

## Information paper on Part 21 Light

### Background

As part of the GA Roadmap 2.0, EASA intends to simplify the airworthiness system (design and production) for the lower end of General Aviation (GA) with smaller and less complex aircraft that pose minimal risks to third parties.

Today, the design and production of these GA aircraft is mostly subject to the same regulatory requirements ('Part 21') as large aircraft operated in commercial air transport. This approach is now widely considered to be outdated, inefficient and disproportionate.

In 2012, the European Commission, as proposed by EASA, adopted as set of simplified and more proportionate rules into Part 21 for European Light Aircraft (ELA)<sup>1</sup>.

During the development of the Opinion (01/2011) that supported this change to Part 21 for ELA, comments were received from stakeholders that indicated that on top of the proposed amendments there was still a need for a process where formal organisational approvals would not be required and where there would be reduced involvement from the authorities in the certification and production of low risk aircraft. However, to the extent requested, such simplification was not implementable in view of the substantive requirements of the basic Regulation (EC) No 216/2008, in particular its article 5, at that time.

However, these comments were discussed and considered during the development of the new basic Regulation (EU) 2018/1139 which now provides the means to introduce greater proportionality for lower risk and simpler products. At the same time the basic Regulation requires the Agency to issue opinions for the amendment of (among other) Part 21 in order to adapt it – as regards aircraft intended primarily for sports and recreational use.

EASA under the auspices of Rulemaking Task (RMT).0727 reviewed the current 'Part 21' in view of the airworthiness processes of sports and recreational aircraft. In this respect, EASA intends to propose to the European Commission to take full account of the new tools and greater regulatory flexibility introduced by the new basic Regulation.

EASA considers that the best way to introduce the necessary proportionality in the certification process is by creating a dedicated set of rules concerning design and production activities for sports and recreational aircraft ('Part 21 light'), which would be separate from the current 'Part 21'.

The purpose of this paper is to provide information about the proposal that EASA intends to submit to the European Commission.

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<sup>1</sup> Differentiating between ELA1 (aeroplanes, sailplanes or powered sailplanes that are not classified as complex motor-powered aeroplanes up to a maximum take-off weight of 1 200 kg) and ELA2 (aeroplanes, sailplanes or powered sailplanes that are not classified as complex motor-powered aeroplanes up to a maximum take-off weight of 2 000 kg).

## **Objectives of Part 21 Light**

The aim of the 'Part 21 Light' concept is to provide proportionate rules, stimulate innovation, drive safety improvements and reinvigorate the EU aviation market by establishing simplified processes for determining compliance of aircraft used for sports and recreational purposes, and of the organisations involved in their design and production, with the essential requirements for airworthiness.

It is expected that the regulatory burden for the design and production organisations of sports and recreational aircraft will be alleviated thereby reducing the associated costs. This is particularly noticeable for a limited scope of simpler aircraft for which the regulatory burden is lowered further with the possibility to declare the compliance of the design.

Part 21 Light will create progressive steps for organisations into the EU regulatory system which will encourage new entrants into the EU aviation market due to the easing of initial entry point into the EU regulatory system. It is also foreseen that this will also foster innovation and facilitate safety improvements in this sector by removing some of the more onerous regulatory requirements for simpler aircraft and taking a more risk based approach to oversight.

## **Overarching principles of the Part 21 Light concept**

1) Choice of the design organisation to choose suitable certification process

The proposal for a Part 21 Light is split into two key processes:

- **Light certified process** - a light certification process, corresponding to the nature and risk of the product, leading to an EASA Type Certificate (ICAO compliant). On the basis of the EASA Type Certificate a standard Certificate of Airworthiness would be issued by the competent authority for the individual aircraft; or
- **Light declared process** - a declaration of compliance of the aircraft design with the applicable requirements or standards by the responsible organisation, but with no verification of compliance of the design by EASA and no Type Certificate issued. On the basis of that declaration a (not necessarily ICAO compliant) Restricted Certificate of Airworthiness would be issued by the competent authority for the individual aircraft.

It is envisaged that Part 21 Light will allow organisations to choose between these two processes. The choice would principally depend whether the product is in the scope of both processes and whether the manufacturer is aiming at a market in which individual aircraft ultimately should be able to receive an ICAO compliant Certificate of Airworthiness, based on a Type Certificate, or a (not necessarily ICAO compliant) Restricted Certificate of Airworthiness without an EASA approved design.

Irrespective of the introduction of the new Part 21 light rules, the manufacturers will be permitted if they wish so to continue using the current, standard, Part-21 rules for Type Certification along with the existing regulatory alleviations in Part 21 for ELA 1 and ELA 2 aircraft. This possibility will be retained in order to not adversely affect existing organisations that are familiar with and wish to continue using Part 21. EASA will revisit the necessity to maintain in Part 21 specific rules for ELA 1 and ELA 2 in the course of the evaluation task EVT.007 of the EPAS.

2) No change of responsibilities but collaborative working relationship

The implementation of 'Part 21 Light' will not result in any changes in the allocation of respective responsibilities or competencies of EASA and the National Aviation Authorities. However in order to optimise the processes in 'Part 21 Light' a collaborative working relationship will be promoted

between EASA, National Aviation Authorities and the organisations using the new processes. An enhanced exchange of information between EASA and National Aviation Authorities will be necessary and the possibility to conduct collaborative oversight visits of the organisations at key stages in the process will further facilitate this exchange.

### 3) Proportionate organisational requirements

'Part 21 Light' will provide significant alleviations from the current design and production capability requirements for organisations that are contained in Part 21. However, organisations that already have an approval issued in accordance with Part 21 will be permitted to use them as a demonstration of their capabilities also under Part 21 Light. In addition, 'Part 21 Light' will allow organisations the possibility to declare their design and production capabilities and become a 'declared design organisation' or a 'declared production organisation', two new categories of organisations to be introduced by the envisaged rules. These declared organisations will still be subject to oversight from EASA, as regards the declared design organisations' and the competent authorities of MS, as regards the 'declared production organisations' located in the EU.

The two processes in 'Part 21 Light' will have different *organisational requirements* depending on whether the organisation is seeking an EASA Type Certificate under a simplified certification process (**Light certified process of design compliance**) or just declaring that the design of the aircraft complies with detailed technical specifications established by EASA (**Light declared process of design compliance**):

#### - **Light certified process of design compliance**

The organisation will be permitted to declare their capability to design products and parts (Declared Design Organisation) instead of obtaining a Design Organisation Approval (DOA), which is the main alleviation under this process. However a standard DOA will also be permitted as a means of demonstrating design capability for those organisations which prefer to hold a DOA.

#### - **Light declared process of design compliance**

Design Organisations will not be required upstream to demonstrate their design capabilities by holding a DOA or by declaring their capabilities as a declared design organisation. However under Part 21 Light, there will also be certain organisational requirements that the undertaking will have to cover by the declaration of design compliance which will be required in respect of the product itself.

As regards the **production requirements**, they will depend on whether the product has been approved under the 'Light certified process of design compliance' or is covered by a declaration issued under the Light declared process of design compliance:

- As regards products certified under Part 21 light, they will be permitted to be manufactured either by 'declared production organisations' (which is the main alleviation), or by an organisation holding a standard production organisation approval (POA) if the manufacturer so prefers;
- As regards products declared under Part 21 light, their manufacturers will not be required upstream to hold a POA or to declare their production capabilities. However similarly as is envisaged for design, there will be a dedicated set of production requirements established under Part 21 light that the organisation will have to confirm compliance with when signing

the individual statement of conformity of the manufactured products and parts with the declared design data.

#### 4) Product focussed oversight and risk based verification / oversight

One of the key principles of 'Part 21 Light' is the departure from the rigid oversight process of process-based documentary reviews and audit. In its place is the concept of an oversight focussed more on the product that has been designed and produced. Thanks to much simpler designs, the product itself can provide significant insights into the design and production capability of the design and production organisation and the robustness of the processes that have been used. More traditional oversight means remain available but should be mainly used as a means to understand and establish the root cause of a possible shortfall in the design or production of the product.

The concept of product based oversight along with a level of involvement adapted to the inherent risks in case of non-compliance of such products will be utilised in the verification of compliance by EASA when issuing the Type Certificate for products in the Light Certified Process. This will provide a much lighter involvement of EASA in the verification of compliance whilst providing the necessary independent substantiation to enable EASA to issue a Type Certificate for the product.

For declared aircraft, the responsibility for compliance with the applicable technical standards and environmental protection requirements rests with the declarant. Therefore the involvement of EASA is primarily to ensure that the aircraft does not have any features that would affect capability of the aircraft to conduct safe flight and be environmentally compatible during in-service operations. Here the well-established concept of the airworthiness directives or similar measures will be maintained.

The concepts of product based oversight and a risk based approach to oversight will also be utilised by the Competent Authorities of Member States for the verification of conformity of either type certified products or declared aircraft prior to issuing the first and subsequent Certificates of Airworthiness (for type certified aircraft) and Restricted Certificates of Airworthiness (for declared aircraft).

A risk based approach to oversight will allow EASA and the competent authorities of Member States to focus their oversight activities where they will have the most benefit and effect. This will also foster a stronger working relationship between organisations and the authorities and work towards the establishment of a voluntary safety culture beyond mandated compliance.

#### 5) Providing suitable means to identify non compliances and to enforce them

In 'Part 21 Light' there will of course still be the obligation for EASA and the competent authorities of Member States to oversee organisations, products and activities, including those which are declared, to mandate corrective actions based upon findings that are raised during investigations / oversight if they are found to be necessary. EASA and the competent authority will retain the possibility to limit, suspend or revoke approvals or to stop or prohibit (declared) activities until such as time as the corrective actions are implemented and the findings are resolved.

Further details about the concept of Part 21 Light are provided in Appendix A.

### **Interface with Continuing Airworthiness Regulation (Commission Regulation (EU) No 1321/2014)**

The proposed Part 21 Light rules are deemed to be compatible with the requirements for continuing airworthiness. The main changes that have been introduced include:

- A statement of conformity will be issued by a production organisation for newly manufactured parts that conform to the declared data of design compliance. The statement of conformity will contain the same information as an Authorised Release Certificate (EASA Form 1).
- An Authorised Release Certificate (EASA Form 1) will still be issued by an approved or declared production organisation for parts that conform to the approved data of a type certificate issued in accordance with Part 21 Light.
- Instructions for Continued Airworthiness will still be required to be provided although for declared aircraft, there will no longer be any sections requiring approval by EASA.
- A change of terminology is required for declared aircraft from “approved data” to “declared data”.

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## Appendix A

### Overview of key aspects of Part 21 Light

#### Light Certified process of design compliance

The Light Certified process for design compliance contains the following elements:

Product scope	<ul style="list-style-type: none"> <li>• an aeroplane with a Maximum Take-off Mass (MTOM) of 2000 kg or less with a seating configuration of maximum 4 persons;</li> <li>• a sailplane or powered sailplane of 2 000 kg MTOM or less;</li> <li>• a balloon;</li> <li>• a hot air airship;</li> <li>• a passenger gas airship designed for not more than 4 persons</li> <li>• a rotorcraft with a Maximum Take-off Mass (MTOM) of 1 200kg or less with a seating configuration of maximum 4 persons.</li> <li>• a piston engine and fixed pitch propeller that is intended to be installed on an aircraft product within the scope of 1 to 6 above. In this case, the type certificate data sheet shall be appropriately annotated to only permit installation of the engine or propeller on an aircraft product within the scope of 1 to 6 above.</li> <li>• gyroplanes</li> </ul>
Design capability	<ul style="list-style-type: none"> <li>• Design capability can be demonstrated by either: <ul style="list-style-type: none"> <li>○ Holding a Design Organisation Approval (with oversight);</li> <li>or</li> <li>○ Making a declaration of design capability and becoming a Declared Design Organisation (with oversight).</li> </ul> </li> </ul>
Defined certification basis	<ul style="list-style-type: none"> <li>• Certification basis established by EASA</li> </ul>
Product focused investigations prior to type certification (risk based compliance verification)	<ul style="list-style-type: none"> <li>• Critical Design Review prior to first flight and approval of flight conditions;</li> <li>• First article inspection of the final configuration (collaborative oversight visit of applicant from EASA and Competent Authority for areas of responsibilities)</li> </ul>
Issuance of type certificate	<ul style="list-style-type: none"> <li>• Type certificate issued by EASA based upon verification of compliance (through product focused investigations)</li> </ul>
Continuing Airworthiness	<ul style="list-style-type: none"> <li>• EASA product oversight (unsafe condition, non-compliances etc.)</li> </ul>

#### Light Declared Process of design compliance

The Light declared process contains the following elements:

Product scope	<ul style="list-style-type: none"> <li>• an aeroplane with a Maximum Take-off Mass (MTOM) of 1 200 kg or less with a seating configuration of maximum 2 persons;</li> <li>• a sailplane or powered sailplane of 1 200 kg MTOM or less;</li> <li>• a balloon designed for not more than 4 persons ;</li> <li>• a hot air airship designed for not more than 4 persons;</li> </ul>
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Design Capabilities	<ul style="list-style-type: none"> <li>No requirement to demonstrate upstream design capability by holding a DOA or by declaring capability (although commitment of a declarant to adhere to certain [organisational] requirements, see below)</li> </ul>
Compliance with recognised standards	<ul style="list-style-type: none"> <li>Compliance is declared in accordance with applicable technical specifications and environmental protection requirements</li> </ul>
Declaration of compliance	<ul style="list-style-type: none"> <li>Declaration of compliance by declarant with applicable technical specifications and environmental protection requirements</li> </ul>
Product focused investigation of airworthiness or environmental compatibility	<ul style="list-style-type: none"> <li>First article inspection of the final configuration (collaborative oversight visit of applicant from EASA and Competent Authority for areas of responsibilities) to ensure the basic capability of the aircraft to conduct safe flight and be environmentally compatible and to verify conformity with the declared design, considering also any investigation that took place prior to first flight and approval of flight conditions</li> <li>No verification of compliance (declarant having sole responsibility for compliance)</li> </ul>
Registration of the declaration of design compliance	<ul style="list-style-type: none"> <li>If no issues are raised from the first article inspection then the Declaration of Design Compliance is registered and made public on EASA website</li> </ul>
Continuing Airworthiness	<ul style="list-style-type: none"> <li>EASA product oversight (unsafe condition, non-compliances etc.)</li> </ul>

### **Production of aircraft and parts**

For production of aircraft and parts the following elements are included:

Production of a Type Certificated products or parts	<ul style="list-style-type: none"> <li>An approved production organisation (POA) can continue to use their existing approval for showing conformity of products and parts with the applicable design data of type certified products within the scope of Part 21 Light.</li> <li>Alternatively an organisation can produce and show conformity under Part 21 Light if it has declared its production capability and became a declared production organisation.</li> <li>Initial oversight of the declared production organisation by the Competent Authority is intended to take place as product focussed oversight visits to the organisation, jointly with EASA when conducting the first article inspection for the purpose of TC issuance.</li> <li>Obligations and responsibilities are assigned to the declared production organisation in the same manner as an approved production organisation.</li> <li>Oversight cycle established based upon risk of non-compliance.</li> <li>Findings and observations can be issued to the declared production organisation if necessary, requesting corrective actions and ultimately enforcing a non-compliance.</li> <li>An approved or declared production organisation is able to issue a statement of conformity for aircraft (Form 52B) and an</li> </ul>
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	<p>authorised release certificate for parts (Form 1) that have been produced in compliance with the approved data of a type certificate issued under Part 21 Light.</p>
Production of declared aircraft or parts	<ul style="list-style-type: none"> <li>• An approved production organisation (POA) can continue to use their existing approval for showing conformity of products and parts with the declared design data of declared aircraft within the scope of Part 21 Light.</li> <li>• However, when producing aircraft or parts, the design compliance of which was declared by the design organisation, a production organisation approval or a declaration of production capability is not required. A production organisation may produce those aircraft and parts also without such an approval or declaration.</li> <li>• (organisational) Obligations and responsibilities are assigned to the production organisation in the same manner as an approved or declared production organisation.</li> <li>• Production organisations must comply with a set of production requirements prior to releasing an aircraft or part.</li> <li>• Oversight is achieved on a risk basis through a review of aircraft and parts released by the production organisation.</li> <li>• Corrective actions can be assigned by the competent authority to the production organisation if non conformities that could affect the safety of the aircraft are discovered prior to the issuance of the restricted certificate of airworthiness.</li> </ul> <p>An approved or declared production organisation, or a production organisation that complies with the requirements for issuing a statement of conformity is able to produce aircraft and parts that conform to declared data and release them using a statement of conformity.</p>

### **Issuance of an Airworthiness Certificates**

The following elements are included within the Airworthiness Certificate process:

Certificate of Airworthiness	<ul style="list-style-type: none"> <li>• Certificate of Airworthiness issued by competent authority for aircraft that conform to the approved data of a Type Certificate issued in accordance with Part 21 Light.</li> <li>• Aircraft statement of conformity (EASA Form 52B) can be issued by either: <ul style="list-style-type: none"> <li>○ An approved production organisation; or</li> <li>○ A declared production organisation.</li> </ul> </li> <li>• Prior to the issuance of the first certificate of airworthiness of a given design a joint EASA and competent authority first article inspection is conducted, each within its respective field of responsibility.</li> <li>• When an aircraft statement of conformity is issued by a declared production organisation, the competent authority has the possibility to conduct an inspection of an aircraft, on a risk basis, prior to issuing a certificate of airworthiness.</li> </ul>
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Restricted Certificate of Airworthiness	<ul style="list-style-type: none"> <li>• The competent authority can only issue a Restricted Certificate of Airworthiness for aircraft that conform to the declared data of a Declaration of Design Compliance.</li> <li>• Aircraft statement of conformity (EASA Form 52B) can be issued by either: <ul style="list-style-type: none"> <li>○ A production organisation that has produced the aircraft in accordance with the production requirements for a statement of conformity; or</li> <li>○ An approved production organisation; or</li> <li>○ A declared production organisation.</li> </ul> </li> <li>• Prior to the issuance of the first restricted certificate of airworthiness of a given design a joint EASA and competent authority first article inspection is conducted, each within its respective field of responsibility.</li> <li>• The competent authority has the possibility to conduct an inspection of an aircraft, on a risk basis, prior to issuing a restricted certificate of airworthiness.</li> </ul>
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### **Issuance of a Noise Certificates**

The following elements are included within the Noise Certificate process:

Noise Certificate	<ul style="list-style-type: none"> <li>• Noise Certificate issued by competent authority for aircraft that conform to the approved data of a Type Certificate issued in accordance with Part 21 Light (Subpart B)</li> <li>• Data will be made available on the EASA website</li> </ul>
Restricted Noise Certificate	<ul style="list-style-type: none"> <li>• Restricted Noise Certificate issued by competent authority for aircraft that conform to the declared data of a registered Declaration of Design Compliance.</li> <li>• Data will be made available on the EASA website</li> </ul>

### **Issuance of Authorised Release Certificate (EASA Form 1), Statement of Conformity for aircraft (EASA Form 52B) or Statement of Conformity for parts**

The following elements are introduced for the compliance of aircraft and parts:

Release of aircraft and parts that conform with the approved data of a type certificate issued under Part 21 Light	<ul style="list-style-type: none"> <li>• The release of an aircraft is through the signature of a statement of conformity for aircraft (EASA Form 52B)</li> <li>• The release of engines, propellers and parts is through an Authorised Release Certificate (EASA Form 1)</li> </ul>
Release of aircraft and parts that conform with the declared data of a registered	<ul style="list-style-type: none"> <li>• The release of an aircraft is through the signature of a statement of conformity for aircraft (EASA Form 52B)</li> <li>• The release of engines, propellers and parts is through a statement of conformity for parts.</li> </ul>

declaration of design compliance	
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