European Union Aviation Safety Agency

Notice of Proposed Amendment 2023-101(#2)

in accordance with Article 6 of MB Decision No 01-2022

Acceptable means of compliance and guidance material to Subparts G, J and R of Annex Ib (Part 21 Light)

Package #2

RMT.0727

EXECUTIVE SUMMARY

The objective of the proposed acceptable means of compliance (AMC) and guidance material (GM) to Subparts G, J and R of Annex Ib (Part 21 Light) is to provide affected stakeholders with cost-efficient and proportionate means to comply with the regulatory requirements in the field of the initial airworthiness of aircraft intended primarily for sports and recreational use.

Compared to Part 21, Part 21 Light provides a lighter approach to the certification of those general aviation aircraft, and introduces the possibility for a declaration of design compliance to be submitted as an alternative to certification. Part 21 Light also provides for the possibility to demonstrate design and production capabilities through a declaration, instead of an approval, and for certain production activities the demonstration of production capabilities is not required at all.

These AMC and GM are expected to support the application of the new requirements and contribute towards reducing the regulatory burden for the designers and manufacturers of aircraft intended primarily for sports and recreational use while continuing to ensure a high level of safety as intended by Part 21 Light.

Domain:	Design and production		
Related rules:	Commission Regulation (EU) No 748/2012		
Affected stakeholders:	Aircraft manufacturers and designers; GA operators; national competent authorities, including EASA		
Driver:	Efficiency and proportionality	**Rulemaking group:**	No
Impact assessment:	Light		

EASA rulemaking procedure milestones

Start Terms of Reference	**Advisory Body consultation** *Package #2*	**Decision** Certification Specifications, Detailed Specifications, Acceptable Means of Compliance, Guidance Material
28.8.2019	29.3.2023	2023/Q2

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1. About this NPA

1.1. How this NPA was developed

The European Union Aviation Safety Agency (EASA) developed this Notice of Proposed Amendment (NPA) in line with Regulation (EU) 2018/1139[1] (the Basic Regulation) and the Rulemaking Procedure[2]. This rulemaking task (RMT) 0727 is included in Volume II of the European Plan for Aviation Safety (EPAS) for 2023–2025[3]. The scope and timescales of the task were defined in the related Terms of Reference (ToR)[4].

The NPA shall be consulted with the EASA Advisory Bodies (ABs) in accordance with Article 6(3) of MB Decision No 01-2022.

The AMC and GM to Part 21 Light will be consulted in thematic packages based upon Part 21 Light subparts in order to allow stakeholders to focus their review based upon their interest in the topics.

Package number	Generic title	AMC and GM to Part 21 Light subparts
#1	Initial Airworthiness	A, B, C and P
#2	Design and Production Organisations	G, J and R
#3	Design changes and repair designs	D, E, F, M and N
#4	Airworthiness and Noise Certificates and Parts and Markings	H, I, K and Q

The major milestones of this RMT are presented on the cover page.

1 Regulation (EU) 2018/1139 of the European Parliament and of the Council of 4 July 2018 on common rules in the field of civil aviation and establishing a European Union Aviation Safety Agency, and amending Regulations (EC) No 2111/2005, (EC) No 1008/2008, (EU) No 996/2010, (EU) No 376/2014 and Directives 2014/30/EU and 2014/53/EU of the European Parliament and of the Council, and repealing Regulations (EC) No 552/2004 and (EC) No 216/2008 of the European Parliament and of the Council and Council Regulation (EEC) No 3922/91 (OJ L 212, 22.8.2018, p. 1) (https://eur-lex.europa.eu/legal-content/EN/TXT/?qid=1535612134845&uri=CELEX:32018R1139).

2 EASA is bound to follow a structured rulemaking process as required by Article 115(1) of Regulation (EU) 2018/1139. Such a process has been adopted by the EASA Management Board (MB) and is referred to as the 'Rulemaking Procedure'. See MB Decision No 01-2022 of 2 May 2022 on the procedure to be applied by EASA for the issuing of opinions, certification specifications and other detailed specifications, acceptable means of compliance and guidance material ('Rulemaking Procedure'), and repealing Management Board Decision No 18-2015 (https://www.easa.europa.eu/the-agency/management-board/decisions/easa-mb-decision-01-2022-rulemaking-procedure-repealing-mb).

3 https://www.easa.europa.eu/en/document-library/general-publications/european-plan-aviation-safety-2023-2025

4 ToR RMT.0727 'Alignment of Part 21 of Regulation (EU) No 748/2012 with Regulation (EU) 2018/1139 (including simple and proportionate rules for GA)' (https://www.easa.europa.eu/en/document-library/terms-of-reference-and-group-compositions/tor-rmt0727).

1.2. How to comment on this NPA

Please submit your comments via email to **IAConsultation@easa.europa.eu**.

The deadline for the submission of comments is **5 May 2023**.

1.3. The next steps

Following the consultation of the draft AMC and GM (Package #2), EASA will review all the comments received and will duly consider them in the further progress of this RMT.

When issuing the decision to amend the AMC and GM to Regulation (EU) No 748/2012, EASA will also provide feedback to the commentators that were engaged and/or provided comments during the consultation of the draft regulatory material, which comments were received, how such engagement and/or consultation was used in rulemaking, and how their contributions were considered.

2. In summary — why and what

2.1. Why we need to amend the AMC and GM — issue/rationale

The current Part 21 does not provide sufficient proportionality with regard to the nature of and risks associated with certain products and activities, such as aircraft primarily used for sports and recreational purposes. As a consequence, the certification costs and the associated administrative burden are high for the small-aircraft community, that is the least able to bear them.

For this reason, the European Commission adopted Commission Implementing Regulation (EU) 2022/1361[5] and Commission Delegated Regulation (EU) 2022/1358[6] for Part 21 Light based upon EASA's Opinion No 05/2021[7].

The proposed AMC and GM will provide the means of compliance with these simplified requirements for aircraft primarily used for sports and recreational purposes.

2.2. What we want to achieve — objectives

The overall objectives of the EASA system are defined in Article 1 of the Basic Regulation. This NPA will contribute to achieving the overall objectives by addressing the issues described in Section 2.1.

The specific objective of this proposal is to introduce AMC and GM to the simplified rules that will enable the application of a proportionate approach for products that are considered to pose less risk when compared to other, more complex products. This proposal intends to achieve an overall reduction in the administrative burden and its associated costs, while at the same time supporting innovation in the GA sector.

2.3. What are the expected benefits and drawbacks of the proposed amendments

The expected benefits and drawbacks of the proposed amendments are summarised below. For the full impact assessment of the amendments to Regulation (EU) No 748/2012 as regards the introduction of Part 21 Light, please refer to Chapter 4 of NPA 2021-102.

There are no additional benefits or drawbacks from the AMC and GM to Part 21 Light compared to the benefits and drawbacks expected in the context of the adoption of the amendments to Regulation (EU) No 748/2012 as regards Part 21 Light.

The AMC and GM contained in Chapter 3 are not expected to have any additional impact to those that were already described in NPA 2021-102, and the only purpose they serve is to provide greater clarity of what is required by the introduction of the new requirements contained in Annex Ib (Part 21 Light) to Regulation (EU) No 748/2012.

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5 Commission Implementing Regulation (EU) 2022/1361 of 28 July 2022 amending Regulation (EU) No 748/2012 as regards the certification, oversight and enforcement tasks of the competent authorities in the implementation of the rules concerning the organisations involved in the design and production of aircraft used for sport and recreational aviation (OJ L 205, 5.8.2022, p. 127) (https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A32022R1361&qid=1678272149669).

6 Commission Delegated Regulation (EU) 2022/1358 of 2 June 2022 amending Regulation (EU) No 748/2012 as regards the implementation of more proportionate requirements for aircraft used for sport and recreational aviation (OJ L 205, 5.8.2022, p. 7) (https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A32022R1358&qid=1678272247617).

7 Opinion 05/2021 'Part 21 Light — Certification and declaration of design compliance of aircraft used for sport and recreational aviation and related products and parts, and declaration of design and production capability of organisations' (https://www.easa.europa.eu/en/document-library/opinions/opinion-052021).

3. Proposed amendments

The amendments are arranged to show deleted, new and unchanged text as follows:

— deleted text is ~~struck through~~;

— new or amended text is highlighted in blue;

— an ellipsis '[…]' indicates that the rest of the text is unchanged.

Where necessary, the rationale is provided in *italics.*

3.1. Draft acceptable means of compliance and guidance material (draft EASA decision)

SECTION A

TECHNICAL REQUIREMENTS

SUBPART G — DECLARED PRODUCTION ORGANISATIONS

GM1 21L.A.121(a) Scope

APPLICABLE DESIGN DATA

Applicable design data is defined as all necessary drawings, specifications and other technical information provided by the applicant for, or holder of, an approval of a design of a product to be issued in accordance with this Annex or by a natural or legal person that has declared or intends to declare the compliance of the aircraft design in accordance with this Annex, and has released it in a controlled manner to a declared production organisation. This should be sufficient for the development of production data to enable repeatable manufacture to take place in conformity with the applicable design data.

Prior to the issuance of the type certificate (TC), supplemental type certificate (STC), approval of the changes to the TC or approval of the repair design, design data is defined as 'non- approved' but parts may be released with an EASA Form 1 as a certificate of conformity.

After the issuance of the TC, STC, approval of the changes to the TC or approval of the repair design, the design data is defined as 'approved' and items manufactured in conformity with this data are eligible for release on an EASA Form 1 for airworthiness purposes.

When the compliance of the aircraft design and any subsequent compliance of any changes to the design or the repair design are subject to a declaration according to the requirements of Subparts C, F or N respectively of Annex Ib (Part 21 Light) to Regulation (EU) No 748/2012, the design data is considered 'non-approved'. However, a distinction can be made between the status of the data before the issuance of the declaration and after. This will be indicated in Block 12 'Remarks' of the EASA Form 1.

Note: For the EASA Form 1 layout, contents and instructions for completion, please refer to Appendix I to Annex I (Part 21) to Regulation (EU) No 748/2012.

AMC1 21L.A.122(a);(b) Eligibility

LINK BETWEEN DESIGN AND PRODUCTION

The natural or legal person that declares the production capability should establish and document the interface between staff responsible for design and staff responsible for production. This may be achieved through common design and production procedures.

Other ways to document this interface may be also acceptable. For example, by defining simple flow charts supported by self-explanatory forms, or by task descriptions of the responsible functions in the organisation. IT-based enterprise resource planning (ERP) systems may be used to ensure and to demonstrate that there is a correct flow of information on the basis of defined and visible workflows with assigned roles and release gates.

The interface should cover the following aspects:

— the transfer of applicable design data from design to production (including their status: approved / non-approved);

— the development of own manufacturing data;

— the management of continued airworthiness matters and required actions;

— the cooperation in compliance-demonstration activities (e.g. manufacturing and testing prototype models and test specimens);

— the management of production deviations and non-conforming parts; and

— the configuration control of manufactured parts.

AMC1 21L.A.122(c) Eligibility

ARRANGEMENTS BETWEEN DESIGN AND PRODUCTION

In accordance with point 21L.A.122(c), the natural or legal person that declares their production capability (referred to as 'declared production organisation' in this AMC and in GM1 21L.A.122(c)) must collaborate with the applicant for, or holder of, an approval of the design of the product, or with the organisation that has declared or intends to declare the compliance of that aircraft design (referred to as 'design organisation' in this AMC and in GM1 21L.A.122(c)) to ensure that the manufactured product or part is in conformity to that design, and to ensure the continued airworthiness of the product or part.

In order to demonstrate this collaboration, an arrangement should be documented between the declared production organisation and the design organisation that are separate legal entities.

GM1 21L.A.122(c) Eligibility

ARRANGEMENT BETWEEN DESIGN AND PRODUCTION — FORMAT

To define such a design–production interface, the following sample form is offered:

ARRANGEMENT SAMPLE FORM

<table>
<tr><td colspan="2">ARRANGEMENT
in accordance with point 21L.A.122(c) of Annex Ib (Part 21 Light)</td></tr>
<tr><td>The undersigned agree to commit to the following:</td><td>Relevant interface procedures</td></tr>
<tr><td>The design organisation [NAME] takes responsibility to:
— assure the correct and timely transfer of up-to-date applicable design data (e.g. drawings, material specifications, dimensional data, processes, surface treatments, shipping conditions, quality requirements, etc.) to the declared production organisation [NAME];
— provide visible statement(s) of approved or declared design data.</td><td></td></tr>
<tr><td>The declared production organisation [NAME] takes responsibility to:
— assist the design organisation [NAME] in dealing with continuing airworthiness matters and for required actions;
— assist the design organisation [NAME] in case of products prior to type certification in demonstrating compliance with the applicable certification specifications and environmental-protection requirements;
— develop, where applicable, its own manufacturing data in compliance with the airworthiness data package.</td><td></td></tr>
<tr><td>The design organisation [NAME] and the declared production organisation [NAME] take joint responsibility to:
— deal adequately with production deviations and non-conforming parts in accordance with the applicable procedures of the design organisation and the declared production organisation;
— achieve adequate configuration control of manufactured parts to enable the declared production organisation to make the final determination and identification for conformity.</td><td></td></tr>
<tr><td colspan="2">The scope of production covered by this arrangement is detailed in [DOCUMENT REFERENCE / ATTACHED LIST].</td></tr>
<tr><td colspan="2">Transfer of applicable design data:
(keep only the text relevant for either a design-approval case or a declaration-of-design-compliance case)

The design approval holder [NAME] acknowledges that the approved data provided, controlled, and modified in accordance with the arrangement is recognised as approved by the competent authority and, therefore, the parts manufactured in accordance with this data and found in a condition for safe operation may be released certifying that the item(s) has (have) been manufactured in conformity to approved design data and is in a condition for safe operation.
When indicated so by the applicant for design approval [NAME], before the issuance of the design approval, the design data provided is considered not approved and, therefore, the parts manufactured in accordance with this data may be released certifying only their conformity.
The declarant of the design compliance [NAME] acknowledges that the declared data provided, controlled and modified in accordance with the arrangement is recognised as declared by the competent authority and, therefore, the parts manufactured in accordance with this data and found in a condition for safe operation may be released certifying that the parts have been manufactured in accordance with the design data of a declaration of design compliance in accordance with Subpart C, F or N of Section A of Annex Ib (Part 21 Light).
When indicated so by [NAME] that intends to submit a declaration of design compliance, before the declaration of design compliance, the design data provided is considered not approved and, therefore, the parts manufactured in accordance with this data may be released certifying only their conformity.</td></tr>
<tr><td colspan="2">Direct delivery authorisation:
This acknowledgment includes also [OR does not include] the general agreement for direct delivery to end users in order to guarantee continued airworthiness control of the released parts.</td></tr>
</table>

For the *[NAME of the design organisation]* **Date:** **Signature:** xx.xx.xxxx [NAME in block letters]	For the *[NAME of the declared production organisation]* **Date:** **Signature:** xx.xx.xxxx [NAME in block letters]

AMC1 21L.A.123(c) Declaration of production capability

DECLARATION FORM

The natural or legal person that declares their production capability should provide the information required by point 21L.A123(c) in the declaration form defined below.

DECLARATION OF PRODUCTION CAPABILITY pursuant to Commission Regulation (EU) No 748/2012 Annex Ib (Part 21 Light) SUBPART G — DECLARED PRODUCTION ORGANISATIONS	
☐ Initial declaration ☐ Notification of changes — Declared production organisation (DPO) registered number:	
1.	**Declared production organisation (DPO)** Registered name:
2.	**Place of business** Contact details (registered address, phone, email) of the DPO's principal place of business:
3.	**Operating sites** Where applicable, contact details (address, phone, email) of the operating site(s): *(may be left blank if same as in point 2 'Place of business')*
4.	**Accountable manager** Name and contact details (address, phone, email) of the DPO's representative:

EASA Form TBD

5.	**Intended scope of work**	
	5.1. Category of products	
	Products certified under Part 21 Light Subpart B	***Products declared under Part 21 Light Subpart C***
	☐ Aeroplanes with a maximum take-off mass (MTOM) of 2 000 kg or less with a seating configuration of maximum 4 persons	☐ Aeroplanes with a maximum take-off mass (MTOM) of 1 200 kg or less that is not jet powered, and has a seating configuration of maximum 2 persons.
	☐ Sailplanes or powered sailplanes with a MTOM of 2 000 kg or less	☐ Sailplanes or powered sailplanes with a MTOM of 1 200 kg or less
	☐ Balloons	☐ Balloons designed for not more than 4 persons
	☐ Hot-air airships	☐ Hot-air airships designed for not more than 4 persons
	☐ Passenger gas airships designed for not more than 4 persons	
	☐ Rotorcraft with a MTOM of 1 200 kg or less and a maximum seating configuration of 4 persons	
	☐ Piston engines	
	☐ Propellers	
	☐ Gyroplanes	
	5.2. Conformity documents	
	☐ For complete aircraft, issue EASA Form 52B for new aircraft	
	☐ For other products or parts, issue EASA Form 1	
	☐ Maintain a new aircraft and issue EASA Form 53B	
	5.3. Detailed description of the scope of work *(aircraft type …)* *(parts for aircraft type …)*	
6.	**Date of intended commencement of production:**	
7.	**Statements** The DPO has established and implemented a management system for production in accordance with point (a) of point 21L.A.124. This management system will be maintained in compliance with Subpart G of Annex Ib (Part 21 Light) to Regulation (EU) No 748/2012. The references of the elements of the management system for production are included in the annex to this declaration. All the personnel of the DPO must adhere to the processes and procedures referred to in the annex to this declaration. *[Company Name]* agrees to undertake the obligations of a declared production organisation in accordance with point 21L.A.127. I confirm that all the information contained in this declaration, including its annex, is complete and correct.	
8.		
	Date / Location	Signature of the accountable manager

EASA Form TBD

ANNEX TO THE DECLARATION OF PRODUCTION CAPABILITY

This annex includes references to the DPO documentation showing compliance with the requirements of Annex Ib (Part 21 Light) to Regulation (EU) No 748/2012.

No	Part 21 Light	Subject	DPO reference (DPOE reference, as relevant)
Quality system			
1.	21L.A.124(b)(2)(i)	Document issue, approval, or change	
2.	21L.A.124(b)(2)(ii)	Vendor and subcontractor assessment, audit and control	
3.	21L.A.124(b)(2)(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	
4.	21L.A.124(b)(2)(iv)	Identification and traceability	
5.	21L.A.124(b)(2)(v)	Manufacturing processes	
6.	21L.A.124(b)(2)(vi)	Inspection and testing	
7.	21L.A.124(b)(2)(vi)	Production flight tests, flight test operations manual (FTOM) (if relevant)	
8.	21L.A.124(b)(2)(vii)	Calibration of tools, jigs, and test equipment	
9.	21L.A.124(b)(2)(viii)	Non-conforming item control	
10.	21L.A.124(b)(2)(ix) 21L.A.5	Collaboration with the applicant for, or holder of, the design approval or the declarant of a declaration of design compliance	
11.	21L.A.124(b)(2)(x)	Completion and retention of records	
12.	21L.A.124(b)(2)(xi) 21L.A.125(a)	Competence and qualifications of personnel	
13.	21L.A.124(b)(2)(xii)	Issue of airworthiness release documents	
14.	21L.A.124(b)(2)(xiii)	Handling, storage and packing	
15.	21L.A.124(b)(2)(xiv) 21L.A.124(c)	Internal quality audits and the resulting corrective actions	
16.	21L.A.124(b)(2)(xv)	Work performed at any location other than the operating sites included in the declaration	
17.	21L.A.124(b)(2)(xvi) 21L.A.124(e)	Work carried out after the completion of production but prior to delivery, to maintain the aircraft in a condition for safe operation	
18.	21L.A.124(b)(2)(xvii)	Request for the issuance of permits to fly and the approval of associated flight conditions	

EASA Form TBD

No	Part 21 Light	Subject	DPO reference (DPOE reference, as relevant)
Airworthiness and environmental compatibility data			
20.	21L.A.125(b)(2)	Procedure to ensure that airworthiness and environmental compatibility data is correctly incorporated into production data	
21.	21L.A125(b)(3)	Such data is kept up to date and made available to all personnel that need access to such data to perform their duties	
Organisation, key personnel and certifying staff			
22.	21L.A.125(d)	Organisational structure documented and kept updated	
23.	21L.A.125(c)(2)	Identification of key personnel nominated by the accountable manager to ensure that the organisation is in compliance with the requirements of Subpart G of Part 21 Light	
24.	21L.A.125(c)(2)	Nomination process for key personnel ensuring they have the appropriate knowledge, background and experience to discharge their responsibilities	
25.	21L.A.125(c)(3)	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 declared production organisation in respect of airworthiness and environmental compatibility data matters	
26.	21L.A.125(d)(1)	Nomination procedure for certifying staff	
27.	21L.A.125(d)(2)	List of certifying staff	
Changes to the DPO			
28.	21A.L.128	Procedure for the notification of organisational changes to the competent authority according to point 21L.A.128	
Obligations			
29.	21L.A.3	Reporting system	
30.	21L.A.6	Marking	
31.	21L.A.7	Record-keeping	
32.	21L.A.10	Access and investigations	
33.	21L.A.11	Findings and observations	

EASA Form TBD

Instructions: If the DPO, for the purpose of compliance with point 21L.A.124(d), has produced a declared production organisation exposition (DPOE), then the DPOE sections should be referenced in the right-hand column of the form.

GM1 21L.A.124(b) Management system for production

QUALITY SYSTEM DOCUMENTATION

The quality system is an organisational structure, included in the management system for production, with responsibilities, procedures, processes, and resources, which implements a management function to determine and enforce quality principles.

The quality system should be documented in such a way that the documentation can be made easily available to personnel that need to use the material for performing their normal duties, in particular:

— the procedures, instructions and data to cover the issues of point 21L.A.124(b)(2) are available in a written form;

— the distribution of relevant procedures to offices/staff is made in a controlled manner;

— the job descriptions (or equivalent) providing staff with a clear list of their tasks and responsibilities; and

— the updating process is clearly described.

The person or group of persons responsible for ensuring that the quality system is implemented and maintained should be identified.

Other methods to document the quality system may be used if they ensure that members of the organisation can obtain the actual and relevant information in a reasonable way. Such other methods may include the provision of such information by electronic means, for example, on the intranet of the organisation, by the use of an electronic database such as DMS, on paper, by illustration, by using workflow definitions within IT-based enterprise resource planning (ERP) systems, etc.

GM2 21L.A.124(b) Management system for production

USE OF RECOGNISED STANDARDS

An organisation that has a quality system designed to meet a recognised standard such as ISO 9001, EN 9100, or ASTM F2972 (relevant to the scope of work of the declared production organisation), should ensure that the existing quality system covers all the aspects defined in point 21L.A.124(b).

For example, if the standard that is used is ISO 9001, the quality system should be expanded to include at least the following additional topics, as appropriate, in order to demonstrate compliance with the requirements of this Annex:

— mandatory and voluntary reporting system as required by point 21L.A.3;

— control of work occasionally performed outside the operating sites included in the declaration;

— collaboration with the applicant for, or holder of, an approved design, or with the organisation that has declared or intends to declare the compliance of a particular aircraft design as required by point 21L.A.122(c);

— issue certificates within the scope of work of point 21L.A.126;

— incorporation of airworthiness data in production and inspection data as required by point 21L.A.125(b);

— when applicable, ground test and/or production flight test of products in accordance with the procedures defined by the applicant for, or holder of, the design approval or the declarant of a declaration of design compliance;

— procedures for traceability including the definition of clear criteria of which items require such traceability; traceability is defined as a means of establishing the origin of an article by reference to historical records for the purpose of providing evidence of conformity; and

— personnel training and qualification procedures especially for certifying staff as required by point 21L.A.125(d).

GM1 21L.A.124(b)(1);(b)(2)(iii) Management system for production

QUALITY SYSTEM — CONFORMITY OF SUPPLIED ITEMS

The declared production organisation is responsible for determining and applying acceptance standards for the physical condition, configuration status and conformity of supplied products, parts, materials or equipment, whether to be used in production or delivered to customers as spare parts. This responsibility also includes items of buyer-furnished equipment (BFE).

To discharge this responsibility, the quality system needs an organisational structure and procedures to adequately verify the supplied items.

The below list provides examples of verification techniques to be used as appropriate to ensure conformity of the product or part:

— qualification and auditing (desktop and on-site audits) of the supplier's quality system;

— evaluation of the supplier's capability in performing all the manufacturing activities, inspections and tests necessary to establish the conformity of parts, materials or equipment to the applicable design data;

— first-article inspections of supplied parts, including destruction, if necessary, to verify that the article conforms to the applicable data for a new production line or a new supplier;

— incoming inspections and tests of supplied parts, materials or equipment that can be satisfactorily inspected on receipt;

— identification of incoming documentation and data relevant to the showing of conformity to be included in the certification documents; and

— any additional work, tests or inspection which may be needed for parts that are to be delivered as spare parts and which are not subjected to the checks normally provided by subsequent production or inspection stages.

The declared production organisation could for example rely on the results of inspections/tests performed by the supplier, if the supplier can establish that:

— the personnel responsible for these tasks satisfy the competency standards of the declared production organisation quality system;

— quality measurements are clearly identified; and

— the records or reports showing evidence of conformity are available for review.

For the purpose of showing conformity, a declared production organisation could for example rely upon an EASA Form 1 issued by the supplier.

If the items are not delivered with an EASA Form 1, the supplier is considered a subcontractor under the direct control of the quality system of the declared production organisation.

Since the declared production organisation is responsible for the verification of the supplied items, it retains direct responsibility for inspections/tests carried out either at its own facilities or at the supplier's facilities.

GM1 21L.A.124(b)(2)(vi) Management system for production

INSPECTION OF PARTS IN PROCESS

The purpose of the inspection is to check at suitable points during production and provide objective evidence that the correct specifications are used, and that processes are carried out strictly in accordance with the those specifications.

During the manufacturing process, each part should be inspected in accordance with a plan that identifies the nature of all inspections required and the production stages at which they occur. The plan should also identify any particular skills or qualification required of person(s) carrying out the inspections (e.g. NDT personnel). This plan should be considered part of the documentation required by point 21L.A.124(d).

If the parts are such that, if damaged, they could compromise the safety of the aircraft, additional inspections for such damage should be performed at the completion of each production stage.

AMC1 21L.A.124(b)(2)(vi) Management system for production

TESTS

If relevant, the declared production organisation should perform functional, ground and flight tests for the manufactured products.

The production ground and flight tests for new aircraft will be specified by the aircraft design organisation. These tests should include at least the following:

— a check on handling qualities;

— a check on flight performance (using normal aircraft instrumentation);

— a check on the proper functioning of all aircraft equipment and systems;

— a determination that all instruments are properly marked, and that all placards and required flight manuals are installed before flight test;

— a check of the operational characteristics of the aircraft on the ground;

— a check on any other items peculiar to the aircraft being tested.

The functional test required for a new engine should be specified by the engine design organisation and should normally include at least the following:

— Break-in runs that include a determination of fuel and oil consumption and a determination of power characteristics at rated maximum continuous power or thrust and, if applicable, at rated take-off power or thrust.

— A period of operation at rated maximum continuous power or thrust. For engines that have a rated take-off power or thrust, part of that period should be at rated take-off power or thrust.

The test equipment used for the test run should be capable of output determination of a level of accuracy sufficient to assure that the engine output delivered complies with the specified rating and operation limitations.

The functional tests required for a new propeller will be specified by the propeller design organisation and should normally include several complete cycles of control throughout the propeller pitch and

rotational speed ranges. In addition, for feathering and/or reversing propellers, several cycles of feathering operation and reversing operation from the lowest normal pitch to the maximum reverse pitch should normally be required.

Following functional testing, each engine or propeller should be inspected to determine that the engine or propeller is in condition for safe operation. Such inspection should be specified by the design organisation and should normally include internal inspection and examination. The degree of internal inspections should normally be determined on the basis of the positive results of previous inspections conducted on the first production engines or propeller, and on the basis of in-service experience.

AMC1 21L.A.124(b)(2)(viii) Management system for production

NON-CONFORMING ITEM CONTROL

All parts, materials and equipment that have been identified at any stage in the manufacturing process as not conforming to the specific design data should be suitably identified by clearly marking or labelling to indicate their non-conforming status.

All such non-conforming material or parts should be removed from the production area and held in a segregated area with restricted access until their appropriate disposition is determined.

The non-conformities, which cannot be solved by restoring full conformity with the design data, should be recorded and presented to the relevant design organisation for review and disposition. The results of the review and actions taken consequently as regards the part/product should be recorded as well.

AMC1 21L.A.124(b)(2)(xiii) Management system for production

HANDLING, STORAGE AND PACKING

Storage areas should be protected from dust, dirt or debris, and adequate blanking and packaging of stored items should be practised. All parts should be protected from extremes of temperatures and humidity and, where needed, environment-controlled facilities should be provided.

Racking and handling equipment should be provided such as to allow storage, handling and movement of parts without damage.

Lighting should be such as to allow safe and effective access and handling, but should also cater for items which are sensitive to light (e.g. rubber items).

Care should be taken to segregate and shield items which can emit fumes (e.g. wet batteries), substances or radiation (e.g. magnetic items) which are potentially damaging to other stored items.

Particular attention should be paid to shelf life-limited items (e.g. sealants, adhesives) to ensure the storage conditions and monitor the expiry date.

Procedures should be in place to maintain and record stored parts' identities and batch information.

Access to storage areas should be restricted to authorised personnel that are fully trained to understand and maintain the storage control arrangements and procedures.

Provisions should be made for segregated storage of non-conforming items pending their disposition (see AMC1 21L.A.124(b)(2)(viii)).

AMC1 21L.A.124(c) Management system for production

INDEPENDENT MONITORING FUNCTION

The independent monitoring function should ensure that:

— the management system for production remains compliant with the applicable requirements of this Subpart and with any additional requirements as established by the production organisation;

— the staff of the production organisation follow the documented procedures of the management system when performing their tasks; and

— the management system for production is adequate and enables the organisation through the use of its procedures to meet the conformity objectives identified in point 21L.A.124.

An objective review of the complete set of production-management-related activities is provided through independent monitoring activities, such as audits, inspections and reviews. The independence of the monitoring activities is established by always ensuring that those activities are performed by staff that are not involved in the function, procedure or products that they monitor and that are independent from the operating managers of the function(s) being monitored; however, this should not exclude support by domain experts during monitoring.

The monitoring should be performed based on a monitoring plan. This plan is established to show when and how often the activities required by this Subpart will be audited. This plan should include, in a defined period of time, all the elements of the management system, including all workshops and subcontractors. The defined period of time for the audit planning should not exceed 24 months.

When a non-compliance is found, the root cause(s) and contributing factor(s) should be identified and corrective actions should be defined and followed up. When providing feedback, the compliance-monitoring function should define who is required to address any non-compliance in each particular case, and the procedure to be followed if the corrective action is not completed within the defined time frame.

Also, feedback should be regularly provided to the accountable manager on the overall status of the compliance and adequacy of the management system for production, including main issues identified and cases where corrective actions have not been satisfactorily implemented.

The staff that perform an independent monitoring function should have access to all the parts of the production organisation and, as necessary, to any subcontracted organisations.

AMC1 21L.A.124(d) Management system for production

DOCUMENTATION

Point 21L.A.124(d) requires the declared production organisation to document its processes and procedures.

An acceptable means of compliance with this requirement is to establish a declared production organisation exposition (DPOE). The purpose of a DPOE is to set forth in a concise document format the organisational relationships, responsibilities, terms of reference, and the associated authority, procedures, means and methods of the organisation.

If utilised, the DPOE should contain the following:

(a) a statement signed by the accountable manager confirming that the DPOE and any associated manuals/procedures/instructions which define the organisation's compliance with this Subpart will be complied with at all times;

(b) the title(s) and name(s) of the person(s) nominated in accordance with point 21L.A.125(c)(2);

(c) the duties and responsibilities of the accountable manager and the persons as specified by points 21L.A.125(c)(1) and (2), including matters on which they may deal directly with the competent authority on behalf of the organisation;

(d) an organisational chart showing associated chains of responsibility of the managers as required by point 21L.A.125(c)(4);

(e) the list of certifying staff as referred to in point 21L.A.125(d)(2);

(f) a general description of manpower;

(g) a general description of the facilities located at each address specified in the declaration of production capability;

(h) a general description of the declared production organisation's scope of work as defined in the declaration of production capability (see also point 21L.A.126);

(i) the procedure for the notification of changes to the competent authority according to point 21L.A.128;

(j) the amendment procedure for the DPOE;

(k) a procedure to develop, where applicable, the production organisation's own manufacturing data in compliance with the airworthiness and environmental compatibility data package;

(l) a description of the quality system and the procedures as required by point 21L.A.124(b);

(m) a list of those outside parties referred to in point 21L.A.124(b)(1); and

(n) if flight tests are to be conducted, a flight test operations manual (FTOM) defining the organisation's policies and procedures in relation to flight testing; for the contents of the FTOM, refer to AMC1 21L.A.127(b).

If this information is documented and integrated in manuals, procedures and instructions, the DPOE should provide a summary of the information and an appropriate cross reference.

When changes to the organisation occur, the DPOE should be kept up to date. Changes to the organisation shall be notified to the competent authority as required by point 21L.A.128.

If the organisation holds one or more additional organisation certificates (DOA, MOA, POA, etc.) within the scope of Regulation (EU) 2018/1139 and the delegated and implementing acts that are adopted on the basis thereof, so that the organisation is required to establish another exposition, the organisation may combine the documents by producing a separate manual or supplement that covers the differences between the DPOE and the other exposition. In that case, the separate manual or supplement should identify where in the other exposition the remaining information on the declared production organisation is covered. That remaining information then formally becomes part of the exposition.

AMC1 21L.A.124(e) Management system for production and 21L.A.126(e) Scope of work

MAINTENANCE ACTIVITIES

Point 21L.A.124(e) requires the declared production organisation to have procedures that cover maintenance activities for new aircraft it has manufactured, as necessary to keep them in an airworthy condition. The declared production organisation shall not maintain newly manufactured aircraft beyond the point at which the applicable operational rules require maintenance to be performed by an approved maintenance organisation (point 21L.A.126(e)). If the declared production organisation intends to maintain aircraft beyond that point, it would have to apply for and obtain an appropriate maintenance approval (see Articles 3 and 4 of Regulation (EU) No 1321/2014).

MAINTENANCE OF AIRCRAFT

Examples of maintenance activities within the scope of work of a declared production organisation are:

— preservation, periodic inspection visits, etc.;

— embodiment of a service bulletin (SB);

— application of airworthiness directives;

— repairs;

— maintenance tasks resulting from special flights; and

— maintenance tasks to maintain airworthiness during flight training, demo flights and other non-revenue flights.

Any package of maintenance activities should be recorded in the aircraft logbook. It should be signed by certifying staff for attesting the conformity of the maintenance work with the applicable airworthiness data.

If the aircraft logbook is not available or if the production organisation prefers to use a separate form (for instance, for a large work package or for delivery of the aircraft to the customer), the production organisation should use EASA Form 53B which should subsequently become part of the aircraft maintenance records.

MAINTENANCE OF COMPONENTS OUTSIDE THE DPO CAPABILITY

Such a maintenance activity outside the capability of the aircraft declared production organisation may still be accomplished under the original release organisation. In such circumstances, the engine(s), propeller(s), parts and appliances will require re-release in accordance with point 21.A.163(c) or point 21L.A.126(c) (EASA Form 1).

GM1 21L.A.125(a) Resources of the declared production organisation

GENERAL

1. FACILITIES AND WORKING CONDITIONS

A facility should be a working area where the working conditions and the environment are controlled as appropriate in respect of cleanliness, temperature, humidity, ventilation, lighting, space/access, noise, and air pollution.

2. EQUIPMENT AND TOOLS

The organisation's equipment and tools should enable all the specified tasks to be accomplished in a repeatable manner without any detrimental effects. The calibration control of the equipment and tools that affect the dimensions and values of products should demonstrate compliance with, and be traceable to, national or international standards.

3. NUMBER OF STAFF

Sufficient staff means that, for each function, according to the nature of the work and the production rate, the organisation has a sufficient number of qualified staff to accomplish all the specified manufacturing tasks and to attest the conformity of such task. The number of staff should be such that the relevant airworthiness considerations may be applied in all areas without any undue pressure.

4. COMPETENCE OF STAFF

An evaluation of the competence of the staff is performed as part of the quality system. This should include, where appropriate, verification that specific qualification standards have been implemented, for example, for NDT, welding, etc.

Adequate initial and recurrent training should be provided in relation to the job function to ensure that staff remain competent. That training should be adapted based on experience that is gained within the organisation.

GM1 21L.A.125(b) Resources of the declared production organisation

MANUFACTURING DATA

When a declared production organisation develops its own manufacturing data, such as computer-based data, from the design data package that is delivered by a design organisation, procedures are required to ensure the correct transcription of the original design data.

Procedures are required to define the manner in which airworthiness and environmental compatibility data is used to issue and update the production/quality data, which determines the conformity of products and parts. The procedure should also define the traceability of such data to each individual product or part for the purpose of certifying their condition for safe operation and issuing a statement of conformity or an EASA Form 1.

AMC1 21L.A.125(c)(1) Resources of the declared production organisation

ACCOUNTABLE MANAGER

The term 'accountable manager' refers to the manager that is responsible and has corporate authority for ensuring that all production work is carried out to the required standards. This function may be performed by the chief executive officer or by another person in the organisation, nominated by the chief executive officer to fulfil the function, provided that the position and authority of that person in the organisation allows that person to discharge the associated responsibilities.

The accountable manager should:

(a) have sufficient knowledge and authority to be able to respond to the competent authority regarding major issues concerning the declared production organisation, and to implement any necessary improvements;

(b) demonstrate an understanding of this Annex, sufficient to discharge the relevant responsibilities.

AMC1 21L.A.125(c)(2) Resources of the declared production organisation

NOMINATED MANAGERS

The person or group of persons nominated in accordance with point 21L.A.125(c)(2) should represent the management structure of the organisation and be responsible for all the functions specified in Subpart G. Depending on the size of the declared production organisation, the functions may be subdivided among individual managers (and, in fact, may be further subdivided) or combined in a variety of ways.

The responsibilities and the duties of each individual manager should be clearly defined in such a way that all the responsibilities are covered.

Where a declared production organisation chooses to appoint managers for all or for any combination of the functions identified in Part 21 Light because of the size of the undertaking, those managers should ultimately report to the accountable manager nominated in accordance with point 21L.A.125(c)(1). Where a manager does not directly report to the accountable manager, that manager should have direct access to the accountable manager formally established.

One such manager, normally known as the 'quality manager', should be responsible for the independent monitoring function as defined in point 21L.A.124(c). The independent monitoring function should be independent from other functions. As such, the quality manager should not be at the same time one of the other persons that are referred to in point 21.A.125(c)(2). The role of the quality manager should be to ensure that:

(a) the activities of the organisation are monitored for compliance with the applicable requirements and any additional requirements as established by the organisation, and that those activities are performed properly under the supervision of the nominated persons that are referred to in point 21L.A.125(c)(2);

(b) an audit plan is properly implemented, maintained, and continually reviewed and improved; and

(c) corrective actions are requested, as necessary, and their implementation is followed up.

GM1 21L.A.125(c)(4) Resources of the declared production organisation

DOCUMENTATION OF ORGANISATIONAL STRUCTURE AND KEY PERSONNEL

Point 21L.A.125(c)(4) requires that the organisational structure together with the key personnel are documented. The key personnel are those managers nominated according to point 21L.A.125(c)(1) and (c)(2).

This could be achieved through the information included in the declared production organisation exposition (DPOE) (see AMC1 21L.A.124(d)).

The above information should be kept updated to reflect changes made within the organisation.

AMC1 21L.A.125(d)(1) Resources of the declared production organisation

CERTIFYING STAFF

(a) Certifying staff should be nominated by the declared production organisation to ensure that each of the products and/or parts that are produced within the organisation's scope of work, qualifies for a statement of conformity or a release certificate. The position and number of certifying staff should be appropriate to the complexity of the product and the production rate.

(b) The qualifications of certifying staff should be based on their knowledge, background and experience and on specific training (or testing) that is established by the organisation appropriate to the product or part to be released.

(c) Training should be given to develop a satisfactory level of knowledge of product/part specifications, the organisation's procedures, the management system for production (including compliance monitoring), aviation legislation, and the associated regulations, AMC and GM that are relevant to their particular role. Training should include on-the-job training, as relevant.

(d) For that purpose, in addition to the general training policy, the organisation should define its own standards for training, including pre-qualification standards, for personnel to be identified as certifying staff.

(e) The training policy is part of the quality system.

(f) The training should be updated in response to experience gained and changes in technology.

(g) A feedback system to ascertain that the required standards are being maintained should be put in place to ensure the continuing compliance of personnel with authorisation requirements.

(h) For the release of products or parts, the responsibilities to issue statements of conformity or authorised release certificates (EASA Form 1) are allocated to the certifying staff that is identified in point 21L.A.125(d)(2).

AMC1 21L.A.125(d)(2) Resources of the declared production organisation

EVIDENCE OF AUTHORISATION

(a) Certifying staff should be provided with evidence of their authorisation. This should be done through an internal authorisation document. That document should be in a style that makes its scope clear to the certifying staff and any entitled person that may require to examine the authorisation. It should include the privileges that are granted to the certifying staff and the category of products upon which they may exercise those privileges. Where codes are used to define the scope, an interpretation document should be readily available.

(2) Certifying staff are not required to carry the authorisation document at all times, but they should be able to make it available within a reasonable time following a request from an entitled person, which includes the competent authority.

(3) The list of certifying staff should be included in the declared production organisation exposition (DPOE) (see AMC 21L.A.124(d)), if utilised, or in equivalent processes and procedures.

GM1 21L.A.126(a) Scope of work

CONFORMITY OF PROTOTYPE MODELS AND TEST SPECIMENS

Points 21L.A.25(c) and 21L.A.44(d) require the determination of conformity of prototype models and test specimens to the applicable design data.

The EASA Form 1 may be used as a conformity certificate as part of the assistance that a declared production organisation provides to a design approval holder/applicant or a declarant of a declaration of design compliance.

The EASA Form 1 should only be used for conformity release purposes when it is possible to indicate (in Block 12) the reason that prevents its issuance for airworthiness release purposes.

GM1 21L.A.126(d) Scope of work

FLIGHT CONDITIONS

The need to recommend flight conditions for an aircraft is related to the performance of the production flight tests.

Production flight tests of a newly manufactured aircraft should be performed under the conditions specified in point 21L.A.241 and under Subpart P of Annex I (Part 21) to this Regulation.

For this purpose, the declared production organisation should apply for a permit to fly to the competent authority. EASA Form 21 (see AMC 21.B.520(b)) should be obtained from the competent authority.

Where the flight conditions are not approved at the time of application for a permit to fly, the declared production organisation should also apply for approval of the flight conditions (refer to point 21L.A.241(a) (and by inference to point 21.A.709 of Annex I (Part 21))).

GM1 21L.A.127(a) Obligations of the declared production organisation

WORK CARRIED OUT IN ACCORDANCE WITH DEFINED PROCEDURES, PRACTICES AND PROCESSES

The establishment of a declared production organisation exposition (DPOE) (if chosen to be utilised by the organisation (see AMC1 21L.A.124(d))) or the equivalent processes and procedures are a prerequisite for the registration of a declaration for production capability and for maintaining such registration.

The declared production organisation should make the DPOE or the equivalent processes and procedures available to its personnel, where necessary, for the performance of their duties. A distribution list should, therefore, be established. If utilised, and if the DPOE mainly refers to separate manuals or procedures, the distribution of the DPOE could be limited.

The declared production organisation should ensure that personnel have access to and are familiar with that part of the content of the DPOE or the referenced documents, at the latest revision level, which covers their activities.

Monitoring of compliance with the DPOE or the equivalent processes and procedures is normally the responsibility of the independent monitoring function.

AMC1 21L.A.127(b) Obligations of the declared production organisation

FLIGHT TEST OPERATIONS MANUAL (FTOM)

(a) General

(1) Scope: The FTOM covers flight-test operations.

The FTOM complexity should be proportionate to the organisation complexity's as well as to the complexity of a particular aircraft.

(2) Format

The FTOM may:

— be included in the declared production organisation's (DPO) / declared design organisation's (DDO) documents; or

— be a separate manual.

The FTOM may make reference to other documents to cover the contents listed in point 2 below (e.g. for record-keeping).

(3) Use by contractors or subcontractors

When flight tests are performed by contractors or subcontractors, they should comply with the FTOM of the declared production or design organisations, unless they have established an FTOM in compliance with Part 21 or Part 21 Light, the use of which has been agreed between the two organisations.

(b) The FTOM should contain the following elements:

(1) Exposition

If the FTOM is presented as a separate document, it should include a chart indicating the structure of the organisation and, more specifically, the functional links of the staff in charge of flight-test activities. It should also mention the coordination between all departments affecting flight test, e.g. design office, production and maintenance, in particular the coordination for the establishment and update of flight-test programmes.

(2) Risk and safety management

The FTOM should describe the organisation's policy in relation to risk and safety assessment, mitigation, and associated methodologies.

(3) Crew members

According to the flight-test category, the FTOM should describe the organisation's policy on the composition of the crew and the competence and currency of its flight-test pilots, including procedures for appointing crew members for each specific flight.

Note: For flight tests performed for demonstration-of-compliance activities required by points 21L.A.25 and 21L.A.44, the flight crew conditions or restrictions are part of the flight conditions approved by EASA. As part of the investigations required under point 21L.B.242, EASA will also check the flight crew qualifications to ensure that the flight testing can be conducted safely.

All crew members should be listed in the FTOM.

A flight time limitation policy should be established.

(4) Carriage of persons other than crew members

According to the flight-test category, the FTOM should describe the organisation's policy in relation to the presence and safety onboard of people other than crew members (i.e. with no flying duties).

People other than crew members should not be allowed on board for Category 1 flight tests (for the definition of the flight categories, refer to Appendix XII to Annex I (Part 21) to this Regulation).

(5) Instruments and equipment

The FTOM should list, depending on the nature of the flight, the specific safety-related instruments and equipment that should be available on the aircraft or carried by people on board.

The FTOM should contain provisions to allow flights to take place in case of defective or missing instruments or equipment.

(6) Documents

The FTOM should list the documents to be produced for flight testing, and include (or refer to) the procedures for their issuance, update and follow-up to ensure the documents' configuration control:

(i) documents associated with a flight-test programme:

— flight order for a given flight, which should include:

— a list of the tests to be performed and associated conditions;

— safety considerations relevant to the flight;

— category of the flight (e.g. Category 1);

— composition of the crew;

— names of persons other than crew members;

— aircraft configuration items relevant to the test to be highlighted to the crew;

— loading of the aircraft;

— reference to approved flight conditions; and

— restrictions relevant to the flight to be highlighted to the crew;

— flight crew report;

(ii) documentation and information to be carried on board the aircraft during flight test;

(iii) record-keeping: the FTOM should describe the policy relative to record-keeping.

(7) Permit to fly

The FTOM should describe the involvement of the flight-test organisation or flight-test team (as appropriate) in the process for the approval of flight conditions and the issuance of permits to fly in accordance with Part 21 Light Subpart P (and by reference to Part 21 Subpart P).

(8) Currency and training

The FTOM should describe how training for flight test is organised.

Currency of the flight-test crew may be ensured either through recent experience or refresher training.

The FTOM should specify the requirements for a refresher training in order to ensure that crew members are sufficiently current to perform the required flight-test activity.

A system should be established to record the currency of the flight test crew's training.

A valid national document (i.e. licence), issued by an EASA Member State under its national regulations and ensuring compliance with the agreed currency requirements, may be an acceptable means of compliance to demonstrate currency for a pilot that holds a flight-test rating.

GM1 to 21L.A.127(c) Obligations of the declared production organisation

CONFORMITY WITH APPROVED OR DECLARED DESIGN DATA

Individual configurations are often based on the needs of the customer and improvements or changes which may be introduced by the type-certificate holder or the declarant of a declaration of design compliance. There are also likely to be unintentional deviations (concessions or non-conformances) during the manufacturing process. All these changes should be subject to approval by the design approval holder or the declarant, as relevant, or, when necessary, by EASA.

GM2 21L.A.127(c) Obligations of the declared production organisation

AIRCRAFT — CONDITION FOR SAFE OPERATION

Before submitting the aircraft statement of conformity (EASA Form 52B) to the competent authority of the Member State of registry, the declared production organisation should make an investigation so as to be satisfied in respect of each of the items listed below. The documented results of this investigation should be kept on file by the declared production organisation. Some of these items may be required to be provided (or made available) to the operator or owner of the aircraft (and in some cases the competent authority of the Member State of registry):

1. Equipment or design changes that do not meet the requirements of the State of manufacture but have been accepted by the competent authority of the importing country.
2. Identification of products or parts that:
   (a) are not new;
   (b) are furnished by the buyer or future operator (including those identified in point 21L.A.252(b)(1)).
3. Technical records which identify the location and serial numbers of components for which special traceability requirements apply for continued-airworthiness purposes, including those identified in point 21L.A.252(b)(1).
4. Logbook and a modification record book for the aircraft as required by EASA.
5. Logbooks for products identified in point 21L.A.252(b)(1) installed as part of the type design as required by EASA.
6. A weight and balance report for the completed aircraft.
7. A record of missing items or defects which do not affect airworthiness. These, for example, could be furnishings or buyer-furnished equipment (BFE) (items of equipment may be recorded in a technical log or other suitable arrangement such that the operator and EASA are formally aware of).
8. Product support information required by other implementing rules and associated CSs or GM, such as a maintenance manual, a parts catalogue, all of which should reflect the actual build standard of the particular aircraft. Also, an electrical load analysis and a wiring diagram.
9. Records which demonstrate completion of maintenance tasks appropriate to the test flight flying hours recorded by the aircraft. These records should show the relationship of the maintenance status of a particular aircraft to the manufacturer's recommended maintenance task.
10. Details of the serviceability state of a particular aircraft in respect of:
    (a) the fuel and oil contents;
    (b) provision of operationally required emergency equipment.
11. An approved flight manual which conforms to the build standard and modification state of a particular aircraft shall be available.
12. Show that inspections for foreign objects at all appropriate stages of manufacture have been satisfactorily performed.
13. The registration has been marked on the exterior of the aircraft as required by national legislation. Where required by national legislation, affix a fireproof owner's nameplate.

14. Where applicable, there should be a certificate for noise and for the aircraft radio station.
15. The installed compass and/or compass systems have been adjusted and compensated, and a deviation card displayed in the aircraft.
16. A record of rigging and control surface movement measurements.
17. Where maintenance work has been performed under point 21L.A.126(e), issue a release to service that includes a statement that the particular aircraft is in a condition for safe operation.
18. List of all applicable service bulletins (SBs) and airworthiness directives (ADs) that have been implemented.

GM1 21L.A.127(l) Obligations of the declared production organisation

APPLICABLE SUBPART A REQUIREMENTS

The following requirements in Subpart A are applicable to declared production organisations:

— points 21L.A.3(b), (c), (d), (e) and (f) Reporting system
— point 21L.A.5 Collaboration between design and production
— point 21L.A.6(b) Marking
— points 21L.A.7(b), (c) and (d) Record-keeping
— point 21L.A.10 Access and investigation
— point 21L.A.11 Findings and observations
— point 21L.A.12 Means of compliance

AMC1 21L.A.128 Notification of changes and cessation of activities

CHANGES AND THEIR TIMELY NOTIFICATION

The declared production organisation should notify the competent authority of the following changes:

(a) Changes to the information that has been declared in accordance with point (c) of point 21L.A.123 (according to point 21L.A.128(a)):

— change of the registered name of the organisation;
— change of the registered address of the organisation's principal place of business and, where applicable, change of the operating sites and/or their addresses;
— change of the accountable manager and/or their contact details; and
— change of the scope of work.

These changes are notified to the competent authority by submitting a revised declaration of production capability.

(b) Significant changes to the management system for production (according to point 21L.A.128(b)):

— significant changes to production capacity;

— change to the manufacturing methods;

— changes in the organisation structure, especially to those parts of the organisation in charge of quality;

— change of the managers nominated according to point 21L.A.125(c)(2);

— changes in the management system for production or quality system that may have an important impact on the conformity/airworthiness of each product or part; and

— changes in the placement or control of significant subcontracted work or supplied parts.

These changes are notified without revising the declaration of production capability.

Timely notification: The declared production organisation should notify the change(s) as soon as it has taken the decision to introduce the respective change(s) but no later than 10 working days after the change(s) became effective.

SUBPART J — DECLARED DESIGN ORGANISATIONS

GM1 21L.A.173(b) Declaration of design capability

SUBMISSION OF THE DECLARATION

The EASA application form (ref. TBD) is available on the EASA website. The documents to be sent with the application are indicated in the form and include the DECLARATION OF DESIGN CAPABILITY — see AMC1 21L.A.173(c) / EASA Form (TBD).

AMC1 21L.A.173(c) Declaration of design capability

DECLARATION FORM

The natural or legal person that declares its design capability should provide the information required by point 21L.A173(c) in the declaration form defined below.

DECLARATION OF DESIGN CAPABILITY pursuant to Commission Regulation (EU) No 748/2012 Annex Ib (Part 21 Light) SUBPART J — DECLARED DESIGN ORGANISATIONS	
☐	Initial declaration
☐	Notification of changes — Declared design organisation (DDO) registered number:
1.	**Declared design organisation (DDO)** Registered name:
2.1.	**Place of business** Contact details (registered address, phone, email) of the DDO's principal place of business:
2.2.	**Operating sites** Where applicable, contact details (address, phone, email) of the operating site(s): *(may be left blank if same as in point 2.1 'Place of business')*
3.	**Head of design organisation** Name and contact details (address, phone, email) of the DDO's representative:

EASA Form TBD

4. **Intended scope of work**

4.1. Category of products

Products certified under Part 21 Light Subpart B

☐ Aeroplanes with a maximum take-off mass (MTOM) of 2 000 kg or less with a seating configuration of maximum 4 persons	☐ Passenger gas airships designed for not more than 4 persons
☐ Sailplanes or powered sailplanes with a MTOM of 2 000 kg or less	☐ Rotorcraft with a MTOM of 1 200 kg or less with a seating configuration of maximum 4 persons
☐ Balloons	☐ Piston engines
☐ Hot-air airships	☐ Propellers
☐ Gyroplanes	

4.2. Certification activities

☐ Type certification under Part 21 Light Subpart B

☐ Supplemental type certification under Part 21 Light Subpart E

☐ Major repair approval under Part 21 Light Subpart M

4.3. Detailed description of the scope of work

For type-certification activities, aircraft type(s): *- [product 1]*
- [product 2]

Note: In the case of type-certification activities, all relevant technical areas are included.

For STC activities: *[N/A or see below]*

A. Technical areas

	Aeroplanes	(Powered) Sailplanes	Balloons	Hot-air airships	Gas airships	Rotorcraft	Gyroplanes	Engines	Propellers
Flight									
Structures									
Cabin									
Hydromechanical systems									
Environmental control systems									
Electrical systems									
Avionics									
Powerplant and fuel systems									
Rotor drive systems									
Propulsion									

B. Limitations

EASA Form TBD

4.3. Detailed description of the scope of work *(continued)*

For repair activities: *[N/A or see below]*

A. Technical areas

	Aeroplanes	(Powered) Sailplanes	Balloons	Hot-air airships	Gas airships	Rotorcraft	Gyroplanes	Engines	Propellers
Flight									
Structures									
Cabin									
Hydromechanical systems									
Environmental control systems									
Electrical systems									
Avionics									
Powerplant and fuel systems									
Rotor drive systems									
Propulsion									

B. Limitations

5. **Statements**

The declared design organisation (DDO) has established and implemented a management system for design in accordance with point (a) of point 21L.A.174. This management system will be maintained in compliance with Subpart J of Annex Ib (Part 21 Light) to Regulation (EU) No 748/2012.

The references of the elements of the management system for design are included in the annex to this declaration.

All the personnel of the DDO must adhere to the processes and procedures referred to in the annex to this declaration.

[Company Name] agrees to undertake the obligations of a declared design organisation in accordance with point 21L.A.177.

I confirm that all information contained in this declaration, including its annex, is complete and correct.

6.

Date / Location	Signature of the head of the design organisation

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Instructions for filling in Section 4 'Intended scope of work':

4.1. Category of products

The declarant may tick one or several boxes depending on the category of products they plan to apply for a type certificate, a supplemental type certificate, or a major repair approval.

4.2. Certification activities

The declarant may tick one or several boxes.

Example: A declared design organisation may apply for a type certificate for a piston engine (under point 21L.A.21(g)) and for a supplemental type certificate for the installation of the (respective) engine on small aeroplanes as defined under point 21L.A.21(a).

4.3. Detailed description of the scope of work

In the case of type-certification activities, the declarant should indicate the product designation. When a new type-certification application is submitted, this declaration should be updated and the new product designation listed.

In case of supplemental-type-certification or repair-design-approval activities, the declarant should tick the relevant boxes in the respective tables, depending on the category of products and technical areas.

Example:

	Aeroplanes	(Powered) Sailplanes	Balloons	Hot-air airships	Gas airships	Rotorcraft	Gyroplanes	Engines	Propellers
Flight									
Structures	✓	✓							
Cabin									
Hydromechanical systems									
Environmental control systems									
Electrical systems	✓	✓				✓			
Avionics	✓	✓				✓			
Powerplant and fuel systems									
Rotor drive systems									
Propulsion									

For supplemental-type-certification or repair-design-approval activities, the declarant may also indicate the limitations specific to their design activity.

Examples: *— Design activities on composite materials are excluded*

— Structural design activities limited to the installation of external mission equipment

ANNEX TO THE DECLARATION OF DESIGN CAPABILITY

This annex includes references to the declared design organisation's (DDO) documentation showing compliance with the requirements of Annex Ib (Part 21 Light) to Regulation (EU) No 748/2012.

No	Part 21 Light	Subject	DPO reference (DDOE reference, as relevant)
I. General			
1.	21L.A.174(d)	Process and procedure documentation issuance, approval or change	
II. Organisation, key personnel and compliance verification staff			
1.	21L.A.175(e)	Organisational structure documented and kept updated	
2.	21L.A.175(b)	Identification of key personnel nominated by the head of design organisation to ensure that the organisation is in compliance with the requirements of Part 21 Light Subpart J: — head of airworthiness function, — head of independent monitoring function, — others	
3.	21L.A.175(c)	Nomination process for key personnel ensuring they have the appropriate knowledge, background and experience to discharge their responsibilities	
4.	21L.A.174(b)(2)	List of authorised staff to perform compliance verification and the criteria and process for their initial nomination and maintenance of their authorisation	
5.	21L.A.175(d)	The numbers of staff in all technical departments and their level of experience are sufficient, and staff have been given the appropriate authority to be able to discharge their allocated responsibilities and that there is full and effective coordination within the declared design organisation in respect of airworthiness and environmental compatibility matters	
III. System monitoring			
1.	21L.A.174(c)	System monitoring procedure	
IV. Subcontracting			
1.	21.A.174(b)(3) 21L.A.174(e)	Subcontracting procedure and a list of subcontractors	
V. Changes to the DDO			
1.	21L.A.178	Procedure for the notification of organisational changes to EASA according to point 21L.A.178	

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No	Part 21 Light	Subject	DPO reference (DDOE reference, as relevant)
VI. Design and certification processes			
1.	21L.A.26	Identification and issuance of type design documentation and configuration control	
2.	21L.A.24	Type-certificate application (including: type-certification basis, environmental-protection requirements and certification plan)	
3.	21L.A.25	Compliance demonstration (preparation, verification and issuance of compliance documentation)	
4.	21L.A.25(c)	Testing procedure and conformity of test specimen/prototype	
5.	21L.A.25(d)	Flight-testing procedure and flight test operations manual (FTOM)	
6.	21L.A.241	Procedure for requesting the issuance of permits to fly and the approval of associated flight conditions	
7.	21L.A.25(e) 21L.A.241(c) 21L.B.46 21L.B.242	Preparing and supporting EASA in conducting its investigations *(critical design review, pre-flight inspection, first-article inspection)*	
8.	21L.A.241(b) 21L.B.241	Preparing and supporting the competent authority in conducting its inspections	
9.	21L.A.25(f)	Issuance of compliance declaration	
10.	21L.A.63	Classification of changes to a type certificate	
11.	21L.A.67	Approval of minor changes to a type certificate (TC)	
12.	21L.A.68	Approval of major changes to a type certificate (TC)	
13.	21L.A.86	Approval of a supplemental type certificate (STC)	
14.	21L.A.203	Classification of repair designs	
15.	21L.A.207	Approval of minor repair designs	
16.	21L.A.208	Approval of major repair designs	
VII.Obligations			
1.	21L.A.3	Reporting system	
2.	21L.A.4	Airworthiness directives	
3.	21L.A.5	Collaboration between design and production	
4.	21L.A.6	Marking	
5.	21L.A.7	Record-keeping	
6.	21L.A.8	Manuals	
7.	21L.A.9	Instructions for continued airworthiness	
8.	21L.A.10	Access and investigation	
9.	21L.A.11	Findings and observations	

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Instructions: If the DDO, for the purpose of compliance with point 21L.A.174(d), has produced a declared design organisation exposition (DDOE), then the DDOE sections should be referenced in the right-hand column of the form.

AMC1 21L.A.174(b) Management system for design

DESIGN ASSURANCE SYSTEM

The complete design process, starting with the type-certification basis, environmental-protection requirements and product specifications, and culminating with the issuance of a type certificate (TC), is shown in the diagram in Figure 1. This identifies the relationship between the design, the type investigation and the design assurance processes.

Effective design assurance requires a continuing evaluation of all the factors that affect the adequacy of the design for the intended applications. In particular, it should be ensured that the product or part complies with the applicable type-certification basis and environmental-protection requirements, and that it will continue to comply after any change to the TC or any repair.

Planned and systematic tasks should, therefore, be defined and performed from the very beginning of the design activities up to the continued-airworthiness activities.

GM1 21L.A.174(b) Management system for design

DESIGN ASSURANCE SYSTEM

(a) Purpose

This GM outlines some basic principles and objectives of the design assurance system.

(b) Definitions

(1) 'Design assurance system'

The design assurance system includes the organisational structure, responsibilities, procedures, and resources to ensure the proper functioning of the design organisation.

(2) 'Design assurance' refers to all planned and systematic actions necessary to provide adequate confidence that the organisation has the capability to:

— design products or parts in accordance with the applicable type-certification basis and environmental-protection requirements;

— demonstrate and verify compliance with the type-certification basis and environmental-protection requirements; and

— demonstrate compliance to EASA.

(3) 'Type investigation' refers to the tasks of the organisation in support of the type certificate (TC), supplemental type certificate (STC), or other design approval processes necessary to demonstrate, verify, and maintain compliance with the applicable type-certification basis and environmental-protection requirements.

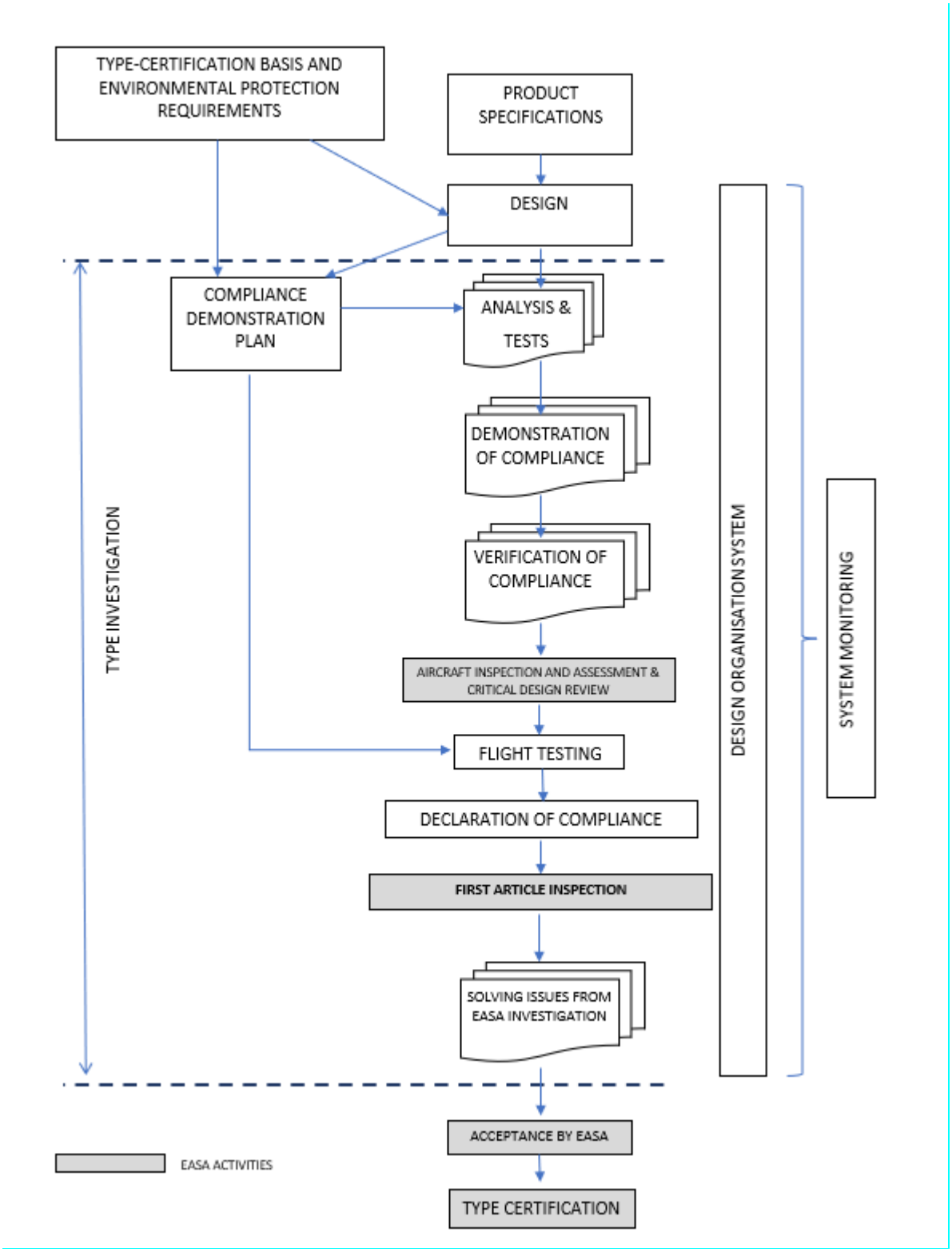

Figure 1 — Relationship between design, design assurance and type investigation

PLANNED AND SYSTEMATIC TASKS

For design organisations that carry out the certification process of products, their planned and systematic tasks should cover the following, and the related procedures should be defined accordingly.

(a) General

(1) Issue or, where applicable, supplement, or amend the documentation of the management system for design (or, if it is used, the declared design organisation exposition (DDOE)) in accordance with point 21L.A.174(d).

(2) Assure that all the procedures are adhered to.

(3) Conduct the certification process.

(4) Nominate staff as 'compliance verification engineers' that are responsible for approving compliance documents as defined in point (c) below.

(5) Nominate staff that belong to the airworthiness function and are responsible as defined in GM1 21L.A.174(b)(1).

(6) In the case of an applicant for an STC, obtain the agreement of the TC holder for the proposed STC to the extent that is defined in point 21L.A.86.

(7) Ensure that there is full and complete liaison between the design organisation and the related organisations that have responsibility for the products and parts that are manufactured according to the type design.

(8) Provide assurance to EASA that any prototype models and test specimens adequately conform to the type design (see points 21L.A.25(c), 21L.A.85(c) and 21L.A.206(c)).

(b) Head of the design organisation (or deputy)

The head of the design organisation (HDO), or an authorised representative, should sign a declaration of compliance (see points 21L.A.25(f), 21.A.85(f) and 21L.A.206(f)) with the applicable type-certification basis and environmental-protection requirements after verifying the satisfactory completion of the certification process. The signature of the HDO on the declaration of compliance confirms that the relevant procedures of the management system for design have been followed.

(c) Compliance verification

(1) Approval through the signing of all the compliance documents, including test programmes and data that are necessary for the verification of compliance with the applicable type-certification basis and environmental-protection requirements, as defined in the compliance-demonstration plan.

(2) Approval of the technical content (completeness, technical accuracy, etc.), including any subsequent revisions, of the manuals to be approved by EASA (aircraft flight manual (AFM), airworthiness limitations section (ALS) of the instructions for continued airworthiness (ICAs)).

(d) Maintenance and operating instructions

(1) Ensuring the preparation and updating of all the maintenance and operating instructions (including ICAs and SBs) that are needed to maintain airworthiness (i.e. continuing airworthiness) in accordance with the relevant certification specifications (CSs).

(2) In accordance with points 21L.A.8 and 21L.A.9 and, where applicable, point 21.A.609, ensuring that those documents are made available as per point 21.A.9(c).

GM1 21L.A.174(b)(1) Management system for design

AIRWORTHINESS FUNCTION

The following tasks are normally performed by the airworthiness function:

(a) Liaison between the design organisation and EASA with respect to all aspects of the design certification application.

(b) Preparation of the compliance-demonstration plan and obtaining its approval by EASA.

(c) Coordination internally, in the design organisation, of all compliance-demonstration activities according to the compliance-demonstration plan.

(d) Regular reporting to EASA about the progress of compliance-demonstration activities and coordination of EASA investigations. These include the necessary arrangements for the physical inspection and assessment of the aircraft and the critical design review, in accordance with point 21L.A.241(c)(2), and the first-article inspection, in accordance with point 21L.B.46.

(e) Establishing the compliance checklist and updating it with any changes, as necessary.

(f) Checking that all the compliance documents that are necessary to demonstrate compliance with the applicable type-certification basis and the applicable environmental-protection requirements, as well as for completeness, are prepared and signing the documents for release.

(g) Providing verification to the head of the design organisation that all the activities required for a type investigation have been properly completed.

(h) Endorsing the classification of changes and repairs in accordance with point 21L.A.63 and 21L.A.203 respectively.

(i) Ensuring the initiation of activities as a response to an occurrence report and providing information to EASA if the airworthiness is impaired.

(j) Advising EASA on the issuing of airworthiness directives (ADs) in general based on service bulletins (SBs).

(k) Monitoring significant events on other aeronautical products, as far as they are relevant, to determine their effect on the airworthiness of the products designed by the design organisation.

(l) Ensuring that there is cooperation in preparing SBs and any subsequent revisions, with special attention being given to the manner in which the contents affect airworthiness and environmental-protection aspects.

GM1 21L.A.174(b)(2) Management system for design

INDEPENDENT VERIFICATION FUNCTION OF THE DEMONSTRATION OF COMPLIANCE

(a) The independent verification function of the demonstration of compliance is normally carried out by a person that did not create the compliance data. Such a person may work in conjunction with the individuals that prepare compliance data.

(b) The verification is normally shown by signing all compliance documents, including test programmes and data that are necessary for the demonstration of compliance with the applicable type-certification basis and the applicable environmental-protection requirements as defined in the compliance-demonstration plan.

(c) For a product, there is normally only one compliance-verification engineer that is nominated for each relevant technical discipline. The relevant procedures would normally describe the way of action in case of non-availability of the nominated persons and their replacement, when necessary.

(d) For STC cases, when compliance statements and associated documentation are produced by the TC holder, and when this data is approved under the system of the authority of the TC holder, then the STC applicant does not need to provide, within its own DDO, the independent verification function that is required by point 21L.A.124(b)(2) for that data.

GM1 21L.A.174(b)(3);(e) Management system for design

PARTNERS AND SUBCONTRACTORS

Examples of elements that the process to control partners and subcontractors should normally address are:

— the identification of the work to be subcontracted (e.g. design of parts, drafting drawings, stress analysis, laboratory testing);

— the selection of a subcontractor based on its capability to perform the identified work (criteria (e.g. facilities, knowledge and experience) and the selection process);

— the working arrangement (e.g. purchase technical specifications, statement of work); this may cover technical requirements (for parts to be design or tasks to be performed) and process requirements (e.g. procedures to be followed by the subcontractor); and

— the control of the work performed by the subcontractor; this control would not only cover the deliverables provided by the partners and subcontractors but also the monitoring function required under point 21L.A.174(c), and, if relevant, the independent function to verify the demonstration of compliance required under 21L.A.174(b)(2).

If a partner or subcontractor holds a design organisation approval (DOA), then the declared design organisation may take this into account for the effective integration of that partner or subcontractor (e.g. simplifying the selection process when the scope of work of the respective subcontractor's DOA is similar with the scope of the subcontracted work).

The declared design organisation maintains a list of all selected partners and subcontractors, including their respective scope of subcontracted work.

If the independent function to verify the demonstration of compliance required under point 21L.A.174(b)(2) is subcontracted, the declared design organisation should normally identify in its own documentation the authorised staff of the partner or subcontractor performing this function.

AMC1 21L.A.174(c) Management system for design

INDEPENDENT MONITORING FUNCTION

The independent monitoring function should ensure that:

— the management system for design remains compliant with the applicable requirements of Part 21 Light and with any additional requirements as established by the organisation;

— the staff of the design organisation follow the documented procedures of the management system when performing their tasks; and

— the management system for design is adequate and enables the organisation through the use of its procedures to provide assurance that the designed products, changes and repairs are compliant with the applicable type-certification basis and the applicable environmental-protection requirements.

An objective review of the complete set of design-management-related activities is provided through independent monitoring activities, such as audits, inspections, reviews. The independence of the monitoring activities is established by always ensuring that those activities are performed by staff that are not involved in the function, procedure or products they monitor, and that are independent from the operating managers of the function(s) being monitored; however, this should not exclude support by domain experts during monitoring.

The monitoring should be performed based on a monitoring plan. This plan is established to show when and how often the activities required by Part 21 Light will be audited. This plan should include, in a defined period of time, all the elements of the management system, including all subcontractors. The defined period of time for the audit planning should not exceed 24 months.

When a non-compliance is found, the root cause(s) and contributing factor(s) should be identified and corrective actions should be defined and followed up. When providing feedback, the compliance-monitoring function should define who is required to address any non-compliance in each particular case, and the procedure to be followed if the corrective action is not completed within the defined time frame.

Also, feedback should be regularly provided to the head of the design organisation on the overall status of the compliance and adequacy of the management system for design, including main issues identified and cases where corrective actions have not been satisfactorily implemented.

Staff that perform an independent monitoring function should have access to all the parts of the design organisation and, as necessary, to any subcontracted organisations.

AMC1 21L.A.174(d) Management system for design

DOCUMENTATION

Point 21L.A.174(d) requires the declared design organisation to document its processes and procedures.

An acceptable means of compliance with this requirement is to establish a declared design organisation exposition (DDOE). The purpose of a DDOE is to set forth in a concise document format the organisational relationships, responsibilities, terms of reference, and the associated authority, procedures, means and methods of the organisation.

If utilised, the DDOE should contain the following:

(a) a statement signed by the head of the design organisation confirming that the DDOE and any associated manuals, procedures and instructions that define the organisation's compliance with this Subpart will be complied with at all times;

(b) the title(s) and name(s) of the person(s) nominated in accordance with point 21L.A.175(b);

(c) the duties and responsibilities of the head of the design organisation and the person(s) as specified by point 21L.A.175(b), including matters on which they may deal directly with EASA on behalf of the organisation;

(d) an organisational chart showing the associated chains of responsibility of the managers as required by point 21L.A.175(e);

(e) the list of authorised staff that perform the independent function of verifying the demonstration of compliance as referred to in point 21L.A.174(b)(2);

(f) the nomination procedure for key personnel and authorised staff;

(g) a general description of manpower;

(h) a general description of the facilities located at each address specified in the declaration of design capability;

(i) a general description of the declared design organisation's scope of work as defined in the declaration of design capability (see also point 21L.A.176);

(j) the procedure for the notification of organisational changes to EASA according to point 21L.A.178;

(k) the procedure for the amendment of the DDOE;

(l) the independent system monitoring procedure;

(m) the subcontracting procedure and the list of partners and subcontractors;

(n) the procedure for identification and issuance of type design documentation and configuration control;

(o) the procedure(s) followed and forms used for type certification and supplemental type certification;

(p) the procedures for design changes;

(q) the procedure for design of repairs;

(r) the continued-airworthiness procedures (including reporting system and data in support of the issuance of airworthiness directives);

(s) the procedures for the collaboration between design and production organisations (including transfer of design data and approval of production concessions or non-conformities);

(t) the record-keeping procedure;

(u) the procedure for marking products and parts;

(v) the procedures for the issuance of manuals and instructions for continued airworthiness (ICAs);

(w) the procedures for the interface with EASA (supporting EASA investigations and answering to findings and observations).

The DDOE may be produced and distributed in paper or electronic format. If the above information is documented in separate procedures and instructions, the DDOE should include a summary of the information and an appropriate cross reference.

When changes to the organisation occur, the DDOE should be kept up to date. Changes to the organisation shall be notified to EASA as required by point 21L.A.178.

If the organisation holds one or more additional organisation certificates within the scope of Regulation (EU) 2018/1139 and the delegated and implementing acts that are adopted on the basis thereof (DOA, POA, etc.), so that the organisation is required to establish another exposition, the organisation may combine the documents by producing a separate manual or supplement that covers the differences between the DDOE and the other exposition. In that case, the manual or supplement should identify where in the other exposition the remaining information on the declared design organisation is covered. That remaining information then formally becomes part of the exposition.

AMC1 21L.A.175(a) Resources of the declared design organisation

HEAD OF THE DESIGN ORGANISATION

The nominated head of the design organisation should have the direct or functional responsibility for all departments of the organisation that are responsible for the design of products, changes or repairs. If the departments responsible for design are functionally linked, the head of the design organisation still carries the ultimate responsibility for the compliance of the organisation with Subpart J.

The head of the design organisation should:

(a) have sufficient knowledge and authority to be able to respond to EASA regarding major issues of the declared design organisation and the product design approval, and to implement any necessary improvements;

(b) demonstrate an understanding of this Annex, sufficient to discharge the relevant responsibilities.

AMC1 21L.A.175(b);(c) Resources of the declared design organisation

NOMINATED MANAGERS

The person or group of persons nominated in accordance with point 21L.A.175(b) should represent the management structure of the organisation and be responsible for all the functions as specified in Subpart J. Depending on the size of the design organisation, the functions may be subdivided under individual managers (and, in fact, may be further subdivided) or combined.

At least the following key managers should be nominated:

— the manager responsible for the airworthiness function (chief of the airworthiness function); and

— the manager responsible for independent monitoring function (chief of the independent monitoring function).

(a) The responsibilities and tasks of each individual manager should be clearly defined in order to prevent uncertainties about the relations within the organisation. If a manager does not directly report to the head of the design organisation, they should have direct access to the head of the design organisation that is formally established.

(b) The chief of the airworthiness function should be able to demonstrate relevant knowledge, background and appropriate experience that are related to product certification and continued airworthiness, including knowledge of, and experience in, managing the design assurance system.

The tasks for which the chief of the airworthiness function should be responsible are presented in GM1 21L.A.174(b)(1).

(c) The chief of the independent monitoring function should be able to demonstrate relevant knowledge, background and appropriate experience that are related to the activities of the organisation, including knowledge of and experience in compliance monitoring. The chief of the independent monitoring function should not be responsible for other design or airworthiness function aspects.

The role of the chief of the independent monitoring function should be to ensure that:

(1) the activities of the organisation are monitored for compliance with the applicable requirements and any additional requirements as established by the organisation, and that those activities are performed properly under the supervision of the nominated persons that are referred to in point 21L.A.175(b);

(2) an audit plan is properly implemented, maintained, and continually reviewed and improved; and

(3) corrective actions are requested, as necessary, and their implementation is followed up.

With due regard to the size of the organisation and the nature and complexity of its activities, the compliance-monitoring-manager function may be exercised by the head of the design organisation.

GM1 21L.A.175(d) Resources of the declared design organisation

PERSONNEL, FACILITIES AND ORGANISATION

(a) Personnel

The declared design organisation should ensure that the personnel that are made available by the organisation to comply with point 21L.A.175(d) are able, based on their special qualifications and numbers, to provide assurance of the design or modification of a product, as well as of the compilation and verification of all the data that is needed to meet the applicable

type-certification basis and the applicable environmental-protection requirements, as well as the necessary continued-airworthiness activities to support in-service products.

The organisation should have a system in place to plan the availability of staff to ensure that the organisation has sufficient and appropriately qualified staff to plan, perform, supervise, inspect, and monitor the organisation's activities in accordance with the organisation's scope of work.

(b) Facilities

The declared design organisation should have access to:

(1) workshops and production facilities that are suitable for manufacturing prototype models and test specimens;

(2) accommodation and test facilities that are suitable for carrying out tests and measurements needed to demonstrate compliance with the applicable type-certification basis and the applicable environmental-protection requirements.

(c) Organisation

The declared design organisation should ensure that:

(1) an airworthiness function has been established and staffed on a permanent basis to act as the focal point for coordinating airworthiness and environmental-compatibility matters;

(2) responsibilities for all tasks related to type investigations are assigned in such a way as to exclude gaps in authority; the responsibility for several tasks may be assigned to one person especially in the case of simple projects; and

(3) coordination between the technical departments and the persons in charge of the system monitoring required by point 21L.A.174(c) has been established to:

(i) ensure quick and efficient reporting and resolution of difficulties encountered using the handbook and associated procedures;

(ii) maintain the design assurance system;

(iii) optimise auditing activities.

(d) Competence of staff

The declared design organisation should establish and control the competence of the staff that are involved in the activities of the organisation, as detailed in the organisation's scope of work, in accordance with documented procedures.

Adequate initial and recurrent training should be provided in relation to the job function to ensure that staff remain competent. This training should be adapted based on experience that is gained within the organisation.

AMC1 21L.A.175(d) Resources of the declared design organisation

AIRWORTHINESS AND COMPLIANCE-VERIFICATION PERSONNEL

(a) The declared design organisation should maintain a list of the personnel authorised to perform airworthiness and compliance-verification functions.

(b) For these personnel, the organisation should define a system to select, train, maintain and identify them for all the tasks for which they are needed.

(c) The numbers of these personnel that are needed to sustain the design activities should be identified by the organisation.

(d) These personnel should be chosen on the basis of their knowledge, background and experience.

(e) When necessary, complementary training should be established to ensure that personnel have sufficient background and knowledge in the scope of their authorisation. The minimum standards for new personnel to qualify in the functions should be established. The training should lead to a satisfactory level of knowledge of the procedures that are relevant for each particular role. Training policy forms part of the management system for design.

(f) The organisation should maintain a record of the personnel as defined in AMC 21L.A.7(d).

GM1 21L.A.176 Scope of work

SCOPE OF WORK

The scope of work is stated in the declaration of design capability submitted by the declared design organisation (see AMC1 21L.A.173(c)). This includes the scope of work and the products, changes or repairs to them, with the appropriate limitations for which the design capability is declared. For declared design organisations that cover type-certification activities, the list of product types covered by the design assurance system should be included.

Changes in the scope of work are subject to notification as required by point 21L.A.178.

21L.A.177(b) Obligations of the declared design organisation

FLIGHT TEST OPERATIONS MANUAL (FTOM)

(a) General

(1) Scope: The FTOM covers flight-test operations.

The FTOM complexity should be proportionate to the organisation's complexity as well as to the complexity of a particular aircraft.

(2) Format

The FTOM may:

— be included in the declared production organisation's (DPO) / declared design organisation's (DDO) documents; or

— be a separate manual.

The FTOM may make reference to other documents to cover the contents listed in point (b) below (e.g. for record-keeping).

(3) Use by contractors or subcontractors

When flight tests are performed by contractors or subcontractors, they should comply with the FTOM of the declared production or design organisation, unless they have established an FTOM in compliance with Part 21 or Part 21 Light, the use of which has been agreed between the two organisations.

(b) The FTOM should contain the following elements

(1) Exposition

If the FTOM is presented as a separate document, it should include a chart indicating the structure of the organisation and, more specifically, the functional links of the staff in charge of flight-test activities. It should also mention the coordination between all departments affecting flight test, e.g. design office, production and maintenance, in particular the coordination for the establishment and update of flight-test programmes.

(2) Risk and safety management

The FTOM should describe the organisation's policy in relation to risk and safety assessment, mitigation and associated methodologies.

(3) Crew members

According to the flight-test activities to be performed, the FTOM should describe the organisation's policy on the composition of the crew and the competence and currency of its flight-test pilots, including procedures for appointing crew members for each specific flight.

Note: For flight test performed for demonstration-of-compliance activities required under points 21L.A.25 and 21L.A.44, the flight crew conditions or restrictions are part of the flight conditions approved by EASA. As part of the investigations required under point 21L.B.242, EASA should also check the flight crew qualifications to ensure that the testing can be conducted safely.

All crew members should be listed in the FTOM.

A flight time limitation policy for flight-test crew members should be established.

(4) Carriage of persons other than crew members

According to the flight-test category, the FTOM should describe the organisation's policy in relation to the presence and safety on board of people other than crew members (i.e. with no flying duties).

People other than crew members should not be allowed on board for Category 1 flight tests (for the definition of the flight categories, please refer to Appendix XII to Annex I (Part 21) to this Regulation).

(5) Instruments and equipment

The FTOM should list, depending on the nature of the flight, the specific safety-related instruments and equipment that should be available on the aircraft or carried by people on board.

The FTOM should contain provisions to allow flights to take place in case of defective or missing instruments or equipment.

(6) Documents

The FTOM should list the documents to be produced for flight testing, and include (or refer to) the procedures for their issuance, update and follow-up to ensure the documents' configuration control:

(i) documents associated with a flight-test programme:

— flight order for a given flight, which should include:

— a list of the tests to be performed and associated conditions;

— safety considerations relevant to the flight;

— category of the flight (e.g. Category 1);

— composition of the crew;

— names of persons other than crew members;

— aircraft configuration items relevant to the test to be highlighted to the crew;

— loading of the aircraft;

— reference to approved flight conditions; and

— restrictions relevant to the flight to be highlighted to the crew;

— flight crew report.

(ii) documentation and information to be carried on board the aircraft during flight test;

(iii) record-keeping: the FTOM should describe the policy relative to record-keeping.

(7) Permit to fly

The FTOM should describe the involvement of the flight-test organisation or flight test team (as appropriate) in the process for the approval of flight conditions and the issuance of permits to fly in accordance with Part 21 Light Subpart P (and by reference to Part 21 Subpart P).

(8) Currency and training

The FTOM should describe how training for flight test is organised.

Currency of the flight-test crew may be ensured either through recent experience or refresher training.

The FTOM should specify the requirements for a refresher training in order to ensure that crew members are sufficiently current to perform the required flight-test activity.

A system should be established to record the currency of the flight test crew's training.

A valid national document (i.e. licence), issued by an EASA Member State under its national regulations and ensuring compliance with the agreed currency requirements, is an acceptable means of compliance to demonstrate currency for a pilot that holds a flight-test rating.

GM1 21L.A.177(e) Obligations of the declared design organisation

APPLICABLE SUBPART A REQUIREMENTS

The following requirements in Subpart A are applicable to declared design organisations:

— points 21L.A.3(a), (c), (d), (e) and (f) Reporting system

— point 21L.A.4 Airworthiness directives

— point 21L.A.5 Collaboration between design and production

— point 21L.A.6(a) Marking

— points 21L.A.7(a), (c) and (d) Record-keeping

— point 21L.A.8 Manuals

— point 21L.A.9 Instructions for continued airworthiness

— point 21L.A.10 Access and investigation

— point 21L.A.11 Findings and observations

— point 21L.A.12 Means of compliance

AMC1 21L.A.178 Notification of changes and cessation of activities

CHANGES AND THEIR TIMELY NOTIFICATION

The declared design organisation should notify EASA of the following changes:

1. Changes to the information that has been declared in accordance with point (c) of point 21L.A.173 (according to point 21L.A.178(a)):
   — change of the registered name of the organisation;
   — change of the registered address of the organisation's principal place of business and, where applicable, change of the operating sites and/or their addresses;
   — change of the head of the design organisation and/or their contact details;
   — change of the scope of work.

   These changes are notified to EASA by submitting a revised declaration of design capability.
2. Significant changes to the management system for design (according to point 21L.A.178(b)):
   — change in the parts of the organisation that contribute directly to the airworthiness or environmental compatibility (independent checking function and airworthiness function);
   — new distribution of responsibilities affecting airworthiness or environmental-compatibility aspects;
   — changes in the organisation structure;
   — change to the principles of procedures related to:
      — the type certification (see Subpart B);
      — the approval of changes (see Subpart D);

— the approval of repair designs (see Subpart M);

— continued airworthiness (see points 21L.A.3 and 21L.A.4);

— the configuration control, when airworthiness or environmental compatibility is affected;

— the acceptability of design tasks undertaken by partners or subcontractors (point 21L.A.174(b)(3));

These changes are notified without revising the declaration of design capability.

Timely notification: The declared design organisation should notify the change(s) as soon as it has taken the decision to introduce the respective change(s) but no later than 10 working days after the change(s) became effective.

SUBPART R — STATEMENT OF CONFORMITY FOR AIRCRAFT AND AUTHORISED RELEASE CERTIFICATE (EASA FORM 1) FOR ENGINES AND PROPELLERS, OR PARTS THEREOF, WHICH CONFORM TO A DECLARATION OF DESIGN COMPLIANCE

AMC1 21L.A.272 Eligibility

ACCESS TO APPLICABLE DESIGN DATA

(a) If the declarant of a declaration of design compliance and the natural or legal person that plans to issue the statement of conformity or the authorised release certificate are the same entity, then access to the relevant design data is considered to have been granted without any need for a formal arrangement or contract.

(b) If the declarant of a declaration of design compliance and the natural or legal person that plans to issue the statement of conformity or the authorised release certificate are different entities, then access to the relevant design data should be formalised. This can be achieved by establishing a contract or arrangement between the two entities in which the declarant of a declaration of design compliance identifies the applicable design data and commits to transfer (or otherwise ensure access to) this data to the natural or legal person that plans to issue the statement of conformity or the authorised release certificate.

Note 1: The applicable design data is that identified according to point 21L.A.46 for the respective aircraft, engine, propeller, or part thereof.

Note 2: To formalise the access to applicable design data, the two entities may use GM1 21L.A.122(c) as guidance, customised to their specific needs.

AMC1 21L.A.273(a);(f) Production control system

MEANS OF CHECKING OF THE PRODUCTION PROCESSES

The production control system should include appropriate means of checking that production processes, whether performed by the natural or legal person that produce under Subpart R or by subcontractors under its control, are performed in accordance with the applicable production data and ensure:

(a) there is a system for the control and authorised amendment of data provided for the production, inspections and tests to ensure that data is complete and up to date at the point of use;

(b) the availability of personnel with suitable qualifications, experience, and training for each required production, inspection, and test task (special attention should be paid to tasks that require specialised knowledge and skills, e.g. NDT/NDI, welding, etc.);

(c) a working area is provided where the working conditions and environment are controlled as appropriate in respect of cleanliness, temperature, humidity, ventilation, lighting, space/access, protection against noise and pollution; and

(d) the equipment and tools are sufficient to enable all specified tasks to be accomplished in a safe and repeatable manner without any detrimental effects on the items under production; it should be demonstrated that the calibration control of the equipment and tools used complies with, and is traceable to, national or international standards.

GM1 21L.A.273(a);(f) Production control system

CONFORMITY OF SUPPLIED ITEMS

(a) The natural or legal person that produces under Subpart R is responsible for determining and applying acceptance standards for physical condition, configuration status and conformity of raw materials, subcontracted works, and supplied products or parts, whether to be used in production or delivered to customers as spare parts. This responsibility also includes items of buyer-furnished equipment (BFE).

(b) The following techniques are examples for the production control:

— first-article inspection of supplied parts, including destruction, if necessary, to verify that the article conforms to the applicable data for the new production line or the new supplier;

— incoming inspections and tests of supplied parts, materials or equipment that can be satisfactorily inspected on receipt;

— review of incoming documentation and data relevant to the showing of conformity to be included in the certification documents;

— any additional work, tests or inspections that may be needed for parts that are to be delivered as spare parts and that are not subject to the checks normally performed during subsequent production or inspection stages.

(c) The natural or legal person that produces under Subpart R may rely upon an EASA Form 1 issued in accordance with Part 21 or Part 21 Light if provided as evidence of conformity with the applicable design data.

(d) For suppliers that do not hold an approval under Part 21 Subpart G (POA) or that have not declared their production capability under Subpart G of this Annex, the inspection system of the natural or legal person that produces under Subpart R should include a system for the control of incoming parts which would allow that natural or legal person to inspect and test such items at the supplier's facility, if the item cannot or will not be completely inspected upon receipt.

GM2 21L.A.273(a);(f) Production control system

IDENTIFICATION OF INCOMING MATERIALS AND PARTS

The natural or legal person that produces under Subpart R should inspect all parts and materials supplied from external parties to ascertain that:

— they are identified;

— they have not been damaged during transport or unpacking;

— the incoming parts and materials have the appropriate and correct accompanying documentation; and

— the configuration and condition of the parts and materials are as laid down in the applicable design data.

Only upon completion of these checks and of any incoming further verifications laid down in the procurement specification, the natural or legal person that produces under Subpart R may accept the parts or materials for warehousing and used in production.

This acceptance should be certified by an inspection statement.

A suitable recording system should allow reconstruction at any time of the history of every material or part.

The areas where the incoming checks are carried out and the materials or parts are stored pending completion of the checks should be physically segregated from other departments.

AMC1 21L.A.273(c) Production control system

TESTS

If relevant, the natural or legal person that produces under Subpart R should perform functional, ground and flight tests of the manufactured products.

The production ground and flight tests for a new aircraft should be specified by the declarant of the declaration of design compliance. These tests typically include:

— a check on the handling qualities;

— a check on flight performance (using normal aircraft instrumentation);

— a check on the proper functioning of all aircraft equipment and systems;

— a determination that all instruments are properly marked, and that all placards and required flight manuals are installed before the flight test;

— a check of the operational characteristics of the aircraft on the ground; and

— a check on any other items peculiar to the aircraft being tested.

For production flight-test activities, the natural or legal person that produces under Subpart R may consider establishing a flight test operations manual (FTOM) (refer to AMC1 21L.A.127(b) and to point 21L.A.177(b)).

If the design compliance of the engine is covered by the declaration of the aircraft design compliance, then the declarant of the aircraft design compliance should also provide the specifications for the functional test required for a new engine. This will normally include at least the following:

— break-in runs that include the determination of fuel and oil consumption and the determination of power characteristics at rated maximum continuous power and, if applicable, at rated take-off power;

— a period of operation at rated maximum continuous power; for engines that have a rated take-off power, part of that period should be at rated take-off power.

The test equipment used for the test run should be capable of an output determination of accuracy sufficient to assure that the engine output delivered complies with the specified rating and operational limitations.

If the design compliance of the propeller is covered by the declaration of the aircraft design compliance, then the declarant of the aircraft design compliance should also provide the specifications for the functional test required for a new propeller. This will normally include several complete cycles of control throughout the propeller pitch and rotational speed ranges. In addition, for feathering

and/or reversing propellers, several cycles of feathering operation and reversing operation from the lowest normal pitch to the maximum reverse pitch should normally be required.

After functional testing, each engine or propeller should be inspected to determine that the engine or propeller is in condition for safe operation. Such inspection should be specified by the declarant of the aircraft design compliance and should normally include internal inspection and examination. The degree of internal inspections should normally be determined on the basis of the positive results of previous inspections conducted on the first-produced engine or propeller, and on the basis of in-service experience.

AMC1 21L.A.273(e) Production control system

PROCEDURES FOR THE PRODUCTION DATA

(a) When a natural or legal person that produces under Subpart R develops its own manufacturing data from the design data package delivered by a declarant of design compliance, the procedures should ensure the correct transcription of the original design data.

(b) The procedures should define the manner in which applicable design data is used to issue and update the production/inspection data, which determines the conformity of products and parts. These procedures should also define the traceability of such data to each individual product or part for the purpose of stating the condition for safe operation and for issuing a statement of conformity (EASA Form 52B) or an EASA Form 1.

(c) During execution, all work performed should be accompanied by documentation that gives either directly or by means of appropriate references the description of the work as well as the identification of the personnel in charge of inspection and execution of the tasks for each of the different work phases.

AMC1 21L.A.273(f) Production control system

INSPECTION OF PARTS IN PROCESS

The purpose of the production inspection system is to carry out checks at suitable points during production and provide objective evidence that the correct specifications are used, and that processes are carried out strictly in accordance with those specifications.

During the manufacturing process, each part should be inspected in accordance with an inspection plan that identifies the nature of all inspections required and the production stages at which they occur. The inspection plan should also identify any particular skills or qualifications required for personnel that carry out the inspections (e.g. NDT personnel).

If the parts are such that if damaged, they could compromise the safety of the aircraft, additional inspections for such damages should be performed at the completion of each production stage.

GM1 21L.A.273(g) Production control system

ARCHIVING SYSTEM

For guidance regarding archiving systems, please refer to GM1 21.A.7(a) and (b).

AMC1 21L.A.273(h) Production control system and 21L.A.275(e) Obligations of a natural or legal person issuing a statement of conformity (EASA Form 52B) or an authorised release certificate (EASA Form 1)

MAINTENANCE ACTIVITIES

Point 21L.A.273(h) requires the natural or legal person that produces under Subpart R to have procedures that cover maintenance activities of new aircraft it has manufactured, as necessary to keep them in an airworthy condition. The natural or legal person that produces under Subpart R should not maintain a newly manufactured aircraft beyond the point at which the applicable operational rules require maintenance to be performed by an approved maintenance organisation (point 21L.A.275(e)). If the production organisation intends to maintain the aircraft beyond that point, it should apply for and obtain an appropriate maintenance approval (see Articles 3 and 4 of Regulation (EU) No 1321/2014).

MAINTENANCE OF AIRCRAFT

Examples of such maintenance activities are the following:

— preservation, periodic inspection visits, etc.;

— embodiment of a service bulletin (SB);

— application of airworthiness directives (ADs);

— repairs;

— maintenance tasks resulting from special flights; and

— maintenance tasks to maintain airworthiness during flight training, demo flights and other non-revenue flights.

Any maintenance activities should be recorded in the aircraft logbook. It should be signed off for attesting the conformity of the work performed with the applicable airworthiness data.

If the aircraft logbook is not available, or if the production organisation prefers to use a separate form (for instance, for a large work package or for delivery of the aircraft to the customer), the production organisation should use EASA Form 53B which should subsequently become part of the aircraft maintenance records.

GM1 21L.A.274(b) Issuance of a statement of conformity (EASA Form 52B) or an authorised release certificate (EASA Form 1)

It is the responsibility of the natural or legal person that manufactures under Subpart R to ensure that each and every product and part conforms with the applicable design data and is in a condition for safe operation before issuing and signing the relevant statement of conformity (EASA Form 52B) or authorised release certificate (EASA Form 1).

During manufacture, the natural or legal person is expected to use the facilities, systems, processes and procedures it has established for fulfilling its obligations under points 21L.A.273 and 21L.A.275.

The competent authority should then inspect and investigate the records, products or parts that are necessary to be satisfied that the aircraft is in conformity with the design for which the design compliance has been declared (see points 21L.B.143 and 21L.B.144).

To enable timely inspection and investigation by the competent authority, the statement of conformity should be prepared and submitted to the competent authority immediately upon the satisfactory completion of the final production inspection and test.

AMC1 21L.A.275(a) Obligations of a natural or legal person issuing a statement of conformity (EASA Form 52B) or an authorised release certificate (EASA Form 1)

INFORMATION TO THE COMPETENT AUTHORITY — FORMAT

The natural or legal person that issues a statement of conformity (EASA Form 52B) or an authorised release certificate (EASA Form 1) under Subpart R has the obligation to inform the competent authority that it intends to produce an aircraft, engine or propeller, or a part thereof. To comply with this obligation, the form defined below should be used.

INFORMATION

on the intention to manufacture

pursuant to Commission Regulation (EU) No 748/2012
Annex Ib (Part 21 Light)
SUBPART R — STATEMENT OF CONFORMITY FOR AIRCRAFT AND AUTHORISED RELEASE CERTIFICATE (EASA FORM 1) FOR ENGINES AND PROPELLERS, OR PARTS THEREOF, THAT CONFORM TO A DECLARATION OF DESIGN COMPLIANCE

1.	**Name of the natural or legal person**
2.	**Place of business** Contact details (registered address, phone, email) of the principal place of business:
3.	**Intended scope of work**
	3.1 Category of products
	Design declared under Part 21 Light Subpart C

	☐ Aeroplanes with a maximum take-off mass (MTOM) of 1 200 kg or less that are not jet powered, and have a seating configuration of maximum 2 persons	
	☐ Sailplanes or powered sailplanes with a MTOM of 1 200 kg or less	
	☐ Balloons designed for not more than 4 persons	
	☐ Hot-air airships designed for not more than 4 persons	
	***3.2 Conformity documents** (intended to be issued)*	
	☐ For complete aircraft, issue EASA Form 52B for new aircraft	
	☐ For other products or parts, issue EASA Form 1	
	☐ Maintain a new aircraft and issue EASA Form 53B	
	3.3 Detailed description of the scope of work *(aircraft type …)* *(parts for aircraft type …)*	
4.	**Date of intended commencement of production:**	
5.	**Statements** I confirm *[I / Name of the organisation]* [have/has] been granted access by the declarant of the design compliance to the applicable design data. I confirm *[I / Name of the organisation]* [have/has] established and implemented a production control system in accordance with point 21L.A.273. *[I / Name of the organisation]* [agree/agrees] to undertake the obligations in accordance with point 21L.A.275.	
6.	Date / Location	Signature of the natural person or legal representative of the legal person

EASA Form TBD

GM1 21L.A.275(g) Obligations of a natural or legal person issuing a statement of conformity (EASA Form 52B) or an authorised release certificate (EASA Form 1)

APPLICABLE SUBPART A REQUIREMENTS

The following requirements in Subpart A are applicable to a natural or legal person that issues a statement of conformity (EASA Form 52B) or an authorised release certificate (EASA Form 1):

— points 21L.A.3(b), (c), (d), (e) and (f) Reporting system

— point 21L.A.5 Collaboration between design and production

— point 21L.A.6(b) Marking

— point 21L.A.7(b) Record-keeping

— point 21L.A.10 Access and investigation

— point 21L.A.11 Findings and observations

— point 21L.A.12 Means of compliance

SECTION B

PROCEDURES FOR COMPETENT AUTHORITIES

SUBPART G — DECLARED PRODUCTION ORGANISATIONS

AMC1 21L.B.141 Initial oversight investigation

Upon receiving a declaration from an organisation that declares its production capability, the competent authority should appoint a suitable member of its technical staff as the team leader (i.e. focal point) to be in charge of the verification and registration of the declaration and, subsequently, the oversight of the organisation. If needed, the team leader should be supported by one or more team members.

The competent authority should perform sufficient verification activities to be satisfied that the declarant is compliant with the requirements of Subpart G of Section A of this Annex.

AMC1 21L.B.142 Registration of a declaration of production capability

REGISTRATION NUMBER

The competent authority should assign a unique and consecutive declared production organisation (DPO) reference number to the declarant.

The reference number should have the following format: commencing with the UN country code of the State of the competent authority to which the declaration is submitted, followed by the term '.DPO.' and a consecutive numbering (example: 'AT.DPO.001').

AMC1 21L.B.143(b) Oversight

FIRST-ARTICLE INSPECTION FOR A NEW AIRCRAFT, ENGINE, PROPELLER OR PART PRODUCED FOR THE FIRST TIME

(a) Purpose

The purpose of first-article inspection (of the article that is in conformance with the proposed type design for certification) when a new aircraft, engine, propeller or part is produced and released for the first time is for the competent authority to:

— ensure the conformity of the aircraft, engine, propeller or part with the applicable design data;

— conduct an oversight visit to the declared production organisation in order to ensure that the declared production organisation is capable of consistently producing, or controlling the production of, aircraft, products and parts that conform with the applicable design data;

— ensure that the declared production organisation is able to discharge its obligations and responsibilities as regards production.

(b) Methodology and evidence

The first-article inspection should be conducted by the competent authority at an appropriate location(s) selected by the declared production organisation. This (these) location(s) should include the physical location of the aircraft, engine, propeller or part under inspection and should be in the principal place of business (which in accordance with Article 9(2) of Regulation (EU) No 748/2012 must be in an EU Member State).

The main focus of the activities to gather evidence to ensure the objectives mentioned in point (a) are satisfied should be through a physical inspection of the aircraft, engine, propeller or part that has been produced in accordance with the approved design data.

Additional sources of evidence during the visit to the declared production organisation's facilities may include:

(1) the review of supporting conformity documentation and test reports;

(2) the review of applicable design data and how it is used;

(3) discussions with key production personnel;

(4) the review of production processes and procedures.

The above list of additional sources of evidence is not exhaustive.

It is possible that during the first-article inspection the competent authority may discover 'evidence' that indicates that the declared production organisation has:

(1) misunderstood, misinterpreted or not achieved conformity with the applicable design data;

(2) not discharged its production obligations as a declared production organisation;

(3) not followed good production practices to ensure conformity or control of a product or a part it has produced.

If such 'evidence' is discovered, the competent authority may perform a more in-depth investigation into the production practices of the production organisation to determine the root cause(s) and to establish corrective actions to prevent a reoccurrence of the issue.

(c) Condition and conformity of the aircraft, engine, propeller or part to be inspected

The aircraft, engine, propeller or part presented to the competent authority for inspection should be in the final condition for release and in conformity with the applicable design data.

(d) Availability of supporting documentation and key personnel

The supporting documentation and conformity data should be made available by the declared production organisation at the time of the visit by the competent authority to the facilities of the declared production organisation. Key production personnel should be made available to the competent authority by the declared production organisation in case of need.

(e) Findings and resolution

If a non-compliance is discovered by the competent authority in the process of the activities mentioned in point (b), an appropriate finding may be raised against the declared production organisation in accordance with point 21L.B.21 and enforcement actions implemented in accordance with point 21L.B.22. Depending upon its nature, such finding may need to be

resolved before the initial and subsequent aircraft, engine(s), propeller(s) or part(s) can be released or the first certificate of airworthiness (or restricted certificate of airworthiness in the case of a declared aircraft) is issued.

(f) Duration and schedule

First-article inspection relating to the initial type certificate of a product

The declared production organisation should coordinate with the competent authority so that, as far as practicable, the first-article-inspection activities to be conducted under point 21L.B.143(b) are conducted at the same time as the first-article inspection activities conducted under point 21L.B.46(c) or point 21L.B.62(b). If this is not appropriate or practicable (for example, because a partial first-article inspection would be beneficial at an earlier stage of production (e.g. for major assemblies)), then the applicant may arrange this with the competent authority.

Note: For a modified or repaired product, when determined under points 21L.B.83(c), 21L.102(c) or 21L.B.203(c) respectively, EASA may require and coordinate with the competent authority on the need for a first-article inspection.

First-article inspection relating to a part that is produced for the first time by the production organisation

For the first-article inspection of every part that is produced for the first time by the declared production organisation, it is possible that this is arranged without the need for coordination with EASA.

If such a part relates to a major change/repair for which EASA has determined the need for a first-article inspection under points 21L.B.83(c), 21L.102(c) or 21L.B.203(c), then EASA may require and coordinate with the competent authority on the need for a first-article inspection.

AMC1 21L.B.144 and 21L.B.184 Oversight programme

ANNUAL REVIEW

The oversight planning cycle and the related oversight programme for each organisation should be reviewed annually to ensure they remain adequate regarding any changes in the nature, complexity or performance of the organisation.

When reviewing the oversight programme, the competent authority should also consider any relevant information collected in accordance with points 21L.A.3 and 21L.B.12.

AMC1 21L.B.144(a) and 21L.B.184(a) Oversight programme

SPECIFIC NATURE AND COMPLEXITY OF THE ORGANISATION — RESULTS OF PAST OVERSIGHT ACTIVITIES

When determining the oversight programme, including for product audits, the relevant sample of products and parts that are within the scope of the organisation, the competent authority should consider in particular the following elements, as applicable:

(a) the effectiveness of the organisation's management system in identifying and addressing non-compliances;

(b) the implementation by the organisation of any industry standards that are directly relevant to the organisation's activities subject to Part 21 Light;

(c) any specific procedures implemented by the organisation that are related to any alternative means of compliance used (see point 21L.B.24(b));

(d) the number of locations and the activities performed at each location;

(e) the number and type of any subcontractors which perform production or design tasks as appropriate;

(f) the volume of activity for each product or part; and

(g) the number and nature of significant changes notified under points 21L.A.128 or 21L.A.178, as relevant.

AMC2 21L.B.144(a) and 21L.B.184(a) Oversight programme

SUBCONTRACTED ACTIVITIES

If a declared production or design organisation subcontracts some of its tasks, the competent authority should determine whether the subcontracted organisations need to be audited and included in the oversight programme, taking into account the specific nature and complexity of the subcontracted activities, the results of previous oversight activities of the declared production or design organisation, and based on the assessment of the associated risks.

For such an audit, the competent authority inspector should ensure that they are accompanied throughout the audit by a representative of the declared production or design organisation.

GM1 21L.B.144(a) Oversight programme

CONTENTS

An oversight programme typically consists of the elements detailed in this GM.

(a) Planned continued surveillance

In the planned continued surveillance, the total surveillance actions are split into several audits that are carried out at planned intervals during the oversight cycle. One aspect may be audited once or several times, depending on its importance. All relevant aspects are audited at least once within an oversight cycle.

(b) Planned inspections of produced aircraft, engines, propellers and parts

For the first-article inspection (of a new product or part produced for the first time), refer to AMC1 21L.B.143(b).

For serial production, in order to perform the inspections effectively and efficiently, the competent authority should integrate a sampling plan, as part of the planning of the continued

surveillance activities, which is appropriate to the scope and size of the declared production organisation. A flexible sampling plan allows to accommodate changes in the production rate and consider the results obtained from other samples or investigation activities.

(c) Unplanned reviews

Unplanned reviews are specific additional investigations of a declared production organisation related to surveillance findings or external needs. The competent authority is responsible for deciding when a review is necessary, taking into account any changes in the scope of work, changes in personnel, reports on the organisation's performance submitted by other EASA or competent authorities' teams, and reports on the in-service products.

AMC1 21L.B.144(d);(e) and 21L.B.184(d);(e) Oversight programme

EXTENSION OF THE OVERSIGHT PLANNING CYCLE BEYOND 24 MONTHS

(a) Part 21 Light Subparts G and J do not require the implementation of a safety management system by the respective declared organisations. However, a declared production organisation or a declared design organisation may decide to introduce certain elements of a safety management system as defined in Part 21 points 21.A.139 and 21.A.239 (e.g. safety risk management, safety performance monitoring and measurement). When such elements are voluntarily introduced, the competent authority may consider them to substantiate an extension of the oversight planning cycle beyond 24 months, as specified in points 21L.B.144(d) and (e) and in points 21L.B.184(d) and (e).

(b) If the competent authority applies an extended oversight planning cycle (i.e. that exceeds 24 months), it should perform, at a minimum, one annual review (see AMC1 21L.B.144 and point 21L.B.184 'Oversight programme') to validate the oversight programme.

(c) If the results of the annual review indicate a decrease in the safety performance of the organisation, the competent authority should revert to a 24-month (or shorter) oversight planning cycle and review the oversight programme accordingly.

SUBPART J — DECLARED DESIGN ORGANISATIONS

AMC1 21L.B.181 Initial oversight investigation

Upon receiving a declaration from an organisation that declares its design capability, EASA should appoint a suitable member of its technical staff as the team leader (i.e. focal point) to be in charge of the verification and registration of the declaration and, subsequently, the oversight of the organisation.
If needed, the team leader should be supported by one or more team members.

EASA should perform sufficient verification activities to be satisfied that the declarant is compliant with the requirements of Subpart J Section A of this Annex.

AMC1 21L.B.182 Registration of a declaration of production capability

REGISTRATION NUMBER

EASA should assign a unique and consecutive declared design organisation ('DDO') reference number to the declarant.

EASA should publish an up-to-date list of the registered declarations of design capability. This list should include the declared scope of work of those declared design organisations.

GM1 21L.B.183(b) Oversight

CRITICAL DESIGN REVIEW, PHYSICAL INSPECTION AND FIRST-ARTICLE INSPECTION

The oversight of a declared design organisation should be built around the product design and the investigations performed by EASA during the certification or the registration of a declaration of design compliance.

These investigations are performed as follows:

(a) for the certification of design compliance:

(1) a critical design review is performed, as applicable, before the approval of the flight conditions (see point 21L.B.242(a)(1) and (a)(3));

(2) a physical inspection is performed, as applicable, before the approval of the flight conditions (see point 21L.B.242(a)(1) and (a)(3)); and

(3) a physical inspection of the first article (first-article inspection) is performed, as applicable, after receiving the declaration of compliance and before the issuance of the respective product design certificate or approval (see points 21L.B.46(c), 21L.B.83(c), 21L.B.102(c) and 21L.B.203(c));

(b) for a declaration of design compliance:

(1) a physical inspection is performed, as applicable, before the approval of the flight conditions (see point 21L.B.242(a)(2) and (a)(4)); and

(2) a physical inspection of the first article (first-article inspection) is performed, as applicable, after receiving the declaration of design compliance and before the registration of the respective declaration (see points 21.B.62(b), 21.B.121(b) and 21L.B.221(b)).

Note: The physical inspections mentioned above are:

— for a certified product: compliance inspections during which EASA verifies that the product is compliant with the applicable type-certification basis and the applicable environmental-protection requirements;

— for a declared aircraft: safety inspections during which EASA ensures that the aircraft is capable of safe flight and environmentally compatible; these physical inspections may include ground, functional and flight tests, as relevant.

For the contents and methodology to perform critical design reviews, physical inspections and first-article inspections, refer to AMC2 21L.B.46(c), AMC1 21L.B.62(b), AMC1 21L.B.241(a)(1) and point 21L.B.242(a)(1), and AMC 21L.B.241(a)(2) and point 21L.B.242(a)(2).

AMC1 21L.B.144 and 221L.B.184 Oversight programme

ANNUAL REVIEW

The oversight planning cycle and the related oversight programme for each organisation should be reviewed annually to ensure they remain adequate regarding any changes in the nature, complexity or performance of each organisation.

When reviewing the oversight programme and the oversight planning cycle, the competent authority should also consider any relevant information collected in accordance with points 21L.A.3 and 21L.B.12.

AMC1 21L.B.144(a) and 21L.B.184(a) Oversight programme

SPECIFIC NATURE AND COMPLEXITY OF THE ORGANISATION — RESULTS OF PAST OVERSIGHT ACTIVITIES

When determining the oversight programme, including for product audits, the relevant sample of products and parts within the scope of the organisation the competent authority should consider in particular the following elements, as applicable:

(a) the effectiveness of the organisation’s management system in identifying and addressing non-compliances;

(b) the implementation by the organisation of any industry standards that are directly relevant to the organisation’s activities subject to Part 21 Light;

(c) any specific procedures implemented by the organisation that are related to any alternative means of compliance used (see point 21L.B.24(b));

(d) the number of locations and the activities performed at each location;

(e) the number and type of any subcontractors which perform production or design tasks as appropriate; and

(f) the volume of activity for each product or part.

(g) the number and nature of significant changes notified under point 21L.A.128 or 21L.A.178, as relevant.

AMC2 21L.B.144(a) and 21L.B.184(a) Oversight programme

SUBCONTRACTED ACTIVITIES

If a declared production or design organisation subcontracts some of tasks, the competent authority should determine whether the subcontracted organisations need to be audited and included in the oversight programme, taking into account the specific nature and complexity of the subcontracted activities, the results of previous oversight activities of the declared organisation, and based on the assessment of the associated risks.

For such an audit, the competent authority inspector should ensure that they are accompanied throughout the audit by a representative of the declared production or design organisation.

GM1 21L.B.184(a) Oversight programme

CONTENTS

The oversight programme typically consists of the elements detailed in this GM.

(a) Planned continued surveillance

In the planned continued surveillance, the total surveillance actions are split into several audits that are carried out at planned intervals during the oversight cycle. One aspect may be audited once or several times, depending on its importance. All relevant aspects are audited at least once within an oversight cycle.

(b) Planned critical design reviews, physical inspections and first-article inspections as defined for each new product design.

(c) Unplanned reviews

Unplanned reviews are specific additional investigations of a declared design organisation related to surveillance findings or external needs. EASA is responsible for deciding when a review is necessary, taking into account any changes in the scope of work, changes in personnel, reports on the organisation's performance submitted by other EASA or competent authorities' teams, and reports on the in-service products.

AMC1 21L.B.144(d);(e) and 21L.B.184(d);(e) Oversight programme

EXTENSION OF THE OVERSIGHT PLANNING CYCLE BEYOND 24 MONTHS

(a) Part 21 Light Subparts G and J do not include requirements for the implementation of a safety management system. However, a declared production organisation or a declared design organisation may decide to introduce certain elements of a safety management system as defined in Part 21 points 21.A.139 and 21.A.239 (e.g. safety risk management, safety performance monitoring and measurement). When such elements are voluntarily introduced, the competent authority may consider them to substantiate an extension of the oversight planning cycle beyond 24 months, as specified in points 21L.B.144(d) and (e) and in points 21L.B.184(d) and (e).

(b) If the competent authority applies an extended oversight planning cycle (i.e. that exceeds 24 months), it should perform, at a minimum, one annual review (see AMC1 21L.B.144 and point 21L.B.184 'Oversight programme') to validate the oversight programme.

(c) If the results of the annual review indicate a decrease in the safety performance of the organisation, the competent authority should revert to a 24-month (or shorter) oversight planning cycle and review the oversight programme accordingly.

SUBPART R — STATEMENT OF CONFORMITY FOR AIRCRAFT AND AUTHORISED RELEASE CERTIFICATES (EASA FORM 1) FOR ENGINES AND PROPELLERS, OR PARTS THEREOF, WHICH CONFORM TO A DECLARATION OF DESIGN COMPLIANCE

AMC1 21L.B.251(b) Oversight

FIRST-ARTICLE INSPECTION FOR A NEW AIRCRAFT, ENGINE, PROPELLER OR PART PRODUCED FOR THE FIRST TIME

(a) Purpose

The purpose of first-article inspection when a new aircraft, engine, propeller or part is produced and released for the first time is for the competent authority to:

(1) ensure the conformity of the aircraft, engine, propeller or part with the applicable design data;

(2) conduct an oversight visit to the natural or legal person that uses Subpart R in order to ensure that the natural or legal is capable of consistently producing, or controlling the production of, aircraft, products and parts that conform with the declared design data;

(3) ensure that the natural or legal person that uses Subpart R is able to discharge its obligations and responsibilities for production.

(b) Methodology and evidence

The first-article inspection should be conducted by the competent authority at an appropriate location(s) selected by the natural or legal person that uses Subpart R. This (these) location(s) should:

(1) be at the physical location of the aircraft, engine, propeller or part under inspection;

(2) be in the principal place of business (which in accordance with Article 8(2) of Regulation (EU) No 748/2012 must be in an EU Member State); and

(3) be in a location that enables the competent authority to conduct the oversight stated in points (a)(2) and (3) above; this location should include the actual production and manufacture of new aircraft, engine, propeller or parts of the aircraft to enable the competent authority to determine that the legal or natural person is in compliance with Subpart R.

Note: The principal place of business is defined as follows: 'The head office or registered office of the organisation within which the principal financial functions and operational control of the activities referred to in this Regulation are exercised.'

The main focus of the activities to gather evidence to ensure the objectives mentioned in point (a) are satisfied should be through a physical inspection of the aircraft for which a statement of conformity has been issued or the engine, propeller or part for which an authorised release certificate has been issued.

Additional sources of evidence during the visit to the production organisation's facilities may include:

(1) the review of supporting conformity documentation and test reports;

(2) the review of applicable design data and how it is used;

(3) discussions with key production personnel;

(4) the review of production processes and procedures.

The above list of additional sources of evidence is not exhaustive.

It is possible that during the first-article inspection the competent authority may discover 'evidence' that indicates that the production organisation has:

(1) misunderstood, misinterpreted or not achieved conformity with the applicable design data;

(2) not discharged its production obligations;

(3) not followed good production practices to ensure conformity or control of a product or part it has produced.

If such 'evidence' is discovered, the competent authority may perform a more in-depth investigation into the production practices of the production organisation to determine the root cause(s) and to establish corrective actions to prevent a reoccurrence of the issue.

(c) Condition and conformity of the aircraft, engine, propeller or part to be inspected

The aircraft, engine, propeller or part presented to the competent authority for inspection should be in the final condition for release and in conformity with the applicable design data.

(d) Availability of supporting documentation and key personnel

The supporting documentation and conformity data should be made available by the natural or legal person that uses Subpart R at the time of the visit by the competent authority to the facilities of the production organisation. Key production personnel should be made available to the competent authority in case of need.

(e) Findings and resolution

If a non-compliance is discovered by the competent authority in the process of the activities mentioned in point (a), an appropriate finding may be raised. Depending upon its nature, such finding may need to be resolved before the initial and subsequent aircraft, engine(s), propeller(s) or part(s) can be released.

(f) Duration and schedule

First-article inspection relating to the initial declaration of design compliance for an aircraft (including engines and propellers).

The natural or legal person that uses Subpart R should coordinate with the competent authority so that the first-article-inspection activities to be conducted under point 21L.B.251(b) are conducted at the same time as the first-article-inspection activities conducted under point 21L.B.62(b). If this is not appropriate (due to the fact that a partial first-article inspection would be beneficial at an earlier stage of production), then it is possible that the declarant arrange this with the competent authority.

Note: For a modified or repaired product, when determined under points 21L.B.121(b) or 21L.B.221(b) respectively, EASA may require and coordinate with the competent authority on the need for a first-article inspection.

First-article inspection relating to a part that is produced for the first time by the production organisation

For the first-article inspection of every part that is produced for the first time by the natural or legal person that uses Subpart R, it is possible that this is arranged without the need for coordination with EASA.

If such a part relates to a major change/repair for which EASA has determined the need for a first-article inspection under points 21L.B.121(b) or 21L.B.221(b), then EASA may require and coordinate with the competent authority on the need for a first-article inspection.

AMC1 21L.B.252 Oversight programme

CONTENTS

The oversight programme should be built around conformity inspections of products and parts (performed during manufacture and on the final product).

The oversight programme should consist of:

(a) planned inspections of each new aircraft produced for the first time and for which a permit to fly has been requested (see point 21L.B.241(a));

(b) planned first-article inspections of every new aircraft, engine, propeller or part that is produced for the first time for which the natural or legal person has issued a statement of conformity (EASA Form 52B) or authorised release certificates (EASA Form 1) (see point 21L.B.251(b));

(c) inspections of further aircraft, engines, propellers and parts produced by that natural or legal person; for this to be performed effectively and efficiently, the competent authority should integrate a sampling plan, as part of the planning of the continued surveillance activities, which is appropriate to the scope and size of the activities of the natural or legal person; this sampling plan should be flexible to accommodate changes in the production rate, and consider the results from other samples or investigation activities; and

(d) specific assessments and audits; these might be triggered by the results of the above inspections of products and parts, and the feedback on in-service products received from other competent authorities' and EASA teams.

Note: For the planned inspections of a new aircraft, engine and propeller produced for the first time (see points (a) and (b) above), the competent authority should coordinate as much as possible the related activities with the EASA team(s) involved in the investigation of the respective aircraft's declaration of design compliance.

GM1 21L.B.252(d);(e) Oversight programme

EXTENSION OF THE OVERSIGHT PROGRAMME PLANNING CYCLE

Compliance with the conditions for the extension of the oversight programme planning cycle in point 21L.B.252(d) and (e) would normally be demonstrated using a safety management system. However, it is not expected that the natural or legal person that produces under Subpart R would implement such a system. Consequently, that natural or legal person is not expected to meet the conditions for the extension of the oversight programme planning cycle.

4. References

4.1. Related EU regulations

— Commission Regulation (EU) No 748/2012 of 3 August 2012 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 224, 21.8.2012, p. 1)

5. Quality of the NPA

To continuously improve the quality of its documents, EASA welcomes your feedback on the quality of this NPA with regard to the following aspects:

5.1. The regulatory proposal is of technically good/high quality

Please choose one of the options below and place it as a comment in CRT; if you disagree or strongly disagree, please provide a brief justification.
Fully agree / Agree / Neutral / Disagree / Strongly disagree

5.2. The text is clear, readable and understandable

Please choose one of the options below and place it as a comment in CRT; if you disagree or strongly disagree, please provide a brief justification.
Fully agree / Agree / Neutral / Disagree / Strongly disagree

5.3. The regulatory proposal is well substantiated

Please choose one of the options below and place it as a comment in CRT; if you disagree or strongly disagree, please provide a brief justification.
Fully agree / Agree / Neutral / Disagree / Strongly disagree

5.4. The regulatory proposal is fit for purpose (capable of achieving the objectives set)

Please choose one of the options below and place it as a comment in CRT; if you disagree or strongly disagree, please provide a brief justification.
Fully agree / Agree / Neutral / Disagree / Strongly disagree

5.5. The impact assessment (IA), as well as its qualitative and quantitative data, is of high quality

Please choose one of the options below and place it as a comment in CRT; if you disagree or strongly disagree, please provide a brief justification.
Fully agree / Agree / Neutral / Disagree / Strongly disagree

5.6. The regulatory proposal applies the 'better regulation' principles[1]

Please choose one of the options below and place it as a comment in CRT; if you disagree or strongly disagree, please provide a brief justification.
Fully agree / Agree / Neutral / Disagree / Strongly disagree

5.7. Any other comments on the quality of this NPA (please specify)

Note: Your comments on Chapter 5 will be considered for internal quality assurance and management purposes only and will not be published in the related CRD.

[1] For information and guidance, see:
- https://ec.europa.eu/info/law/law-making-process/planning-and-proposing-law/better-regulation-why-and-how_en
- https://ec.europa.eu/info/law/law-making-process/planning-and-proposing-law/better-regulation-why-and-how/better-regulation-guidelines-and-toolbox_en
- https://ec.europa.eu/info/law/law-making-process/planning-and-proposing-law/better-regulation-why-and-how/better-regulation-guidelines-and-toolbox/better-regulation-toolbox_en