



Notice of Proposed Amendment 2017-19

Installation of parts and appliances that are released without an EASA Form 1 or equivalent

RMT.0018

EXECUTIVE SUMMARY

This Notice of Proposed Amendment (NPA) aims to introduce more proportionate and efficient requirements in the airworthiness field, in particular to introduce commensurate manufacturing requirements for new spare parts and appliances. The requirement mandates that parts and appliances to be installed during maintenance need to be accompanied by a European Aviation Safety Agency (EASA) Form 1 to attest manufacturing in accordance with Annex I (Part 21) to Regulation (EU) No 748/2012, which is considered, in certain cases, disproportionate.

The so-called commercial parts are an example of that. Since these parts are often not designed exclusively for aviation use, parts manufacturers are not necessarily interested in achieving manufacturing recognition in accordance with Part 21 manufacturing standards (e.g. production organisation approval (POA)). Not only for commercial parts, but also for other parts and appliances a release certificate other than an EASA Form 1 may also be sufficient to guarantee adequate manufacturing quality.

In order to ease the manufacturing requirements for some of the parts, this NPA proposes to assign a criticality level (CL) for each part based on the safety consequences should the part fail to meet its design standards.

This NPA proposes that only the design holder (for instance, the type certificate holder) can establish the CL for each part, with the default option of assigning the most stringent CL to all parts. In certain cases, the possibility to assign CLs is also given to EASA. This NPA also establishes minimum manufacturing and release certificate requirements based on industry standards depending on the CL assigned to each part. Different marking requirements also apply for each part depending on its assigned CL.

Once the implementing rule and related AMC/GM are in place, by alleviating the effective requirements for the manufacture of parts not being critical, the manufacturing costs would decrease without affecting the safety of the air operations. The requirements proposed by this NPA may very positively impact on general aviation (GA), since often certain parts of the aircraft have not been designed with an aviation intent and not manufactured by a POA.

Action area:	Maintenance organisations			
Affected rules:	Commission Regulation (EU) No 748/2012 (Annex I (Part 21)); Commission Regulation (EU) No 1321/2014 (Annex I (Part-M), Annex II (Part-145)); Decision 2012/020/R; Decision 2015/029/R			
Affected stakeholders:	Manufacturers, design approval holders (DAHs), operators, continuing airworthiness management organisations (CAMOs), approved maintenance organisations (AMOs), engineers and competent authorities (CAs)			
Driver:	Efficiency/proportionality	Rulemaking group:	Yes	
Impact assessment:	Light	Rulemaking Procedure:	Standard	

● EASA rulemaking process

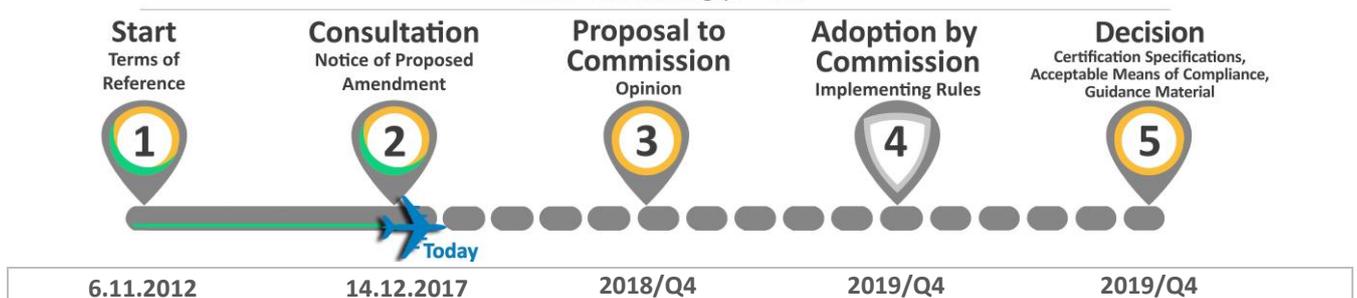


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1. About this NPA

1.1. How this NPA was developed

EASA developed this NPA in line with Regulation (EC) No 216/2008¹ (the 'Basic Regulation') and the Rulemaking Procedure². This rulemaking activity is included in the EASA Rulemaking and Safety Promotion Programme for 2017-2021³ under rulemaking task RMT.0018 (former task number 21.026). The text of this NPA has been developed by EASA based on the input of the Rulemaking Group RMT.0018 & RMT.0571. It is hereby submitted to all interested parties⁴ for consultation.

1.2. How to comment on this NPA

Please submit your comments using the automated **Comment-Response Tool (CRT)** available at <http://hub.easa.europa.eu/crt/>⁵.

The deadline for submission of comments is **14 March 2018**.

1.3. The next steps

Following the closing of the public commenting period, EASA will review all comments and decide on the need to set up a review group to assist EASA in providing answers to the comments.

Based on the comments received, EASA will develop an opinion containing the proposed amendments to Regulation (EU) No 1321/2014⁶ and to Regulation (EU) No 748/2012⁷. The opinion will be submitted to the European Commission, which will use it as a technical basis to prepare a European Union (EU) regulation.

Following the adoption of the proposed regulation, EASA will issue a decision containing the related acceptable means of compliance (AMCs)/guidance material (GM).

The comments received, and the EASA responses thereto, will be reflected in a comment-response document (CRD). The CRD will be annexed to the opinion.

¹ Regulation (EC) No 216/2008 of the European Parliament and of the Council of 20 February 2008 on common rules in the field of civil aviation and establishing a European Aviation Safety Agency, and repealing Council Directive 91/670/EEC, Regulation (EC) No 1592/2002 and Directive 2004/36/EC (OJ L 79, 19.3.2008, p. 1) (<http://eur-lex.europa.eu/legal-content/EN/TXT/?qid=1467719701894&uri=CELEX:32008R0216>).

² EASA is bound to follow a structured rulemaking process as required by Article 52(1) of Regulation (EC) No 216/2008. Such a process has been adopted by the EASA Management Board (MB) and is referred to as the 'Rulemaking Procedure'. See MB Decision No 18-2015 of 15 December 2015 replacing Decision 01/2012 concerning the procedure to be applied by EASA for the issuing of opinions, certification specifications and guidance material (<http://www.easa.europa.eu/the-agency/management-board/decisions/easa-mb-decision-18-2015-rulemaking-procedure>).

³ <https://www.easa.europa.eu/document-library/rulemaking-programmes/rulemaking-and-safety-promotion-programme-2017-2021>

⁴ In accordance with Article 52 of Regulation (EC) No 216/2008, and Articles 6(3) and 7 of the Rulemaking Procedure.

⁵ In case of technical problems, please contact the CRT webmaster (crt@easa.europa.eu).

⁶ Commission Regulation (EU) No 1321/2014 of 26 November 2014 on the continuing airworthiness of aircraft and aeronautical products, parts and appliances, and on the approval of organisations and personnel involved in these tasks (OJ L 362, 17.12.2014, p. 1) (<http://eur-lex.europa.eu/legal-content/EN/TXT/?qid=1506077883791&uri=CELEX:32014R1321>).

⁷ 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) (<http://eur-lex.europa.eu/legal-content/EN/TXT/?qid=1506078064342&uri=CELEX:32012R0748>).



2. In summary — why and what

2.1. Why we need to change the rules — issue/rationale

To guarantee that new parts⁸ for use during aircraft (or component) maintenance conforms to the intended design (including related manufacturing requirements), current airworthiness rules stipulate that these parts need to be produced in accordance with the manufacturing provisions of Part 21 Subpart F ('Production without production organisation approval') or Subpart G ('Production organisation approval'), permitting the issuance of an EASA Form 1 for the produced part⁹.

However, it is acknowledged that requiring an EASA Form 1 for all aircraft parts (e.g. parts not designed exclusively for aviation) might be too onerous and unnecessary¹⁰.

A more detailed explanation is available in Section 4.1.

2.2. What we want to achieve — objectives

The overall objectives of the EASA system are defined in Article 2 of the Basic Regulation. This proposal will contribute to the achievement of the overall objectives by addressing the issues outlined in Section 2.1 above and in Chapter 4.

The specific objective of this proposal is to provide industry with flexibility for the acceptance of parts and appliances with different production background for installation in an aircraft during maintenance. For the full list of specific objectives refer to Section 4.2 or to the terms of reference.

2.3. How we want to achieve it — overview of the proposals

The purpose of the main concepts proposed in this NPA is to achieve the objectives identified in the terms of reference (ToR)¹¹ of the aforementioned RMTs and which are also listed in Section 4.2. For a detailed explanation of each of the proposed amendments, refer to Chapter 3. of this NPA.

The proposal would allow certain parts that are used during aircraft/component maintenance to be manufactured by organisations not holding a POA, thus issuing the parts without an EASA Form 1. One consequence of this proposal is that some manufacturing organisations located outside the EU that currently need a POA in order to manufacture spare parts for European aircraft will no longer need European manufacturing certificates issued in accordance with Part 21. This may provide flexibility for obtaining spare parts for some legacy aircraft.

In practice, the parts would be classified by the DAH (for instance, type certificate holder) into different criticality levels (CLs) in accordance with certain safety criteria in order to be eligible for being manufactured outside the POA (or Part 21, Subpart F) framework.

⁸ For simplicity, the term 'part' is sometimes used throughout this document instead of 'parts and appliances', which is the term often used in Part 21.

⁹ It is also possible to manufacture aircraft parts and issue an EASA Form 1 without holding a POA. This is described in Part 21 Subpart F. This alternative to the POA is not preferred by the industry since it requires direct involvement of the CA in the release of the parts. To facilitate the reading of this document, sometimes the document is drafted as if EASA Form 1 would only be issued by POA organisations, omitting the case where the EASA Form 1 would be issued under Part 21 Subpart F provisions, which is not frequent.

¹⁰ Current rules already permit certain alleviations to this concept for European light aircraft (ELA) ELA1, ELA 2, and gliders.

¹¹ <https://www.easa.europa.eu/document-library/terms-of-reference-and-group-compositions/tor-21026-rmt0018-and-rmt0571>

The intention with the proposed amendments is not to amend the existing approach concerning the repair of parts, i.e. only approved maintenance organisations (AMOs) would be allowed to repair parts, regardless of the production method of the parts. EASA is looking forward to receiving the stakeholders' views in this regard.

EASA is also particularly interested in the stakeholders' opinion on the four CLs this NPA proposes and on how these levels should be defined.

The need to interpret the term 'parts and appliances', or other similar terms used in the rules (e.g. 'component', 'part', 'article'), or any other term affecting the definition of the group of parts subject to an EASA Form 1 (e.g. the term 'mounted' in Article 5(2) of the Basic Regulation) becomes less critical if the new approach proposed in this NPA, which assigns different levels to parts based on the criticality for aviation safety of a potential failure of the part, comes into effect. Furthermore, these terms are defined in different regulations and also widely used. For instance, the Basic Regulation defines the term 'part and appliance', Regulation (EU) No 748/2012 defines the term 'article', and Regulation (EU) No 1321/2014 defines the term 'component'. These different terms are widely used in the corresponding relevant rules and in their related AMCs/GM (e.g. the terms 'parts and appliances', 'component', 'article' and 'part' are all used in Part 21 and with the same intention). Considering that amending the rules to harmonise the use of these terms would only have an administrative impact on stakeholders, EASA has preferred at this stage not to standardise the use of these terms nor to interpret them.

Mandating the issue of an EASA Form 1 for all parts used during maintenance is considered to be unnecessary and onerous. The proposed rules establish a system on which the DAHs, based on certain criteria defined in the rules, can assign different manufacturing standards for different parts. It is expected that by easing the manufacturing standards for certain parts (i.e. by not requesting an EASA Form 1 for all parts) used during maintenance, the cost of the related parts would decrease and this would in turn lead up to reduced maintenance costs for the aircraft owners.

Considering that for the safety of the aircraft the adequate functioning and the accomplishment of the expected life of the parts are crucial and that this relies on their sound production, the classification of the CLs for the parts must be an element of the product's type design. This proposal amends the rule in this regard, so that when the design requires approval, i.e. for any design change except in the case of 21.A.90B 'Standard changes' or 21.A.431B 'Standard repairs', establishing a new CL for the parts of an already approved design will require to follow the design change approval process.

The draft amendment also proposes that the DAH has to make available to affected parties the classification of the parts (CLs in this NPA) so that maintenance organisations can have evidence that the part they are installing on a product has been manufactured as per the required (or higher) standards.

In very few cases (e.g. for small aircraft for which the DAH's site and the production of new parts are located outside Europe and there is a small fleet of aircraft registered in Europe), imposing the EU system for the manufacturing of the spare parts may not be reasonable. For these cases, it is proposed that EASA may establish the CL for the parts, providing certain flexibility for special cases.



Commission Regulation (EU) No 965/2012¹² (the ‘Air Operations Regulation’), in point CAT.IDE.A.100¹³ ‘Instruments and equipment — general’ of Annex IV (Part-CAT), alleviates the need for an airworthiness certificate for certain equipment on board an aircraft. EASA understands that this equipment falls under the definition of ‘parts and appliances mounted on the aircraft’¹⁴ provided in the Basic Regulation and therefore the proposed amendments of this NPA do not clash with the Air Operations Regulation.

The draft amendments proposed in Chapter 3 refer to amendments to the current rules. Considering that EASA has already issued opinions that propose amendments to the same rules as this NPA does, and whose adoption is still pending (e.g. Opinion No 13/2016 ‘Technical records’¹⁵), EASA will adjust the proposals presented in this NPA taking into account the comments received from the stakeholders and also any rule amendments adopted prior to the publication of the related opinion.

2.4. What are the expected benefits and drawbacks of the proposals

The benefits of the proposal would be that parts classified into certain CLs can be more easily procured by organisations (or persons) performing maintenance, and can be installed on an aircraft without significantly affecting its airworthiness.

More responsibility would be given to design organisations that would be able to propose the CL and to certain manufacturing organisations that would not require oversight by CAs but only compliance with industry standards, which are typically recognised worldwide. Therefore, this would facilitate collaboration with manufacturing organisations located in geographical regions subject to different rules.

After the expected smooth transition to the new system has taken place, no drawback is expected as long as organisations act responsibly.

¹² Commission Regulation (EU) No 965/2012 of 5 October 2012 laying down technical requirements and administrative procedures related to air operations pursuant to Regulation (EC) No 216/2008 of the European Parliament and of the Council (OJ L 296, 25.10.2012, p. 1) <http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2012:296:0001:0148:EN:PDF>.

¹³ Point CAT.IDE.A.100 refers to Commercial Air Transport operations with aeroplanes. For operations with other aircraft or other type of operations Commission Regulation (EU) No 965/2012 contains similar alleviations.

¹⁴ Regulation (EC) No 1108/2009 of 21 October 2009 amending the Basic Regulation defines ‘parts and appliances’ as *any instrument, equipment, mechanism, part, apparatus, appurtenance, software or accessory, including communications equipment, that is used or intended to be used in operating or controlling an aircraft in flight; it shall include parts of an airframe, engine or propeller, or equipment used to manoeuvre the aircraft from the ground*. See also Section 4.1. for a more detailed discussion (<http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2009:309:0051:0070:EN:PDF>)

¹⁵ <https://www.easa.europa.eu/document-library/opinions/opinion-132016>

3. Proposed amendments and rationale in detail

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

- deleted text is ~~struck through~~;
- new or amended text is highlighted in grey;
- an ellipsis '[...]' indicates that the rest of the text is unchanged.

3.1. Draft regulation (draft EASA opinion)

3.1.1. Proposed amendments to Annex I (Part 21) to Commission Regulation (EU) No 748/2012

Point 21.A.31 is amended as follows:

'21.A.31 Type design

(a) The type design shall consist of:

1. the drawings and specifications, and a listing of those drawings and specifications, necessary to define the configuration and the design features of the product shown to comply with the applicable type-certification basis and environmental protection requirements;
2. information on materials and processes, ~~and~~ on methods of manufacture and assembly of the product necessary to ensure the conformity of the product and the assigned criticality levels, as defined in point 21.A.308, for new parts and appliances to be installed during maintenance;
3. an approved airworthiness limitations section of the instructions for continued airworthiness as defined by the applicable certification specifications; and
4. any other data necessary to allow by comparison, the determination of the airworthiness, the characteristics of noise, fuel venting, and exhaust emissions (where applicable) of later products of the same type.

(b) Each type design shall be adequately identified.'

Point 21.A.121 is amended as follows:

'21.A.121 Scope

- (a) This Subpart establishes the procedure for demonstrating the conformity with the applicable design data of a product, or part or ~~and~~ appliance for which an EASA Form 1 is sought, and that is intended to be manufactured without a production organisation approval under Subpart G.
- (b) This Subpart establishes the rules governing the obligations of the manufacturer of a product, part, or appliance being manufactured under this Subpart.'

Point 21.A.131 is amended as follows:

'21.A.131 Scope

This Subpart establishes:



- (a) the procedure for the issuance of a production organisation approval for a production organisation showing conformity of products, or parts ~~or~~ appliances for which an EASA Form 1 is sought, with the applicable design data;
- (b) the rules governing the rights and obligations of the applicant for, and holders of, such approvals.'

Point 21.A.263 is amended as follows:

'21.A.263 Privileges

[...]

(c) [...]

'8. by way of derogation from 21.A.103(a) and for the design for which it holds the approval, to approve the assignment, or amendments thereto, of the criticality levels (CLs) of parts and appliances, in accordance with point 21.A.308.'

Point 21.A.307 'Release of parts and appliances for installation' is deleted.

New point 21.A.308 is added as follows:

'21.A.308 Criticality levels for new parts and appliances to be installed during maintenance

(a) The applicant for, and the holder of, a design approval of a product, a change or a repair, the holder of a standard change or a standard repair and the holder of an ETSO article authorisation (hereinafter jointly referred as 'design holder') may, for the parts and appliances that it has designed or has identified in the design and that are not ETSO articles nor products, assign criticality levels (CLs) which shall be applicable to new parts and appliances to be installed during maintenance, in compliance with the following four levels:

(1) CL I for parts and appliances whose failure would:

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

(2) CL II for parts and appliances other than those assigned CL I, whose failure would:

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

(3) CL III for parts and appliances other than those assigned CL II, whose failure would:

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

(4) CL IV for parts and appliances other than those assigned CL III, II or I.



- (b) Notwithstanding point (a), the design holder referred to in (a) may decide to assign a lower CL to a part or appliance than the CL that would correspond to the part or appliance under (a).
- (c) When assigned following (a), the design holder shall make available the list of the CLs for the parts and appliances, and further changes to it, to each known owner of one or more aircraft, engines or propellers, that contain such design, and upon owner's request, to any interested person. The list shall also be provided by the design holder to the competent authorities upon request.
- (d) When the design holder has decided not to assign CLs to parts and appliances of its design or when the type certificate has been surrendered, CL I shall be considered as assigned to the parts and appliances, unless the Agency, considering the operational need, decides otherwise upon request of an affected party.
- (e) The manufacturing standards and release requirements for new parts and appliances to be installed during maintenance, depending on their assigned CL, are established in point 21.A.309.'

New point 21.A.309 is added as follows:

'21.A.309 Manufacturing standards and release requirements for new parts and appliances to be installed during maintenance

New parts and appliances to be installed during maintenance shall be manufactured and released as follows, depending on the criticality level (CL) assigned in accordance with point 21.A.308:

Part/appliance	Manufacturing standards and release requirements
Parts and appliances with assigned CL I (i.e., lowest CL)	EASA Form 1 or equivalent, unless the Agency has assigned the CL and recognises another release document as acceptable.
Parts and appliances with assigned CL II	Any release document acceptable for parts with assigned CL I; or the part is released by the manufacturer identified in the design data by means of a Certificate of Conformity (CofC) stating conformity with the identified design part number and the manufacturing source as well as copy of evidence that the manufacturing source meets a quality management system standard recognised by the aviation industry as suitable for manufacturing.
Parts and appliances with assigned CL III	Any release document acceptable for parts with assigned CL II; or the part is accompanied by means of a CofC as well as copy of evidence that the manufacturing source meets a quality management system standard recognised by the manufacturing industry.
Parts and appliances with assigned CL IV (i.e., highest CL)	Any release document acceptable for parts with assigned CL III; or at least the documentation accompanying the part identifying the part and the manufacturer.'



Point 21.A.804 is amended as follows:

'21.A.804 Identification of parts and appliances

- (a) Each part or appliance with assigned criticality level (CL) I, II or III, as defined in point 21.A.308, shall be marked permanently and legibly with:
1. a name, trademark, or symbol identifying the manufacturer in a manner identified by the applicable design data; and
 2. the part number, as defined in the applicable design data; and
 3. the letters EPA for parts or appliances with assigned CL I, as defined in point 21.A.308, produced in accordance with approved design data not belonging to the type-certificate holder of the related product, except for ETSO articles.
- (b) By way of derogation from point (a), if the Agency agrees that a part or appliance is too small or that it is otherwise impractical to mark a part or appliance with any of the information required by point (a), the authorised release document accompanying the part or appliance or its container shall include the information that could not be marked on the part or appliance.'

3.1.2. Proposed amendments to Annex I (Part-M) to Commission Regulation (EU) No 1321/2014

Point M.A.401 is amended as follows:

'M.A.401 Maintenance data

- (a) [...]
- (b) For the purposes of this Part, applicable maintenance data is:
1. any applicable requirement, procedure, standard or information issued by the competent authority or the Agency,
 2. any applicable airworthiness directive,
 3. applicable instructions for continuing airworthiness and the assigned criticality level (CL) for the new parts and appliances to be installed during maintenance, issued by type certificate holders, supplementary type certificate holders and any other organisation that publishes such data in accordance with Annex I (Part-21) to Regulation (EU) No 748/2012.
 4. any applicable data issued in accordance with point 145.A.45(d).
- (c) [...]

Point M.A.501 is amended as follows:

'M.A.501 Installation of components and standard parts, and use of raw and consumable material

- (a) A component shall only be installed on an aircraft or on another component when it is in a satisfactory condition, meets the applicable release requirements defined in point 21.A.309 of Annex I (Part 21) to Regulation (EU) No 748/2012 or M.A.502, and is marked in accordance with Subpart Q of Annex I (Part 21) to Regulation (EU) No 748/2012, unless otherwise specified in Annex II (Part-145) or Subpart F, Section A of Annex I to this Regulation.



- (a) ~~No component may be fitted unless it is in a satisfactory condition, has been appropriately released to service on an EASA Form 1 or equivalent and is marked in accordance with Annex I (Part 21), Subpart Q, unless otherwise specified in Annex I (Part 21) to Regulation (EU) No 748/2012, Annex II (Part 145) or Subpart F, Section A of Annex I to this Regulation.~~
- (b) Prior to installation of a component on an aircraft the person or approved maintenance organisation shall ensure that the particular component is eligible to be fitted when different modification and/or airworthiness directive configurations may be applicable.
- (c) Standard parts shall only be fitted to an aircraft or a component when the maintenance data specifies the particular standard part. Standard parts shall only be fitted when accompanied by evidence of conformity traceable to the applicable standard.
- (d) Material being either raw material or consumable material shall only be used on an aircraft or a component when the aircraft or component manufacturer states so in relevant maintenance data or as specified in Annex II (Part-145). Such material shall only be used when the material meets the required specification and has appropriate traceability. All material must be accompanied by documentation clearly relating to the particular material and containing a conformity to specification statement plus both the manufacturing and supplier source.
- (e) Notwithstanding point (a), an owner of an ELA1 or ELA2 aircraft may assume responsibility and permit the installation of a component that is:
1. not life-limited, nor part of the primary structure, nor part of the flight controls;
 2. subject to the component being identified for installation in the aircraft;
 3. manufactured in compliance with the applicable design; and
 4. marked in accordance with Subpart Q of Annex I (Part 21) to Regulation (EU) No 748/2012.
- (f) Notwithstanding point (a), equipment that, in accordance with Commission Regulation (EU) No 965/2012 is exempted from an airworthiness approval, shall be acceptable for installation on an aircraft with documentation identifying the equipment and the manufacturer and being eligible for installation in accordance with the operator's requirements.'

Point M.A.502 is amended as follows:

'M.A.502 Component maintenance and release requirements after maintenance

- (a) Except for components referred to in point M.A.501(e) and (f) ~~21.A.307(c) of Annex I (Part 21) to Regulation (EU) No 748/2012~~, the maintenance of components shall be performed and released on an EASA Form 1, or equivalent, by maintenance organisations appropriately approved in accordance with Section A, Subpart F of this Annex (Part-M) or with Annex II (Part-145).
- (b) By derogation from point (a), maintenance of a component in accordance with aircraft maintenance data or, if agreed by the competent authority, in accordance with component maintenance data, may be performed by an A-rated organisation approved in accordance with Section A, Subpart F of this Annex (Part-M) or with Annex II (Part-145) as well as by certifying staff referred to in point M.A.801(b)2 only whilst such components are fitted to the aircraft. Nevertheless, such organisation or certifying staff may temporarily remove this component for maintenance, in order to improve access to the component, except when such removal generates the need for additional maintenance not eligible for the provisions of this point. Component maintenance performed in accordance with this point is not



eligible for the issuance of an EASA Form 1 and shall be subject to the aircraft release requirements provided for in point M.A.801.

- (c) By derogation from point (a), maintenance of an engine/Auxiliary Power Unit (APU) component in accordance with engine/APU maintenance data or, if agreed by the competent authority, in accordance with component maintenance data, may be performed by a B rated organisation approved in accordance with Section A, Subpart F of this Annex (Part-M) or with Annex II (Part-145) only whilst such components are fitted to the engine/APU. Nevertheless, such B rated organisation may temporarily remove this component for maintenance, in order to improve access to the component, except when such removal generates the need for additional maintenance not eligible for the provisions of this point. Component maintenance performed in accordance with this point is not eligible for the issue of an EASA Form 1 for the isolated component and shall be subject to the engine/APU release requirements.
- (d) By derogation from point (a) and point M.A.801(b)2, maintenance of a component while installed or temporarily removed from an ELA1 aircraft used by other than licenced air carriers in accordance with Regulation (EC) No 1008/2008, and performed in accordance with component maintenance data, may be performed by certifying staff referred to in point M.A.801(b)2, except for:

1. overhaul of components other than engines and propellers, and;
2. overhaul of engines and propellers for aircraft other than CS-VLA, CS-22 and LSA.

Component maintenance performed in accordance with point (d) is not eligible for the issuance of an EASA Form 1 and shall be subject to the aircraft release requirements provided for in point M.A.801.

- (e) Maintenance of components referred to in ~~point M.A.501(e)–21A.307(c) of Annex I (Part 21) to Regulation (EU) No 748/2012~~ shall be performed by an A-rated organisation approved in accordance with Section A, Subpart F of this Annex (Part-M) or Annex II (Part-145), by certifying staff referred to in point M.A.801(b)2 or by the pilot-owner referred to in point M.A.801(b)3 while such a component is fitted to the aircraft or temporarily removed to improve access. Component maintenance performed in accordance with this point is not eligible for the issuance of an EASA Form 1 and shall be subject to the aircraft release requirements provided for in point M.A.801.'

3.1.3. Proposed amendments to Annex II (Part-145) to Commission Regulation (EU) No 1321/2014

Point 145.A.42 is replaced by the following:

'145.A.42 Acceptance of components

- (a) The maintenance organisation shall classify, appropriately segregate and install components in accordance with Subpart E of Annex I (Part-M) and Annex II (Part-145).
- (b) Additionally, in the case of used components, the maintenance organisation shall only install components from a third party when they are released with an EASA Form 1 or equivalent.
- (c) The maintenance organisation may fabricate a restricted range of parts to be used in the course of undergoing work within its own facilities provided procedures are identified in the exposition.
- (d) Notwithstanding points (a) and (b), equipment that, in accordance with Commission Regulation (EU) No 965/2012 is exempted from an airworthiness approval, shall be acceptable for installation on an aircraft with documentation identifying the equipment and the manufacturer and being eligible for installation in accordance with the operator's requirements.'



Point 145.A.45 is amended as follows:

'145.A.45 Maintenance data

- (a) [...]
- (b) For the purposes of this Part, applicable maintenance data shall be any of the following:
1. Any applicable requirement, procedure, operational directive or information issued by the authority responsible for the oversight of the aircraft or component;
 2. Any applicable airworthiness directive issued by the authority responsible for the oversight of the aircraft or component;
 3. Instructions for continuing airworthiness and the assigned criticality level (CL) for the new parts to be installed during maintenance, issued by type certificate holders, supplementary type certificate holders, any other organisation required to publish such data by Annex I (Part-21) to Regulation (EU) No 748/2012 and in the case of aircraft or components from third countries the airworthiness data mandated by the authority responsible for the oversight of the aircraft or component;
 4. Any applicable standard, such as but not limited to, maintenance standard practices recognised by the Agency as a good standard for maintenance;
 5. Any applicable data issued in accordance with point (d).
- (c) [...]

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

3.2.1. Proposed amendments to the AMC/GM to Annex I (Part 21) to Commission Regulation (EU) No 748/2012

GM 21.A.91 is amended as follows:

'GM 21.A.91 Classification of changes to type certificate

[...]

3.4. [...]

(g) where the criticality level (CL) of one or several parts or appliances referred to in the approved design is changed to a higher CL.

Note 1: [...]

Appendix A to GM 21.A.91 is amended as follows:

'Appendix A to GM 21.A.91: Examples of Major Changes per discipline

<The flow chart 'Classification process' at the end of Appendix A to GM 21.A.91 is amended accordingly, i.e. a new line (viii) is added in the biggest box of the diagram>.

(viii) the CL of a part or appliance is changed to a higher CL'



AMC 21.A.303(c) is amended as follows:

'AMC 21.A.303(c) Standard parts

~~1. In this context a part is considered as a 'standard part' where it is designated as such by the design approval holder responsible for the product, part or appliance, in which the part is intended to be used. In order to be considered a 'standard part', all design, manufacturing, inspection data and marking requirements necessary to demonstrate conformity of that part should be in the public domain and published or established as part of officially recognised standards, or~~

~~2. For sailplanes and powered sailplanes, where it is a non-required instrument and/or equipment certified under the provision of CS 22.1301(b), if that instrument or equipment, when installed, functioning, functioning improperly or not functioning at all, does not in itself, or by its effect upon the sailplane and its operation, constitute a safety hazard.~~

~~'Required' in the term 'non required' as used above means required by the applicable certification specifications (CS 22.1303, 22.1305 and 22.1307) or required by the relevant operating regulations and the applicable Rules of the Air or as required by Air Traffic Management (e.g. a transponder in certain controlled airspace).~~

~~Examples of equipment which can be considered standard parts are electrical variometers, bank/slip indicators ball type, total energy probes, capacity bottles (for variometers), final glide calculators, navigation computers, data logger / barograph / turnpoint camera, bug wipers and anti-collision systems.~~

~~Equipment which must be approved in accordance to the certification specifications shall comply with the applicable ETSO or equivalent and is not considered a standard part (e.g. oxygen equipment).'~~

New GM 21.A.308 is added as follows:

'GM 21.A.308 Criticality levels (CLs) for new parts and appliances to be installed during maintenance

The adequacy of the parts and appliances to be installed on a new product during its production is assessed under the POA procedures which include the control of suppliers by the quality system of the organisation that will issue an EASA Form 52 for a new aircraft or an EASA Form 1 for a new engine or propeller, or under the procedures described in point 21.A.126 for incoming parts in the case of organisations manufacturing without a POA. The CLs assigned in accordance with point 21.A.308 are relevant for the purpose of the new parts and appliances being installed during maintenance only.'

New GM 21.A.308(b) is added as follows:

'GM 21.A.308(b) Lower and higher criticality levels (CLs)

The design holder has the right to assign a lower CL than the CL that would have been assigned when assessed in accordance with the criteria in 21.A.308(a). This means to assign CL I to a part or appliance to which, when assessed in accordance with 21.A.308(a), CL II, III or IV would have been assigned, and so on. This is the prerogative of the design holder whose design contains such part or appliance at the time of obtaining the design approval.

Reassigning to a part or appliance a CL other than that assigned during the initial design should be considered a design change, in accordance with Subpart D.'



New GM 21.A.308(c) is added as follows:

‘GM 21.A.308(c) Availability of criticality levels (CLs) for parts and appliances

The interested person referred to in point 21.A.308(c) should be understood as the person or organisation identified by the owner of each individual product that needs to use the CL list in relation to maintenance. This includes a Continuing Airworthiness Management Organisation (CAMO) managing the aircraft, a person or organisation performing relevant maintenance requiring to install the part or appliance, and a person or organisation that manufactures the parts or appliances. Instead of directly distributing the information, the design holder may grant permission to the owner of the product to distribute the current CL list to such organisations/persons.’

New GM 21.A.308(d) is added as follows:

‘GM 21.A.308(d) Default assignment of criticality levels (CLs) and CLs assigned by the Agency considering the operational need

Unless the design holder decides to assess in accordance with 21.A.308(a) the parts and appliances to assign CLs, the parts and appliances will need to be manufactured under Part 21 manufacturing provisions that permit the issue of an EASA Form 1.

Alternatively and upon request of a third party, the Agency may decide, on a case-by-case basis and considering the operational need, to assign CLs to parts and appliances belonging to a design which is in compliance with Part 21.

The Agency’s decision would cover cases such as:

- aircraft for which the type certificate has been surrendered and for which no production organisation approved under Part-21 is available to manufacture new parts and appliances to be used during maintenance; or
- other than complex motor-powered aircraft (and engines or propellers mounted on them) with a small European fleet, for which the design holder and/or the production of new parts and appliances is/are located outside EU.’

New AMC 21.A.308(a) is added as follows:

‘AMC 21.A.308(a) Parts and appliances with assigned criticality level (CL) IV for sailplanes

In the case of sailplanes, including powered sailplanes, non-required instruments and/or equipment certified under CS 22.1301(b), if those instruments or equipment, when installed, functioning, functioning improperly or not functioning at all, do not in themselves, or by their effect upon the sailplane and its operation, constitute a safety hazard, they shall be considered as being assigned CL IV.

‘Required’ in the term ‘non-required’ as used above means that is required by the applicable airworthiness code (CS 22.1303, 22.1305 and 22.1307) or required by the relevant operating regulations and the applicable Rules of the Air, or as required by air traffic management (e.g. a transponder in certain controlled airspace).



Examples of equipment that can be assigned CL IV are electrical variometers, bank/slip indicators ball type, total energy probes, capacity bottles (for variometers), final glide calculators, navigation computers, data logger/barograph/turnpoint camera, bug-wipers and anti-collision systems.

Equipment that must be approved in accordance with the applicable airworthiness code shall comply with the applicable ETSO or equivalent and therefore cannot be assigned CL IV (e.g. oxygen equipment).'

New AMC 21.A.309 is added as follows:

'AMC 21.A.309 Manufacturing standards and release requirements for new parts and appliances to be installed during maintenance

In respect of 21.A.309:

- EN/AS/JAS 9100 is considered a quality management system standard recognised by the aviation industry as suitable for manufacturing;
- a Certificate of Conformity (CofC) conforming to EN 10204 or ATA 106 is considered adequate to release parts and appliances that have been assigned CL II.
- ISO 9001 is considered a quality management system standard recognised by the manufacturing industry.'

3.2.2. Proposed amendments to the AMC/GM to Annex I (Part-M) to Commission Regulation (EU) No 1321/2014

AMC M.A.501(a) is amended as follows:

'AMC M.A.501(a) Installation of components

[...]

3. The following list, though not exhaustive, contains typical checks to be performed:

[...]

(e) verify that the release certificate accompanying each new part satisfies the release requirements established in point 21.A.309 taking into consideration the criticality level (CL) of the part as assigned in 21.A.308 for the particular product where the part is being installed.

4. The purpose of the EASA Form 1 (see also Part-M Appendix II) is to release components with assigned CL I (see Part 21) after manufacture and to release maintenance work carried out on such components under the approval of a competent authority and to allow components removed from one aircraft/component to be fitted to another aircraft/component.

5. [...]



AMC M.A.501(b) is amended as follows:

'AMC M.A.501(b) Installation of components

1. The EASA Form 1 identifies the airworthiness status of ~~an~~ **certain** aircraft components. Block 12 'Remarks' on the EASA Form 1 in some cases contains vital airworthiness-related information (see also Part-M Appendix II) which may need appropriate and necessary actions.
2. The fitment of replacement components should only take place when the person referred to in M.A.801 or the ~~Part-MM-A~~ Subpart F or Part-145 maintenance organisation is satisfied that such components meet required standards in respect of manufacture or maintenance, as appropriate.
3. The person referred to under M.A.801 or the ~~M.A.~~Part-M Subpart F or Part-145 approved maintenance organisation should be satisfied that the component in question meets the approved data/standard, such as the required design and modification standards. This may be accomplished by reference to the (S)TC holder or manufacturer's parts catalogue or other approved data (i.e. Service Bulletin). Care should also be taken in ensuring compliance with applicable AD, ~~and~~ the status of any service life-limited parts fitted to the aircraft component **as well as the applicable Critical Design Configuration Control Limitations (CDCCL).**'

AMC M.A.501(c) is amended as follows:

'AMC M.A.501(c) ~~Installation~~ Standard parts

1. Standard parts are: ~~(a)~~ parts manufactured in complete compliance with an established industry, Agency, competent authority or other Government specification which includes design, manufacturing, test and acceptance criteria, and uniform identification requirements. The specification should include all information necessary to produce and verify conformity of the part. It should be published so that any party may manufacture the part. Examples of specifications are National Aerospace Standards (NAS), Army-Navy Aeronautical Standard (AN), Society of Automotive Engineers (SAE), SAE Sematec, Joint Electron Device Engineering Council, Joint Electron Tube Engineering Council, and American National Standards Institute (ANSI), EN Specifications, etc....
~~(b) For sailplanes and powered sailplanes, non-required instruments and/or equipment certified under the provision of CS 22.1301(b), if those instruments or equipment, when installed, functioning, functioning improperly or not functioning at all, do not in itself, or by its effect upon the sailplane and its operation, constitute a safety hazard.
'Required' in the term 'non-required' as used above means required by the applicable airworthiness code (CS 22.1303, 22.1305 and 22.1307) or required by the relevant operating regulations and the applicable Rules of the Air or as required by Air Traffic Management (e.g. a transponder in certain controlled airspace). Examples of equipment which can be considered standard parts are electrical variometers, bank/slip indicators ball type, total energy probes, capacity bottles (for variometers), final glide calculators, navigation computers, data logger / barograph / turnpoint camera, bug wipers and anti collision systems. Equipment which must be approved in accordance to the airworthiness code shall comply with the applicable ETSO or equivalent and is not considered a standard part (e.g. oxygen equipment).~~
2. [...]



AMC M.A.801 is amended as follows:

'AMC M.A.801 Aircraft certificate of release to service after embodiment of a Standard Change or a Standard Repair (SC/SR)

[...]

Eligibility for installation of parts and appliances belonging to a SC/SR is subject to compliance with the Part-21 and Part-M and Part-145 related provisions, and the situation varies depending on the aircraft in/on which the SC/SR is to be embodied, and who the installer is. The need for an EASA Form 1 is addressed in Part-21 and Part-M, while less restrictive rules may, for instance, apply for ELA1 and ELA2 aircraft parts (e.g. ~~21.A.307~~ M.A.501(e)) and sailplanes parts (e.g. AMC ~~21A.303~~ 21.A.308(a) of the 'AMC and GM to Part-21'). Furthermore, Part-M Subpart F and Part-145 contain provisions (i.e. M.A.603(c) and 145.A.42(c)) allowing maintenance organisations to fabricate certain parts to be installed in/on the aircraft as part of their maintenance activities.

3. [...]

New GM M.A.501(f) is added as follows:

'GM M.A.501(f) Equipment exempted from an airworthiness approval in Commission Regulation (EU) No 965/2012.

The equipment exempted from an airworthiness approval in Commission Regulation (EU) No 965/2012 that can be installed on an aircraft under Part-M provisions is the equipment identified in points NCO.IDE.A.100(b) and (c), NCO.IDE.H.100(b) and (c), NCO.IDE.S.100(b) and (c), NCO.IDE.B.100(b) and (c), SPO.IDE.A.100(b) and (c), SPO.IDE.H.100(b) and (c), SPO.IDE.S.100(b) and (c), SPO.IDE.B.100(b) and (c) of the mentioned regulation.'

3.2.3. Proposed amendments to the AMC/GM to Annex II (Part-145) to Commission Regulation (EU) No 1321/2014

AMC 145.A.42(a), AMC 145.A.42(b) and AMC 145.A.42(d) 'Acceptance of components' are deleted.

New GM 145.A.42(d) is added as follows:

'GM 145.A.42(d) Equipment exempted from an airworthiness approval in Commission Regulation (EU) No 965/2012.

The equipment exempted from an airworthiness approval in Commission Regulation (EU) No 965/2012 that can be installed on an aircraft under Part-145 provisions is the equipment identified in points CAT.IDE.A.100(a), CAT.IDE.H.100(a), NCC.IDE.A.100(b) and (c), NCC.IDE.H.100(b) and (c), NCO.IDE.A.100(b) and (c), NCO.IDE.H.100(b) and (c), NCO.IDE.S.100(b) and (c), NCO.IDE.B.100(b) and (c), SPO.IDE.A.100(b) and (c), SPO.IDE.H.100(b) and (c), SPO.IDE.S.100(b) and (c), SPO.IDE.B.100(b) and (c) of the mentioned regulation.'



Rationale

The following is a detailed explanation of the proposed rule amendments described in Chapter 3.

Identification by the design holder of parts that don't need an EASA Form 1 (i.e. identification of the CL)

The definition of 'type design' (i.e. point 21.A.31) is amended to specify that only the DAH can assign CLs to new parts to be installed during maintenance.

Point 21.A.308 is created to define CLs. The wording used in this point intentionally implies that only the design holder can assign CLs. This is in line with the consideration that the CL is part of the type design (see paragraph above). The assignment of CLs to parts has implications as regards the fabrication requirements for the parts. The design holder is supposed to assign the CL in accordance with the established criteria proposed in point 21.A.308, allowing that only certain new parts require an EASA Form 1 for installation during maintenance. When the design holder decides not to assign an CL to the parts identified in its design, such parts are supposed to be assigned CL I, implying that they require an EASA Form 1. Alternatively, EASA can assign CLs for certain cases (e.g. new parts of 'orphan aircraft' or of small aircraft whose DAH and the production of new parts are located outside the EU).

GM 21.A.308(b) explains that the reassessment of an existing CL of a part has to be considered as a design change. The rationale is that since the EASA Form 1 provides higher assurance of compliance with the approved design than any CofC, changing the CL in a way that would effectively allow the issue of a (CofC), i.e. other than an EASA Form 1, would reduce the controls on the manufacturing process of the part, with potential consequences in the airworthiness of the final product, i.e. potentially affecting the part's reliability. Therefore the reassessment of an existing CL classification is considered a design change in accordance with Subpart D and, when applicable (i.e. for other than standard changes), it would need to be considered if it is a major change, i.e. the newly assigned CL is higher than the original (e.g. original CL I is changed to CL II) and requires the approval from EASA. However, some design organisations that hold an approved design would be technically capable to reassign CLs (in any direction) following an agreed procedure, thus avoiding EASA's involvement in the particular CL reassignment. In this regard, the amendment of point 21.A.263 is proposed so that DOA organisations may be granted the privilege to approve the reassignment of CLs for designs for which they hold the design approval.

EASA would like to receive the stakeholders' feedback on whether the CL assignment should be considered a minor change or, as proposed in this NPA, a major change, and if the latter is the case, whether a privilege should be granted for design organisation approvals (DOAs) to assign CLs to parts being identified in their previously approved designs.

Smooth transition expected

Since the NPA proposes that, regardless 21.A.308(a) criteria, a design holder may decide to assign CL I to all the parts belonging to its design and therefore an EASA Form 1 is required for installing them during maintenance (i.e. same situation as today), the entry into force of the changes proposed by the NPA would have no impact, compared to the current scenario, in which the design holder does not produce this CL list.

The current point 21.A.307 contains information relevant for the person/organisation installing parts during maintenance. This is why this point (adapted as needed) is transferred to Part-M and is deleted



from Part 21. Point 21.A.307 was never intended to address parts to be used during the assembly of a new product that would later be released under production rules (POA or Part 21 Subpart F). This is clarified in the new GM 21.A.308.

CL classification to be made available to interested parties

The CL classification has to be made available to interested parties so that the person or organisation performing maintenance can assess whether the release requirement for the part to be installed corresponds to the CL assigned to the part by the design holder. The availability of the CL classification is proposed in point 21.A.308(c).

POA only required for parts with CL I

By amending points 21.A.121 and 21.A.131, only new parts with CL I require an EASA Form 1 and have to be produced under Part 21 Subpart F (monitored production without POA) or Subpart G (POA requirements). For parts with other CLs (as assigned by the DAH), the NPA proposes that the organisations manufacturing the part do not hold a POA but other recognition of their manufacturing capability, based on industry standards. The 'manufacturing standards and release requirements for new parts and appliances to be installed during maintenance' is established with the new point 21.A.309.

Manufacturing of parts and their release for installation during maintenance

Points 21.A.309 and M.A.502 contain the requirements for the release of parts, respectively new and used, to be used during maintenance. The proposed point 21.A.309 allows the manufacturer of the new parts, for which the DAH has assigned CL II, III or IV (see proposed point 21.A.308), to manufacture not under the production system defined in Part 21, but instead according to different manufacturing standards, based on the part's assigned CL. Thanks to this approach, the DAH, by using the classification in point 21.A.308, is indirectly deciding which parts have to be manufactured under a POA and which parts do not need such high manufacturing standards and the consequential CA oversight, as it can be the case for many commercial parts, for instance. This would provide industry with the flexibility it needs for installing certain parts for which an EASA Form 1 is not appropriate.

One implication of relaxing the manufacturing requirements for certain parts is that some requirements (e.g. 21.A.133(c) or 21.A.157 or 21.A.165(f)) for the organisations manufacturing under Part 21 would not be applicable to organisations entitled to manufacture parts with assigned CL II, III or IV. EASA would like to receive the stakeholders' comments on this aspect.

Stakeholders are also invited to comment on the proposed CL classification (i.e. CL I, II, III and IV) and the corresponding 21.A.309 manufacturing standards and release requirements (e.g. stakeholders' view regarding the need to identify the manufacturer for a part with assigned CL IV).

The existing rule already contains some alleviations that explicitly allow the fabrication of parts without a POA, that is to say, installing parts without an EASA Form 1. Subject to certain conditions, the main alleviations are the following:

- (1) fabrication of parts for own use by a maintenance organisation (permitted in M.A.603(c) and 145.A.42(c));
- (2) installation of some equipment on a glider (by means of defining the equipment as 'standard part' as considered in AMC 21.A.303 and AMC M.A.501); and



- (3) installation of certain parts in ELA1 and ELA2 aircraft (as per to 21.A.307(c)).
- (4) installation of certain instruments and equipment that, in accordance with air operations rules, e.g. CAT.IDE.A.100(a), do not need an airworthiness approval.

The alleviations described in (1) is not amended with this NPA. Alleviation (4) is explicitly mentioned in the NPA by creating a new paragraph in 145.A.42 and M.A.501 that refers to the alleviation already contained in air operations rules. Alleviations (2) and (3) might have not been necessary if the amendments proposed in this NPA (i.e. different manufacturing controls depending on the part's CL) had already been in place when they were created. However, EASA proposes to keep them in order not to impact on existing stakeholders' practices. Some amendments to the points that introduce these alleviations are nevertheless required in order to make the resulting text consistent.

In this respect, point 21.A.307(c) is moved to M.A.501(e), and paragraph (b) of AMC 21.A.303(c) and paragraph 1(b) of AMC M.A.501(c) are moved to new AMC 21.A.308(a). Also, the references in paragraphs CS-SC051 and CS-SC402 of the certification specification CS-STAN would need to be amended at the next revision of this specification¹⁶.

Maintenance of parts and their release for installation during maintenance

Point M.A.502 has been revised and the minor amendments proposed to this point have little or no implications on the current way of handling used parts. In this respect, the concept behind the release of parts after maintenance has not changed: when the part has been maintained by an AMO, the part should be released with an EASA Form 1, regardless of the CL assigned to the part as new. The issue of an EASA Form 1 for the part that has undergone maintenance implies that the part was maintained by an AMO in accordance with maintenance data and it is not expected to contain information about the release of the part as new. The same situation happens today when the part that requires maintenance was already installed in a new aircraft; since a part that was produced to be installed on a new aircraft was not necessarily delivered with a Form 1, there is no traceability of the manufacturing standard for the part. The Agency would like to receive comments from stakeholders regarding the need to retain information regarding the manufacturing standards of the (or some) new parts to be installed during maintenance once the part undergoes workshop maintenance. If stakeholders consider that information regarding the manufacturing standards (or CL) of the new part should be retained along the life of the part, a possible solution could come by means of mandating certain marking on the part, but obviously this generates more work. Our view is that since the aircraft continuing airworthiness requirements already mandates controlling the service life of certain parts, for these parts the traceability is already ensured; while for other parts, their traceability to the manufacturing standard might not be relevant after workshop maintenance.

Most of the current provisions in Part-145 in relation to the classification of components and the requirements for their installation are similar or identical to some Part-M Subpart E provisions. This is also the case for the related AMCs/GM. Considering that in most of the cases the information is duplicated in Part-145 and in Part-M Subpart E, and the need to amend at least Part-M Subpart E in order to introduce the alleviations for new spare components (main subject of this NPA), EASA has prepared the draft text by amending Part-145 to refer to the provisions in Part-M Subpart E when

¹⁶ The amendment to CS-STAN is not explicitly described in this NPA and, subject to the stakeholders' comments to this NPA, it will be described at the next possible revision of CS-STAN.



needed and deleted them from Part-145. However, other rulemaking tasks launched by EASA are expected to produce a stand-alone Part-145. If EASA finally decides to amend Part-145 to have a stand-alone document, the Part-M Subpart E requirements applicable to Part-145 would need to be duplicated into Part-145. If this would be the case, it could be done at the time of the publication of the opinion or prior to the adoption of the final rule, taking into account the concepts proposed in the NPA and the stakeholders' comments.

Marking of parts

The marking of parts is also affected by the classification in respect of point 21.A.308. Assuming that the design holder assigns CLs to the parts (if this is not the case, all parts are assigned CL I by default), only those with CLs I, II and III would be subject to marking requirements. While today even very simple non-aviation parts are often marked in a way, this is not always necessarily the case and therefore no marking is imposed for CL IV parts. Nevertheless, parts with CL IV need to be at least traceable to its manufacturer by means of their accompanying documentation (see point 21.A.309) at the time they are installed during maintenance.

The European part approval (EPA) marking has been limited (point 21.A.804(a)3) to the cases where the part is released with an EASA Form 1. Parts with CL II and III are to be excluded from the EPA marking since the certificate accompanying the part with CL II and III would usually be a CofC issued in accordance with an industry standard that is widely recognised. Imposing the EU-specific marking could be unbalanced, since that part could already be used in another design. The Agency would like to receive comments from stakeholders with regards to difficulties to obtain the proposed marking for parts with CL III, considering the expected manufacturing standards of these parts.



4. Impact assessment (IA)

4.1. What is the issue

In accordance with point 21A.307 (Part 21 Subpart K), a part or appliance is only eligible for installation in type-certified products when it is released with an EASA Form 1 or when it is a standard part. Similarly, in Part-M and Part-145, this is repeated with the addition that the part or appliance must be accompanied by an EASA Form 1 or equivalent. The term ‘equivalent’ refers to authorised release forms issued in the EU before EASA existed or release forms accepted through bilateral agreements. These requirements in practice create some problems and uncertainties.

First of all, the Basic Regulation defines ‘parts and appliances’ as ‘any instrument, equipment, mechanism, part, apparatus, appurtenance, software or accessory, including communications equipment, that is used or intended to be used in operating or controlling an aircraft in flight; it shall include parts of an airframe, engine or propeller, or equipment used to manoeuvre the aircraft from the ground’.

Together with Article 5 of the Basic Regulation, this definition establishes the applicability of the design and production rules. In this context, Article 5(2) is relevant: ‘compliance of aircraft referred to in Article 4(1)(b), and of products, parts and appliances mounted thereon shall be established in accordance with the following: ...’ This can be understood as meaning that anything in an aircraft that does not comply with the definition of ‘parts and appliances’, or is not mounted on a product, does not need a design and/or production approval.

These requirements raise several interpretation issues:

- What is meant with ‘used or intended to be used in operating or controlling an aircraft in flight’?
- What is meant with ‘mounted’?

Secondly, today, except as permitted in 21.A.307(c), only standard parts can be installed without an EASA Form 1 (or equivalent). In this context, a part is considered a standard part when it is designated as such by the DAH responsible for the product, part or appliance, in which the part is intended to be used. In order to be considered a standard part, all design, manufacturing, inspection data and marking requirements necessary to demonstrate conformity of that part should be in the public domain and published or established as part of officially recognised standards.

For years, however, industry has been using the term ‘commercial parts’ to refer to parts that are not designed or manufactured specifically for aviation use (such as light bulbs, fire axes, smoke detectors, etc.). Whereas a standard part specification is developed by a consensus standards organisation and is publicly available, the design of a commercial part is developed privately. Therefore, these parts cannot be considered standard parts and when installed as replacement parts they would need an EASA Form 1.

EASA recognises that it is unrealistic to expect from manufacturers that make thousands of non-aviation parts every day, and relatively few aviation parts, to obtain a POA allowing them to issue an EASA Form 1.

To address this issue, the Federal Aviation Administration (FAA) amended its Part 21 and issued an Advisory Circular introducing the concept of ‘commercial parts’.



EASA already took several actions to address similar problems in particular aviation domains. Decisions 2006/013/R¹⁷ and 2006/014/R¹⁸ extended the definition of standard parts to allow the installation of certain non-required equipment in sailplanes and powered sailplanes without an EASA Form 1.

With the publication of Regulation (EU) No 748/2012 paragraph (c) was added to point 21.A.307 establishing a category of parts that do not require an EASA Form 1 when installed in ELA1 and ELA2 aircraft. There is a need to incorporate these stopgaps in a comprehensive regulatory approach towards the production of all aviation parts.

Thirdly, a question could be raised with regard to the proportionality of production rules. For production, there is a black-and-white scenario: a manufactured part must either be produced under Part 21 Subpart F or under POA to qualify for release with an EASA Form 1 and, therefore, be accepted as replacement part during maintenance¹⁹. On the design side, the certification of parts and appliances can be based on a wide range of requirements, depending on their potential impact on safety. The question is whether there should be a more differentiated approach towards production of parts and appliances, commensurate with the design certification of those parts. It can also be examined whether a part is required for certification or not.

Finally, the question is whether the requirement of point 21A.307 is properly placed in Part 21 or it is superfluous and could, therefore, be deleted. Part 21 deals with design and production and should not deal with installation of replacement parts in already certified aircraft. This is a maintenance issue and needs to be regulated under Regulation (EU) No 1321/2014.

4.1.1. Safety risk assessment

There is no safety risk identified nor safety recommendations addressed to EASA associated with the current scenario.

4.1.2. Who is affected

The issue described in Section 4.1 mostly impacts on organisations or persons performing maintenance activities, since the regulation forces them to purchase all parts with an EASA Form 1, the parts being sometimes not critical or not initially designed to be used in aviation.

This impacts on the manufacturers of these parts, since they have to comply with Part 21 manufacturing requirements, while the organisations might have otherwise chosen to comply with a different quality management manufacturing standard (e.g. ISO 9001), which is more widely recognised outside the EU and the aviation sector. The CAs which monitor the organisations approved

¹⁷ Decision No 2006/13/R of the Executive Director of the European Aviation Safety Agency of 20 December 2006 amending Decision No 2003/01/R of 17 October 2003 on acceptable means of compliance and guidance material 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 ("AMC and GM to Part 21") (<http://www.easa.europa.eu/document-library/agency-decisions/ed-decision-2006013r>).

¹⁸ Decision No 2006/14/R of the Executive Director of the European Aviation Safety Agency of 20 December 2006 amending Decision No 2003/19/RM of 28 November 2003 on acceptable means of compliance and guidance material to Commission Regulation (EC) No 2042/2003 on the continuing airworthiness of aircraft and aeronautical products, parts and appliances, and on the approval of organisations and personnel involved in these tasks (Non-required equipment for sailplanes) (<http://www.easa.europa.eu/document-library/agency-decisions/ed-decision-2006014r>).

¹⁹ Except for a couple of exemptions already explained in Section 4.1, point 21.A.307(a) of Regulation (EU) No 748/2012 states that a manufactured (i.e. new) part can only be installed on a product when accompanied with an EASA Form 1. This statement is to be understood in the context of maintenance activity only. Installation of parts for the purpose of producing a new product by a POA (or Part 21 Subpart F organisation) is subject to POA (or Part 21 Subpart F) requirements and procedures, which include a quality system for the control of the POA suppliers. For more details, refer to 21.A.139 and GM2 21.A.139(a). Therefore, an EASA Form 1 is not mandatory for parts that are used in the POA environment.



for production are also affected since they need to dedicate resources for the oversight of these organisations.

Furthermore, third-country aviation systems, such as the system in the United States (US), allow that parts are released with certificates issued by an organisation that is not under the FAA supervision for manufacturing. The current imbalanced approach with regard to the release certificates for some parts prevents that EASA recognise the US system as equivalent and, therefore, does not accept the use of these parts during maintenance of EU-registered aircraft.

All the inefficiencies described above are translated into extra costs for aircraft end users, e.g. aircraft owners or air passengers.

4.1.3. How could the issue/problem evolve

Given that the rule is very prescriptive in this regard, if the regulatory framework does not change, the flexibility that is requested by the affected stakeholders will not be achieved.

On occasion, maintenance organisations have issued an EASA Form 1 'as inspected' for parts received from non-aviation suppliers in order to circumvent the rule. This 'artificial trick' is also inefficient and does not provide better guarantees with regard to the quality of manufacturing of the new part. This situation may continue if not addressed with the proposed rule amendment.

It could also be expected that CAs would receive requests for exemptions to the rules as per Article 14 of the Basic Regulation, aiming to install parts without an EASA Form 1.

4.2. What we want to achieve — objectives

The specific objectives of this RMT are to:

- provide a consistent interpretation of the definition of 'parts and appliances' and of other terms used in the various rules;
- provide industry with flexibility for manufacturing companies not holding a POA, thus fostering a more proportionate system;
- prevent market barriers and foster international competitiveness of manufacturing companies.

4.3. How it could be achieved — options

Option 0 is 'no policy change'. Considering that the current rules are very prescriptive with regard to the mandatory release certificate (EASA Form 1) for the new parts to be installed during maintenance and that such form can only be issued by organisations with a POA (or when manufacturing under Part 21 Subpart F methods), changing to a new approach on which an EASA Form 1 is not always mandatory requires policy changes, i.e. there is a need for rule amendments in order to achieve the objectives of Section 4.2.

Option 1 is 'rule change'. The approach proposed with this NPA is to assign more responsibilities to industry. First of all, the DAH will be authorised to propose a classification of the parts assigning different CLs based on how critical a failure of the part would be. The criteria for the assignment of the CL is defined in the proposed rule, so the expected minimum level of safety should be guaranteed. Additionally, the CLs are proposed as being part of the type design, meaning that EASA should be



involved in most of the cases to some extent in the process of accepting the CLs assigned to the parts, also with the possibility to grant a DOA privilege.

This option proposes the use of industry standards by organisations manufacturing parts instead of issuing an EASA Form 1. These standards are typically recognised by the stakeholders and are not geographically restricted.

While Option 1 implies amendments to the rule, the set of the proposed amendments in Chapter 3 is only one of the possible options chosen by EASA based on the inputs of the rulemaking group, and a different set of rule amendments could also tackle the issue described in Section 4.1. The proposed resulting text is described in detail in Chapter 3.

Table 1: Selected policy options

Option No	Short title	Description
0	Do nothing	No policy change (no changes to the rules; situation remains as outlined in Section 4.1.).
1	Accept different release certificates	Rule changes to relax the requirements for installing parts without an EASA Form 1 (see detailed description above). AMCs and GM need also adaptation to the proposed rule.

4.4. What are the impacts

4.4.1. Safety impact

Option 0: No impact

Option 1: The draft amendments proposed in this NPA imply that the manufacturing of certain parts will not be subject to Part 21 manufacturing provisions, which includes oversight of the subject organisations by the CAs. It could therefore be expected that the parts manufactured not following such stringent requirements and that are not under the oversight of a CA, might have more chances to fail earlier than expected since more manufacturing flaws could remain undetected. To maintain an adequate level of safety, the proposal establishes that the manufacturing standards for the organisations and the parts produced are in correspondence with the consequences of the failure of the part (see proposed draft points 21.A.308 and 21.A.309). Therefore, no negative safety impact is expected.

4.4.2. Environmental impact

No environmental impact is expected for any of the two options.

4.4.3. Social impact

Option 0: No impact.

Option 1: No relevant social impact is expected. Once the approach proposed with this NPA is in place and reaches maturity, there should be a smaller number of organisations approved to manufacture in accordance with Part 21, but the same organisations would exist and produce the same type of parts;



therefore, no social impact is expected in this regard. Since some responsibility is proposed to be assigned to industry, CAs might need less resources (POA inspectors). On the other hand, resources required by industry should not increase in the same numbers since currently some of the existing manufacturing organisations hold both industry and Part 21 certificates of recognition, and they would surrender their POA, while some organisations may replace their POA approval with manufacturing recognition based on industry standards. Overall, the social impact is considered neutral.

4.4.4. Economic impact

Option 0: No impact.

Option 1: Even if affected stakeholders will suffer a negative economic impact, assumed to be minimal, linked to the need to adapt to the new provisions of the rule (updating internal procedures and contract templates, training, etc.), this impact is one-off and considered minimal compared to the cost savings described below.

Under this option the proposed draft amendments will eliminate the financial burden that maintenance organisations bear today when they have to pay more for some new parts that are released with an EASA Form 1. In case the part is not minimally critical for safety, the form, which attests compliance with some manufacturing standards imposed by the rules, does not add any particular value. The need for an EASA Form 1, in the best of those cases, entails the direct cost for the manufacturing organisations of complying with Part 21 requirements. The reduction of such costs on the manufacturing organisations should be shared among maintenance organisations buying the parts, the air operators/aircraft owners, and air travellers. By eliminating that inefficiency, all actors involved should be, to some extent, positively impacted.

To understand the reduction of costs, it has to be taken into account that only a number of existing POAs will have the opportunity (if the proposed system is adopted) to surrender their approval, since many, after considering the proposed system or any other contractually agreed practice, will still keep their POA in accordance with Part 21. However, for cases where parts are not manufactured primarily for the aviation industry, obtaining an EASA Form 1 for the part was an artificial imposition derived from an inflexible rule.

Initially, design organisations may be directly and negatively impacted if they choose, as expected, to allocate resources to assign CLs to the parts referred to in their design and to keep such classification current and make it available to third parties. The benefit for them would come to a certain extent from the reduction of running costs of their products, such as maintenance costs. The NPA proposes that DAH would still have the right not to assign CLs and in such case, all new parts to be installed during maintenance would require an EASA Form 1, but it is expected that this will not be the case, especially for design organisations involved mainly in design changes.

When there is a bilateral aviation safety agreement with the EU in place, the existing rules permit to use release certificates equivalent to the EASA Form 1, for parts produced by manufacturing organisations that are subject to foreign regulations (note that the rule says 'Form 1 or equivalent' to also consider this case). The bilateral agreements do not permit other forms accompanying a new part that could be permitted domestically in certain cases by the foreign regulation. The foreign rule is more flexible than the current EU rule is in this regard. If the system proposed with this NPA is adopted, bilateral agreements (for instance, EU-US BASA) could be subject to revision to allow other release certificates ('as equivalent') for certain parts, if considered appropriate in the negotiations. It is also



true that, while this NPA provides an opportunity for flexibility in the bilateral agreement with the US, once the rule is amended, agreements with other third countries (Canada, Brazil) will still mandate that new parts manufactured in Europe for dual use are delivered with an EASA Form 1, regardless of their CL.

The proposed amendments to the rules have caused the reallocation and renumbering of some of the parts of the existing rules that currently provide alleviations, e.g. as regards ‘standard parts’ for gliders and certain parts that can be installed as decided by ELA1 or ELA2 owners. It is not EASA’s intention to impact on these alleviations with the proposed amendments, but should there be any potential implications caused by the reallocation and renumbering of the relevant rule parts, EASA would appreciate being notified during the public consultation of this NPA.

4.4.5. General aviation and proportionality issues

Option 0: No impact.

Option 1: It is expected that especially the GA sector (in the sense of recreational aircraft) may be positively impacted by the proposed amendments. Considering that industry budget is tight and design specifications are light, it is common that some parts used in the aircraft design are not aviation-specific, but rather initially conceived for another industrial sector (e.g. car industry). Owners of these aircraft may reduce costs if the parts can be directly used on the aircraft, without imposing on them the Part 21 manufacturing framework for the production of those parts.

4.5. Conclusion: comparison of options

	Option 0 “No rule change”	Option 1 “rule change”
Safety impact	0	0
Social impact	0	+/-
Economic impact	0	+
Proportionality impacts	0	+
Total	0	+

Option 0 (‘do nothing’) does not address the issue. As explained earlier in Chapter 4.1, the rules prescribe an EASA Form 1 for the new parts to be installed during maintenance. Therefore, Option 1 needs to be considered to address the issue by amending the rules. Since Option 0 is not appropriate, the resulting draft text proposed in Chapter 3 of this NPA is only one of the possible solutions (see detailed description of Option 1 in Section 4.3) to relax the requirement as regards the need for an EASA Form 1 for the new parts to be installed during maintenance. Other solutions are possible and stakeholders are invited to discuss them.

4.6. Monitoring and evaluation

Assessment of parts and appliances CLs conducted by the design holder can be monitored during EASA’s approval of the design change implicit to the assessment or during DOA oversight.

Furthermore, if once the rule is in place and based on the reported events, it is observed that the rate of safety-relevant incidents related to well-designed parts failing in flight due to poor manufacturing



increases, compared with the existing figures, EASA, in collaboration with the CAs, would need to evaluate the causes (e.g. the rule itself, improper implementation) and take any measure to restore safety levels.



5. Proposed actions to support implementation

EASA is committed to providing support for the implementation of the new rules. The range of activities to be developed in this regard will vary depending on the complexity of the rules, the affected stakeholders, as well as on the amount and type of resources allocated by stakeholders to ensure compliance with the new rules.

Feedback from stakeholders is crucial in determining the type of activities that will be developed. In this respect, any constructive feedback provided via different communication channels (e.g. regular meetings with the EASA advisory bodies, development of frequently asked questions published on the EASA website, or a combination of the above) will be taken into consideration once the new rules are applicable.



6. References

6.1. Affected regulations

- Commission Regulation (EU) No 1321/2014 of 26 November 2014 on the continuing airworthiness of aircraft and aeronautical products, parts and appliances, and on the approval of organisations and personnel involved in these tasks (OJ L 362, 17.12.2014, p. 1)
- 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)

6.2. Affected decisions

- ED Decision 2015/029/R of 17 December 2015 issuing acceptable means of compliance and guidance material to Part-M, Part-145, Part-66, and Part-147 of Regulation (EU) No 1321/2014 and repealing Decision 2003/19/RM of the Executive Director of the Agency of 28 November 2003 'AMC and GM to the Annexes to Regulation (EU) No 1321/2014 — Issue 2'
- ED Decision N°2012/020/R of the Executive Director of the Agency of 30 October 2012 on acceptable means of compliance and guidance material 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 ('AMC and GM to Part 21') repealing Decision No 2003/01/RM of the Executive Director of the Agency of 17 October 2003

6.3. Other reference documents

- Subject to the comments received during the consultation of the NPA and the final text adopted, the certification specification CS-STAN may require some changes for alignment with the amended rules/AMCs/GM. The required changes would imply updating some references in CS-SC051 and CS-SC402, without affecting technically the CS. Considering that EASA plans to revise the CS-STAN in the near future, the updates required to the CS-STAN would be described in the NPA for its next revision.
- Agreement between the US and the EU on cooperation in the regulation of civil aviation safety (EU–US BASA); EASA–FAA Technical Implementation Procedures for airworthiness and environmental certification (TIP rev 6) (https://www.easa.europa.eu/system/files/dfu/FAA-EASA%20TIP%20Rev%206%20%20Final_Signed%209-22-2017%20.pdf)
- Agreement between the US and the EU on cooperation in the regulation of civil aviation safety (EU–US BASA); EASA–FAA Maintenance Annex Guidance (MAG Change 6) (https://www.easa.europa.eu/system/files/dfu/MAG_Change-6.pdf)



7. Appendix

N/a

