undertake the obligations of 21A.118A and for this purpose has demonstrated its ability to qualify under the criteria of 21A.112B except for aircraft defined in 21A.14 (c) has sought the Agency agreement for the use of procedures setting out its activities to undertake these obligations.

SUBPART G

21A.139 Quality System

(a) The Production Organisation shall demonstrate that it has established and is able to maintain a quality system. The quality system shall be documented. This quality system shall be such as to enable the organisation to ensure that each product, part or appliance produced by the organisation or by its partners, or supplied from or subcontracted to outside parties, conforms to the applicable design data and is in condition for safe operation, and thus exercise the privileges set forth in 21A.163.

(b) The quality system shall contain:

(1) As applicable within the scope of approval, control procedures for:

(i) Document issue, approval, or change.

(ii) Vendor and subcontractor assessment audit and control.

(iii) Verification that incoming products, parts, materials, and equipment, including items supplied new or used by buyers of products, are as specified in the applicable design data.

(iv) Identification and traceability.

(v) Manufacturing processes.

(vi) Inspection and testing, including production flight tests.

(vii) Calibration of tools, jigs, and test equipment.

(viii) Non conforming item control.

(ix) Airworthiness co-ordination with the applicant for, or holder of, the design approval.

(x) Records completion and retention.

(xi) Personnel competence and qualification.

(xii) Issue of airworthiness release documents.

(xiii) Handling, storage and packing.

(xiv) Internal quality audits and resulting corrective actions.

(xv) Work within the terms of approval performed at any location other than the approved facilities.

(xvi) Work carried out after completion of production but prior to delivery, to maintain the aircraft in a condition for safe operation.

(xvii) Issue of permit to fly and approval of associated flight conditions.

The control procedures need to include specific provisions for any critical parts.

(2) An independent quality assurance function to monitor compliance with, and adequacy of, the documented procedures of the quality system. This monitoring shall include a feedback system to the person or group of persons referred to in 21A.145(c)(2) and ultimately to the manager referred to in 21A.145(c)(1) to ensure, as necessary, corrective action.

(c) By derogation to paragraph (a), for aircraft defined in 21A.14 (b) and (c), the quality system may be replaced by a Production Organisational review and the organisation shall demonstrate that it has established and is able to maintain a production organisational review system. This system shall be such as to enable the organisation to ensure that each product, part or appliance produced by the organisation or by its partners, or supplied from or subcontracted to outside parties, conforms to the applicable design data and is in a condition for safe operation, and thus exercise the privileges granted under this Subpart.

(1). The system for organisational review shall contain:

i) As applicable within the scope of approval, control procedures for:

1. Document issue, approval, or change;
2. Vendor and subcontractor assessment audit and control;
3. Verification that incoming products, parts, materials, and equipment, including items supplied new or used by buyers of products, are as specified in the applicable design data;
4. Identification and traceability;
5. Manufacturing processes;
6. Inspection and testing, including production flight tests;
7. Calibration of tools, jigs, and test equipment;
8. Non-conforming item control;
9. Airworthiness co-ordination with the applicant for, or holder of, the design approval;
10. Records completion and retention;
11. Personnel competence and qualification;
12. Issue of airworthiness release documents;
13. Handling, storage and packing;

14. Internal quality audits and resulting corrective actions;
15. Work within the terms of approval performed at any location other than the approved facilities;
16. Work carried out after completion of production but prior to delivery, to maintain the aircraft in a condition for safe operation;
17. Issue of Permit to Fly and establishment of associated flight conditions.

The control procedures need to include specific provisions for any life-limited parts.

ii) An internal quality assurance function to monitor compliance with, and adequacy of, the documented procedures of the organisational review system. This monitoring shall include a feedback system to the person or group of persons referred to in sub-paragraph 21A.145(c)(2) [Approval Requirements] and ultimately to the manager referred to in sub-paragraph 21A.145(c)(1) to ensure, as necessary, corrective action.

21A.163 Privileges

e. For any for any product referred to in 21A.14(c), maintain and repair the product that he has produced and issue a certificate of release to service (EASA Form 53) in respect of that maintenance.

SUBPART K

21A.307 Release of parts and appliances for installation

No part or appliance (except a standard part), shall be eligible for installation in a type-certificated product unless it is:

(a) Accompanied by an authorised release certificate (EASA Form 1), certifying airworthiness; ~~and~~ or

(b) in the case of aircraft complying with one of the criteria of 21A.14(b), and except for life limited parts and appliances, parts of the primary structure and parts of the flight controls, produced in conformity with an approved design under the responsibility of the aircraft owner when installed in his aircraft; or

(c) in the case of aircraft complying with one of the criteria of 21A.14(c), produced in conformity with an approved design under the responsibility of the aircraft owner when installed in his aircraft; and

(~~b~~d) Marked in accordance with Subpart Q.

SUBPART L - Combined Approval of Organisations Responsible for Design and Production of aircraft defined in Paragraph 21A.14(b) and (c)

21A.351 Scope

This Subpart establishes:

a. The procedures for the approval of combined Design and Production Organisations applicable to aircraft defined in Paragraph 21A.14(b) and (c).

b. The rules governing the rights and obligations of applicants for, and holders of, such approvals.

21A.353 Eligibility

a. Any natural or legal person ('organisation') shall be eligible as an applicant for an approval under this Subpart.

b. For combined Design and Production Organisation Approval the applicant shall hold or have applied for:

i) A Type Certificate or equivalent, or approval of a major change to a type design; or

ii) A Supplemental Type Certificate or equivalent; or

iii) A major repair design approval; or

iv) Privileges to approve design changes or repairs, or

v)

v) Hold or have applied for an approval of that specific design;

or justify that, for a defined scope of work, an approval under this Subpart is appropriate for the purpose of showing conformity with a specific design; and

21A.355 Application

Each application for a combined Design and Production Organisation Approval shall be made to the Agency and Competent Authority or Agency when the Member State has made use of article 20(2)(b)(ii) of the Basic Regulation in a form and manner established by that authority and shall include an outline of the terms of approval and associated privileges requested to be issued.

21A.357 Issue of Approval

A combined Design and Production Organisation shall be entitled to have a combined Design and Production Organisation Approval issued by the Agency when the Member State has made use of article 20(2)(b)(ii) of the Basic Regulation or a Design Organisation Approval issued by the Agency and a Production Organisation Approval issued by the Competent Authority when it has demonstrated compliance with the applicable requirements under this Subpart.

21A.359 Design Assurance System

a. The organisation shall demonstrate that it has established and is able to maintain a design assurance system for the control and supervision of the design, and of design changes, of products, parts and appliances covered by the application. This design assurance system shall be such as to enable the organisation:

i) To ensure that the design of the products, parts and appliances or the design change thereof, comply with the applicable Type Certification basis and environmental protection requirements; and

ii) To ensure that its responsibilities are properly discharged in accordance with the appropriate provisions of this Subpart; and the terms of approval issued under this Subpart.

iii) To independently monitor the compliance with, and adequacy of, the documented procedures of the system. This monitoring shall include a

feed-back system to a person or a group of persons having the responsibility to ensure corrective actions.

b. The design assurance system shall include an independent checking function for the showing of compliance.

c. The organisation shall specify the manner in which the design assurance system accounts for the acceptability of the parts and appliances designed or the tasks performed by partners or subcontractor according to methods which are the subject of written procedures.

21A.361 Production Organisational Review

a. The organisation shall demonstrate that it has established and is able to maintain a combined Design and Production Organisational review system. This system shall be such as to enable the organisation to ensure that each product, part or appliance produced by the organisation or by its partners, or supplied from or subcontracted to outside parties, conforms to the applicable design data and is in a condition for safe operation, and thus exercise the privileges granted under this Subpart.

b. The system for organisational review shall contain:

i) As applicable within the scope of approval, control procedures for:

1. Document issue, approval, or change;
2. Vendor and subcontractor assessment audit and control;
3. Verification that incoming products, parts, materials, and equipment, including items supplied new or used by buyers of products, are as specified in the applicable design data;
4. Identification and traceability;
5. Manufacturing processes;
6. Inspection and testing, including production flight tests;
7. Calibration of tools, jigs, and test equipment;
8. Non-conforming item control;
9. Airworthiness co-ordination with the applicant for, or holder of, the design approval;
10. Records completion and retention;
11. Personnel competence and qualification;
12. Issue of airworthiness release documents;
13. Handling, storage and packing;
14. Internal quality audits and resulting corrective actions;
15. Work within the terms of approval performed at any location other than the approved facilities;
16. Work carried out after completion of production but prior to delivery, to maintain the aircraft in a condition for safe operation.
17. Issue of Permit to Fly and establishment of associated flight conditions

The control procedures need to include specific provisions for any life-limited parts.

ii) An internal quality assurance function to monitor compliance with, and adequacy of, the documented procedures of the organisational review system. This monitoring shall include a feedback system to the person or group of persons referred to in sub-paragraph 21A.365(c)(ii) [Approval Requirements] and ultimately to the manager referred to in sub-paragraph 21A.365(c)(i) to ensure, as necessary, corrective action.

21A.363 Exposition

a. The organisation shall submit to the Agency and Competent authority or Agency when the Member State has made use of article 20(2)b(ii) of the Basic Regulation an exposition providing the following information:

i) A statement signed by the accountable manager confirming that the exposition and any associated manuals which define the approved organisation's compliance with this Subpart will be complied with at all times;

ii) The title(s) and names of nominated managers accepted by the Agency and Competent authority or Agency when the Member State has made use of article 20(2)b(ii) of the Basic Regulation;

iii) The duties and responsibilities of the manager(s) including matters on which they may deal directly with the Agency and Competent authority or Agency when the Member State has made use of article 20(2)b(ii) of the Basic Regulation on behalf of the organisation;

iv) An organisational chart showing associated chains of responsibility of the managers;

v) A list of certifying staff;

vi) A general description of manpower resources;

vii) A general description of the facilities located at each address specified in the organisation's certificate of approval;

viii) A general description of the scope of work relevant to the terms of approval;

ix) The procedure for the notification of organisational changes to the Agency and Competent authority or Agency when the Member State has made use of article 20(2)(b(ii) of the Basic Regulation;

x) The amendment procedure for the exposition;

xi) A description of the organisational review system and associated procedures.

b. The exposition shall be amended as necessary to remain an up-to-date description of the organisation, and copies of any amendments shall be supplied to the Agency/Competent Authority.

21A.365 Approval Requirements

The organisation shall demonstrate, on the basis of the information submitted in the exposition that:

a. With regard to general approval requirements, facilities, working conditions, equipment and tools, processes and associated materials, number and competence of staff, general organisation and coordination are adequate to discharge the organisation's obligations under this Subpart;

b. With regard to all necessary airworthiness, noise, fuel venting and exhaust emissions data:

i) The organisation is in receipt of such data from the Agency, and from the holder of, or applicant for, the type approval or design approval, to determine conformity with the applicable design data;

ii) The organisation has established a procedure to ensure that airworthiness, noise, fuel venting and exhaust emissions data are correctly incorporated in its production data;

iii) Such data are kept up to date and made available to all personnel who need access to such data to perform their duties.

c. With regard to management and staff:

i) A manager has been nominated by the organisation, and is accountable to the Agency and Competent Authority or Agency when the Member State has made use of article 20(2)b(ii) of the Basic Regulation. His or her responsibility within the organisation shall consist of ensuring that all design and production is performed to the required standards and that the organisation is continuously in compliance with the data and procedures identified in the exposition;

ii) A person or group of persons have been nominated to ensure that the organisation is in compliance with this Subpart, and are identified, together with the extent of their authority. Such person(s) shall act under the direct authority of the accountable manager referred to in subparagraph i). The persons nominated shall be able to show the appropriate knowledge, background and experience to discharge their responsibilities;

iii) Staff at all levels have been given appropriate authority to be able to discharge their allocated responsibilities and that there is full and effective coordination within the organisation in respect of airworthiness, noise, fuel venting and exhaust emission data matters.

d. With regard to certifying staff authorised by the organisation to sign the documents issued under the privileges of this approval:

i) The knowledge, background (including other functions in the organisation), and experience of the certifying staff are appropriate to discharge their allocated responsibilities;

ii) The organisation maintains a record of all certifying staff which shall include details of the scope of their authorisation;

iii) Staff is provided with evidence of the scope of their authorisation.

21A.367 Changes to the Approved Organisation

a. After the issue of the organisation approval, each change to the organisation, particularly changes to the design assurance or organisational review systems, that is significant to the showing of compliance, conformity or to the airworthiness and environmental protection of the product, part or appliance, shall be approved by the Agency and Competent Authority or Agency when the Member State has made use of article 20(2)b(ii) of the Basic Regulation.

b. An application for approval shall be submitted to the Agency and Competent Authority or Agency when the Member State has made use of article 20(2)b (ii) of the Basic Regulation and before implementation of the change the organisation shall demonstrate that it will continue to comply with this Subpart after implementation.

c. A change of the location of the facilities of the approved organisation is deemed a change of significance and therefore necessitates application to the Agency and Competent Authority or Agency when the Member State has made use of article 20(2)b(ii) of the Basic Regulation.

21A.369 Transferability

Except as a result of a change in ownership, which is deemed a significant change and necessitates application to the Agency and Competent Authority or Agency when the Member State has made use of article 20(2)b(ii) of the Basic Regulation, a combined Design and Production Approval in accordance with this Subpart is not transferable.

21A.371 Terms of Approval

a. The terms of approval shall identify the scope of work, the categories of products, parts and appliances, for which the holder is entitled to exercise the privileges of this approval.

b. Those terms shall be issued as:

i. One certificate when the Member State has requested the Agency to issue the production certificate in accordance to article 20(2)b(ii) of the Basic Regulation

ii. Two certificates in all other cases.

21A.373 Changes to the Terms of Approval

Each change to the terms of approval shall be approved by the Agency and Competent Authority or Agency when the Member State has made use of article 20(2)b(ii) of the Basic Regulation. Any application for a change to the terms of approval shall be made in a form and manner established by the Agency and Competent Authority or Agency when the Member State has made use of article 20(2)b(ii) of the Basic Regulation. The organisation shall comply with the applicable requirements of this Subpart.

21A.375 Investigations

The organisation shall make arrangements that allow the Agency and Competent Authority or Agency when the Member State has made use of article 20(2)b(ii) of the Basic Regulation to make any inspection or attend investigations, including investigations of partners and subcontractors, or to witness flight or ground tests, necessary to determine compliance and continued compliance with the applicable requirements of this Subpart.

21A.377 Findings

a. When objective evidence is found showing non-compliance of the holder of a combined Design and Production Approval with the applicable requirements, the finding shall be classified as follows:

i) A level one finding is any non-compliance with the requirements of this Subpart which could lead to uncontrolled non-compliances with applicable requirements and which could affect the safety of the aircraft;

ii) A level two finding is any non-compliance with the requirements of this Subpart which is not classified as level one.

b. A level three finding is any item where it has been identified, by objective evidence, to contain potential problems that could lead to non-compliance under 21A.377(a).

c. After receipt of notification of findings:

i) In case of a level one finding, the holder of the organisation approval shall demonstrate corrective action to the satisfaction of the Agency and Competent Authority or Agency when the Member State has made use of

article 20(2)b(ii) of the Basic Regulation within a period of no more than 21 working days after written confirmation of the finding;

ii) In case of level two findings, the corrective action period granted by the Agency/Competent Authority shall be appropriate to the nature of the finding but in any case initially shall not be more than six months. In certain circumstances and subject to the nature of the finding the Agency and Competent Authority or Agency when the Member State has made use of article 20(2)b(ii) of the Basic Regulation may extend the six month period subject to a satisfactory corrective action plan;

iii) A level three finding shall not require immediate action by the holder of the organisation approval.

d. In the case of level one or level two findings, the organisation approval may be subject to a partial or full suspension or revocation. The holder of the organisation approval shall provide confirmation of receipt of the notice of suspension or revocation of the organisation approval in a timely manner.

21A.379 Duration and Continued Validity

a. A combined Design and Production Approval shall be issued for an unlimited duration; it shall remain valid unless:

i) The organisation fails to demonstrate compliance with the applicable requirements; or

ii) The Agency and Competent Authority or Agency when the Member State has made use of article 20(2)b(ii) of the Basic Regulation is prevented by the approved organisation, or any of its partners or subcontractors, from performing its investigations; or

iii) There is evidence that the organisation cannot maintain satisfactory control of the design or manufacture of products, parts or appliances under the approval; or

iv) The organisation no longer meets the eligibility requirements for this approval; or

v) The certificate has been surrendered or revoked.

b. Upon surrender or revocation, the certificate shall be returned to the Agency and Competent Authority or Agency when the Member State has made use of article 20(2)b(ii) of the Basic Regulation.

21A.381 Design Privileges

a. The holder of a combined Design and Production Approval shall be entitled to perform design activities within its scope of approval.

b. Subject to 21A.375 compliance documents submitted by the holder of a combined Design and Production Approval for the purpose of obtaining:

i) A Type Certificate or approval of a major change to a type design; or

ii) A Supplemental Type Certificate; or

iii) A major repair design approval

shall be accepted by the Agency without further verification.

c. The holder of a combined Design and Production Approval shall be entitled, within its terms of approval and under the relevant procedures of the design assurance system:

i) To classify changes to type design and repairs as ‘major’ or ‘minor’;

ii) To approve minor changes to type design and minor repairs;

iii) To issue information or instructions containing the following statement: ‘The technical content of this document is approved under the authority of the combined Design and Production Organisation Approval reference [EASA] [x/y/z].’

iv) Approval for changes to flight and/or technical manuals;

v) Approval to issue or amend continuing airworthiness instructions

vi) Approval of flight conditions for the issue of Permits to Fly

d. The holder of a combined Design and Production Organisation Approval may be Type Certificate holder for aircraft defined in part 21A.14(b) and (c) that it has not designed, subject to having access to the necessary design data.

21A.383 Production Privileges

Pursuant to the terms of approval issued under these requirements the holder of a combined Design and Production Organisation Approval may:

a. Perform production activities under these requirements.

b. In the case of complete aircraft and upon presentation of an Aircraft Statement of Conformity (EASA Form 52) under 21A.174, obtain an aircraft certificate of airworthiness, restricted certificate of airworthiness or permit to fly and, if appropriate, a noise certificate without further showing.

c. In the case of other products, parts or appliances issue Authorised Release Certificates (EASA Form 1) under 21A.307 without further showing.

d. Maintain a new aircraft that it has produced and issue a Certificate of Release to Service (EASA Form 53) in respect of that maintenance

e. Repair and overhaul products, parts or appliances which are included in its scope of approval and issue an Authorised Release Certificate (EASA Form 1) in respect of that maintenance

f. Under procedures agreed with its Competent Authority for production, for an aircraft it has produced and when the Production Organisation itself is controlling under its POA the configuration of the aircraft and is attesting conformity with the design conditions approved for the flight, to establish the flight conditions for the issue of a Permit to Fly in accordance with the 21A.710(b).

21A.385 Obligations of the Holder

The holder of a combined Design and Production Organisation Approval shall, as applicable:

a. Ensure that the exposition, and the documents to which it refers, are used as basic working documents within the organisation;

b. Maintain the organisation in conformity with the data and procedures approved for the organisation approval;

c. Determine that the design of products, or changes or repairs thereof, as applicable, comply with applicable requirements and have no unsafe feature;

d. Except for minor changes or repairs approved under the privileges of the combined Design and Production Organisation Approval, provide to the Agency a Certificate of Design conformity confirming compliance with paragraph c);

e. Ensure that required manuals or instructions for continued airworthiness, or changes thereof, are approved either by the combined Design and Production Organisation or the Agency as appropriate and are provided to each known owner of aircraft affected;

f. Provide to the Agency information or instructions related to Airworthiness Directives;

g. i) Determine that each completed aircraft conforms to the type design and is in condition for safe operation prior to submitting a Statement of Conformity (EASA Form 52); or

ii) Determine that other products, parts or appliances are complete and conform to the approved design data and are in condition for safe operation before issuing an EASA Form 1 to certify airworthiness, and additionally in the case of engines, determine according to data provided by the engine type approval holder that each completed engine is in compliance with the applicable emissions requirements, current at the date of manufacture of the engine, to certify emissions compliance; or

iii) Determine that other products, parts or appliances conform to the applicable data before issuing an EASA Form 1 as a conformity certificate;

h. Record all details of work carried out;

i. Establish and maintain an internal occurrence reporting system to enable the collection and assessment of occurrence reports in order to identify adverse trends or to address deficiencies, and to extract reportable occurrences. This system shall include evaluation of relevant information relating to occurrences and the promulgation of related information;

j. i) Report to the holder of the type approval or design approval, all cases where products, parts or appliances have been released by the Production Organisation and subsequently identified to have possible deviations from the applicable design data, and investigate with the holder of the type approval or design approval in order to identify those deviations which could lead to an unsafe condition;

ii) Report to the Agency and Competent Authority or Agency when the Member State has made use of article 20(2)b(ii) of the Basic Regulation the deviations which could lead to an unsafe condition identified according to subparagraph i). Such reports shall be made in a form and manner established by the Agency and Competent Authority or Agency when the Member State has made use of article 20(2)b(ii) of the Basic Regulation; Where the holder of the combined Design and Production Organisation Approval is acting as a supplier to another Production Organisation, report also to that other organisation all cases where it has released products, parts or appliances to that organisation and subsequently identified them to have possible deviations from the applicable design data;

k. Provide assistance to the holder of the type approval or design approval in dealing with any continuing airworthiness actions that are related to the products parts or appliances that have been produced;

l. Establish an archiving system incorporating requirements imposed on its partners, suppliers and subcontractors ensuring conservation of the data used to justify conformity of the products, parts or appliances. Such data shall be held at the disposal of the Agency and Competent Authority or Agency when the Member State has made use of article 20(2)b(ii) of the Basic Regulation and be retained in order to provide the information necessary to ensure the continuing airworthiness of the products, parts or appliances;

m. Where, under its terms of approval, the holder issues a Certificate of Release to Service, determine that each completed aircraft has been subjected to necessary maintenance and is in condition for safe operation, prior to issuing the certificate;

n. Where applicable, under the privilege of 21A.383(f), determine the conditions under which a permit to fly can be issued.

SUBPART M

21A.432B Demonstration of capability

(a) An applicant for a major repair design approval shall demonstrate its capability by holding a Design Organisation Approval, issued by the Agency in accordance with Subpart J.

(b) By way of derogation from paragraph (a), as an alternative procedure to demonstrate its capability, an applicant may seek Agency agreement for the use of procedures setting out the specific design practices, resources and sequence of activities necessary to comply with this Subpart.

(c) By way of derogation from paragraph (a) and (b), an applicant may seek Agency agreement for the approval of a certification programme setting out the specific design practices, resources and sequence of activities necessary to comply with this part for a repair on aircraft defined in paragraph 21A.14(c).

21A.436 Standard repairs

By way of derogation to Paragraph A.91, the following applies to standard repairs:

(a) Applicability: This paragraph is applicable only to aeroplanes below 5700 kg, rotorcraft below 3175 kg Maximum Take-Off Mass, sailplanes, powered sailplanes, balloons and airships as defined in paragraph 21A.14(b) and (c).

(b) Standard repairs are defined in a certification specification adopted by the Agency. The certification specification will contain acceptable methods, techniques and practices for such repairs and will include the associated instructions for continuing airworthiness.

(c) The standard repair is deemed to be approved by the Agency when it is designed in accordance with the certification specification mentioned in paragraph (b).

21A.439 Production of repair parts

Parts and appliances to be used for the repair shall be manufactured in accordance with production data based upon all the necessary design data as provided by the repair design approval holder:

(a) Under Subpart F, or

(b) By an organisation appropriately approved in accordance with Subpart G or L, or

(c) By an appropriately approved Maintenance Organisation.

21A.441 Repair embodiment

(a) The embodiment of a repair shall be made by an appropriately approved Maintenance Organisation, or by a Production Organisation appropriately approved in accordance with Subpart G and L, under 21A.163(d) or 21A.383(d) privilege.

(b) The Design Organisation or the combined Design and Production Organisation shall transmit to the organisation performing the repair all the necessary installation instructions.

SUBPART P

21A.710 (a)

Add a new (a) 3 to read:

For aircraft defined in 21A.14(b) or (c) and subject to 21A.257(b), the Agency shall accept without further verification compliance documents submitted by the applicant for the purpose of obtaining the establishment of flight conditions required for a permit to fly.

SUBPART Q

21A.801 Identification of products

(a) The identification of products shall include the following information:

(1) Manufacturer's name.

(2) Product designation.

(3) Manufacturer's serial number.

(4) Any other information the Agency finds appropriate.

(b) Any natural or legal person that manufactures an aircraft or engine under Subpart G or Subpart F or Subpart L shall identify that aircraft or engine by means of a fireproof plate that has the information specified in paragraph (a) marked on it by etching, stamping, engraving, or other approved method of fireproof marking. The identification plate shall be secured in such a manner that it is accessible and legible, and will not likely be defaced or removed during normal service, or lost or destroyed in an accident.

(c) Any natural or legal person that manufactures a propeller, propeller blade, or propeller hub under Subpart G or Subpart F or Subpart L shall identify it by means of a plate, stamping, engraving, etching or other approved method of fireproof identification that is placed on it on a non-critical surface, contains the information specified in paragraph (a), and will not likely be defaced or removed during normal service or lost or destroyed in an accident.

(d) For manned free balloons, the identification plate prescribed in paragraph (b) shall be secured to the balloon envelope and shall be located, if practicable, where it is legible to the operator when the balloon is inflated. In addition, the basket and any heater assembly shall be permanently and legibly marked with the manufacturer's name, part number, or equivalent, and serial number, or equivalent.

21A.804 Identification of parts and appliances

(a) Each manufacturer of a part or appliance shall permanently and legibly mark the part or appliance with:

(1) a name, trademark, or symbol identifying the manufacturer; and

(2) the part number, as defined in the applicable design data; and

(3) the letters European Part Approval (EPA) for parts and appliances produced in accordance with approved design data not belonging to the Type Certificate holder of the related product, except for ETSO articles.

(b) By way of derogation from paragraph (a), if the Agency agrees that a part or appliance is too small or that it is otherwise impractical to mark a part or appliance with any of the information required by paragraph (a), the authorised release document accompanying the part or appliance or its container shall include the information that could not be marked on the part.

(c) By way of derogation to paragraph a, for product defined in 21A.14(c), the marking in accordance with subpart Q is only required for life limited parts.

21A.805 Identification of critical parts

In addition to the requirement of 21A.804, each manufacturer of a part to be fitted on a type-certificated product which has been identified as a critical part shall permanently and legibly mark that part with a part number and a serial number. By way of derogation this paragraph, for product defined in 21A.14(c), the marking in accordance with subpart Q is only required for life limited parts.

SECTION B

SUBPART L:

Paragraph 21B.620: Procedures for subpart L

The requirements of paragraphs 21B.220 to 21B.260 are applicable.

II NEW CERTIFICATION SPECIFICATION FOR LIGHT SPORT AEROPLANES

CONTENTS
CS-LSA

SUBPART A - GENERAL

LSA 1 Applicability

This LSA prescribes airworthiness standards for Light Sport Aeroplanes for issuance of a Type Certificate, and changes to that Type Certificate.

Light Sport Aeroplane complies with the following criteria:

(i) A Maximum Take-Off Mass of not more than 600 kg

(ii) A maximum stalling speed in the landing configuration (VS0) of not more than 45 knots CAS at the aircraft's maximum certificated Take-Off Mass and most critical centre of gravity.

(iii) A maximum seating capacity of no more than two persons, including the pilot.

(iv) A single, non-turbine engine fitted with a propeller.

(v) A non-pressurised cabin

LSA 3 Aeroplane categories

These specifications apply to aeroplanes intended for "non-aerobatic" and for "VFR day" operation only. Non-aerobatic operation includes -

(a) Any manoeuvre incidental to normal flying;

(b) Stalls (except whip stalls); and

(c) Lazy eights, chandelles, and steep turns, in which the angle of bank is not more than 60°.

LSA 5 Airworthiness code

The airworthiness code is ASTM International standard F2245.