



European Aviation Safety Agency
Comment-Response Document 2014-04

Appendix 1
to Opinion No 13/2016



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1. Procedural information

1.1. The rule development procedure

The European Aviation Safety Agency (EASA) developed this Comment-Response Document (CRD) in line with Regulation (EC) No 216/2008¹ (EASA Basic Regulation) and the Rulemaking Procedure².

This rulemaking activity is included in the EASA [5-year Rulemaking Programme](#) under RMT.0276. The scope and timescales of the task were defined in the related [ToR](#).

The draft Regulation and the related acceptable means of compliance (AMC)/guidance material (GM) have been developed by EASA based on the inputs of RG NPA 2014-04 (RMT.0276 (MDM.076)) that assessed the comments received on [NPA 2014-04](#). 350 comments were received from interested parties, including aircraft owners, operators, associations, maintenance organisations, CAMOs, manufacturers, CAs and individuals.

The process map on the title page contains the major milestones of this rulemaking activity.

1.2. The structure of this CRD and related documents

Chapter 1 of this CRD contains the procedural information related to this task. Chapter 3 of the CRD contains the draft AMC/GM to Annex I (Part-M) and Annex II (Part-145) to Regulation (EU) No 1321/2014³ (the CAW Regulation⁴), as well as to Annex IV (Part-CAT), Annex VI (Part-NCC), Annex VII (Part-NCO) and Annex VIII (Part SPO) to Regulation (EU) No 965/2012⁵ (the Air OPS Regulation⁶). A summary of the comments received on NPA 2014-04 and the responses thereto are provided in Chapter 2 of the Explanatory Note (EN) to the related Opinion No 13/2016⁷ (see also Chapter 2 of the CRD), and the full set of individual comments in Chapter 4 of the CRD.

1.3. The next steps in the procedure

EASA published this CRD concurrently with Opinion No 13/2016, which contains proposed amendments to the CAW Regulation. Said Opinion is submitted to the European Commission to be used as technical basis in order to prepare a legislative proposal.

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).

² EASA is bound to follow a structured rulemaking process as required by Article 52(1) of the Basic Regulation. 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 the Agency for the issuing of opinions, certification specifications and guidance material.

³ 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).
⁴ Continuing-Airworthiness Regulation.

⁵ 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).

⁶ Air Operations Regulation

⁷ <http://easa.europa.eu/document-library/opinions>



The ED Decision, to which the related AMC/GM will be annexed, will be published by EASA once the European Commission has adopted the related Regulation.



2. Summary of comments and responses

A summary of the comments received on NPA 2014-04 and the responses thereto are contained in the EN to Opinion No 13/2016.

The subjects which received the more significant comments are listed as follows:

- record-keeping period;
- life-limited parts (LLPs) and time-controlled components (TCCs);
- detailed maintenance records;
- information in statuses; and
- general aviation (GA)-related topics.



3. Draft AMC/GM (draft EASA Decision)

3.1. AMC/GM to Part-M

1. 'CONTENTS' is replaced by the following:

AMC M.1

SECTION A — TECHNICAL REQUIREMENTS

SUBPART A — GENERAL

SUBPART B — ACCOUNTABILITY

GM M.A.201 Responsibilities

GM M.A.201(e) Responsibilities

AMC M.A.201(e)(2) Responsibilities

GM M.A.201(f) Commercial ATO

AMC M.A.201(h) Responsibilities

GM M.A.201(i), M.A.302(h) and M.A.901(l)

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AMC M.A.201(i)(3) Responsibilities

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AMC M.A.202(b) Occurrence reporting

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AMC M.A.301(2) Continuing-airworthiness tasks

AMC M.A.301(3) Continuing-airworthiness tasks

AMC M.A.301(4) Continuing-airworthiness tasks

AMC M.A.301(5) Continuing-airworthiness tasks

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GM M.A.302(a) Aircraft maintenance programme

AMC M.A.302(d) Aircraft maintenance programme

AMC M.A.302(e) Aircraft maintenance programme

AMC M.A.302(f) Aircraft maintenance programme

AMC M.A.302(h) Aircraft maintenance programme

GM M.A.302(h) Aircraft maintenance programme

AMC M.A.302(i) Aircraft maintenance programme

AMC M.A.304 Data for modifications and repairs



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AMC M.A.305(b)(1) Aircraft continuing-airworthiness record system
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AMC M.A.305(f) Aircraft continuing-airworthiness record system
AMC M.A.306(a) Aircraft technical log system
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AMC M.A.307(a) Transfer of aircraft continuing-airworthiness records

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AMC M.A.401(c) Maintenance data
AMC M.A.402(a) Performance of maintenance
GM M.A.402(a) Performance of maintenance
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AMC M.A.402(d) Performance of maintenance
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AMC M.A.402(g) Performance of maintenance
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AMC M.A.501(b) Installation

AMC M.A.501(c) Installation

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GM M.A.709 Documentation

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Appendix II to AMC M.A.711(a)(3) Subcontracting of continuing-airworthiness management tasks

Appendix III to GM M.B.303(b) Key risk elements

Appendix IV to AMC M.A.604 Maintenance organisation manual

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Appendix XI to AMC M.A.708(c) Contracted maintenance

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Appendix XIII to AMC M.A.712(f) Organisational review

2. New GM M.A.305 is added

GM M.A.305 Aircraft continuing-airworthiness record system

- (a) The aircraft continuing-airworthiness records are the means to assess the airworthiness status of a product and its components. An aircraft continuing-airworthiness record system includes the processes to keep and manage those records and should be proportionate to the subject aircraft. Aircraft continuing-airworthiness records should provide the owner/CAMO of an aircraft with the information needed:
- (1) to demonstrate that the aircraft is in compliance with the applicable airworthiness requirements; and
 - (2) to schedule all future maintenance as required by the AMP, based on the last accomplishment of the specific maintenance, if any, as recorded in the aircraft continuing-airworthiness records.
- (b) 'Applicable airworthiness limitation parameter' and 'applicable parameter' mean 'flight hours' and/or 'flight cycles' and/or 'landings' and/or 'calendar time', and/or any other applicable utilisation measurement unit, as appropriate.
- (c) An LLP is a part for which the maintenance schedule of the AMP requires the permanent removal from service when or before the specified mandatory life limitation in accordance with Regulation (EU) No 748/2012 in any of the applicable parameters is reached.
- (d) The 'current status of LLPs' should indicate for each affected part the life limitation, the total life accumulated in any applicable parameter (as appropriate), and the remaining life in any applicable parameter before the life limitation is reached.
- (e) The term 'TCCs' embraces any component for which the maintenance schedule of the AMP requires periodically the removal for maintenance to be performed in an appropriate approved



organisation for maintenance of components (workshop) to return the component to a specified standard, to replace any sub-component of the assembly by new ones, or to inspect/test the component's performance after a service period controlled at component level in accordance with the specified airworthiness limitation, defined as per Regulation (EU) No 784/2012, in any of the applicable parameters.

- (f) The term 'current status of time-controlled components' means the current status of compliance with the required periodic maintenance task(s) from the maintenance schedule of the AMP specific to the time-controlled components. It should include the life accumulated by the affected components in the applicable parameter, as appropriate, since the last accomplishment of scheduled maintenance specified in the maintenance schedule of the AMP. Any action that alters the periodicity of the maintenance task(s) or changes the parameter of this periodicity should be recorded.
- (g) 'Detailed maintenance records' refers to those records required to be kept by the person or organisation responsible for the aircraft continuing airworthiness in accordance with M.A.201 in order for them to be able to fulfil their obligations under Part-M.

These are only a part of the detailed maintenance records required to be kept by a maintenance organisation under M.A.614 or 145.A.55(c). Maintenance organisations are required to retain all detailed records to demonstrate that they worked in compliance with the respective requirements and quality procedures.

All records do not need to be transferred from the maintenance organisation to the person or organisation responsible for the aircraft continuing airworthiness in accordance with M.A.201 unless they specifically contain information relevant to aircraft configuration and future maintenance. Thus, incoming certificates of conformity, batch number references and individual task card sign-offs verified by and/or generated by the maintenance organisation are not required to be retained by the person or organisation responsible in accordance with M.A.201. However, dimensional information contained in the task card sign-off or work package may be requested by the owner/CAMO in order to verify and demonstrate the effectiveness of the AMP.

Information relevant to future maintenance may be contained in specific documents related to:

- modifications;
- airworthiness directives;
- repaired and non-repaired damage;
- components referred to in M.A.305(d); and
- measurements associated with defects.

- (h) An airworthiness limitation is a boundary beyond which an aircraft or a component thereof is not to be operated unless the instructions associated with this airworthiness limitation are complied with.
- (i) 'Other maintenance required for continuing airworthiness' means unscheduled or out of phase maintenance due to abnormal or particular conditions or events which have an impact on the continuing airworthiness of the aircraft at the time of its return to service. It is not intended to request every single condition described in the maintenance data, e.g. Chapter 5 of the Aircraft



Maintenance Manual (AMM), but just those conditions that cannot be captured by other means, i.e. for the case where the maintenance related to the event is not included in the records for repairs. Some abnormal or particular conditions or events that may be kept under this requirement are lightning strikes, hard landings, long-term storage, propeller or rotor overspeed, overtorque, impact on a main rotor blade, etc.

- (j) The term ‘in-service history records’ embraces records by which the current status of LLPs is determined. The ‘in-service history records’ template may be adjusted to the relevant characteristics of the LLP, e.g. an engine disk being different from a fire extinguisher squib or landing gear sliding tube.

Such records document an LLP each time it enters service or is removed from service. They should clearly:

- (1) identify the part by its part number and serial number;
- (2) show the date of installation and removal (i.e. date on/date off);
- (3) show the details of the installation and removal (i.e. type, serial number, weight variant, thrust rating, as appropriate, of the aircraft, engine, engine module, or propeller) at installation and removal of the part when this is necessary to appropriately control the life limitation; and
- (4) show the total in-service life accumulated in any applicable parameter, as appropriate, corresponding to the dates of installation and removal of the part.

Any other events that may affect the life limitation or change the limitation parameter, such as an embodied modification (in accordance with ADs, service bulletins or any product improvements) should also be included in the in-service history record. Not all modifications are necessarily pertinent to the life limitation of the component. Additionally, if a parameter is not relevant to the life of the part, then this parameter does not need to be recorded.

- (k) The term ‘permanently withdrawn from service’ means for an aircraft or component to be moved to a location that is not used for storage and/or future return to service.

- (l) The term ‘current status’ means the data which accurately establishes the level of compliance of an aircraft, engine, propeller or component thereof with a requirement. Each ‘current status’ should:

- (1) identify the aircraft, engine, propeller or component it applies to;
- (2) be dated, and
- (3) include the relevant total in-service life accumulated in the applicable parameter on the date of the status.



3. New AMC M.A.305(a) is added as follows:

AMC M.A.305(a) Aircraft continuing-airworthiness record system

- (a) The inclusion of the CRS in the aircraft continuing-airworthiness record system means that the date at which the maintenance was performed, and/or that any applicable parameter, including a unique reference to the CRS, should be processed in the record system.
- (b) For components with airworthiness limitations, this information should be found on the authorised release certificate (EASA Form 1 or equivalent). For LLPs, some relevant information required by M.A.305 may need to be introduced into the in-service history records.

4. New AMC M.A.305(b)(1) is added as follows:

AMC M.A.305(b)(1) Aircraft continuing-airworthiness record system

- (a) Certain gas turbine engines and propellers are assembled from modules, and a record of the total life accumulated in service for the complete engine or propeller may not be kept. When owners and operators wish to take advantage of the modular design, then the total life accumulated in service for each module, as well as in-service history, if applicable, and detailed maintenance records for each module, should be maintained. The continuing-airworthiness records, as specified, should be kept with the module and show compliance with any mandatory requirements pertaining to that module.
- (b) The recording of in-service life accumulation may be necessary also in other measurement units to ensure the continuing airworthiness of the aircraft. For example, a mandatory life limitation measured in cycles of auxiliary power unit (APU) usage may apply to some rotating parts. In such a case, APU cycles need to be recorded.

5. New AMC M.A.305(c)(1) is added as follows:

AMC M.A.305(c)(1) Aircraft continuing-airworthiness record system

- (a) The current status of ADs, and measures mandated by the competent authority in immediate reaction to a safety problem, should identify the product/component, the applicable ADs, including revision or amendment numbers, and the date on which the status was updated. For the purpose of assessing the AD status, there is no need to list those ADs that are superseded or cancelled.
- (b) If the AD is generally applicable to the aircraft or component type but is not applicable to the particular aircraft, engine, propeller or component, then this should be identified as well as the reason why it is not applicable.
- (c) The current status of ADs should include the CRS date on which the AD or measure was accomplished (the date the CRS was issued), and where the AD or measure is controlled by flight hours and/or flight cycles and/or landings and/or any other applicable parameter, as appropriate, it should include the corresponding total life accumulated in service in that parameter on the date when the AD or measure was accomplished and/or the due limit in the



appropriate parameter. For repetitive ADs or measures, only the last and next applications with the reference to the applicable parameter should be recorded in the current status.

- (d) The current status of ADs should also specify the method of compliance with the ADs, and which part of a multipart AD or measure has been accomplished, where a choice is available in the AD or measure.
- (e) The current status of ADs should be sufficiently detailed to identify any loadable software aircraft part (LSAP) used for operating or controlling the aircraft.
- (f) When the AD is multipart or requests assessments of certain inspections, this information should be included as well.

6. New AMC M.A.305(c)(2) is added as follows:

AMC M.A.305(c)(2) Aircraft continuing-airworthiness record system

- (a) 'Status of current modifications and repairs' means a list, compiled at aircraft level, of modifications and repairs currently embodied. It should include the identification of the aircraft, engine(s) or propeller(s), as appropriate, and the date of the CRS when the modification or repair was accomplished. Where a modification or repair creates the need for the accomplishment of scheduled maintenance tasks, the reference to the applicable tasks should be added to the AMP. The status should include the reference to the data in accordance with M.A.304, which provides the accomplishment procedure for the modification or repair. It should also specify which part of a multipart modification or repair has been accomplished, as well as the method of compliance, where a choice is available in the data.
- (b) In addition to the previous applicable information, with respect to structure, the status of the current repairs should contain the description of the repair (e.g. doubler, blend, crack, dent, etc.), its location (e.g. reference to stringers, frames, etc.) and its dimensions. In the case of blend-out repairs, the remaining material should be recorded as well.
- (c) The status of modifications should be sufficiently detailed to identify any installed loadable software aircraft part (LSAP) used for operating or controlling the aircraft, the part number of which evolves independently of its associated aircraft hardware component, as identified in the maintenance data of the relevant design approval holders (DAHs).

Other loadable software parts, such as navigational databases or entertainment systems, are not considered under this recording requirement.
- (d) For the purpose of this AMC, a component replaced by a fully interchangeable alternate component is not considered a modification if this condition is published by the DAH.
- (e) The status of modifications and repairs should include engine(s), propeller(s) and components, subject to mandatory instructions and associated airworthiness limitations, and it is not intended to be retained for other components.



7. New GM M.A.305(c)(2) is added as follows:

GM M.A.305(c)(2) Aircraft continuing-airworthiness record system

- (a) The status of modifications and repairs may include the impact of a specific modification or repair on:
- (1) embodiment instructions;
 - (2) mass and balance change data;
 - (3) maintenance and repair manual supplements;
 - (4) maintenance programme and instructions for continuing airworthiness; and/or
 - (5) aircraft flight manual (AFM) supplements.
- (b) When aircraft require a specific loadable software aircraft part (LSAP) configuration in order to operate correctly, a specific listing with this information may be necessary as well.

8. AMC M.A.305(c)(3) is added as follows:

AMC M.A.305(c)(3) Aircraft continuing-airworthiness record system

- (a) The 'current status of compliance with the AMP' means the last and next accomplishment data (referring to the applicable parameter) for the tasks specified in the maintenance schedule of the AMP. It should include:
- (1) an identifier specific enough to allow an easy and accurate identification of the task to be carried out, such as a task reference combined with a task title or short description of the work to be performed;
 - (2) the engine, propeller or component identification when the task is controlled at engine, propeller, or component level; and
 - (3) the date when the task was accomplished (i.e. the date the CRS was issued), and for repetitive tasks, when it is next due time, as well as when the terminating action should be performed.
- (b) Where the task is controlled by flight hours and/or flight cycles and/or landings and/or calendar time and/or any other applicable parameter, the total in-service life accumulated by the aircraft, engine, propeller or component, as appropriate, in the suitable parameter(s) should also be included.

9. AMC M.A.305(d) is deleted:

~~AMC M.A.305(d) Aircraft continuing airworthiness record system~~

~~The current status of AD should identify the applicable AD including revision or amendment numbers. Where an AD is generally applicable to the aircraft or component type but is not applicable to the particular aircraft or component, then this should be identified. The AD status includes the date when the AD was accomplished, and where the AD is controlled by flight hours or flight cycles it should include the aircraft or engine or component total flight hours or cycles, as appropriate. For repetitive~~



ADs, only the last application should be recorded in the AD status. The status should also specify which part of a multi-part directive has been accomplished and the method, where a choice is available in the AD.

~~The status of current modification and repairs means a list of embodied modification and repairs together with the substantiating data supporting compliance with the airworthiness requirements. This can be in the form of a Supplemental Type Certificate (STC), SB, Structural Repair Manual (SRM) or similar approved document.~~

~~The substantiating data may include:~~

- ~~(a) — compliance programme; and~~
- ~~(b) — master drawing or drawing list, production drawings, and installation instructions; and~~
- ~~(c) — engineering reports (static strength, fatigue, damage tolerance, fault analysis, etc.); and~~
- ~~(d) — ground and flight test programme and results; and~~
- ~~(e) — mass and balance change data; and~~
- ~~(f) — maintenance and repair manual supplements; and~~
- ~~(g) — maintenance programme changes and instructions for continuing airworthiness; and~~
- ~~(h) — aircraft flight manual supplement.~~

~~Some gas turbine engines are assembled from modules and a true total time in service for a total engine is not kept. When owners and operators wish to take advantage of the modular design, then total time in service and maintenance records for each module is to be maintained. The continuing airworthiness records as specified are to be kept with the module and should show compliance with any mandatory requirements pertaining to that module~~

10. AMC M.A.305(d)(4) and AMC M.A.305(h) is deleted:

~~AMC M.A.305(d)(4) and AMC M.A.305(h) — Aircraft continuing airworthiness record system~~

~~The term ‘service life limited components’ embraces: (i) components subject to a certified life limit after which the components should be retired, and (ii) components subject to a service life limit after which the components should undergo maintenance to restore their serviceability.~~

~~The current status of service life limited aircraft components should indicate:~~

- ~~(i) — for components subject to a certified life limit: the component life limitation, total number of hours, accumulated cycles or calendar time and the number of hours/cycles/time remaining before the required retirement time of the component is reached;~~
- ~~(ii) — for components subject to a service life limit: the component service life limit, the hours, cycles or calendar time since the component has been restored back to their service life and the remaining service (hours, cycles, calendar time) life before the components need to undergo maintenance.~~

~~Any action that alters the components’ life limit (certified or service) or changes the parameter of the life limit (certified or service) should be recorded.~~



When the determination of the remaining life requires knowledge of the different types of aircraft/engine on which the component has previously been installed, the status of all service life limited aircraft components should additionally include a full installation history indicating the number of hours, cycles or calendar time relevant to each installation on these different types of aircraft/engine. The indication of the type of aircraft/engine should be sufficiently detailed with regard to the required determination of remaining life.

Recommendations from the type certificate holder on the procedures to record the remaining life may be considered.

11. New GM M.A.305(d) is added as follows:

GM M.A.305(d) Aircraft continuing-airworthiness record system

(a) A part is to be considered as an LLP and a TCC when it complies with both definitions given in GM M.A.305(c) and (e).

For example, the maintenance schedule of the AMP may include both a mandatory permanent removal for a landing gear sliding tube and a periodic removal for overhaul of the landing gear (including the sliding tube).

(b) The following table provides a summary of the record-keeping requirements related to LLPs and TCCs:

Maintenance task from the maintenance schedule of the AMP		Type of component	Continuing-airworthiness records
Mandatory instructions (and associated airworthiness limitation) in accordance with Part-21 affecting a component	Permanent removal (replacement)	LLP e.g.: engine high pressure turbine (HPT) disc, landing gear sliding tube	<ul style="list-style-type: none"> — Current status (M.A.305(d)(1)); — In-service history record (M.A.305(e)(3)(i)); — EASA Form 1 and detailed maintenance records for last scheduled maintenance and subsequent unscheduled maintenance (M.A.305(e)(3)(ii)); and — EASA Form 1 and detailed maintenance records for modifications and repairs (M.A.305(e)(2)(ii)).
	Periodic removal for maintenance in an appropriate approved workshop, e.g.: <ul style="list-style-type: none"> — overhaul of horizontal stabilizer actuator or of a landing gear; and/or — replacement of U-joints (of a gearbox). 	TCC e.g.: horizontal stabiliser actuator, landing gear gearbox	<ul style="list-style-type: none"> — Current status (M.A.305(d)(2)); — EASA Form 1 and detailed maintenance records for last scheduled maintenance and subsequent unscheduled maintenance (M.A.305(e)(3)(ii)); and — EASA Form 1 and detailed maintenance records for modifications and repairs



			(M.A.305(e)(2)(ii)).
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12. New GM M.A.305(d)(2) is added as follows:

GM M.A.305(d)(2) Aircraft continuing-airworthiness record system

(a) The maintenance schedule of the AMP may include tasks controlled at component level stemming from a mandatory requirement in accordance with Part-21, and to be performed in a workshop, such as:

- (1) the removal of a component for periodic restoration in order to return the component to a specified standard (e.g. removal of landing gear for overhaul);
- (2) the periodic removal of a component for replacement of a subcomponent by a new one when it is not possible to restore the item to a specific standard of failure resistance (e.g. discarding of universal joints of a gearbox, batteries of the escape slide/raft, cartridges of fire extinguishers, etc.); and
- (3) a periodic inspection or test to confirm that a component meets specified performance standards (e.g. functional check of the portable emergency locator transmitter (ELT), etc.); the component is left in service (no further maintenance action to be taken) on the condition that it continues to fulfil its intended purpose within specified performance limits until the next scheduled inspection.

The above tasks apply to TCCs, as defined in GM M.A.305(e). If a component affected by a task in accordance with (2) and (3) above is controlled at aircraft level by the AMP, and it has not been removed since the task was last accomplished, then its status of compliance with M.A.305(d)2 is already demonstrated by the aircraft records.

Note: the maintenance in accordance with:

- (1) and (2) above assumes a predictable deterioration of the component: the overall reliability invariably decreases with age; and
- (3) above assumes a gradual deterioration of the component: failure resistance may reduce and fall below a defined level.

(b) When a component is affected by a maintenance task contained in the AMP, recommended by the design approval holder (DAH), and controlled at component level, although such component does not qualify as TCC, the status of the component may need to show that all the maintenance due on the aircraft according to the AMP has been carried out. There is no specific requirement to keep the EASA Form 1 or equivalent or any other detailed maintenance records.

(c) For AMPs developed under a methodology oriented towards primary maintenance processes (e.g. Maintenance Steering Group), the term 'TCC' pertains to 'Hard time' and 'On-condition'. The primary maintenance processes are:

- (1) Hard time

This is a preventive process in the context of which known deterioration of a component is limited to an acceptable level by maintenance actions carried out at periods related to



time in service (e.g. calendar time, number of cycles, number of landings). The prescribed actions restore the component utility margin to the applicable time limitation.

(2) On-condition

It is a preventive process in the context of which the component is inspected or tested at specified periods to an appropriate standard in order to determine whether it may continue in service. The purpose is to remove the component before its failure in service.

(3) Condition monitoring

This is a process in the context of which a condition parameter of a component (vibration, temperature, oil consumption, etc.) is monitored in order to identify the development of a fault. The purpose is to remove the component before its failure in service (e.g. due to related repair costs); however, those components are permitted to remain in service without preventive maintenance until a functional failure occurs.

Note: for components that are not subject to any of these primary maintenance processes, corrective maintenance is carried out after failure detection and is aimed at restoring components to a condition in which they can perform their intended function ('fly-to-failure').

- (d) The following table provides a summary of the record-keeping requirements related to components subjected to primary maintenance processes, including components without an EASA Form 1 in accordance with 21.A.307(c):

	Primary maintenance process	Continuing-airworthiness records
LLP		<ul style="list-style-type: none"> — Current status (M.A.305(d)(1)); — In-service history record (M.A.305(e)(3)(i)); — EASA Form 1 and detailed maintenance records for the last scheduled maintenance and subsequent unscheduled maintenance (M.A.305(e)(3)(ii)), including modifications and repairs (M.A.305(e)(2)(ii)).
TCC	Hard time	<ul style="list-style-type: none"> — Current status (M.A.305(d)(2)); — EASA Form 1 and detailed maintenance records for the last scheduled maintenance and subsequent unscheduled maintenance (M.A.305(e)(3)(ii)), including modifications and repairs (M.A.305(e)(2)(ii)).
	On-condition	<ul style="list-style-type: none"> — Current status (M.A.305(d)(2)); and — EASA Form 1 and detailed maintenance records for the last scheduled maintenance and subsequent unscheduled maintenance (M.A.305(e)(3)(ii)). <p>If the task is controlled at aircraft level, the above information may be already contained in the records related to the AMP (M.A.305(c)(3) and M.A.305(e)(2)(iii)). If the maintenance was performed off-wing, EASA Form 1 needs to be kept.</p>



Condition monitoring	EASA Form 1 does not need to be kept unless this is the means to fulfil another requirement, for example an AD compliance.
ELA2 aircraft: any component fitted without an EASA Form 1 in accordance with 21.A.307(c)	The CRS and owner's acceptance statement (M.A.305(e)(3)(iii)).

13. New AMC M.A.305(e) is added as follows:

AMC M.A.305(e) Aircraft continuing-airworthiness record system

(a) The information that constitutes the aircraft continuing-airworthiness records may be entered in an information technology (IT) system and/or documents equivalent in scope and detail.

IT systems acceptable for supporting the aircraft continuing-airworthiness records should:

- (1) include functions so that search of data and production of status is possible;
- (2) allow a transfer of the aircraft continuing-airworthiness records data from one system to another using an industry-wide/worldwide data format or allow printing information;
- (3) contain safeguards which prevent unauthorised personnel from altering data; and
- (4) ensure the integrity of the data, including traceability of amendments.

(b) 'Documents equivalent in scope and detail' are included in the airworthiness record system and may be an aircraft logbook, engine logbook(s) or engine module log cards, propeller logbook(s) and log cards for LLPs.

Any logbook/log card should contain:

- (1) identification of the product or component it refers to;
- (2) type, part number, serial number and registration, as appropriate, of the aircraft, engine, propeller, engine module, or component to which the component has been fitted, along with the reference to the installation and removal;
- (3) the date and the corresponding total in-service life accumulated in any applicable parameter, as appropriate; and
- (4) any AD, modification, repair, maintenance or deferred maintenance tasks applicable.

If fulfilling the applicable requirements, a logbook/log card as described above is a means to comply with the current status and in-service history record for each LLP.

(c) Form of records

Producing and/or keeping continuing-airworthiness records in a form acceptable to the competent authority normally means in either physical or electronic copy, or a combination of both.

Retention of records should be done in one of the following formats:

- (1) original paper document or electronic data (via an approved electronically signed form);
- (2) a paper reproduction of a paper document (original or copy); or



- (3) an electronic reproduction of electronic data (original or copy); or
- (4) a printed reproduction of electronic data (original or copy); or
- (5) an electronically digitised reproduction of a paper document (original or copy); or
- (6) a microfilm or scanned reproduction of a paper document (original or copy).

Where IT systems are used to retain documents and data, it should be possible to print a paper version of the documents and data kept.

(d) Physical (non-digitised) records

All physical records should remain legible throughout the required retention period. Physical records on either paper or microfilm systems should use robust material that withstands normal handling, filing and ageing. They should be stored in a safe way to prevent damage, alteration and theft.

(e) Digitised records

Digitised records may be created from a paper document (original or copy) or from electronic data.

When created from a paper document:

- (1) the creation date of the digitised record should be stored with the digitised record;
- (2) it is advisable to create an individual digitised record for each document;
- (3) if an organisation creates a large number of digitised records, the use of database technology should ease the future retrieval of the record(s); and
- (4) digitised records should be legible, including but not limited to details, such as the date of signature, names, stamps, notes, or drawings.

(f) Digitised record retention

Digitised records when created from an original paper record, or as a digital electronic original, should be stored on a system that is secured and kept in an environment protected from damage (e.g. fire, flooding, excessive temperature or accidental erasing). IT systems should have at least one backup system, which should be updated at least within 24 hours of any entry in the primary system. Access to both primary and backup systems is required to be protected against the ability of unauthorised personnel to alter the database and they should preferably be located remotely from the main system.

The system used for retention of digitised records should:

- (1) ensure the integrity, accuracy and completeness of the record;
- (2) ensure that access to the digitised record has safeguards against alteration of the data;
- (3) ensure the authenticity of the record including assurance that the date has not been modified after creation;
- (4) be capable of retrieval of individual records within a reasonable time period; and



(5) be maintained against technological obsolescence which would prevent printing, displaying or retrieval of the digitised records.

Computer backup discs, tapes etc. should be stored in a different location from that containing the current working discs, tapes, etc., and in a safe environment.

Where the competent authority has accepted a system for digitised record-keeping satisfying the above, the paper documents may be permanently disposed of.

(g) Lost or destroyed records

Reconstruction of lost or destroyed records can be done by reference to other records which reflect the time in service, by research of records maintained by maintenance organisations and by reference to records maintained by individual mechanics, etc. When reconstruction has been done and the record is still incomplete, the owner/operator may make a statement in the new record describing the loss and establishing the time in service based on the research and the best estimate of time in service. The reconstructed records should be submitted to the competent authority for acceptance. The competent authority may require the performance of additional maintenance if not satisfied with the reconstructed records.

14. New GM M.A.305(e) is added as follows:

GM M.A.305(e) Aircraft continuing-airworthiness record system

‘Until such time as the information contained therein is superseded by new information equivalent in scope and detail but not less than 36 months’ means that during a maximum of 36 months, the information and the one superseding it should be kept but, after these 36 months, only the new information should be kept.

For example, for a maintenance task with an interval shorter than 36 months, more than one set of information equivalent in scope and detail should be retained. If the maintenance task interval is longer than 36 months, the last set of information equivalent in scope and detail is retained.

15. New AMC M.A.305(e)(1) is added as follows:

AMC M.A.305(e)(1) Aircraft continuing-airworthiness record system

This retention period of 36 months may be extended in the case of an entry in the technical log system requiring an additional period of retention as defined in Part-M.

16. New AMC M.A.305(e)(2) is added as follows:

AMC M.A.305(e)(2) Aircraft continuing-airworthiness record system

(a) EASA Form 1 and the certificate of conformity of the components used to perform a modification/repair are not part of the substantiation data for a modification/repair. These documents are retained by the maintenance organisation.

(b) In the case of an AD with several steps or with intermediate assessments during its application, these intermediate steps are part of the detailed maintenance records.



17. New AMC M.A.305(e)(3) is added as follows:

AMC M.A.305(e)(3) Aircraft continuing-airworthiness record system

- (a) EASA Form 1 and detailed maintenance records are not required to be kept to support every installation/removal shown in the in-service history records.
- (b) Conservative methods to manage missing historical periods are acceptable to establish the current status of the LLP. In case of use of a conservative method, the supporting documents should be endorsed. Recommendations from the design approval holder (DAH) on the procedures to record or reconstruct the in-service history should be considered.

18. New GM M.A.305(e)(3) is added as follows:

GM M.A.305(e)(3) Aircraft continuing-airworthiness record system

- (a) EASA Form 1 or equivalent is not required to be kept for 'Condition monitoring' process components unless this is the means to fulfil another requirement of M.A.305 (e.g. demonstration of AD compliance).
- (b) For components that are not subject to any of the primary maintenance processes described under GM M.A.305(d)(2) (i.e. 'Hard time', 'On-condition', 'Condition monitoring'), EASA Form 1 or equivalent is not required to be kept.

19. New AMC M.A.305(f) is added as follows:

AMC M.A.305(f) Aircraft continuing-airworthiness record system

When the owner or CAMO arranges for the relevant maintenance organisation to retain copies of the continuing-airworthiness records on their behalf, the owner or CAMO will continue to be responsible for the retention of records. If they cease to be the owner or CAMO, they also remain responsible for transferring the records to the new owner or CAMO.

20. AMC M.A.305(h) is deleted:

~~**AMC M.A.305(h) Aircraft continuing-airworthiness record system**~~

~~When an owner/CAMO arranges for the relevant maintenance organisation to retain copies of the continuing airworthiness records on their behalf, the owner/CAMO will continue to be responsible for the retention of records. If they cease to be the owner/CAMO of the aircraft, they also remain responsible for transferring the records to any other person who becomes the owner/CAMO of the aircraft.~~

~~Keeping continuing airworthiness records in a form acceptable to the competent authority normally means in paper form or on a computer database or a combination of both methods. Records stored in microfilm or optical disc form are also acceptable. All records should remain legible throughout the required retention period.~~

~~Paper systems should use robust material, which can withstand normal handling and filing.~~



Computer systems should have at least one backup system, which should be updated at least within 24 hours of any maintenance. Each terminal is required to contain programme safeguards against the ability of unauthorised personnel to alter the database.

Continuing airworthiness records should be stored in a safe way with regard to damage, alteration and theft. Computer backup discs, tapes etc., should be stored in a different location from that containing the current working discs, tapes, etc., and in a safe environment. Reconstruction of lost or destroyed records can be done by reference to other records which reflect the time in service, research of records maintained by repair facilities and reference to records maintained by individual mechanics, etc. When these things have been done and the record is still incomplete, the owner/CAMO may make a statement in the new record describing the loss and establishing the time in service based on the research and the best estimate of time in service. The reconstructed records should be submitted to the competent authority for acceptance. The competent authority may require the performance of additional maintenance if not satisfied with the reconstructed records.

21. AMC M.A.305(h)(6) is deleted:

~~AMC M.A.305(h)6 Aircraft continuing airworthiness record system~~

~~For the purpose of this paragraph, a ‘component vital to flight safety’ means a component that includes certified life limited parts or is subject to airworthiness limitations or a major component such as, undercarriage or flight controls.~~

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

AMC M.A.501(b) Installation

(...)

3. The person referred to under M.A.801 or the M.A. 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~~ **LLPs and TCCs** fitted to the aircraft component.

23. New GM M.A.503 is added as follows:

GM M.A.503 LLPs and TCCs

The approved limitation is usually expressed in calendar time, flight hours, landings or cycles, as appropriate.

24. AMC M.A.504(c) is amended as follows:

AMC M.A.504(c) Control of unserviceable components — ~~unsalvageable components~~

1. The following types of components should typically be classified as unsalvageable:



(...)

- (d) ~~certified life limited parts~~LLPs that have reached or exceeded their ~~certified life limits~~mandatory life limitation, or have missing or incomplete records;

(...)

(...)

25. AMC M.A.504(d)2 is amended as follows:

AMC M.A.504(d)(2) Control of unserviceable components

(...)

4. Since manufacturers producing approved aircraft components should maintain records of serial numbers for 'retired' ~~LLPs certified life limited or other critical components~~, the organisation that mutilates a component should provide the original manufacturer with the data plate and/or serial number and final disposition of the component.

26. AMC M.A.613(a) is amended as follows:

AMC M.A.613(a) Component certificate of release to service

(...)

(...)

- 2.4. An EASA Form 1 issued in accordance with this paragraph 2 should be issued by signing in block 14b and stating 'Inspected/Tested' in block 11. In addition, block 12 should specify:

(...)

- 2.4.4. detail of life used for ~~service life limited parts~~LLPs and TCCs being any combination of fatigue, overhaul or storage life;

(...)

- 2.6. Used aircraft components removed from a serviceable aircraft.

- 2.6.1. Serviceable aircraft components removed from a Member State registered aircraft may be issued an EASA Form 1 by an appropriately rated organisation subject to compliance with this subparagraph.

- (g) The flight hours/cycles/landings as applicable of any ~~service life limited parts~~LLPs and TCCs including time since overhaul should be established.

(...)

- 2.8. Used aircraft components maintained by organisations not approved in accordance with M.A Subpart F or Part 145.

(...)



- (b) replacing of all ~~service life limited components~~ LLPs and TCCs when no satisfactory evidence of life used is available and/or the components are in an unsatisfactory condition,

(...)

(...)

(...)

27. AMC M.A.710(a) is amended as follows:

AMC M.A.710(a) Airworthiness review

1. A full documented review is a check of at least the following categories of documents:

(...)

- ~~Status list of service life limited component~~ LLPs and TCCs

(...)

(...)

28. AMC M.A.901(d) and (g) is amended as follows:

AMC M.A.901(d) and (g) Aircraft airworthiness review

(...)

- (g) Statement

(...)

The statement should confirm that the aircraft in its current configuration complies with the following:

(...)

- ~~component service life limitations~~ limitation for LLPs and TCCs;

(...)

29. AMC M.A.904(a)(2) is amended as follows:

AMC M.A.904-(a)(2) Airworthiness reviews of aircraft imported into the EU

(...)

2. In determining the work to be undertaken during the airworthiness review on the aircraft, the following should be taken into consideration:

(...)

- (d) the aircraft continuing ~~airworthiness~~ status such as the aircraft and component AD status, the SB status, the maintenance status, the status of ~~LLPs and TCCs~~ all ~~service life limited components~~, weight and centre of gravity schedule including equipment list;



(...)

(...)

30. AMC M.A.904(b) is amended as follows:

AMC M.A.904(b) Airworthiness review of aircraft imported into the EU

The recommendation sent to the competent authority should contain at least the items described below.

(...)

(c) Documents accompanying the recommendation

(...)

— status of all ~~service life limited components~~ LLPs and TCCs;

(...)

(...)

31. Appendix XI to AMC M.A.708(c) is amended as follows:

Appendix XI to AMC M.A.708(c) Contracted maintenance

(...)

2.11 ~~Service life limited components~~ LLPs and TCCs

The control of ~~service life limited components~~ LLPs and TCCs is the responsibility of the CAMO. The contract should specify whether the CAMO should provide the status of ~~service life limited parts~~ LLPs and TCCs to the maintenance organisation, and the information that the approved organisation will have to provide to the CAMO about the ~~service life limited components~~ LLPs and TCCs' removal/installation so that the CAMO may update its records (see also paragraph 2.22 'Exchange of information').

(...)

32. Appendix II to AMC M.A.711(a)(3) is amended as follows:

Appendix II to AMC M.A.711(a)(3) Subcontracting of continuing ~~airworthiness~~ management tasks

(...)

2.11 ~~Service life limit~~ Mandatory life limitation or scheduled maintenance controls and component control/removal forecast

(...)

2.15 Continuing ~~airworthiness~~ records

They may be maintained and kept by the subcontracted organisation on behalf of the CAMO, which remains the owner of these documents. However, the CAMO should be provided with the current status of AD compliance and ~~service life limited components~~ LLPs and TCCs in accordance with the agreed procedures. The CAMO should also be granted unrestricted and timely access to



the original records as and when needed. Online access to the appropriate information systems is acceptable.



33. Appendix III to GM M.B.303(b) is amended as follows:

Appendix III to GM M.B.303(b) KEY RISK ELEMENTS

A.2	Airworthiness limitations	An airworthiness limitation is a boundary beyond which an aircraft or a component thereof must not be operated, unless the instruction(s) associated with this airworthiness limitation is complied with.
Supporting information		Typical inspection items
<p>Airworthiness limitations are exclusively associated with instructions whose compliance is mandatory as part of the type design. They apply to some scheduled or unscheduled instructions that have been developed to prevent and/or to detect the most severe failure.</p> <p>They mainly apply to maintenance (mandatory modification, replacement, inspections, checks, etc.), but can also apply to instructions to control critical design configurations (for example Critical Design Configuration Control Limitations (CDCCL) for the fuel tank safety).</p>		<ol style="list-style-type: none"> 1. Check that the Aircraft Maintenance Programme (AMP) reflects airworthiness limitations and associated instructions (standard or alternative) issued by the relevant design approval holders and is approved by the competent authority, if applicable. 2. Check that the aircraft and the components thereof comply with the approved AMP. 3. Check the current status of life-limited partsLLPs. The current status of LLPslife-limited parts is to be maintained throughout the operating life of the part. <p>Typical Airworthiness Limitation items:</p> <ul style="list-style-type: none"> - Safe Life ALI (SL ALI)/Life-limited partsLLPs, - Damage Tolerant ALI (DT ALI)/Structure, including ageing aircraft structure, - Certification Maintenance Requirements (CMR), - Ageing Systems Maintenance (ASM), including Airworthiness Limitations for Electrical Wiring Interconnection System (EWIS), - Fuel Tank Ignition Prevention (FTIP)/Flammability Reduction Means (FRM), - CDCCL, check wiring if any maintenance carried out in same area - wiring separation, - Ageing fleet inspections mandated through ALS or AD are included in the AMP.
Reference documents: EASA		<ul style="list-style-type: none"> - 21.A.31 - 21.A.61 - CS 22.1529 - CS 23.1529, Appendix G, para. G25.4 - CS 25.1529, Appendix H, para. H25.4 - CS 27.1529, Appendix A, para. A27.4 - CS 29.1529, Appendix A, para. A29.4 - CS 31HB.82 - CS-APU 30 - CS-E 25 - CS-P 40 - CS VLR.1529, Appendix A, para. A.VLR.4 - M.A.302 - M.A.305 - M.A.710(a)(7)



A.3	Airworthiness Directives	An Airworthiness Directive means a document issued or adopted by the Agency, which mandates actions to be performed on an aircraft to restore an acceptable level of safety, when evidence shows that the safety level of this aircraft may otherwise be compromised (Part 21A.3B).
Supporting information		Typical inspection items
Any Airworthiness Directive issued by a State of Design for an aircraft imported from a third country, or for an engine, propeller, part or appliance imported from a third country and installed on an aircraft registered in a Member State, shall apply unless the Agency has issued a different Decision before the date of entry into force of that airworthiness directive.		<ol style="list-style-type: none"> 1. Check if all ADs applicable to the airframe, engine(s), propeller(s) and equipment have been incorporated in the AD-status, including their revisions. 2. Check records for correct AD applicability (including ADs incorrectly listed as non-applicable). 3. Check by sampling in the current AD status that applicable ADs have been or are planned to be (as appropriate) carried out within the requirements of these Airworthiness Directives, unless otherwise specified by the Agency (AMOC). 4. Check that applicable ADs related to maintenance are included into the Aircraft Maintenance Programme. 5. Check that task-cards correctly reflect AD requirements or refer to procedures and standard practises referenced in ADs. 6. Sample during a physical survey some ADs for which compliance can be physically checked.
Reference documents: EASA		<ul style="list-style-type: none"> - 21.A.3B - 21.B.60 - 21.B.326 - 21.B.327 - M.A.303 - M.A.305(a) & (h) - M.A.401(a) & (b) - M.A.501(b) - M.A.503(a) - M.A.504(a) 2 - M.A.504 & AMC M.A.504(c) § 1 (f) - M.A.613 & AMC M.A.613(a) § 2.4.3, 2.5.2, 2.6.1(h) & 2.8(b) - M.A.708(b)8 - M.A.709(a) - M.A.710(a)5 - M.A.801 & AMC M.A.801(h)

(...)



B.2	Flight Manual	A manual, associated with the certificate of airworthiness, containing operational limitations, instructions and information necessary for the flight crew members for the safe operation of the aircraft.
Supporting information		Typical inspection items
The Flight Manual needs to reflect the current status/configuration of the aircraft. When it does not, it may provide flight crew members with wrong information. This may lead to errors and/or to override limitations that could contribute to severe failure.		<ol style="list-style-type: none"> 1. Check the conformity of the Flight Manual (FM), latest issue, with aircraft configuration, including modification status, (AD, SB, STC etc.). 2. Check: <ul style="list-style-type: none"> - the FM approval, revision control, Supplement to FM; - the impact of modification status on noise and weight & balance; - additional required manuals (QRH/FCOM/OM-B etc.); - FM limitations.
Reference documents: EASA		<ul style="list-style-type: none"> - 21.A.174(b)2(iii), (b)3(ii) - 21.A.204(b)1(ii), (b)2(i) - M.A.305, AMC M.A.305(d) - M.A.710(a)2 - M.A.710(c)2 - AMC M.A.710(a)1 - AMC M.A.901(d) and (g) - M.A.902(b)3 - AMC M.A.904(a)2 points 2(c) and 2(k) - AMC M.A.904(b) point (c)
B.3	Mass & balance	Mass and balance data is required to make sure the aircraft is capable of operating within the approved envelope.
Supporting information		Typical inspection items
The mass and balance report needs to reflect the actual configuration of the aircraft. When it does not, the aircraft might be operated outside the certified operating envelope.		<ol style="list-style-type: none"> 1. Check that mass and balance report is valid, considering current configuration. 2. Make sure that modifications and repairs are taken into account in the report. 3. Check that equipment status is recorded on the mass and balance report. 4. Compare current mass and balance report with previous report for consistency.
Reference documents: EASA		<ul style="list-style-type: none"> - M.A.305(d)5 - M.A.708(b)(10) - M.A.710(a)(9), AMC M.A.710(a)1 - Part-CAT: CAT.POL.MAB.100 and related AMCs/GM - Part-NCC: NCC.POL.105 and related AMC/GM - Part-NCO: NCO.POL.105 and related AMC/GM - Part-SPO: SPO.POL.105 and related AMC/GM
(...)C.2	Component control	The component control should consider a twofold objective for components maintenance:



B.2	Flight Manual	A manual, associated with the certificate of airworthiness, containing operational limitations, instructions and information necessary for the flight crew members for the safe operation of the aircraft.
		<ul style="list-style-type: none"> - maintenance for which compliance is mandatory. - maintenance for which compliance is recommended.
Supporting information		Typical inspection items
<p>Depending on each maintenance task, accomplishment is <u>scheduled</u> or <u>unscheduled</u>. Refer to KRE C.1 'Aircraft Maintenance Programme'.</p> <p>Components affected by scheduled maintenance:</p> <p>Life limited components are of two types:</p> <ul style="list-style-type: none"> — components subject to a certified life limit; — components subject to a service life limit. <p>Components with a <u>certified life limit</u> <u>mandatory life limitation and LLPs</u>, must be <u>permanently</u> removed from service when, or before, their operating limitation is exceeded. The life limitation is controlled at the component level (in opposition to aircraft level).</p> <p>Components <u>which are TCCs</u> <u>subject to a service life</u> ('time controlled components') include the following:</p> <ul style="list-style-type: none"> - components for which removal and restoration are scheduled, regardless of their level of failure resistance. Reference is made to hard time components: They are subject to periodic maintenance dealing with a deterioration that is assumed to be <u>predictable</u> (the overall reliability invariably decreases with age): Failure is less likely to occur before restoration is necessary; - components for which failure resistance can reduce and drop below a defined level: Inspections are scheduled to detect potential failures. Reference is made to 'On-condition' components: They are called such because components, which are inspected, are left in service (no further maintenance action taken) on the condition that they continue to meet specified performance standards. <p>Notes:</p> <ol style="list-style-type: none"> 1. Restoration tasks for hard time components are not the same as 'On-condition' tasks, since they do not monitor <u>gradual</u> deterioration, but are primarily done to ensure the item may continue to remain in service until the next planned restoration. 2. Components subject to 'condition-monitoring' are permitted to remain in service without preventive maintenance until functional failure occurs. Reference is made to 'fly-to-failure'. Such components are subject to unscheduled tasks. 		<ol style="list-style-type: none"> 1. Check that the mandatory maintenance tasks are identified as such and managed separately from recommendations. 2. Sample check installed components (PN and SN) against aircraft records: <ol style="list-style-type: none"> a. Correct Part Number and Serial Number installed. b. Correct authorised release document available. 3. Check the current status of time-controlled components, with due consideration to deferred items. They must identify: <ol style="list-style-type: none"> a. The affected components (Part Number and Serial Number). b. For components subject to a repetitive task: the task description and reference, the applicable threshold/interval, the last accomplishment data (date, the component's total accumulated life in Hours, Cycles, Landings, Calendar time, as necessary) and the next planned accomplishment data. c. For components subject to an unscheduled task: the task description and reference, the accomplishment data (date, the component's total accumulated life in Hours, Cycles, Landings, Calendar time, as necessary). Pay attention to ETOPS and CDCCL components. 4. Check current status of <u>LLPs</u> <u>life limited components</u>. This status can be requested upon each transfer throughout the operating life of the part: <ol style="list-style-type: none"> a. The life limitation, the component's total accumulated life, and the life remaining before the component's life limitation is reached (indicating Hours, Cycles, Landings, Calendar time, as necessary). b. If relevant for the determination of the remaining life, a full installation history indicating the number of hours, cycles or calendar time relevant to each installation on these different types of aircraft/engine. 5. Check if the aircraft maintenance programme and reliability programme results impact the component control. 6. Check that <u>LLPs and TCCs</u> <u>life limited and time controlled components</u> are correctly marked during a physical survey.



B.2	Flight Manual	A manual, associated with the certificate of airworthiness, containing operational limitations, instructions and information necessary for the flight crew members for the safe operation of the aircraft.
Reference documents: EASA		<ul style="list-style-type: none"> - 21.A.805 - M.A.302 - M.A.305 - M.A.501 - M.A.503 - M.A.710

(...)

C.4	Records	Continuing-airworthiness records are defined in M.A.305 and M.A.306 and related AMCs.
Supporting information		Typical inspection items
<p>Retention/Transfer of the records is required so that the status of the aircraft and its components can be readily established at any time.</p> <p>Task accomplishment is scheduled (one time or periodically), or unscheduled (e.g. following an event). Aircraft continuing-airworthiness records (refer to logbooks, technical logbooks, component log cards or task cards) shall provide the status with regard to:</p> <ul style="list-style-type: none"> - scheduled tasks: - one-time: life limited parts/LLPs status, modification status, repair status. - repetitive: maintenance programme status. - unscheduled tasks. 		<ol style="list-style-type: none"> 1. Check the aircraft continuing-airworthiness record system: M.A.305 and M.A.306, as applicable, require that certain records are kept for defined periods. Pay attention to the continuity, integrity and traceability of records: <ol style="list-style-type: none"> a. integrity: Check the data recorded is legible, b. continuity: Check that records are available for the applicable retention period, c. traceability: Check the link between operator/CAMO and maintenance documentation, traceability to approved data, traceability to appropriate release documents, etc. 2. If applicable, make sure that the tech log system is used correctly, including: <ol style="list-style-type: none"> a. current aircraft release to service (including the maintenance statement) issued and b. pre-flight inspections signed-off by authorised persons; 3. Check that any maintenance required following abnormal operation/event (such as overspeed, overweight operation, hard landing, excessive turbulence, and operation outside of Flight Manual limitations) has been performed, as applicable.
Reference documents: EASA		<ul style="list-style-type: none"> - M.A.305 - M.A.306 - M.A.307 - M.A.801 - AMCs M.A.305 - AMCs M.A.306 - AMC M.A.307

(...)



3.2. Draft AMC/GM to Part-145

1. AMC No 2 to 145.A.50(d) is amended as follows:

AMC No 2 to 145.A.50(d) Certification of maintenance

(...)

2. In the case of the issue of EASA Form 1 for components in storage before Part 145 and Part 21 became effective and not released on an EASA Form 1 or equivalent in accordance with 145.A.42(a) or removed serviceable from a serviceable aircraft or an aircraft which has been withdrawn from service the following applies:

(...)

(...)

- 2.4.4. Detail of life used for ~~service life limited parts~~ life limited parts (LLPs) and time controlled components (TCCs) being any combination of fatigue, overhaul or storage life.

(...)

- 2.6.1 Serviceable aircraft components removed from a Member State registered aircraft may be issued with an EASA Form 1 by an appropriately rated organisation subject to compliance with this subparagraph.

(...)

- (g) The flight hours/cycles/landings as applicable of any ~~service life limited parts~~ LLPs and TCCs including time since overhaul should be established.

(...)

(...)

(...)

- 2.8. Used aircraft components maintained by organisations not approved in accordance with Part 145. For used components maintained by a maintenance organisation not approved under Part 145, due care should be taken before acceptance of such components. In such cases an appropriately rated maintenance organisation approved under Part 145 should establish satisfactory conditions by:

(...)

- (b) replacing all ~~service life limit components~~ LLPs and TCCs when no satisfactory evidence of life used is available and/or the components are in an unsatisfactory condition;

(...)

(...)



2. GM 145.A.55 (a) is amended as follows:

GM 145.A.55(a) Maintenance and airworthiness review records

1. Properly executed and retained records provide owners, operators and maintenance personnel with information essential in controlling unscheduled and scheduled maintenance, and trouble shooting to eliminate the need for re-inspection and rework to establish airworthiness.

The prime objective is to have secure and easily retrievable records with comprehensive and legible contents. The aircraft record should contain basic details of all serialised aircraft components and all other significant aircraft components installed during the maintenance performed, to ensure traceability to such installed aircraft component documentation and associated maintenance data as specified in 145.A.45.

(...)

3.3. Draft AMC/GM to Part-CAT

1. New AMC1 CAT.IDE.A.105 is added as follows:

AMC1 CAT.IDE.A.105 Minimum equipment for flight

GENERAL

The operator should control and retain the status of instruments, equipment or functions required for the intended operation, that are not controlled for the purpose of continuing-airworthiness management. Examples of such instruments, equipment or functions may be but are not limited to equipment related to navigation approvals as FM immunity or certain software versions.

2. New GM1 CAT.IDE.A.105 is added as follows:

GM1 CAT.IDE.A.105 Minimum equipment for flight

GENERAL

The operator should define responsibilities and procedures to control and retain the status of instruments, equipment or functions required for the intended operation, that are not controlled for the purpose of continuing-airworthiness management.

3. New AMC1 CAT.IDE.H.105 is added as follows:

AMC1 CAT.IDE.H.105 Minimum equipment for flight

GENERAL

The operator should control and retain the status of instruments, equipment or functions required for the intended operation, that are not controlled for the purpose of continuing-airworthiness management. Examples of such instruments, equipment or functions may be but are not limited to equipment related to navigation approvals as FM immunity or certain software versions.



4. New GM1 CAT.IDE.H.105 is added as follows:

GM1 CAT.IDE.H.105 Minimum equipment for flight

GENERAL

The operator should define responsibilities and procedures to control and retain the status of instruments, equipment or functions required for the intended operation, that are not controlled for the purpose of continuing-airworthiness management.

3.4. Draft AMC/GM to Part-NCC

1. New AMC1 NCC.IDE.A.105 is added as follows:

AMC1 NCC.IDE.A.105 Minimum equipment for flight

GENERAL

The operator should control and retain the status of instruments, equipment or functions required for the intended operation, that are not controlled for the purpose of continuing-airworthiness management. Examples of such instruments, equipment or functions may be but are not limited to equipment related to navigation approvals as FM immunity or certain software versions.

2. New GM1 NCC.IDE.A.105 is added as follows:

GM1 NCC.IDE.A.105 Minimum equipment for flight

GENERAL

The operator should define responsibilities and procedures to control and retain the status of instruments, equipment or functions required for the intended operation, that are not controlled for the purpose of continuing-airworthiness management.

3. New AMC1 NCC.IDE.H.105 is added as follows:

AMC1 NCC.IDE.H.105 Minimum equipment for flight

GENERAL

The operator should control and retain the status of instruments, equipment or functions required for the intended operation, that are not controlled for the purpose of continuing-airworthiness management. Examples of such instruments, equipment or functions may be but are not limited to equipment related to navigation approvals as FM immunity or certain software versions.

4. New GM1 NCC.IDE.H.105 is added as follows:

GM1 NCC.IDE.H.105 Minimum equipment for flight

GENERAL

The operator should define responsibilities and procedures to control and retain the status of instruments, equipment or functions, required for the intended operation, that are not controlled for the purpose of continuing-airworthiness management.



3.5. Draft AMC/GM to Part-NCO

1. New AMC1 NCO.IDE.A.105 is added as follows:

AMC1 NCO.IDE.A.105 Minimum equipment for flight**GENERAL**

The operator should control and retain the status of instruments, equipment or functions required for the intended operation, that are not controlled for the purpose of continuing-airworthiness management. Examples of such instruments, equipment or functions may be but are not limited to equipment related to navigation approvals as FM immunity or certain software versions.

2. New AMC1 NCO.IDE.H.105 is added as follows:

AMC1 NCO.IDE.H.105 Minimum equipment for flight**GENERAL**

The operator should control and retain the status of instruments, equipment or functions required for the intended operation, that are not controlled for the purpose of continuing-airworthiness management. Examples of such instruments, equipment or functions may be but are not limited to equipment related to navigation approvals as FM immunity or certain software versions.

3.6. Draft AMC/GM to Part-SPO

1. New AMC1 SPO.IDE.A.105 is added as follows:

AMC1 SPO.IDE.A.105 Minimum equipment for flight**GENERAL**

The operator should control and retain the status of instruments, equipment or functions required for the intended operation, that are not controlled for the purpose of continuing-airworthiness management. Examples of such instruments, equipment or functions may be but are not limited to equipment related to navigation approvals as FM immunity or certain software versions.

2. New AMC1 SPO.IDE.H.105 is added as follows:

AMC1 SPO.IDE.H.105 Minimum equipment for flight**GENERAL**

The operator should control and retain the status of instruments, equipment or functions required for the intended operation, that are not controlled for the purpose of continuing-airworthiness management. Examples of such instruments, equipment or functions may be but are not limited to equipment related to navigation approvals as FM immunity or certain software versions.



4. Individual comments

(General comments)		-
comment	4	comment by: <i>ACE</i> Thanks for the proposed clarification. We think these changes will be very useful.
comment	27	comment by: <i>Liam CREAVEN</i> The NPA content is strongly supported by my organisation since it provides useful and significant clarification concerning the data that must be retained by the Operator. The present version of the affected sections of Part M is leading to unnecessary costs and confusion in our industry. Positive benefits may be expected when the NPA changes are adopted including easing the transfer of aircraft within Europe. My organisation is however concerned that the timetable for publication date of the Opinion (Q1 of 2017) is not expeditious enough and we therefore urge the Agency to accelerate the process.
response		
comment	28	comment by: <i>Federal Office of Civil Aviation FOCA</i> FOCA fully supports the NPA 2014-04. It contains the necessary clarification on electronic storage for continuing airworthiness records systems. We positively note that finally the retention periods of technical documents have been streamlined across all the relevant regulations.
response		
comment	35	comment by: <i>René Meier, Europe Air Sports</i> Europe Air Sports (EAS), European Powered Flying Union (EPFU) and the Aero-Club of Switzerland joined forces to comment on NPA 2014-04 Technical Records, thanking the Agency for the preparation of the document. Theses comments are supported by the Provisional Executive Committee of European Ballooning Federation. The four organisations fully support the positions of European Gliding Union and of the European Sailplane Manufacturers. In addition I would like to add the fact that until recently I was president of the Segel- und Motorfluggruppe Grenchen/Flugschule Grenchen, operating 16 powered aircraft and 12 sailplanes. I guided this organisation during the transformation process form FTO to ATO, I



have several hundred flight hours on my log book and made several hundred glider-towing flights as well. For all this I feel competent to make the statements that follow, which go in the direction that the realities of General Aviation operations were not sufficiently considered by the persons who prepared this NPA, otherwise we would find proposals for provisions for RF/FTO/ATO (whichever is in place), and for our club operations, where one pilot easily performs more than a dozen of flight per day, in parachute-jumping and sailplane-towing operations, in helicopter operations, without stopping the engine between flights. In winch-towing operations with sailplanes during basic training which result in short flight, easily even more than four dozens of flights are performed in a day. How does the Agency think logbook entries should be made after each flight?

In our view the RIA you propose shows us that the authors of this NPA are not familiar with our operations. We are sorry to be obliged to write that again a "one size fits all" solution is proposed, despite dozens of pages were published in the past making us believe that GA's situation is known to them, particularly after creating the "Part-M for General Aviation Task Force".

In one sentence: We accept all proposals increasing the safety of flight at affordable cost, we reject all ideas only creating costs without any real safety benefit and which do not respect the statements proposed the many "Part-M for General Aviation Task Force" texts, as well as the statements in the "European General Aviation Safety Strategy", a discussion paper dated 38 August 2012, and the "Roadmap for Regulation of General Aviation", a working paper dated 18 November 2012.

response

comment

47

comment by: *EUROCONTROL*

The EUROCONTROL Agency does not have any comment on NPA 2014 - 04.

response

comment

63

comment by: *AIRBUS*

Airbus holds organisation approval certificates in addition to the certificates issued under Part-21:

- Airbus holds a certificate for a Continuing Airworthiness Management Organization (CAMO).
- Airbus also holds several Part-145 (or equivalent) certificates granted by National Airworthiness Authorities according to their specific regulations for maintenance organisations.

On the basis of its knowledge and experience gained in these fields, Airbus would like to commend the work undertaken by the Agency and the rulemaking working group. The outcome achieved is valuable. For example, the definitions given in the GM M.A.305 will



contribute to eliminate some grey areas in the way to appropriately manage maintenance and aircraft continuing airworthiness records, in particular for components, including software. The result of this work will also participate in concentrating Part-M community efforts on records essential to the aircraft continuing airworthiness and in ensuring consistency with Part-145, while minimizing the records archiving costs.

Airbus submits additional comments aiming at complementing this important achievement.

response

comment

140

comment by: AIRBUS

Airbus does consider the options available and their implications before giving preference to an implementation strategy. The objective is to achieve a pragmatic and practicable application of proposed regulation amendments. In some cases, the overall benefits support the case for early adoption, whilst in others a later timetable is more suitable.

In the present case, the reorganisation of the point M.A.305, in particular for the new paragraphs (d) and (e), and the clarifications introduced in the different AMC and GM of the point M.A.305 will contribute to:

- Streamline the aircraft continuing airworthiness record system (with better consideration given to components and new Information Technology tools) and its connection with maintenance records,
- Give coherence and direction to produce, keep and retain aircraft continuing airworthiness records for components,
- Enhance cost-efficiency in the aircraft continuing airworthiness record process.

Therefore, Airbus is in favour of an early adoption in order to maximize safety benefits and savings on archiving costs the proposed amendments will produce. 2015Q3 is proposed for the publication date of the Opinion.

response

comment

172

comment by: Swiss International Airlines / Bruno Pfister

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General Comments

SWISS supports the NPA although it is considered to be costly (time consuming and involving extra manpower).

A timely information campaign/training aid for involved Part-M staff should be provided.

Specific Comment

Ref 4.3.3 SWSS considers the interpretation of “back to birth” as being critical and therefore favours Option 2



response

comment

181

comment by: *Chris GRUENER, BOC Aviation Pte. Ltd.*

The terms owner/operator are intermingled, a clear separation should be stated as to their responsibility regarding commercial aviation. If the term "owner" is only required to cover general aviation, a more precise terminology would be good in order to avoid confusion with aircraft lessors/financers (e.g. person responsible for airworthiness compliance). This applies to a number of paragraphs in the regulation.

response

comment

182

comment by: *Chris GRUENER, BOC Aviation Pte. Ltd.*

The new regulation marks a clear improvement over the current regulation. It clarifies and removes uncertainties. Therefore it should be aimed to introduce this regulation earlier than Q1/2017.

response

comment

183

comment by: *Howard Torode*

Comment by European Gliding Union - General Comment

While this NPA clearly applies to GA, it was developed without consultation with the Task Force on Part M for General Aviation (GATF). It has clearly been written by Commercial Air Transport people on the 'one size fits all' principle, without any consideration of GA operational circumstances. This is poor procedural practice by EASA, and demonstrates a continuing failure to appreciate the needs of GA. This is contrary to EASA's own policy and position as recently expressed, for example, in EASA presentations at Friedrichshafen. Further, it is poorly written with non-standard phraseology and colloquialisms that most European's will not understand, and needs full editing for consistency and clarity. EGU as a minimum supports Europe Air Sports editorial comments.

response

comment

209

comment by: *Luftfahrt-Bundesamt*

The LBA has no comments on NPA 2014-04.

response

comment

263

comment by: *DGAC France*

DGAC France supports the aim of this NPA to clarify :



response	<ul style="list-style-type: none"> - what should be kept and for how long in technical records; - the use of new technologies for record-keeping.
comment	<p style="text-align: right;">comment by: <i>DGAC France</i></p> <p>282</p> <p>The NPA is quite clear about the records necessary to determine the status of airworthiness of an aircraft, including its engines, components.</p> <p>But DGAC France wonders how additional records, mainly from an operational source, should be addressed:</p> <ul style="list-style-type: none"> - hard-landing reports and following inspections, possibly impacting LDG and life limited parts - Reliability reports for ETOPS operations - Engine trend monitoring information
response	
comment	<p style="text-align: right;">comment by: <i>DGAC France</i></p> <p>283</p> <p>The NPA clarifies within MA.305 and associated AMC/GM what the aircraft continuing airworthiness records system is, with the aim to determine the airworthiness of an aircraft.</p> <p>There is no similar description of what documentation shall be associated with components on the shelf. For instance, when an engine is removed from an aircraft and another s/n one is mounted, the overall aircraft records per M.A.305 will trace the new s/n engine. But the removed s/n engine should have its own records and it is possibly worth describing that in an AMC to M.A.501 (b).</p>
response	
comment	<p style="text-align: right;">comment by: <i>DGAC France</i></p> <p>284</p> <p>As the AMC MA305(h) has been reviewed with regard to IT systems and digitized record, DGAC recommends to review AMC MA714 accordingly.</p> <p>The following parallels can be drawn:</p> <ul style="list-style-type: none"> - AMC MA714(3) ↔ AMC MA305(e)(c) - AMC MA714(4) ↔ AMC MA305(e)(d) - AMC MA714(5) ↔ AMC MA305(e)(e) - AMC MA714(6) ↔ AMC MA305(e)(f)
response	



comment

287

comment by: *European Sailplane Manufacturers*

The European sailplane manufacturers have some general comments to NPA 2014-04 about "Technical records".

From the perspective of the lower end of European aviation we must emphasize again, that the "one size fits all" approach at EASA rulemaking becomes visible again.

When looking through the list of issues to be addressed in chapter 2.1 we find mostly issues which are not relevant to small aircraft and/or will only make things more complicated for our communities.

It is understood that Part-M has to be applicable to sailplanes as well as airliners, but if Part-M is changed in a way, that the change itself alone creates a lot of additional effort without a real benefit, then it is not acceptable.

Our main issue lies with the proposal to replace the "life limited parts" and "service life limited parts" with other terms.

Even if these old terms are in some cases not as precise as it could be desired, a replacement of terms will have large consequences.

Aircraft maintenance programmes, maintenance manuals of products, manuals of approved organisations, official publications by authorities and other organisations - all will be affected if these long used terms will be re-defined or replaced.

For us this is an example, where the will to do rulemaking seems to be much higher than the will to get to more workable regulations.

It is also an example how the RIA is really not used to make an assessment but to simply express that the proposed changes shall be done.

Alone the first paragraph of the "Safety risks" chapter in the RIA is not more or less than a general excuse for the perception that even more paperwork is considered to be increasing safety. It is really even more unveiling that here the main reason given is the stated probability for an accident of a large aircraft.

Proceeding further in the RIA shows that in most cases the assessing team saw no problems for General Aviation (under point 5) within the RIAs for each sub-tasks. This only shows that no real consideration was done in that respect.

Looking further into the RIA it is also quite obscure how sometimes 1 / 2 / 3 points are given - for an outsider this rather seems to be difficult to understand or to accept.

This results into a fine table where numbers can be added and compared, but in the end we do not find a real assessment about the possible effort, which has to be spent on the side of stakeholders to implement the proposed changes.

It is easy to decide that safety goes up three points (whatever this is) and to claim that GA and/or economics are not or only slightly affected.

The end result is always an inclination toward a proposed change as the rulemaker is then



finished and others have the problem to implement and make it work.

Going back to the issues to be addressed, the sailplane manufacturers have no problem to make it easier to clarify record-keeping periods, allow more electronic means in documenting and marking of parts and making it easier for organisations dealing with EASA and FAA.

But we really oppose change in the rules which will create a lot of effort, increase the implementation efforts by the NAAs and create costs without a safety benefit.

response

comment

292

comment by: *European Sailplane Manufacturers*

The European sailplane manufacturers want to point out that this NPA has not been analysed until now in the General Aviation Part-M Task Force.

This task force has been established by EASA in February 2012 after a workshop in autumn 2011 where the General Aviation communities expressed their great frustration about the fact that Part-M is not very helpful in their communities due to the complicated structure and the need to fit to all sizes of aircraft.

It was explained by EASA to GA stakeholders and the task force members, that from now on the task force shall look into all GA-related rulemaking for Part-M in order to avoid further deteriorating of the already difficult situation.

In the case of NPA 2014-04 this promise has not been kept.

The sailplane manufacturers have a seat in the task force and herewith demand that EASA stays to such promises.

As commented in the other inputs, this NPA will create a considerable effort also in the GA communities and it is nothing less than an affront if EASA makes such promises and then publishes such NPA.

This is even more disturbing when it is considered that also the group composition of the underlying MDM.076 task shows no indication that the needs of GA have been taken into account.

This total ignorance of the needs of GA and the lack of willingness to improve is in total contradiction to the new stated goals as outlined in the EASA GA roadmap, which was announced with great fanfare in spring 2014.

No wonder many GA stakeholder are rather sceptical....

response

comment

295

comment by: *European Sailplane Manufacturers*

As already explained before, the European sailplane manufacturers see the most problems with the re-definition and replacement of the terms 'Life Limited Parts' and 'Service Life



	<p>Limited Parts’.</p> <p>When looking into the ToR it was only stated that these terms today are inconsistent in the use of it.</p> <p>It was nowhere asked in the ToR to replace the terms.</p> <p>As explained before we see a lot of possible consequences by such a replacement of terms and therefore do oppose this proposal.</p> <p>We propose as alternative to do what was asked for in the ToR: to issue the inconsistencies of the use of these terms as is been done today.</p> <p>(Why should the SSCC issue ToR if they are not followed?)</p>
response	

comment	<p>337 comment by: <i>Luftsport Verband Bayern / Germany</i></p> <p>From the view of General Aviation and the glider community in Europe this is an NPA which solves a problem which does not exist in this environment. This NPA may solve problems in the commercial environment but not in the GA.</p> <p>On the contrary implementing this NPA will create the need for more paperwork in our environment without having a benefit, as detailed later in the chapter related comments, even in the light that EASA states itself that an accident deriving from the old "unprecise" terms is not known (chapter 4.1).</p> <p>Stating "no impact" for General Aviation (chapter 4.4) shows that GA was not really involved in preparing this NPA.</p> <p>Redefining the terms as proposed here may solve some old questions but will create a lot of new questions regarding the use of old aircraft or component manuals, organisation manuals, publications by NAAs and so on.</p>
response	

comment	<p>368 comment by: <i>FAA</i></p> <ol style="list-style-type: none"> 1. 1. The record retention periods are significantly longer than FAA requirements (several locations). 2. 2. The conversion from U.S. records requirements to EASA standard may be difficult to impossible due to detail and retention period differences. 3. 3. Proposed Point GM M.A.305(d)(2) - Definitions of "time controlled," "hard time," and "on-condition" etc. should be furnished in the definitions in the front of the document.
response	



comment	371	comment by: <i>NFO Technical Committee</i>
	<p>The aviation industri need to develop better software program. When i use my B1/B2 to give a CSR Certificate of Release to Service i spend a lot of time in front of the computer instead of repair or troubleshoot on the aircraft. And some of the manufacturer made some very time consuming Maintenance Manuals to.</p> <p>I will give the Comment Response Tool used in EASA a big smile. Easy to understand and make comments.</p>	
response		
comment	373	comment by: <i>Aviation Working Group</i>
	<p>Attachment #1</p> <p>Please see attached AWG's comments on NPA 2014-04</p>	
response		

Applicability — Process map

p. 1

comment	221	comment by: <i>Eamon STAPLETON</i>
	<p>Reference document FAA AC 120-16E was cancelled and replaced by FAA AC 120-16F in November 2012.</p>	
response		

EXECUTIVE SUMMARY

p. 1

comment	36	comment by: <i>René Meier, Europe Air Sports</i>
	<p>Page 1/44 Executive Summary</p> <p>Based on safety recommendation UNKG 2007-91 the Agency initiated the Rulemaking Task and its NPA we are discussing here.</p> <p>Considering the extremely wide scope of aviation we do not think that this initiative will bring good results as e.g. provisions for CAT operators are in no way identical to the needs of a flying club.</p> <p>We read in the second paragraph of the Executive Summary of "not clear enough provisions". Unfortunately terms proposed in the NPA like "dirty finger prints" and "conservative" are not clear enough as well and must be replaced to reduce possible</p>	



misinterpretations to a strict minimum. "Hard time" surely will be misunderstood, despite the definition the Agency proposes

Rationale:

Future AMC/GM will not be translated officially, for this reason we need expressions not leading to confusion as we address non-native readers of texts written in English.

What we really do not like is the wording "...has been destroyed...", neither here in the Executive Summary nor in the following text.

Proposal:

Please write "...permanently removed from service" only. "Dismantled" would be another acceptable term. And also do it in 4.1. and in 4.1.1.

Rationale:

Nobody wishes to destroy an aircraft deliberately: An aircraft is destroyed in an accident, probably written off due to a ground fire, its situation may eventually be "beyond economical repair", it might be permanently stored, scrapped or wrecked but simply destroyed in the pure sense of the word is very unlikely a situation.

response

comment

195

comment by: *Swedish Transport Agency*

Swedish Transport Agency (STA) comments to NPA 2014-04 Technical records

The general impression is that we agree the proposed changes to clarify the intention of the technical records for continuing airworthiness.

response

comment

336

comment by: *SVFB/SAMA*

ECOGAS

Representing Small and Medium Enterprises

This community is making a living for the Owners (Entrepreneurs), their families and their employees and their families.

This community is most hit by overregulation.

We are aware of the changes in preparation for part of the recreational aviation, which we support and appreciate the efforts.

For SME's we are expecting urgent and concrete results, should not more SME's close down and jobs lost.

We quote from the "Executive summary:

"This evaluation is always done taking into account different operations/aircraft, so the less



complex aviation community is not imposed to hold records in the same way that more complex ones are."

We propose that there is no change to all aviation up to 5.7, unless it's a change which reduces administrative work in a proven and stakeholder accepted way.

Any safety recommendation from a AAIB should be seen in the context of a risk based approach and should only lead to legal change after an economical impact assessment on SME's in comparison to a forecasted improvement in safety.

"This NPA and the decision eventually coming out of it will be limited to Public Air Transport by Scheduled Airlines and Maintenance Organisations involved Scheduled Air Transport and Scheduled operations" we could accept it"

Without such limitation, we see the potential for more burden without safety benefit for SME's.

We repeat here once more, the data for the substantiation of a new rule:

- must be shown in full
- must be true
- must be valid
- must be transparent (this is not the case for the table with the conclusions)
- must be important (what risks will be mitigated >? <Yes its ok for scheduled commercial airtransport)
- and it should generate a ROI for GA as well, in any case it should not be negative for any sector of GA.

response

Table of contents	p. 2-3
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comment	293	comment by: <i>Regio Lease</i>
	<p>Generally in this NPA we use the term "applicable parameter" (which is defined on page 15) and the terms of its definition such as : flight hours, landing, cycles.</p> <p>It is a bit disturbing in the understanding and though not really in line with the definition.</p>	
response		

2. Explanatory Note	p. 5-9
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comment	39	comment by: <i>René Meier, Europe Air Sports</i>
	Page 5/44	



response	<p>2.2. Objectives</p> <p>Cost efficient rules? When it comes to M.A.305 (b) 1. we find that totally unnecessary costs are produced when the proposed provisions will become applicable to most of the General Aviations operators, as a matter of fact, cost efficient operations will be hindered by rules having nothing in common with efficiency and with effectiveness.</p> <p>Rationale:</p> <p>The Agency's proposal is in no way cost efficient, it produces an additional administrative burden on operators of aircraft of non-complex design, if we shall not get provisions adapted to our needs.</p>
comment	<p>202 comment by: Klaus Lehmkoester - CAMO, DE.MG.1016, LBA.MG.1016</p> <p>FAA: Yes, but make it easier. Do a copy/paste of FAA rules and delete all the EASA rules! And, in future, there no need of the EASA authority!!!</p>
response	
comment	<p>203 comment by: Klaus Lehmkoester - CAMO, DE.MG.1016, LBA.MG.1016</p> <p>Life limited parts:</p> <p>I think, with this action you will open a backdoor to legalise your failed directive with the life limited parts and TBOs.</p> <p>Please make a proposal what you will do with aircrafts older then about 20 years?</p>
response	
comment	<p>220 comment by: Klaus Lehmkoester - CAMO, DE.MG.1016, LBA.MG.1016</p> <p>General remark:</p> <p>Who did this NPA? When I read this, there is absolutly no compliance with the task force for Part-M!!!</p> <p>You said at the AERO in Friedrichshafen everything will come easier. But with this NPA and no feedback from the task force erylthing will come much more difficulter.</p> <p>What is the aim and advantage of this excessive collection and documentation of data? Is there anybody in the EASA or national authorities who evaluated these data; e. g. do a reliability analysis with Weibull? Which sense is behind a "Life Limited Part" and "Service Life Limited Part"? Safety? I do not think so. I think several manufactures only want to earn an extra money with short limited parts. There is absolutly no control of failed parts and suspended parts in the general aviation.</p>



Examples:

- The (motor-)starter from “Sky-Tec” have a lifetime of 2,000 h (used in C172 or Pa28). This means by a starting procedure of 15 seconds you can use this starter 4 times a minute or 480,000 times within his lifetime. Who will watch this?
- A modern glider has 6,000 h lifetime and with prolonging up to 12,000 h. By about 150 h/year you can fly it for 40/80 years. I think your personal lifetime is terminated before ...
- Hoses from “Aeroquip” with same used oil have different lifetime, depends only to the authorities not to the aircraft manufacturer ...

L'Hotellier connectors: Lifetime 10 years! Wether one hour in use or thousands. What a horror!

Lifetime limits may can have sense for big airplanes, but not for small one in the general aviation. Please compare this with your own car: How you collect lifetime data? Are there any one? Which kind of technical records you uses? How often you change the motor in your car? Any average vehicle on our roads are much more complex than any Cessna or Piper or any glider!

Micro light airplanes: Same Rotax motor as in certified airplanes, but no lifetime control. How does this match? Same for other parts, like hoses and ...

response

comment

261 comment by: *Dassault Aviation*

Dassault-aviation comment pages 6,35,40,43,21-22

“Lack of guidance on the acceptability of new technology, such as RFID (Radio Frequency Identification) ”

It seems regrettable to exclude evolutionary technologies -as RFID- of acceptable means.

Dassault-Aviation suggest to add a future opportunity for RFID use when this technology will be on control.

response

comment

290 comment by: *Regio Lease*

We should ensure that the term "back to birth" is not used as is in the manufacturer documentation. We have verified on the Airbus ALS documentation, however we have a doubt on some other OEMs such as CFMi.

response

comment

318 comment by: *René Meier, Europe Air Sports*



Page 5/44

2.1. Overview

The inconsistency in the use of the terms "Life limited Parts" and "Service Life Limited Parts" is not a real problem.

Rationale:

Different interpretations occur because different languages are spoken in Europe, because AMC/GM are normally not translated, because from the start terms lacking precision like "back to birth" or "dirty finger prints" are accepted in official texts.

We see a risk in the fact mentioned above when we write about missing translations of AMC/GM: Most probably NAA's then only refer to "hard law" available in their language, they reduce therefore existing freedom of action and available reasonable interpretation to a minimum, probably to the detriment of General Aviation.

response

comment

348

comment by: SVFB/SAMA

2.2 If the objectives of the EASA System would not take into account in addition to the primary purpose

to protect it's public AND to promote the well being of the citizens of Europe, the excuse could only come from

that of timing.

The regulation was made in a time of a positive economical outlook.

Even so, it takes somewhat into account that regulation must be cost efficient.

We estimate that the meaning of the following article is that the regulation must be cost efficient not mainly for the regulator, but for the regulated.

If this should not be the case, then there is need to change the regulation.

Article 2 (c) of the BR 2016/2008 states:

"(c) to promote cost-efficiency in the regulatory and certification processes and to avoid duplication at national and European level";

The application of this article demands that the economical effect eventually caused by the application of the amended regulation must not be negative; in fact it requests the effect to be positive.

The effect on GA (definition of the GA: all aviation except airlines and state aircraft)

must made transparent to the GA Stakeholder and must not be implemented if negative and



needs their full consent.

To make the process economically more efficient, we propose that legislation is changed in the

BR 2016/2008 as it has been successfully done in other parts of the legislation as for example in 1254/2009 which states in article 1:

Article 1

Member States may derogate from the common basic standards referred to in Article 4(1) of Regulation (EC) No 300/2008 and

adopt alternative security measures that provide an adequate level of protection on the basis of a local risk assessment at airports or demarcated areas of airports where traffic is limited to one or more of the following categories:

1. aircraft with a maximum take-off weight of less than 15 000 kilograms;
2. helicopters;
3. law enforcement flights;
4. fire suppression flights;
5. flights for medical services, emergency or rescue services;
6. research and development flights;
7. flights for aerial work;
8. humanitarian aid flights;
9. flights operated by air carriers, aircraft manufacturers or maintenance companies, transporting neither passengers and baggage, nor cargo and mail;
10. flights with aircraft with a maximum take-off weight of less than 45 500 kilograms for the carriage of own staff and non fare-paying passengers or goods as an aid to the conduct of company business.

Introduction of such boundaries as excluding aircraft up to 15'000 kg and /45'000 kg into 2016/2008 would probably solve many if not most or all of the problems faced by GA and especially by SME's.

If such proceedings was possible in 1254/2009 for Aerodromes, why should it not be the appropriate and Risk based approach for Part 145,Part M, Part 66, Part 147 ?

2.3 We appreciate the intent to make things better and simpler.

The question is: will they be simpler for all players below the airline environment ?

If this can be demonstrated before the rule becomes valid,only then we would support it.

The intro of the wording "Technical Log system" and the correlated required data processing is good for the airline environment and for aircraft above 15'000 kg/45'000kg, but we suspect creation of undue burden below such limits and a heavy burden for recreational



aviation in any case.

The present application of the Term "Commercial Airtransport" prevents application of legislation in a proportionate and risk based manner, it would be adequate if changed to "Scheduled commercial airtransport".

What risks does the Agency exactly want to address ?

The loss of an A330 or the loss of a limited number of lives ?

In the later case it's not demonstrated that a change will have the intended effect.

response

comment

351

comment by: *Ralf Keil*

Bereits in den einführenden Erläuterungen zur NPA 2014-04 zeigt die EASA eine Differenz zwischen der Ankündigung und Umsetzung des Willens zur Schaffung deutlicher Erleichterungen für die Allgemeine Luftfahrt, insbesondere dessen „Light End“. Speziell für Luftfahrzeuge nach ELA 1 und ELA 2 werden nach dem Willen dieser NPA einmal mehr Begrifflichkeiten und Regulierungen der kommerziellen Luftfahrt übernommen, die weder praxisnah noch bisher üblich sind.

Die NPA versucht Begrifflichkeiten neu zu definieren und reißt dabei Lücken auf die neue Fragen stellen, aber unbeantwortet bleiben. Damit schafft die EASA bei den Haltern einfacher Luftfahrzeuge einmal mehr Verwirrung.

Insgesamt erinnert die NPA aus der Sicht des Luftsports an die NPA/Opinion zu den TBO im Jahre 2013. Insgesamt war sicherlich auch diese Decision 2013/025/R in ihrem Ansatz gut gemeint, war aber für die Allgemeine Luftfahrt zu kompliziert, wenig praxisnah und ließ den nationalen Behörden so viel Gestaltungsspielraum, dass eine europaweit einheitliche Umsetzung der Decision unmöglich wurde. Den betroffenen Luftfahrern wurde damit eher geschadet als ihnen zu helfen.

Das Schicksal der Rücknahme durch die Decision 2013/034/R ist bekannt.

In der vorliegenden NPA zeigen sich ähnliche Ansätze, welche besonders für das „lighter End“ der der Allgemeinen Luftfahrt unter dem Aspekt einer regiden Umsetzung durch die nationalen Behörden unbillig harte Entscheidungen erwarten lassen.

Auch wenn ich bei den konkreten Punkten gesondert Stellung nehmen werde, hier schon einmal die Zusammenfassung der nachfolgenden Kommentare:

1. Der Versuch der besseren Definition und Klarstellung der Begrifflichkeiten von „laufzeitkontrollieren Komponenten“ und „lebenszeitbegrenzten Bauteilen“ und deren Dokumentation löst nicht das Problem der Allgemeinen Luftfahrt, weil es von Herstellern sowohl Empfehlungen als auch Forderungen nach Laufzeitbegrenzungen gibt. Die kommentarlose Übernahme dieser Begriffe würde erneut dazu führen, dass nationale Behörden JEDE Empfehlung eines Herstellers als „MUSS“ definieren (können). Eine im Bereich des Luftsports seit Jahrzehnten übliche Überziehung von TBO unter konkreten



Bedingungen wäre damit ausgeschlossen. Nach dem gegenwärtigen Wortlaut müsste ein Motor bei Erreichen einer empfohlenen Laufzeit in jedem Fall ausgetauscht werden. Hier findet sich ganz konkret das Problem der Decision 2013/025/R wieder.

2. Die Forderungen nach der Führung der technischen Dokumentation nach der Durchführung von Flügen ist für den Bereich des Luftsports, der ELA1- und ELA2-Luftfahrzeuge weder sinnvoll, noch praktikabel oder in irgendeiner Weise der Flugsicherheit fördernd. Für die Forderung der Aufzeichnung „nach jedem Flug“, insbesondere bei kurzen, aufeinanderfolgenden Flügen, z.B. bei Ausbildungsflügen in der Platzrunde gibt es, soweit keine technischen Probleme vorliegen, keinerlei Veranlassung die Angaben über Betriebszeit und Landungen in die Bordbücher einzutragen.

Unter der Berücksichtigung der „Road Map for GA“ der EASA erwarte ich, dass alle Luftfahrzeuge der Kategorie ELA1 und ELA2 aus dieser NPA und der folgenden Decision ausgenommen werden.

response

3. Proposed amendments — 3.1. Draft Opinion — 3.1.1. Annex I to Decision 2003/19/RM (AMC to Part-M) — Point M.A.305(a)

p. 10

comment

64

comment by: AIRBUS

1. PARAGRAPH / SECTION THE COMMENT IS RELATED TO:

NPA 2014-04, page 10/44, point M.A.305(a)

2. PROPOSED TEXT / COMMENT:

Could the Agency clarify the term ‘certificate of release to service’ versus ‘authorised release certificate’ (title of the EASA Form 1)?

Is the certificate of release to service:

- an authorised release certificate (i.e. a document),
- a declaration confirming that the maintenance work (to which the declaration relates) has been completed in a satisfactory manner (i.e. a set of information),
- both, or
- something else?

3. RATIONALE / REASON / JUSTIFICATION:

The ToR related to this NPA specify that the rulemaking task will address issues related to continuing airworthiness and maintenance records, and in particular the different interpretations as to which documents are considered equivalent to an EASA Form 1.

On one hand, the points M.A.802(b) and 145.A.50(d) indicate the EASA Form 1, i.e. a document, constitutes the certificate of release to service (for components). On the other hand, the point M.A.801(f) and the AMC 145.A.50(b)2. seem to imply that the certificate of



release to service is a set of data.

In this context, one can ask what has to be “entered in the aircraft continuing airworthiness records [...] in no case more than 30 days after the day of the maintenance action”. The data, the documents, or both?

Could the following terms be proposed to help?

– The term ‘authorised release documents’ embraces documents confirming a certificate of release to service. They include, amongst others, the operator’s technical logbook and the EASA form 1 or equivalent.

– Within the context of maintenance, the ‘certificate of release to service’ is a declaration confirming that the maintenance work to which it relates has been completed in a satisfactory manner, either in accordance with the approved maintenance data and the procedures described in the maintenance organization’s procedures manual or under an equivalent system. The release procedures are described in the point 145.A.50, the point M.A.801 for the aircraft and in the point M.A.802 for components.

response

comment

65

comment by: AIRBUS

1. PARAGRAPH / SECTION THE COMMENT IS RELATED TO:

NPA 2014-04, page 10/44, point M.A.305(a)

2. PROPOSED TEXT / COMMENT:

Could the Agency explain why the point M.A.305(a) has not been amended to take into account the component certificate of release to service required by point M.A.802?

It is proposed to amend this point to read:

“M.A.305 Aircraft continuing airworthiness record system

(a) At the completion of any maintenance, the certificate of release to service required by point M.A.801, **M.A.802**, or point 145.A.50 **and the associated detailed maintenance records** shall be **entered** ~~included~~ in the aircraft continuing airworthiness records **system when they are required to be kept in compliance with (e)**. Each entry shall be made as soon as practicable but in no case more than 30 days after the **date the certificate of release to service is issued** ~~day of the maintenance action~~ **for aircraft maintenance or for the component’s installation on aircraft following the component maintenance.”**

3. RATIONALE / REASON / JUSTIFICATION:

The amendment proposed by this NPA for the points M.A.305(e)2. and 3. refers to the certificate of release to service, and in particular for maintenance performed on components. So, how long is given to Part-M organisations to introduce in the aircraft continuing airworthiness record system, the component certificate of release to service and associated detailed maintenance records that contribute to demonstrate the aircraft



continuing airworthiness and the serviceability of both the operational and emergency equipment?

At first glance, it may seem unnecessary to keep the certificate of release to service (and related detailed maintenance records) associated with the off-wing maintenance of a given component, because another certificate will be issued at component's installation on aircraft. Although components do not accumulate any flight hours or flight cycles when being on ground, attention may need to be given to scheduled tasks where the accomplishment is controlled in calendar time (hours, days, months, years). For some off-wing maintenance tasks, the clock may run immediately after the authorised release document is signed. In demonstrating compliance with the Aircraft Maintenance Programme, the date when the authorised release document for off-wing maintenance is signed may be the reference to calculate the next accomplishment of a maintenance task, not the date of the component's installation on aircraft. Further, the time between the signature of the certificate of release to service and the component installation may be significant.

It is proposed to state "[...] entered in the aircraft continuing airworthiness record system." to be consistent with the point title (... record system). In addition, the next sentence begins with "Each entry..." (consistency).

response

comment

210

comment by: *Baines Simmons Limited*

M.A.305 Aircraft continuing airworthiness record system

There is an inconsistency between the heading and the remainder of the rule texts, in that the heading uses the term " ... record system" and the remainder of the text generally refers to the "... records".

In our experience most (CAM) organisations do not adequately define the constituent parts or structure of their record systems in their CAME or procedures. Inconsistencies such as described do not help organisations (or individuals) understand the concept of a system of records (as opposed to an IT system). We recommend that the term system is used throughout to help reinforce the concept. In the interest of proportionality, the "system" could consist of traditional log books for, e.g. NCO aircraft, or one or more computer databases for, e.g. CAT aircraft.

M.A.305(a) Aircraft continuing airworthiness record system

In the first sentence the word "entered" has been replaced by "included", however the second sentence still retains the word "entries". This is inconsistent.

May we propose the following, simplified sentence for M.A.305(a):

M.A.305 Aircraft continuing airworthiness record system

(a) As soon as practicable, but in no case more than 30 days after the day of completion of any maintenance action, the certificate of release to service required



by point M.A.801 or point 145.A.50 shall be ~~entered~~ included in the aircraft continuing airworthiness record **system**.

response

3. Proposed amendments — 3.1. Draft Opinion — 3.1.1. Annex I to Decision 2003/19/RM (AMC to Part-M) — Point M.A.305(b)

p. 10

comment

1

comment by: *George Knight*

This is a very disappointing proposal and very much against the spirit of more proportionate regulation for General Aviation being talked about by EASA's executives.

I am a sailplane pilot and instructor. I am also a sailplane towing pilot.

Sailplanes.

For my own sailplane I make up my sailplane's logbook on a monthly basis to show the total hours flown in the month and the numbers of launches that have taken place. For many years, both before and after EASA maintenance rules, came into force this approach has deemed to be satisfactory.

If my interpretation of the text

*"(b) The aircraft continuing airworthiness records shall contain the following: 1. a record of the date, total in-service life accumulated in flight hours and/or flight cycles and/or landings and/or any other applicable parameter, for the aircraft, engine(s) and/or propeller(s) **after each flight;**"*

is correct the log book will, if this change is adopted, need an entry to be made for every flight.

When one considers that, for training sailplanes, in particular, a great many flights may take place in a single day and that when training for launch failures on the winch many of the flights will have a duration of no more than one minute then this change will create a ridiculous increase in the time and effort to enter each flight on a separate entry – possibly more time updating the aircraft's log book than it has flown.

It MUST be permitted to allow summary entries to be made in the logbooks of light general aviation aircraft – in particular sailplanes where many very short flights take place.

There is absolutely no safety justification for requiring a separate entry after each flight or even each day.

The regulation must permit summary entries to be made covering a period of up to one month.

If EASA implements this rule then it is most unlikely that sailplanes will comply and log books will cease to be accurate. A big negative impact on safety.

Please reconsider or provide an alternative solution for sailplanes.



Sailplane Towing

Sailplanes towing aircraft may make a great many flights each day – typically of 6 to 8 minutes in duration. The pilot is permitted to make summary entries for multiple flights that take place without a break of more than 30 minutes in his/her log book.

It is nonsense for aircraft engaged in this type of operation to have to update the log books with an entry for every flight as propose. There could be 30 or more flights (by several different pilots) in a single day in one tug.

Please apply some common sense and allow summary entries covering multiple flights for GA.

response

comment

15

comment by: Aviteh Ltd.

There is no clear definition of "flight hour" or "flight time" in the terms of airworthiness. The definitions exist in FAA and Transport Canada regulations but not in EASA.

FAR Part 1, Section 1 - General definitions, provides the definition of "Time in service" as follows:

"Time in service, with respect to maintenance time records, means the time from the moment an aircraft leaves the surface of the earth until it touches it at the next point of landing."

Canadian Aviation Regulations (CARs) Part I, Subpart 1 - Interpretation, gives similar definition for "Air Time" as follows:

"air time means, with the respect to keeping technical records, the time from the moment an aircraft leaves the surface until it comes into contact with the surface at the next point of landing"

Most of the aircraft manufacturers give similar definition of "flight time" for the purpose of continuing airworthiness management as above, i.e. "flight time" means only the time aircraft is in the air and ground time doesn't count. On the other hand there are manufacturers that don't give any definitions what "flight hour" actually means and that creates problem with different interpretations from civil aviation authorities.

New AMC to M.A.305(b) should be added with the definition of flight time as follows, or similar:

"FLIGHT HOURS, FOR THE PURPOSE OF CONTINUING AIRWORTHINESS RECORDS, MEANS THE TIME FROM THE MOMENT AN AIRCRAFT LEAVES THE SURFACE UNTIL IT COMES INTO CONTACT WITH THE SURFACE AT THE NEXT POINT OF LANDING"

Adopting different defintion may have consequences in the case of import of aircraft from USA or Canada. In that case imported aircraft may not have the correct number of flight hours recorded.



response

comment

29

comment by: *British Gliding Association*

M.A.305 (b) 1

Add "as appropriate" after the sentence.

Rationale;

Many light aircraft do not have any cycle controlled items hence most operators do not record flight cycles (landings). "as appropriate" was previously included in the rule and made the paragraph workable.

response

comment

30

comment by: *British Gliding Association*

M.A.305 (b) 1

There needs to be recognition that for ELA engine and propeller hours may be grouped into weekly blocks and sailplanes flying hours and launches grouped into monthly blocks.

Rationale;

This is the established practice and an acceptable and less onerous method of recording with no increased risk of components or lifed limited parts exceeding their life.

The majority sailplane operations tend to be many flights of short duration where the daily totals are grouped and entered into the aircraft records in monthly blocks.

response

comment

38

comment by: *René Meier, Europe Air Sports*

page 10/44

M.A.305 (b) 1.

"...after each flight" is not at all appropriate when it comes to series of flights in e.g. helicopter operations or glider-towing operations, what the Agency asks for does not make sense for flight schools where several flights of short duration are undertaken on the same day.

Proposal 1:

Please add "...or series of similar flights."

Rationale:

This is more appropriate to the helicopter operators environment, to the mountain flyers world, to the community of sailplanes operators and to parachute-jumpers operations. There



is no need for immediate detailed records when aircraft of relatively simple design are involved, containing but very few life-limited items.

Many of our aircraft operate in a "low duration / high duty cycle environment. Do you really consider it feasible and reasonable to fill-in logs between two sailplane-towing flights, two parachute-dropping flights, two helicopter rotation when normally the engines are not stopped? We think this is dangerous and simply is the opposite of what we are asked for, which is safe conduct of flights.

Proposal 2 :

Please introduce the possibility of grouping flight hours for ELA aircraft engines in weekly blocks, sailplanes flying hours in monthly blocks.

Rationale:

Considering the complexity of our operations we firmly believe that this method is sufficient and fulfils the requirements.

We do not undertake CAT-like operations, our aircraft are of relatively simple design, most of our operations take place in a VFR/VMC environment. We urgently ask you to accept these facts.

response

comment

67

comment by: AIRBUS

1. PARAGRAPH / SECTION THE COMMENT IS RELATED TO:

NPA 2014-04, page 10/44, M.A.305(b)

2. PROPOSED TEXT / COMMENT:

Could the Agency clarify why the requirement of life recording is limited to products?

Should the paragraph (b) of the point M.A.305 read the following?

“(b) The aircraft continuing airworthiness records shall contain the following:

1. a record of the date, total in-service life accumulated in flight hours and/or flight cycles and/or landings and/or any other applicable parameter, for the aircraft, engine(s), ~~and/or~~ propeller(s) **and/or any particular component** after each flight; [...]"

With regard to the term ‘total in-service life accumulated’, could the Agency clarify the origin of life accumulation calculations? In other words, is the origin of calculations the date of first ever flight/maiden flight, the date of entry into (revenue/operational) service, or any other date?

3. RATIONALE / REASON / JUSTIFICATION:

For example, a life limitation may apply to some Auxiliary Power Unit (APU) rotating parts (ref. EASA AD 2010-0079). In such a case, the life limitation may be measured in cycles of APU usage. The requirement does not take into account the possible need for recording lives



that are asynchronous to those of products.

The origin of life accumulation calculations is not defined, although it is essential to manage the aircraft continuing airworthiness (for example to schedule maintenance).

See also the comment on AMC M.A.305(b)1.

response

comment

68

comment by: AIRBUS

1. PARAGRAPH / SECTION THE COMMENT IS RELATED TO:

NPA 2014-04, pages 10/44, point M.A.305(b)

2. PROPOSED TEXT / COMMENT:

Point M.A.305(b)3. states “when required in point M.A.306 for commercial air transport or by the Member State for commercial operations other than commercial air transport, the operator’s technical log.”

Point M.A.306(a) states “In the case of commercial air transport, in addition to the requirements of M.A.305, an operator shall use an aircraft technical log system [...]”.

Could the Agency explain the reason for considering commercial operations other than commercial air transport in point M.A.305, while this provision is not in point M.A.306?

If this consideration is justified, it is proposed to move it from point M.A.305 to point M.A.306 to read:

“M.A.305 Aircraft continuing airworthiness record system

[...]

(b) The aircraft continuing airworthiness records shall contain the following:

[...]

3. ~~when required in point M.A.306 for commercial air transport or by the Member State for commercial operations other than commercial air transport~~, the operator’s technical log.”

“M.A.306 Operator’s technical log system

(a) In the case of commercial air transport ~~or when required by the Member State for commercial operations other than commercial air transport~~, in addition to the requirements of M.A.305, an operator shall use an aircraft technical log system [...]”.

3. RATIONALE / REASON / JUSTIFICATION:

For sake of consistency and clarity.

response

comment

116

comment by: AS Miller



M.A.305(b) proposes a requirement that detailed records be added after every flight.
For sailplanes this is a ridiculous requirement.
There are no components or airworthiness events that require this information flight by flight.
The recording burden would be intolerable in a gliding environment.

This proposal is in contravention of the EASA Board's approach to excessive GA burdens; the Agency should review its procedures to find why such an inappropriate proposal got to the NPA stage.

response

comment 156 comment by: Belgian CAA

M.A.305 (b) § 1. : To be complete and ensure correct traceability, it could be useful to specify the record of the type of aircraft with registration marks, including the engine/propeller serial number when applicable. It seems normal but to avoid confusion it could be better to precise that information to ensure full traceability.

M.A.305 (b) § 1. : the reference to the “applicable parameter” is not in line with the definition given in the “GM M.A.305 (1)”. Indeed, based on the content of this paragraph it’s quite fully identical to the content of the “GM M.A. 305 (1)”. Perhaps this wording can be cancelled from this article. Same remark for the “GM M.A.305 (9) (iv)” ; for “AMC M.A.305 (c) 1. §a” and “AMC M.A.305 (c) 3 § (b)”.

response

comment 184 comment by: Howard Torode

Comment by European Gliding Union -

3.1 Draft Opinion 3.1.1, Annex 1 to Decision 2003/19/RM - Item M.A.305(b)

PROPOSAL

EGU might propose that M.A.305(b) be amended in several ways. The most simple is to add final words to “.....after each flight **or series of similar flights.**”

The key issue here is that it is inappropriate and unnecessary to demand immediate detailed records as applied to simple GA aircraft containing very few limited lifed items and operating in low duration but high duty cycle operations. To better reflect this, one might further embellish the amendment as follows: “..... **at a cadence sufficient to safeguard life and time**



controlled components.”

RATIONAL

The proposed text (“.....after each flight.”) is inappropriate to light sport and GA aircraft operating under Part M (or even under Part 145). Note that, in this NPA the Explanatory Note UNKG-2007-091 states ‘...and Part M as necessary’, it was recognised that there may be particular issues therein.

Light sport and GA aircraft typically carry out multiple flight each day quite possibly involving multiple take-offs and landing. For these types of aircraft and operation flights are recorded locally for log keeping and commercial records. Updating of maintenance records is generally carried out at a lower cadence with complete accuracy. An ‘after each flight’ requirement is inappropriate, uneconomic and irrelevant.

response

comment

187

comment by: UK CAA

Page No: 10

Paragraph No: M.A.305(b)

Comment: The use of “and/or” for each parameter in this paragraph implies that there is a choice, such that they may not necessarily be recorded. By adding ‘as required’ then the necessary parameters as dictated by the manufacturer for airframe, engine, propeller will be recorded.

Justification: Clarity to ensure the correct and necessary information is recorded.

Proposed Text: “(b) The aircraft continuing airworthiness records shall contain the following:

1. a record of the date, total in-service life accumulated in flight hours and/or flight cycles and/or landings and/or any other applicable parameter, **as required** for the aircraft, engine(s) and/or propeller(s) after each flight;”

response

comment

205

comment by: Klaus Lehmkoester - CAMO, DE.MG.1016, LBA.MG.1016

M.A.305 (b), 1. "after each flight":

For Jumbo Jet ok.

For training impossible. Does it means that on a glider field "after each" winch launch all data have to be collected? who will do this? and hopefully the authorities will check this "every sunday on each" glider field ...

response



comment	<p>212 comment by: <i>Baines Simmons Limited</i></p> <p>M.A.305(b) Aircraft continuing airworthiness record system</p> <p>We support the deletion of the requirement to use "log books", which for many organisations, e.g. CAT operators of CMPA, have become an unacceptable administrative burden, in that they are maintained for compliance reasons and rarely used to manage continuing airworthiness. We do however believe that appropriately formatted and completed logbooks would represent an acceptable means of compliance to this requirement for, e.g. NCO aircraft.</p> <p>M.A.306 Operator's Technical Log System</p> <p>We have maintained for many years that the scope of applicability of M.A.306 is too narrow. We believe <u>all</u> aircraft involved in <u>any</u> operation must have a Technical Log System in order for the owner or CAMO to adequately manage the continuing airworthiness of aircraft.</p> <p>In the interest of proportionality, we believe different formats could be described in Acceptable Means of Compliance (AMC) and/or Guidance Material (GM).</p>
response	

comment	<p>264 comment by: <i>DGAC France</i></p> <p>This comment concerns § M.A.305 (b) to (d).</p> <p>Although the purpose of paragraphs b, c, d are clear, DGAC finds the structure of elements not so clear, with the choice of main verbs "include" or "contain".</p> <p>In addition, under "aircraft" continuing airworthiness records, it covers also of course, fitted engines, propellers, and components. The definition of (CE)2042/2003 article 2 "components" include "engine" and "propellers" . Therefore, there is some confusion reading paragraphs.</p> <p>DGAC would suggest to reuse proposed terms that clarifies the details of the records, but to merge the paragraphs (b) to (d) as follows and to add in the "introduction sentence of (b) the fact all components of aircraft are also covered in the "aircraft continuing airworthiness records":</p> <p><u>Proposed modification:</u></p> <p>M.A.305</p> <p>(a)....</p> <p>(b) The aircraft continuing airworthiness records shall <u>address the aircraft, its engines, propellers and other components and</u> contain the following:</p> <ol style="list-style-type: none"> 1. a record of the date, total in-service life accumulated in flight hours and/or flight cycles and/or landings and/or any other applicable parameter, for the aircraft, engine(s) and/or propeller(s) after each flight; 2. <u>the data with the supporting detailed maintenance records to address the current:</u>
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a. status of airworthiness directives and measures mandated by the competent authority in immediate reaction to a safety problem;

b. status of modifications and repairs;

c. status of compliance with the aircraft maintenance programme;

d. mass and balance report; and

e. status of deferred maintenance tasks and deferred defects rectification

3. The additional information with the supporting detailed maintenance records to address specific components:

a. current status of life limited parts including the life accumulated by each affected part in relation to the applicable airworthiness limitation parameter; and

b. current status of time controlled components, including the life accumulated by the affected components in the applicable parameter, since the last accomplishment of scheduled maintenance specified in the aircraft maintenance programme.

4. when required in point M.A.306 for commercial air transport or by the Member State for commercial operations other than commercial air transport, the operator’s technical log.

(c) and (d) are reserved.

(e) see further comments.

response

comment

289 comment by: *European Sailplane Manufacturers*

The new proposed requirement to have the regarding records written into the aircraft continuing airworthiness records (ACAR) after each flight is not acceptable.

Especially in small aviation it is common practice to make multiple flights per day.

A sailplane or a small aeroplane could do easily more than 20 flights per day.

It is neither feasible nor acceptable to make an entry into whichever log after each flight in such situations.

This could only come into the mind of persons familiar only with airline operations where either the number of flights is low per day or where you have the time and the personnel to do such a thing.

We oppose this requirement.

An entry of all flights at the end of the day into an aircraft log book is common practice and is also adequate. Nothing more.

response

comment

296 comment by: *European Sailplane Manufacturers*



The sailplane manufacturers have not the full overview of the proposed changes in M.A.305 because here in the NPA only the amended/modified sub-points are displayed.

This is not helping to not lose the overview.

Nevertheless we have the suspicion that with the proposed changes the clear definition that an aircraft log book might be fully sufficient as an aircraft continuing airworthiness record.

If this is the case, then this should be rectified.

It is fully acceptable to the sailplane manufacturers, that perhaps for an airliner the aircraft continuing airworthiness record could now be data on a hard drive or in the internet or whatever modern means of data.

But for our communities it is important to have a clear sentence that a single old-dated paper book called aircraft logbook is also sufficient.

The proposed mentioning of the aircraft logbook only in the AMC is not sufficient as

...some NAAs read and accept only what is found in the regulation

...some persons in Europe do not understand the English-only AMC

If such information is lost it will take not long until some not-understanding NAA demands much more elaborated type of records (or even full internet access in a glider ;-)).

response

comment

338

comment by: *Luftsport Verband Bayern / Germany*

In the GA environment and the glider community it is state of the art to enter the flights at least once per day due to the fact that a lot of flights may be done during one day, especially in the training organisations. Life limited components or time controlled components are under control by periodic reviews. The need to enter the accumulated hours/cycles or whatsoever for aircraft, engine and propeller (and other components ???) is not required because in our environment only a limited number of components are affected by limitations and these figures can be kept well under control by the means we have now. Collecting all the data required by this NPA will be a lot of additional paperwork without any benefit - and it will be paperwork because electronic means are not common here. The logbooks available today don't even have the possibility to enter these data.

So we do not agree with this change and want to stay with the paperwork we have now in use!

response

comment

352

comment by: *Ralf Keil*

M.A.305(b)1.

Dieser Punkt ist für die Allgemeine Luftfahrt, speziell für den Bereich des Luftsports



	<p>überzogen. Er stellt eine unbillige Härte dar und hat weder Einfluss auf die kontinuierliche Aufrechterhaltung der Lufttüchtigkeit, noch auf die Flugsicherheit.</p> <p>Soweit keine technischen Besonderheiten oder Abweichungen vom Standard entstehen, ist die Eintragung der akkumulierten Betriebszeiten (Zelle/Motor) und Landungen in die Bordunterlagen nach jedem Flugtag völlig ausreichend.</p> <p>Für die Feststellung der Restlaufzeit von Komponenten reicht es vollkommen aus, die Restlaufzeiten von Komponenten einmal jährlich im Rahmen der Feststellung der Lufttüchtigkeit festzustellen und diese Komponenten nur beim Unterschreiten einer „kritischen Restlaufzeit“ einer verstärkten Kontrolle zu unterwerfen.</p> <p>Vorschlag: Die Formulierung des „alten M.A.305(c)“ war völlig ausreichend:</p> <p>„c) In die Luftfahrzeug-Bordbücher müssen, wie jeweils zutreffend, das Luftfahrzeugmuster und das Kennzeichen, das Datum zusammen mit der Gesamtflugzeit und/oder den Flugzyklen und/oder den Landungen eingetragen werden.“</p>
response	
comment	<p>361 comment by: SVFB/SAMA</p> <p>We suspect that the formulation, well adapted to scheduled transport, may be burdensome for the non scheduled community below</p> <p>15'000/45'000 kg.</p>
response	
comment	<p>364 comment by: SVFB/SAMA</p> <p>M.A.305 (b) 3.</p> <p>Quote:</p> <p>3. when required in point M.A.306 for commercial air transport or by the Member State for commercial operations other than commercial air transport, the operator's technical log</p> <p>endquote</p> <p>Change into : for scheduled commercial air transport and leave the member state and ... other than commercial air transport away.</p> <p>As formulated it gives certain member states again a handle to regulate according higher requirements.</p>
response	
comment	<p>370 comment by: Oliver Garlt</p>



The Agency proposes to update the aircraft continuing records after each flight.

This regulation is impractical to General Aviation.

Many flights in General Aviation are short traffic pattern / 5-minutes flights. To check life limitations after those short flights for example to interrupt flight training – up to 20 times a day - for updating the technical documentation is not necessary, but rather obstructive to the air operations.

I propose to extend the period to the next day or the evening after a VFR flight day.

Aviation safety will not be affected in this case and the control of life limited parts and time controlled components is still given.

Typical aircraft log books accumulate flight hours on every page and not after each flight. Due to accurate preparation and the experience of the last seasons it is very predictable to determine the moment of exceeding time limitations without accumulating flight time several times a day.

response

3. Proposed amendments — 3.1. Draft Opinion — 3.1.1. Annex I to Decision 2003/19/RM (AMC to Part-M) — Point M.A.305(c)

p. 10-11

comment

5

comment by: *ParTem Aviation*

Item 5. - continuing airworthiness records should include status of deferred maintenance tasks and deferred defects only. Rectification details should form part of the the maintenance records.

response

comment

285

comment by: *DAC Luxembourg*

COMMENT DA CL-2014-04-05

Modify points M.A.305 (c) 2; M.A.305 (e) 2 and corresponding AMC M.A.305 (c) 2 and GM M.A.305 (c) 2 by replacing the wording “modifications” by “**changes to type design**” and suppression or clarification of the GM M.A.305 (c) 2.

Reason/Justification:

The terminology “modification” introduces the need for a definition, which does not exist.

The proposed M.A.305 (c) 2 (ii), while using the wording “modifications”, referred to M.A.304, which itself refers to data approved under Part 21 Subpart D “Changes” (And Subpart M “Repairs”). This **change to the type design** is a clear concept that can be used instead of modification.

On the other hand, and following GM M.A.305 (c) 2, the status of modifications embodied



includes the list of installed components. This concept is almost linked to the “configuration” of the aircraft, not to the changes (with SB, STC, minor change, etc.) that could have been made on the aircraft / components. A clarification is needed. See also Annex I to Decision 2013-005R and its definition of Repair status as a point of comparison:

Repair status means a list of:

- the repairs embodied since the original delivery of (and still existent upon) the aircraft / engine / propeller / component; and
- the un-repaired damage/degradations.

response

comment

354

comment by: *Ralf Keil*

Das AMC M.A.305(c)3 beschreibt den „Status der Übereinstimmung mit dem Instandhaltungsprogramm“ näher und gibt auch Hinweise zur Umsetzung.

Vor dem Hintergrund der zu erwartenden Selbsterklärung von Instandhaltungsprogrammen durch Eigentümer/Halter für ELA1-Luftfahrzeuge und weiterer Vereinfachungen für die Allgemeine Luftfahrt erscheinen die Regelungen für diesen Punkt für die betreffenden Luftfahrzeuge zu restriktiv.

Wer stellt unter diesen Umständen den Status fest? Zu welchem Zeitpunkt? Wie wird dieser dokumentiert?

Welche Auswirkung hat eine Abweichung bei der Feststellung durch Dritte gegenüber der eigenverantwortlichen Erklärung des Eigentümers/Halters bei nicht gewerblich genutzten einfachen Luftfahrzeugen?

Die EASA sollte die betroffenen Luftfahrzeuge aus der Änderung bis zur abschließenden Klärung im Zuge der Vereinfachungen für die Allgemeine Luftfahrt ausschließen.

response

3. Proposed amendments — 3.1. Draft Opinion — 3.1.1. Annex I to Decision 2003/19/RM (AMC to Part-M) — Point M.A.305(d)

p. 11

comment

12

comment by: *AOPA-Sweden*

(d) The aircraft continuing airworthiness records shall include...

1. current...

2. (add): ***For commercial air transport only***, current status of time controlled components, including... .. maintenance programme.

The definition added in GM MA 305(d)(2)(c) for the term “Time Controlled Components” will otherwise make it necessary to break out all inspections for wear and condition etc of



response	<p>bearings, joints etc, etc currently listed in the DAH inspection lists and list them separately with individual times. This is totally unacceptable for GA and would impose another bureaucratic burden that the GA market cannot take. Nor are there any safety gains to be had, rather on the contrary as valuable resources are spent on meaningless paper exercises.</p> <p>Note that "operations other than CAT for which the authority requires a certificate", should also be exempt as the ATO:s operating GA-type aircraft would otherwise be similarly burdened.</p>
comment	<p>31 comment by: <i>British Gliding Association</i></p> <p>M.A.305 (d) 1 and 2</p> <p>These statements should only be applicable to CAT.</p> <p>Rationale:</p> <p>ELA and sailplane components are monitored at scheduled maintenance intervals, typically annual or 100 hour check and at airworthiness review, and those whose life will be exceeded before the next scheduled maintenance are attended to or highlighted to the maintenance manager/owner. Continuous monitoring is inappropriate and too onerous for most private aircraft owners.</p>
response	
comment	<p>57 comment by: <i>René Meier, Europe Air Sports</i></p> <p>page 10/44</p> <p>We think M.A.305(d) should only be applicable to CAT.</p> <p>Proposal:</p> <p>Restrict this provision to CAT.</p> <p>Rationale:</p> <p>Continuous monitoring is much too onerous for privately owned and operated aircraft, it does not increase safety, it only increases flight-hours-costs because of higher maintenance administration burdens.</p>
response	
comment	<p>157 comment by: <i>Belgian CAA</i></p> <p>- M.A.305 (d) and M.A.503 : if the wording "service life limited" is to be changed with this NPA, it is important to ensure harmonization in the whole regulation. Indeed, for example,</p>



the “M.A.504 (a) 1.” refers to “service life limit”. Same remark for “Appendix III to AMC M.B.303(d)” that refers to “Ultimate service life” and the Appendix XIII to M.A.712 (f) which refers to “life limited components”.

-M.A.305 (d) § 2. : it will be clearer to change “....last accomplishment of scheduled maintenance specified in the aircraft maintenance programme.” By “....last accomplishment of the **corresponding** scheduled maintenance **task** specified in the aircraft maintenance programme.” It’s just to reduce as more as possible any risk of erroneous interpretation.

response

comment

185

comment by: *Howard Torode*

Comment by European Gliding Union -

3.1 Draft Opinion 3.1.1, Annex 1 to Decision 2003/19/RM - Item M.A.305(d) (1 and 2)

While these clauses may be appropriate for CAT, the resources necessary for continuous monitoring are not feasible or realistic for Sport/GA. This should be clarified.

RATIONAL

In Sport/ GA, scheduled maintenance is assured/carried out at frequent intervals as defined by the TC holder. While the existence of lifed items is not the norm, when they arise, their needs can readily be accommodated within a scheduled and customized maintenance programme. Practically, GA airframes are not necessarily operated in close proximity to commercial maintenance organizations and requirements for continuous monitoring are not necessary and would be uneconomic for GA operators.

response

comment

222

comment by: *Eamon STAPLETON*

The change proposed in Para.2 does not read particularly well. Can you consider wording similar to Para. 1 - amend to "current status of time controlled components, including the life accumulated by the affected components in **RELATION TO** the applicable parameter....."

response

comment

356

comment by: *Ralf Keil*

Der Versuch der Einführung der Definition von „lebenszeitbegrenzten Bauteilen“ und „laufzeitkontrollierten Komponenten“ führt im Falle von ELA-Luftfahrzeugen nicht wirklich dazu, Missverständnisse zu vermeiden.



response	<p>TBO von Motoren werden ohne weitere Erläuterung nach einschlägiger Erfahrung durch Behörden ohne Weiteres als „lebenszeitbegrenzt“ eingestuft.</p> <p>Die übliche Praxis, "On-Condition" auch lebenszeitbegrenzte Bauteile nach dem ablauf der Laufzeitbegrenzung weiter zu betreiben ist in der Allgemeinen Luftfahrt unter konkreten Voraussetzungen durchaus üblich.</p> <p>Die vorliegende Definition taugt in erster Linie nur für die Klarstellung der technischen Aufzeichnungen bei kommerziell genutzten Luftfahrzeugen und sollte deshalb nur auf diese beschränkt werden.</p>
comment	<p>365 comment by: ASD MRO Working Group</p> <p>Re M.A.305(d) there are varying NAA interpretations to-day as to what records constitute the 'status' of Life Limited Parts or Time Controlled Components. Is the 'status' a summary document only or does the owner/operator have to keep the last installation record and Form 1 (as applicable) for these LLPs and Time Controlled Components to support the 'status' document referred to?</p>
response	

3. Proposed amendments — 3.1. Draft Opinion — 3.1.1. Annex I to Decision 2003/19/RM (AMC to Part-M) — Point M.A.305(e) p. 11-12

comment	<p>3 comment by: Ken Mutton (CityJet)</p> <p>Can further clarification be given as what is the 'last entry'. There are differing interpretations as to what this is as follows:</p> <ul style="list-style-type: none"> • Last Entry - this is the last entry into the aircraft technical log prior to aircraft's permanent withdrawl from service. Therefore all records for the aircraft technical log must be retained for three years (36 months), following the withdrawl of the aircraft from service. <p>or</p> <ul style="list-style-type: none"> • Last Entry - this the is the <u>latest</u> (or current) entry into the aircraft technical log. Therefore technical log records will be retained for 3 years following the entry being made into it. <p>Ken Mutton - CityJet</p>
response	
comment	<p>13 comment by: AOPA-Sweden</p> <p>MA 305 (e) 2 (ii):</p>



response	<p>The requirement for detailed maintenance records should be limited to 2003 and onwards, as before that date national regulations applied and those may have had less stringent criteria for records keeping, especially for repairs and modifications.</p> <p>If not changed, the NPA text here is a potential cause for more or less permanent grounding of older GA aircraft in some countries.</p>
comment	<p>18 comment by: AIR FRANCE</p> <p>2. General data (i) :</p> <ul style="list-style-type: none"> • Is an AD status can be considered as relevant "Detailed maintenance record" demonstrating compliance with AD ? • Does it mean that "Dirty finger print" is not more considered to be kept as substantiating data to demonstrate compliance ? <p>3. Data specific to certain components (i)</p> <ul style="list-style-type: none"> • Could you add the notion of "Applicable airworthiness limitation parameter" to be in coherency with § MA.305 (d) 1 ?
response	
comment	<p>32 comment by: British Gliding Association</p> <p>M.A.305 (e) 1</p> <p>It should be specified that a Technical Log is only applicable to Commercial Air Transport.</p>
response	
comment	<p>33 comment by: British Gliding Association</p> <p>M.A.305 (e) 2 and 3</p> <p>1/ 36 months retention for all records should be retained.</p> <p>Rationale:</p> <p>24 months is too short a time and important information could be lost. 24 months is less than a "Controlled Environment" Airworthiness Review/ARC issue period and could impede the document review this increasing the risk of an inconclusive review.</p> <p>2/ Guidance material is required to recommend retaining useful maintenance records for longer than the minimum time.</p> <p>Rationale:</p> <p>It can be very helpful in troubleshooting or defect investigation if previous records are</p>



response	<p>available. This can highlight issues where a defect or problem is reoccurring and may indicate that a design change is warranted or poor standard components are being supplied. Disposing of the records after 24 months or when repeated means that opportunity is lost.</p>
comment	<p>58 comment by: <i>René Meier, Europe Air Sports</i></p> <p>Page 11/44</p> <p>Proposal:</p> <p>M.A.305(e) should be applicable to CAT operations only.</p> <p>Rationale:</p> <p>Our community does not need a "system" to satisfy the needs of the competent authority. For CAT operators such a system might be helpful, to our operations, however, such a system will not produce any gain in flight safety, it only will add costs to our flying.</p>
response	
comment	<p>59 comment by: <i>René Meier, Europe Air Sports</i></p> <p>page 11/44</p> <p>M.A.305(e)</p> <p>2. General data</p> <p>and 3. Data specific to certain components</p> <p>Proposal:</p> <p>We propose to stay with the 36 months of (e) 1.</p> <p>Rationale:</p> <p>In doing so the requirements are identical and fit with the 36 months interval when it comes to the issue of an ARC.</p> <p>Considering the average age of around 40 years of SEP aircraft it would probably be useful to establish some guidance on how relevant maintenance records should be retained for even longer periods to facilitate troubleshooting and more complex maintenance tasks.</p>
response	
comment	<p>69 comment by: <i>AIRBUS</i></p> <p>1. PARAGRAPH / SECTION THE COMMENT IS RELATED TO:</p> <p>NPA 2014-04, page 11/44, point M.A.305(e)1.</p>



2. PROPOSED TEXT / COMMENT:

It is proposed to amend this point to read:

“1. Operator’s technical log system:

~~The technical log or data equivalent in scope and detail contained in the information technology system, corresponding to the period starting 36 months prior to the last entry~~
latest flight shall be retained.”

3. RATIONALE / REASON / JUSTIFICATION:

A carriage return has been introduced for consistency with the way the other bullet points are organised.

The wording “prior to the last entry” seems inappropriate since it could imply that some or all the entries made when or before placing an aircraft into storage conditions for a long duration (e.g. >36 months) could be disposed before the aircraft undergoes re-commissioning. The wording “the period starting” indicates the entries logged after the latest flight are also to be kept.

response

comment

70

comment by: AIRBUS

1. PARAGRAPH / SECTION THE COMMENT IS RELATED TO:

NPA 2014-04, pages 12/44, point M.A.305(e)2. and 3., and (e)4.(iii)

2. PROPOSED TEXT / COMMENT:

Point M.A.305(e)2. and 3. refer to “the certificate of release to service” (singular form). Point M.A.305(e)4.(iii) refers to the “most recent certificate of release to service” (singular form).

Does it mean that only one certificate of release to service for all accomplished maintenance activities (the one covering the most recent AD, modification, repair, or maintenance visit?) is to be kept?

3. RATIONALE / REASON / JUSTIFICATION:

For sake of understanding/clarity.

Point M.A.305(e)2. and 3. refer to “detailed maintenance records”.

response

comment

71

comment by: AIRBUS

1. PARAGRAPH / SECTION THE COMMENT IS RELATED TO:

NPA 2014-04, pages 12/44, point M.A.305(e)2.(ii)

2. PROPOSED TEXT / COMMENT:

response	<p>Point M.A.305(e)2.(ii) refers to “the applicable data in accordance with M.A.304”.</p> <p>Could the Agency clarify the meaning of “applicable” in this wording?</p> <p>Does it mean the Agency expects* that the person or organisation responsible for the aircraft continuing airworthiness keeps the certificate of release to service and detailed maintenance records <u>resulting from</u> the application of <u>modification and repair data complying with point M.A.304</u>?</p> <p>* for current modifications and repairs to the aircraft, engine(s), propeller(s) and any component subject to airworthiness limitations</p> <p>3. RATIONALE / REASON / JUSTIFICATION:</p> <p>The wording of point M.A.305(e)2.(ii) has been found confusing. For sake of understanding/clarity.</p>
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comment	72	comment by: AIRBUS
response	<p>1. PARAGRAPH / SECTION THE COMMENT IS RELATED TO:</p> <p>NPA 2014-04, pages 12/44, point M.A.305(e)4.</p> <p>2. PROPOSED TEXT / COMMENT:</p> <p>Could the Agency clarify the reasons why the point M.A.305(e)4. does not take into account components (e.g. an engine) permanently withdrawn from service?</p> <p>Should the introductory sentence read the following?</p> <p>“4. Retention periods when the aircraft or a component, as appropriate, is permanently withdrawn from service: [...]”</p> <p>3. RATIONALE / REASON / JUSTIFICATION:</p> <p>It is not clear why component data/reports/statuses are to be kept for 24 months when the (affected) components are permanently removed from service at the same time as the aircraft (because they are fitted to the aircraft) and not when the same components are permanently removed from service, but separately.</p>	

comment	73	comment by: AIRBUS
response	<p>1. PARAGRAPH / SECTION THE COMMENT IS RELATED TO:</p> <p>NPA 2014-04, pages 12/44, point M.A.305(e)4.</p> <p>2. PROPOSED TEXT / COMMENT:</p> <p>Could the Agency clarify the reasons why the operator’s tech log has not been taken into</p>	



account in the point M.A.305(e)4.?

Should this point read the following?

“(iv) the technical log or data identified in M.A.305(e)1. shall be retained for at least 24 months.”

3. RATIONALE / REASON / JUSTIFICATION:

It is not clear why the operator’s tech log data are not to be kept like the other data/reports/statuses, i.e. for 24 months after an aircraft is permanently removed from service. It gives the impression that operator’s tech log data are less important than others and therefore can be destroyed on the day the aircraft is permanently removed from service.

response

comment

115

comment by: *Francis Fagegaltier Services*

In the proposed M.A.305 (e) 4 (retention periods), unless this is corrected elsewhere in the proposals but not identified by the commenter, apparently it is assumed that when an "aircraft is permanently withdrawn from service" the engines are also withdrawn from service. This is likely to be a false assumption : an engine may be re-used in another aircraft.

The new text should differentiate the cases of engines which are withdrawn from service together with the aircraft and engines which are re-used in another aircraft.

response

comment

141

comment by: *CAA-NL*

The retention period for maintenance data in the current Part M was specifically set at a period until the data was superseded by new equivalent information but not less than 36 months. This was done in the EASA committee to guaranty the availability of all the data between 2 full airworthiness reviews in a controlled environment which is 3 years. The retention period after permanent withdrawal from service was less to minimize the administrative burden. As we think these arguments are still valid we oppose the retention period of 24 months and suggest a reinstatement of 36 months when in service. We agree with a harmonization if needed for consistency but on 36 months.

response

comment

158

comment by: *Belgian CAA*

- M.A.305 (e) § 1. : it could be useful to complete the sentence with : “...if there is no record in this system requiring an additional period of retention as defined in the PART-M regulation.” Indeed, for example, the tech log can contain some “release to service” for



certain repairs or maintenance actions or AD that must be kept to ensure traceability.

- M.A.305 (e) § 2. (i) and M.A.305 (e) § 2. (iii) and M.A.305 (e) § 3. (ii) : the introduction of a calendar limit of 24 months seems not really necessary. Indeed, as soon as, it is specified that this kind of record must be kept until it is replaced by equivalent information in scope and detail, we think it's sufficient. It is not necessary to cumulate records for a same task ; we think that there is no safety risk as soon as we have the records of the last performance of task.

-M.A.305 (e) § 2. (ii) : we consider that this article should be revised to remove the limitation to "airworthiness limitations". The records related to modifications and repairs are important in other cases than only "airworthiness limitations" items. Indeed, if there are scheduled maintenance requirements or hard time requirements, it is necessary to ensure the traceability of those cases also. In fact, it seems this article can be already covered by the article M.A.305 (e) 2. (iii). Indeed, the airworthiness limitations, modifications and repairs are included in the maintenance required for the continuing airworthiness by definition and all is covered by the maintenance program also.

- M.A.305 (e) § 3. (i) : this paragraph seems already covered by the article M.A.305 (d).

-M.A.305 (e) § 3. (ii) : it could be more appropriate to replace "...last accomplishment of any scheduled maintenance and any subsequent unscheduled maintenance,....by another scheduled maintenance of equivalent scope..." by "...last accomplishment of any scheduled maintenance **or other maintenance required**,....by another **maintenance** of equivalent scope..." to cover scheduled maintenance and other type of maintenance, as it is done in "M.A.305 (e) § 2. (iii)"

response

comment

174

comment by: *Chris GRUENER, BOC Aviation Pte. Ltd.*

M.A. 305 (e) 2.(ii)

I think the retention period for the records should be mentioned as a "reminder", e.g. 24 months after permanently withdrawn from service

response

comment

186

comment by: *Howard Torode*

Comment by European Gliding Union -

3.1 Draft Opinion 3.1.1, Annex 1 to Decision 2003/19/RM - Item M.A.305 (e) 2 and 3

Records should be retained for at least the period of ARC validity in the 'Controlled Environment' (ie. 36 months) to enable proper review. It should be recommended (but not mandated) that owners should retain maintenance records with the aircraft whenever these might have a bearing on future maintenance actions.

RATIONAL:

Maintenance records are vital to the cost effective maintenance of any airframe, no matter how large or small. This is of particular concern when the ownership or stewardship of an airframe may change hands several time, such as is the case in Sport/GA. This is also key information for any engineer and ARC reviewer, in tracing the origin of any parts identified as faulty.

response

comment

188

comment by: UK CAA

Page No: 12

Paragraph No: M.A.305(e)3

Comment: In accordance with Part 21.A.307(c) for ELA1 and ELA2, aircraft components without an EASA Form 1 can be fitted to an aircraft. The paperwork that identifies which components have been fitted should be kept as part of the aircraft records until such time the component is replaced with one that has an EASA Form 1.

Justification: Ensures that the records include these items that are specific to these class of aircraft.

Proposed Text: Add new paragraph (iii):

“The certificate of release to service and owners acceptance statement for any component that is fitted to an ELA 1 or ELA 2 aircraft without an EASA Form 1 in accordance with Part 21.A.307(c).”

response

comment

194

comment by: Swedish Transport Agency

M.A.305(e)4

An explanation/definition of “*permanently withdrawn from service*” would be helpful.

response

comment

208

comment by: Martinair



Please can you explain what the definition of permanently withdraw from service is Do I have to think about demolition, permanent parking or hand over to another operator

response

comment 217 comment by: *Baines Simmons Limited*

Comment 1

M.A.305 Aircraft continuing airworthiness record system

In the following paragraph (e) it is unclear as to what "... prior to the last entry shall be retained." is intended to mean. The Technical Log System is an on-going record. The first entry would be the entry made near to the aircraft's first operation where M.A.306 applies, and the last entry would be where it is exported from the EU, or withdrawn from service, etc.

We believe the intent of the requirement is to keep a rolling 36 month's worth of data at any point in time. In other words, at the 01 June 2014 the records should include all technical log documents/data dating back to 01 June 2011.

Hence we recommend the requirement should read as follows:

M.A.305 Aircraft continuing airworthiness record system

"(e) The owner or operator shall ensure that a system has been established to keep the following documents and data for the periods specified in a form

acceptable to the competent authority:1. Operator's technical log system: the technical log or data equivalent in

scope and detail contained in the information technology system

corresponding to the 36 months prior to the **most recent** entry shall be retained."

Comment 2

In paragraph "2. General data" the following wording appears " ... until such time as the information contained therein is superseded by

new information equivalent in scope and detail but not less than 24 months." It is not clear how this should be interpreted. Each inspection or check instance potentially identifies defects and as a result the defect must be recorded together with the corrective actions performed. Is the intent to retain the data, e.g. task card, recording the performance of the inspection only, until the same inspection is subsequently repeated as per the Maintenance Programme? We consider this lack of clarity could allow/cause operator's to dispose of valuable inspection and/or defect data thereby potentially compromising on-going reliability analysis. We believe this philosophy to be flawed and this text should be deleted in each case.

Comment 3



There does not appear to be a requirement to keep CRS and detailed maintenance records in relation to defect rectification. "other maintenance required for continuing airworthiness" should include this, but the definition in the GM does not specifically include this. We feel this is a significant omission and must be included as follows:

(iii) the certificate of release to service and detailed maintenance

records of all scheduled maintenance, **defect investigation and rectification**, or other maintenance

required for continuing airworthiness in respect of the aircraft,

engine(s), propeller(s), as appropriate;

Comment 4

We support the remainder of the changes made to M.A.305 Aircraft continuing airworthiness record system in that the introduce greater clarity and consistency to the rule.

response

comment

223

comment by: *Eamon STAPLETON*

Para 1. Corresponding requirements to retain maintenance records in M.A.305 have been set at 24 months - is the intention to keep the operator technical log data retention at 36 months?

Para 3. Data specific to certain components, Para. (i) - Will further guidance (GM M.A.305 aside) be provided as to what constitutes "an in-service history record" for a component and what entities can compile such a record in an acceptable manner. Also can clarification be included as to the situation with Non Incident / Non-Accident Statements which are quite often requested by various parties and their overall standing from an aircraft continuing airworthiness records perspective.

Para. 3(ii) - The fact that retention of detailed maintenance and CRS records for life limited parts beyond 24 months is not required in the circumstances permitted by this paragraph is somewhat contradictory to the guidance provided in GM M.A.305 (9) where it is requested that the in-service records documenting each time a life limited part is placed in service or removed from service are retained.

response

comment

226

comment by: *AEA*

M.A. 305 (e) 2 (ii): "current" mods and repairs.

Comment: What is meant with "current"?

response



comment	<p>227</p> <p>M.A. 305 (e): requirement to keep operators Tech Log system recordings for 36 months.</p> <p>Comment: Other paragraphs in M.A. 305 (e) on page 11 and 12 refer to 24 months. This is inconsistent with the recently adopted approach to keep records in Part M and Part 145 for 36 months in order to align to record retention period for the ARC inspection.</p>	comment by: <i>AEA</i>
response		
comment	<p>228</p> <p>M.A. 305 (e) 3 (i) An “in-service history record” for each.....</p> <p>Comment: Please specify what this record should contain</p>	comment by: <i>AEA</i>
response		
comment	<p>265</p> <p>The purpose of this paragraph is to provide with a time period to keep the various documents, but there is none for paragraphs (e) (2) (ii) and (e) (3) (i).</p> <p>The paragraphs 1, 2, 3 are therefore a list of documents, and within the paragraph, a time is specified. For item 4, it starts for a “retention time” for a list of “documents”. For consistency of the overall paragraph (e), it is proposed to rewrite the fourth bullet.</p> <p><u>Proposed modification:</u></p> <p>M.A.305 e) The owner or operator shall ensure that a system has been established to keep the following documents and data for the periods specified in a form acceptable to the competent authority:</p> <ol style="list-style-type: none"> 1. Operator’s technical log system: the technical log or data equivalent in scope and detail contained in the information technology system corresponding to the 36 months prior to the last entry shall be retained. 2. General data: <ul style="list-style-type: none"> (i) the certificate of release to service and detailed maintenance records demonstrating compliance with airworthiness directives and measures mandated by the competent authority in immediate reaction to a safety problem applicable to the aircraft, engine(s), propeller(s) and components fitted thereto, as appropriate, until such time as the information contained therein is superseded by new information equivalent in scope and detail but not less than 24 months; (ii) the certificate of release to service and detailed maintenance records demonstrating compliance with the applicable data in accordance with M.A.304 for current modifications and repairs to the aircraft, engine(s), propeller(s) and any component subject to airworthiness limitations, until such time as the information contained therein is superseded 	comment by: <i>DGAC France</i>



by new information due to further modifications or repairs; and

(iii) the certificate of release to service and detailed maintenance records of all scheduled maintenance or other maintenance required for continuing airworthiness in respect of the aircraft, engine(s), propeller(s), as appropriate, until such time as the information contained therein is superseded by new information equivalent in scope and detail but not less than 24 months;

3. Data specific to certain components:

(i) an in-service history record for each life limited part from which the current status of compliance with airworthiness limitations can be determined, until such time as the life limited part is removed from the aircraft;

(ii) the certificate of release to service and detailed maintenance records for the last accomplishment of any scheduled maintenance, and any subsequent unscheduled maintenance, on all life limited parts and time controlled components until the scheduled maintenance has been superseded by another scheduled maintenance of equivalent scope and detail but not less than 24 months;

4. ~~Retention periods when~~ The following specific data for at least 24 months after the aircraft is permanently withdrawn from service:

(i) the data required in M.A.305(b)1 in respect of the aircraft, engine(s), and propeller(s) ~~shall be retained at least 24 months;~~

(ii) the last effective status and reports identified in M.A.305(c) and (d) ~~shall be retained for at least 24 months;~~

(iii) the most recent certificate of release to service and detailed maintenance records identified in M.A.305(e)2 and (e) 3 ~~shall be retained for not less than 24 months.~~

response

comment

266 comment by: DGAC France

Further to our previous comment #265 the terms “the most recent certificate” is unclear. Do we mean the latest of all release certificates required to be archived under the referenced paragraphs (which means only one certificate) or the most recent for each of the requirements, so therefore, possibly several release certificates?

Please revise the proposed text according to the answer to this question.

response

comment

298 comment by: Regio Lease

Can we have a definition of "permanently withdrawn from service"? How can we deal with long storage period? do we consider the de-registration? other? In fact, how long can we bring parts from an aircraft on unground until it is considered as withdrawn from service?



response

comment

307

comment by: IATA

Inconsistencies regarding the record keeping period; in some cases it is 36 months and in others 24 months. This is also inconsistent at other parts of the NPA.

Consideration may be given in keeping records for certain periodic events for a period equivalent to the maintenance cycle.

response

comment

310

comment by: IATA

Point M.A.305(e) item (4)(i) “shall be retained...” should be “shall be retained **for...**”

response

comment

339

comment by: Luftsport Verband Bayern / Germany

According to M.A.305 (e) 3. (ii) it seems that a simple FORM-ONE is no longer sufficient as a maintenance record for components? To what extent maintenance records are required to be kept by the owner? Again here is asked for additional paperwork without any benefit. The owner and even the ARS are not in a position to check if the maintenance at component level has been done properly - this is the responsibility of the organisation issuing the FORM-ONE!

We disagreed with this requirement!

response

comment

357

comment by: Ralf Keil

Diese Neuformulierung des ehemaligen M.A.305(h) birgt eine zusätzliche Verschärfung, indem sie den Grundsatz der Zweckmäßigkeit nicht mehr berücksichtigt.

Die Klarstellung der EASA, in welchem Umfang Freigaben durch den Eigentümer/Halter/Operator zu führen und aufzubewahren sind, wurde im „alten M.A.305(h)“ ausreichend dargestellt.

response

comment

366

comment by: ASD MRO Working Group

M.A.305(e) could benefit from a table being included (in AMC or GM?) to clarify the data retention requirements of the owner/operator. For example a table listing Records Category; Type of Records to be Retained and Retention Period would clarify matters considerably. This paragraph is ‘silent’ with respect to records retention requirements for Condition Monitored



(CM) Components. What records (if any) must be retained for CM Components? Does the 24 month rule apply? Is it necessary for the owner/operator to retain the installation record and Form 1 (as applicable) for a CM Component and for what period?

response

3. Proposed amendments — 3.1. Draft Opinion — 3.1.1. Annex I to Decision 2003/19/RM (AMC to Part-M) — Point M.A.305(g)

p. 12

comment

74

comment by: AIRBUS

1. PARAGRAPH / SECTION THE COMMENT IS RELATED TO:

NPA 2014-04, pages 12/44, point M.A.305(g)

2. PROPOSED TEXT / COMMENT:

It is proposed to amend this point to read:

“M.A.305 Aircraft continuing airworthiness record system

[...]

(g) All entries made in the aircraft continuing airworthiness records system [...]”.

3. RATIONALE / REASON / JUSTIFICATION:

For consistency between the point M.A.305 title and the paragraph text.

response

comment

308

comment by: IATA

Point 3.(i) - IATA has worked with industry stakeholders on a draft template to define such contents and can share the contents of the template to be used as the industry “standard”.

response

3. Proposed amendments — 3.1. Draft Opinion — 3.1.1. Annex I to Decision 2003/19/RM (AMC to Part-M) — Point M.A.306(c)

p. 13

comment

142

comment by: CAA-NL

Although it is not in the EASA proposal we suggest an amendment to M.A.307(a)

Proposal:

(a) The owner or operator shall ensure when an aircraft or a component is permanently transferred from one owner or operator to another that the M.A.305 continuing airworthiness records and, if applicable, M.A.306 operator’s technical log are also



transferred.

Explanation:

It is essential that in case of an ownership change of a component, the new owner is in full possession of all relevant airworthiness history data. For this an amendment M.A.307 is proposed.

response

comment

218

comment by: *Baines Simmons Limited*

M.A.306 Operator's Technical Log System

We have maintained for many years that the scope of applicability of M.A.306 is too narrow. We believe all aircraft involved in any operation must have a Technical Log System in order for the owner or CAMO to adequately manage the continuing airworthiness of aircraft.

In the interest of proportionality, we believe different formats could be described in Acceptable Means of Compliance (AMC) and/or Guidance Material (GM).

response

3. Proposed amendments — 3.1. Draft Opinion — 3.1.1. Annex I to Decision 2003/19/RM (AMC to Part-M) — Point M.A.503

p. 13

comment

78

comment by: *AIRBUS*

1. PARAGRAPH / SECTION THE COMMENT IS RELATED TO:

NPA 2014-04, pages 13/44, points M.A.503(a) and (c)

2. PROPOSED TEXT / COMMENT:

Could the Agency explain why no flexibility is given to manage recommended limitations? They are treated in the same way as mandatory ones. Or, would there be a wrong use of the term 'approved' in the wording 'approved limit'?

It is proposed to amend these points to read:

“(a) Installed ~~service life limited~~ life limited parts and time controlled components shall not exceed the ~~approved service life limit~~ **mandatory airworthiness limitations** as specified in the approved **aircraft** maintenance programme and airworthiness directives, except as provided for in point M.A.504(c).

(b) [...]

(c) ~~At the end the approved limit service life, t~~ **The installed time controlled components and life limited parts** must be removed from the aircraft for maintenance, or for disposal **in the case of life limited parts** components with a certified life limit, **respectively, no later than the mandatory airworthiness limitations as specified in the approved aircraft maintenance**



programme and airworthiness directives.”

3. RATIONALE / REASON / JUSTIFICATION:

In accordance with the item 7 of point M.A.301, Operators may want to include in the embodiment policy some flexibility provisions for limitations recommended by Design Approval Holders. This would not jeopardize the aircraft airworthiness (as such limitations are recommended, not mandatory), but could prevent an unnecessary burden on aircraft operations. While the case of mandatory airworthiness limitations is not disputed, there should be some flexibility for recommended limitations.

With regard to the term ‘limit’ (singular form), the maintenance tasks applicable to a component may be of different natures: e.g. a landing gear sliding tube may need to be:

- Periodically inspected to an appropriate standard in order to determine whether it can continue in service (‘on condition’ maintenance process related part); and
- Permanently removed from service no later than a specified life limitation (life limited part).

Therefore, a component may be affected by more than one limit (e.g. one in flight hours and one in flight cycles) and more than one limitation (e.g. a life limitation and a limitation for inspection). It is therefore recommended to refer to ‘mandatory airworthiness limitations’ (mandatory airworthiness limitations are approved in accordance with design-related regulations).

response

comment

79

comment by: AIRBUS

1. PARAGRAPH / SECTION THE COMMENT IS RELATED TO:

NPA 2014-04, page 13/44, point M.A.503(b)

2. PROPOSED TEXT / COMMENT:

Could the Agency clarify what is expected from the person or organisation responsible for the continuing airworthiness of the aircraft as a result of the point M.A.503(b)?

It is proposed to delete the point M.A.503(b).

3. RATIONALE / REASON / JUSTIFICATION:

The limitation parameters are defined by the relevant Design Approval Holder and approved by the Agency at the same time as the limitations. The person or organisation responsible for the continuing airworthiness of the aircraft has no control over this matter.

Further, the point M.A.503(b) provides only a partial list of usage measurement units for limitation parameters: e.g. APU cycles are not listed although the EASA AD 2010-0079 imposes a life limitation expressed in this usage measurement unit.

response



comment	<p>159 comment by: <i>Belgian CAA</i></p> <p>- M.A.503 and M.A.504 : in the M.A.503, there is a reference to “approved limit” whereas in the M.A.504, the reference is “mandatory limitation”. It could be useful to harmonize terminology to avoid confusion. It is important to pay attention to the applicable limit we consider. Indeed, for example, for several components, the TC holder’s refer to the vendor recommendations and in the vendor recommendations, there is often the use of wording “recommended maintenance” and not “mandatory maintenance”. In these circumstances, it is important to clarify the situation because in certain case a recommendation can be understood by certain persons as not to be done without other approach. Same remark for the “appendix II to M.A.201 (h) (1), § 2.11” and for “AMC M.A.504 (c)”.</p>
response	
comment	<p>189 comment by: <i>UK CAA</i></p> <p>Page No: 13</p> <p>Paragraph No: M.A.503(a)</p> <p>Comment: The life limit for life limited parts is not necessarily mandated by an Airworthiness Directive, for example it can be through the Type Certificate. Reference to point M.A.504(c) should be removed. UK CAA comment made against M.A.504(c) refers.</p> <p>Justification: Ensure clarity for the requirements for components depending on the type of component.</p> <p>Proposed Text: “(a) Installed life limited parts and time controlled components shall not exceed the approved limit as specified in the approved maintenance programme and airworthiness directives, and other mandatory Airworthiness’ Requirements, except as provided for in point M.A.504(c).”</p>
response	
comment	<p>270 comment by: <i>DAC Luxembourg</i></p> <p><u>COMMENT DACL-2014-04-01</u></p> <p><u>M.A.503 reworded as follow</u></p> <p>(a) Installed life limited parts shall not exceed the mandatory limit as specified in the approved maintenance data and airworthiness directives, except as provided in point M.A.504(c).</p> <p>(b) Installed time controlled components shall not exceed the limit as specified in the maintenance programme.</p> <p>(c) The limits are expressed in calendar time, flight hours, landings or cycles, as appropriate.</p> <p>(d) At the end of the mandatory limits, the life limited parts must be removed from the</p>



aircraft for disposal, except as provided in point M.A.504(c).

(e) At the end of the limit, the **time controlled components** must be removed from the aircraft for maintenance.

Reason/Justification:

The wording used in the original proposition does not clearly segregate the mandatory life limits of the life limited parts (ALI/CMR approved under the authority of the State of Design) from the limits of the time controlled components (recommendations of the DAH approved through the AMP). It therefore introduces confusion with the definition provided in GM M.A.305 (i.e. "mandatory life limitation").

The proposed text splits both type of components and places them in line with the processes for the approval of the maintenance limits in Part 21 (Through the certification process) and Part M (Through the maintenance programme approval). The mandatory limit of life limited parts is then clearly highlighted by the "**mandatory limit**" terminology. This way to define the different parts / components avoids any ambiguous understanding of both definitions and improves the quality of the readability.

response

comment

281

comment by: *DGAC France*

DGAC would recommend using "aircraft maintenance programme" instead of "approved maintenance programme". This term is already used in GM MA305 definitions of "life limited parts" and "time controlled components". In addition, it is consistent with the opinion 10/2013 and the introduction of "self-declared maintenance programme" as an alternative to "approved maintenance program" for some category of aircraft.

response

comment

311

comment by: *IATA*

Item M.A.503 (c) - Beginning should read: "At the end of the approved..."

response

comment

319

comment by: *René Meier, Europe Air Sports*

page 13/44

M.A.503

We propose not to change the term "service life limited" components.

Rationale:

Considering the effects of such a change on all publications we do not find any return on investment. Think of all the books/texts/publications competent authorities will want us to



response	<p>change "in order to be consistent with..." as they will say.</p> <p>Just having experienced what it meant for us to change from an FTO to an ATO in working hours and money, you better do insist on this proposal which is not at all relevant to the safety of flight.</p> <p>The actual term used and the new one are anyhow not correct as there never was life in a technical part, and it never will be. Using the term "utilisation" or "application" would in our view be more correct.</p>
comment	<p>340 comment by: <i>Luftsport Verband Bayern / Germany</i></p> <p>At the end <u>of</u> the approved</p>
response	
comment	<p>358 comment by: <i>Ralf Keil</i></p> <p>Die EASA sollte klar herausstellen, dass M.A.503 NICHT für Empfehlungen der Hersteller für Laufzeitbegrenzungen von Bauteilen und Komponenten gilt.</p>
response	

3. Proposed amendments — 3.1. Draft Opinion — 3.1.1. Annex I to Decision 2003/19/RM (AMC to Part-M) — Point M.A.504(c)

p. 14

comment	<p>81 comment by: <i>AIRBUS</i></p> <p>1. PARAGRAPH / SECTION THE COMMENT IS RELATED TO:</p> <p>NPA 2014-04, page 14/44, point M.A.504</p> <p>2. PROPOSED TEXT / COMMENT:</p> <p>It is proposed to modify the point M.A.504(a) to read:</p> <p>“(a) A component shall be considered unserviceable in any one of the following circumstances:</p> <p>1. expiry of the service life limit as defined non-compliance with the instructions specified in the approved aircraft maintenance program me;</p> <p>[...]”.</p> <p>3. RATIONALE / REASON / JUSTIFICATION:</p> <p>As already explained, the maintenance tasks applicable to a component may be of different natures: e.g. a landing gear bogie beam may need to be:</p>
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- Inspected to an appropriate standard within a mandatory periodic time-frame (e.g. EASA AD 2013-0267R1) in order to determine whether it can continue in service; and
- Permanently removed from service no later than a specified mandatory life limitation.

Therefore, for example, a component may be unserviceable because a mandatory inspection has not been performed within the mandatory airworthiness limitations as specified in the approved aircraft maintenance programme (including airworthiness directives), even if the total in service life accumulated by the component has not reached the mandatory life limitation.

And the term service life limit is a question item in the ToR.

response

comment

190

comment by: UK CAA

Page No: 14

Paragraph No: M.A.504(c)

Comment: The paragraph allows for a mandatory life limit to be extended. M.A.503(c) states that at the end of the approved limit the component should be removed.

Justification: Ensure consistency across the paragraphs.

Proposed Text: “(c) Components which have reached their certified mandatory life limit limitation or contain a non-repairable defect shall be classified as unsalvageable and shall not be permitted to re-enter the component supply system, ~~unless the mandatory life limits limitation has have been extended or a repair solution has been approved according to M.A.304.~~”

response

3. Proposed amendments — 3.1. Draft Opinion — 3.1.1. Annex I to Decision 2003/19/RM (AMC to Part-M) — Point M.A.614

p. 14

comment

34

comment by: British Gliding Association

M.A.614 (b)

The BGA welcomes this clarification as it is sometimes difficult to obtain sailplane maintenance record information from maintenance organisations.

response

comment

89

comment by: AIRBUS

1. PARAGRAPH / SECTION THE COMMENT IS RELATED TO:



NPA 2014-04, page 14/44, point M.A.614

NPA 2014-04, page 15/44, point 145.A.55

2. PROPOSED TEXT / COMMENT:

It is proposed to modify the paragraph (b) of the point M.A.614 and point 145.A.55 to read:

“M.A.614 Maintenance records

(b) The approved maintenance organisation shall provide **the person or organisation responsible for the aircraft continuing airworthiness with** a copy of each certificate of release to service ~~to the aircraft owner, together and~~ with a copy of any detailed maintenance records associated with the work carried out ~~and, when they are~~ necessary to demonstrate compliance with M.A.305.”

“145.A.55 Maintenance records

(b) The organisation shall provide **the person or organisation responsible for the aircraft continuing airworthiness with** a copy of each certificate of release to service ~~to the aircraft operator, together and~~ with a copy of any detailed maintenance record associated with the work carried out ~~and, when they are~~ necessary to demonstrate compliance with M.A.305.”

3. RATIONALE / REASON / JUSTIFICATION:

It is now confirmed that in some cases, the person or organisation responsible for the aircraft continuing airworthiness is no longer required to keep certificates of release to service (ref. GM M.A.305(e)(3) for example). Further, it is also confirmed that some detailed maintenance records associated with the work carried out are not needed by owners/operators (ref. GM M.A.305, paragraph (6)). Therefore, the points M.A.614 and 145.A.55 should explicitly state that the person or organisation responsible for the aircraft continuing airworthiness should be provided with certificates of release to service and some/all associated records only when they are necessary to demonstrate compliance with M.A.305.

response

comment

90

comment by: AIRBUS

1. PARAGRAPH / SECTION THE COMMENT IS RELATED TO:

NPA 2014-04, page 14/44, point M.A.614

NPA 2014-04, page 15/44, point 145.A.55

2. PROPOSED TEXT / COMMENT:

Could the Agency clarify the reasons why the retention period specified in the point M.A.614(c) has not been aligned with the one of point 145.A.55(c)?

3. RATIONALE / REASON / JUSTIFICATION:

For sake of understanding.



response

comment

196

comment by: *Swedish Transport Agency*

M.A.604(c)

Shouldn't M.A.604(c) also be changed to 3 years to be equivalent with the NPA 145.A.55(c)?

response

comment

267

comment by: *DGAC France*

This comment applies both to M.A.614 (b) and to 145.A.55(b)

These two paragraphs ask for the maintenance organisation to provide the aircraft customer (i.e. owner or operator) with a copy of certificate of release to service.

DGAC wonders what is the reason why the original would remain within the maintenance organisation and not with the owner/operator ?

response

comment

268

comment by: *DGAC France*

This comment applies both to M.A.614(b) and to 145.A.55(b).

These two paragraphs ask for the maintenance organisation to provide the aircraft customer (i.e. owner or operator) with a copy of detailed maintenance records associated to maintenance work, so the owner/operator stores compliance documentation according to M.A.305.

DGAC wonders if there should be an AMC to describe what are the detailed maintenance records that should be transmitted to owner/operator, possibly as originals, and the detailed records that might stay as originals at maintenance organisation, without the need of a copy to owner/operator.

When reading GM. M.A.305 (6), it states that "detailed maintenance records" kept by the owner/operator are different from the "detailed maintenance records" required to be kept by the maintenance organisation. Therefore, it seems there is a need for clarification about the concept of "detailed maintenance records".

DGAC considers the work done at CAMO level in the MA305 is very useful, and is kindly asking EASA to perform similar work on M.A. 614(b) and 145.A.55(b).

response

comment

312

comment by: *IATA*M.A.614 (b), 2nd line

	Add “/operator” after ...”the aircraft owner”; it should read: ...”the aircraft owner/operator”...
response	
comment	343 comment by: <i>Luftsport Verband Bayern / Germany</i>
	Again, to what extent is the maintenance organisation required to provide copies and what is the benefit of that (see M.A.305 (e) 3. (ii).)
response	

3. Proposed amendments — 3.1. Draft Opinion — 3.1.1. Annex I to Decision 2003/19/RM (AMC to Part-M) — Point M.A.710

p. 14

comment	83 comment by: <i>AIRBUS</i>
	<p>1. PARAGRAPH / SECTION THE COMMENT IS RELATED TO:</p> <p>NPA 2014-04, page 14/44, point M.A.710</p> <p>2. PROPOSED TEXT / COMMENT:</p> <p>It is proposed to amend the item 7 of point M.A.710(a) to read:</p> <p>“7. all service life limited life limited parts and time controlled components installed on the aircraft are properly identified, registered recorded and have not exceeded their approved service life mandatory airworthiness limitations limit; and”</p> <p>3. RATIONALE / REASON / JUSTIFICATION:</p> <p>Amendment of this point should be contemplated (holistic approach for consistency).</p> <p>The term ‘registered’ may give the impression that components have registration marks like aircraft. The term ‘recorded’ is preferred.</p>
response	
comment	160 comment by: <i>Belgian CAA</i>
	- M.A.710 (a) § 7. : there is still a reference to “service life limit” which is not in line with the “new” wording used in this NPA. (cfr M.A.503).
response	
comment	191 comment by: <i>UK CAA</i>
	Page No: 14



	<p>Paragraph No: M.A.710(a)7.</p> <p>Comment: The term ‘service life’ has been removed from other paragraphs, this paragraph should be consistent with those.</p> <p>Justification: Inconsistency in terminology used.</p> <p>Proposed Text: “7. all life limited parts and time controlled components installed on the aircraft are properly identified, registered and have not exceeded their approved service life limit; and”</p>
response	

comment	197	comment by: <i>Swedish Transport Agency</i>
	<p>M.A.710</p> <ul style="list-style-type: none"> • “7. all service life limited life limited parts and time controlled components installed on the aircraft are properly identified, registered and have not exceeded their approved service life limit; and” • Shouldn’t also the component with a certified life limit be mentioned to? 	
response		

comment	272	comment by: <i>DAC Luxembourg</i>
	<p><u>COMMENT DACL-2014-04-02</u></p> <p><u>M.A.710 (a) 7. split and reworded as follow</u></p> <p>7.</p> <p>7. (i) life limited parts installed on the aircraft are properly identified, registered and have not exceeded their service limits approved under the authority of the State of Design; and</p> <p>(ii) all time controlled components installed on the aircraft are properly identified, registered and have not exceeded their limits approved in the aircraft maintenance programme.</p> <p><u>Reason/Justification:</u></p> <p>The term “service” is inconsistent, as mentioned in the point 2.3 “Summary of the Regulatory Impact Assessment (RIA)”.</p> <p>The term “approved” is confusing regarding the origin of the approval. The splitting in 2 points gives a clear overview of the different requirements during the airworthiness review.</p> <p>This comment remains in line with the comments n°DACL-2014-04-01.</p>	
response		

comment	278	comment by: <i>DGAC France</i>
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response	<p>Similarly to the changes done in M.A.503 about the terms “service life”, DGAC recommends deleting "service life" as follows at the end of § 7.:</p> <p>"(...) have not exceeded their approved service life limit".</p>
comment	<p>344 comment by: <i>Luftsport Verband Bayern / Germany</i></p> <p>This should read "... have not exceeded their approved service life limit, and" ??</p>
response	

3. Proposed amendments — 3.1. Draft Opinion — 3.1.1. Annex I to Decision 2003/19/RM (AMC to Part-M) — Appendix II to M.A.201(h)1

p. 14

comment	<p>19 comment by: <i>AIR FRANCE</i></p> <p>2.11 : To be in coherency with other paragraphs, replace "scheduled maintenance" by "time controlled"</p>
response	
comment	<p>84 comment by: <i>AIRBUS</i></p> <p>1. PARAGRAPH / SECTION THE COMMENT IS RELATED TO:</p> <p>NPA 2014-04, page 14/44, Appendix II to M.A.201(h)(1)</p> <p>2. PROPOSED TEXT / COMMENT:</p> <p>It is proposed to replace the title of paragraph 2.11 ‘Mandatory life limitation or schedule maintenance controls & component control/removal forecast’ by ‘maintenance planning activities’.</p> <p>3. RATIONALE / REASON / JUSTIFICATION:</p> <p>The contents of this paragraph are broader than the control of component maintenance. They cover <u>all</u> maintenance planning activities (for the aircraft and components thereof).</p>
response	
comment	<p>86 comment by: <i>AIRBUS</i></p> <p>1. PARAGRAPH / SECTION THE COMMENT IS RELATED TO:</p> <p>NPA 2014-04, page 14/44, Appendix II to M.A.201(h)(1)</p> <p>2. PROPOSED TEXT / COMMENT:</p>



It is proposed to amend the paragraph 2.15 to read:

“2.15 Continuing airworthiness records

These may be maintained and kept by the sub-contracted organisation on behalf of the operator who remains the owner of these documents. However, the operator should be provided with the current ~~status of AD compliance and service life limited life limited parts and time controlled components~~ data and statuses/reports required by point M.A.305(b)1., M.A.305(c) and M.A.305(d), in accordance with agreed procedures. The operator should also be provided with unrestricted and timely access to ~~original any aircraft continuing airworthiness~~ records specified in point M.A.305 as and when needed. On-line access to the appropriate information systems is acceptable.”

3. RATIONALE / REASON / JUSTIFICATION:

“The operator is ultimately responsible and therefore accountable for the airworthiness of its aircraft. To exercise this responsibility the operator should be satisfied that the actions taken by sub-contracted organisations meet the standards required by M.A. Subpart G” (AMC M.A.201(h)(1)).

“[...] the operator is responsible for determining what maintenance is required, when it has to be performed and by whom and to what standard, in order to ensure the continued airworthiness of the aircraft being operated” (AMC M.A.201(h)). Continuing or continued airworthiness?

To exert the responsibility described here above, the operator needs to access the life accumulated by the aircraft, engine(s), propeller(s), and particular component(s), as appropriate, and the statuses/reports specified in point M.A.305(c) and M.A.305(d), at least. For example, the statuses listed in the proposed amendment will not completely help in determining what maintenance *for the airframe* is required and when it has to be performed. The continuing airworthiness of an aircraft cannot be established by considering AD and components only.

The term ‘original records’ seems to be no longer pertinent as a result of the introduction of the AMC M.A.305(e).

response

comment

87

comment by: AIRBUS

1. PARAGRAPH / SECTION THE COMMENT IS RELATED TO:

AMC M.A.201(h)(1)

2. PROPOSED TEXT / COMMENT:

It is proposed to amend the paragraph 6 to read:

“6. In order to retain ultimate responsibility the operator should limit sub-contracted tasks to the activities specified below:



<p>(a) airworthiness directive analysis and planning</p> <p>(b) service bulletin analysis</p> <p>(c) planning of maintenance</p> <p>(d) reliability monitoring, engine health monitoring</p> <p>(e) maintenance programme development and amendments</p> <p>(f) aircraft continuing airworthiness records keeping</p> <p>(fg) any other activities which do not limit the operators responsibilities as agreed by the competent authority.”</p> <p>3. RATIONALE / REASON / JUSTIFICATION:</p> <p>For consistency with the Appendix II to M.A.201(h)(1) and the AMC M.A.305(f): the aircraft continuing airworthiness records keeping activity should be listed as an activity an operator may elect to sub-contract.</p>	<p>response</p>
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3. Proposed amendments — 3.1. Draft Opinion — 3.1.2. Annex II to Commission Regulation (EC) No 2042/2003 (Part-145) — Point 145.A.55

p. 15

<p>comment</p> <p>20</p> <p>comment by: <i>AIR FRANCE</i></p> <p>(b) : Do we need to consider "work carried out" as equivalent to "Dirty finger print" ?</p> <p>If yes clarify § 3.2 GM MA.305 (6) concerning the notion of "dirty finger print may not need to be transferred....."</p>	<p>response</p>
<p>comment</p> <p>48</p> <p>comment by: <i>Liam CREAVEN</i></p> <p>M.A. 614(c) and 145.A.55(c) retention periods are not aligned. Please clarify</p>	<p>response</p>
<p>comment</p> <p>88</p> <p>comment by: <i>AIRBUS</i></p> <p>1. PARAGRAPH / SECTION THE COMMENT IS RELATED TO:</p> <p>NPA 2014-04, page 14/44, point M.A.614</p> <p>NPA 2014-04, page 15/44, point 145.A.55</p> <p>2. PROPOSED TEXT / COMMENT:</p> <p>It is proposed to modify the paragraph (b) of the point M.A.614 and point 145.A.55 to read:</p>	<p>response</p>



“M.A.614 Maintenance records

(b) The approved maintenance organisation shall provide **the person or organisation responsible for the aircraft continuing airworthiness with** a copy of each certificate of release to service ~~to the aircraft owner, together~~ and with a copy of any detailed maintenance records associated with the work carried out ~~and, when they are~~ necessary to demonstrate compliance with M.A.305.”

“145.A.55 Maintenance records

(b) The organisation shall provide **the person or organisation responsible for the aircraft continuing airworthiness with** a copy of each certificate of release to service ~~to the aircraft operator, together~~ and with a copy of any detailed maintenance record associated with the work carried out ~~and, when they are~~ necessary to demonstrate compliance with M.A.305.”

3. RATIONALE / REASON / JUSTIFICATION:

It is now confirmed that in some cases, the person or organisation responsible for the aircraft continuing airworthiness is no longer required to keep certificates of release to service (ref. GM M.A.305(e)(3) for example). Further, it is also confirmed that some detailed maintenance records associated with the work carried out are not needed by owners/operators (ref. GM M.A.305, paragraph (6)). Therefore, the points M.A.614 and 145.A.55 should explicitly state that the person or organisation responsible for the aircraft continuing airworthiness should be provided with certificates of release to service and some/all associated records only when they are necessary to demonstrate compliance with M.A.305.

response

comment

91

comment by: AIRBUS

1. PARAGRAPH / SECTION THE COMMENT IS RELATED TO:

NPA 2014-04, page 14/44, point M.A.614

NPA 2014-04, page 15/44, point 145.A.55

2. PROPOSED TEXT / COMMENT:

Could the Agency clarify the reasons why the retention period specified in the point M.A.614(c) has not been aligned with the one of point 145.A.55(c)?

3. RATIONALE / REASON / JUSTIFICATION:

For sake of understanding.

response

comment

143

comment by: CAA-NL

Also here we advocate a retention period of three years related to the airworthiness review



response	<p>cycle. See our comment to M.A.305.</p>
comment	<p>201 comment by: <i>Aviteh Ltd.</i></p> <p>There is no clear rule for maintenance organizations when they retain detailed maintenance records on behalf of the owner/operator.</p> <p>According to proposed 145.A.55(c) maintenance organization needs to retain a copy of detailed maintenance records only for two years from the date the aircraft was released to service.</p> <p>M.A.305(e) requires that the owner/operator keep detailed maintenance records until such time as the information is superseded by new information equivalent in scope. This means that in the case of records showing compliance with any AD, modifications and repairs, the records must be kept as long as aircraft is in service or according to M.A.305(e)(4) 24 months after the aircraft is permanently withdrawn from service.</p> <p>Since GM M.A.305(6) gives the list of limited information that must be given by maintenance organization to the owner/operator in the cases when they keep the records on behalf of owner/operator it must be made clear that maintenance organization must fulfill the requirements of M.A.305(e) which is not the case in proposed rule.</p> <p>145.A.55(c) should be ammended to make it clear that there is exception to the requirements of this paragraph when maintenance organization keeps records on behalf of the owner/operator in which case the requirements of M.A.305(e) must be fulfilled by the maintenance organization.</p> <p>Right now if they follow 145.A.55(c) the records may be destroyed by the maintenance organization after 2 years and owner/operator may not be able to show compliance with M.A.305(e). This is already happening quite often in general aviation and creates a lot of problems especially when the aircraft changes the owner.</p>
response	
comment	<p>229 comment by: <i>AEA</i></p> <p>145.A.55 (c): proposed requirement to keep a copy of all detailed maintenance records for 24 months.</p> <p>Comment: This is inconsistent with the recently adopted approach to keep records in Part M and Part 145 for 36 months in order to align with record retention period for the ARC inspection.</p>
response	
comment	<p>230 comment by: <i>AEA</i></p>



145.A.55 (c): ...”The organisation shall retain a copy of all detailed maintenance records and any associated....”

Comment: it would be helpful if the guidance text on page 16 from GM M.A.305 (6) be inserted in the 145.A.55 (c) requirement. And we mean part of the text in the sentence” ...Whereas maintenance organisations are required to retain all detailed records to demonstrate that they worked in compliance with their respective requirements,...”

We would propose the text of 145.A.55 (c) to read: ...”The organisation shall retain a copy of all detailed maintenance records to demonstrate that they worked in compliance with their respective requirements and any associated....”

This would assist Part 145 organisations in their regulatory reference for recordkeeping procedures for detailed maintenance data such as lab records, welding details, oven settings etc.

response

comment

271

comment by: *DGAC France*

Similarly to the modification of 145.A.55 (c) change from three years to two years, DGAC recommends EASA to do the same changes in M.A.614 (c) and M.A.614 (c) (3).

response

comment

291

comment by: *Regio Lease*

GM MA305, §2: LLP: there is no notion of the source which define the limitation (OEM), our proposal is: "...whuch the maintenance schedule coming from the manufacturer of the ...". For example we may have limitations coming from CMM.

§3 and in general in the document, there is a definition in the §1 which define what is "applicable parameters", but, on the §3, why there is "any other applicable parameter (as appropriate)". what does the term "appropriate" add? why we don't just have "...total number of accumulated applicable parameters..."? or we may also replace in this paragraph, "any other applicable parameter" by "any other additional parameter".

Anyway, some parameters seem to miss such as the Weight variant (for Airbus) or Variant (for Boeing) and rating (for engines). It might be added in the definition of "applicable paramater" in §1.

§4 What about removal for cleaning? ex: heat exchanger or ozone converter. Is cleaning and lubrication as requested by some MRB tasks included? We have only the term replacement. Does replacement include "close loop"?

What do you mean by "quantitative inspection"?

response



comment	332	comment by: <i>NFO Technical Committee</i>
	Then you reduce the storage time from 3 to 2 years. This will give a short timehorizon, if you need to look back in history.	
response		

3. Proposed amendments — 3.2. Draft Decision — 3.2.1. Annex I to Decision 2003/19/RM (AMC to Part-M): — Point GM M.A.305	p. 15-17
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comment	6	comment by: <i>ParTem Aviation</i>
	para (6) does not read correctly. Suggest "... the owner/operator should receive the aircraft release to service performed during the maintenance and ALL DATA necessary to determine the aircraft continuing airworthiness and its configuration, ..."	
response		

comment	21	comment by: <i>AIR FRANCE</i>
	(6) Detailed maintenance records :	
	<ul style="list-style-type: none"> • Clarify the interaction in between § 145.A55 (d) and this paragraph concerning "Detailed maintenance record" and "work carried out" ? • Does it mean that "Dirty finger print" is not more considered to be kept as substantiating data to demonstrate compliance for an owner/operator ? If yes, please clarify the retention period of "Dirty finger print" for owner/operator ? • Add the definition of "Dirty finger print" ? • 2nd paragraph : add "data" before " necessary to determine the aircraft" 	
response		

comment	53	comment by: <i>Liam CREAVEN</i>
	<u>General comment:</u>	
	While recognising that Part M embraces general aviation and commercial operations the references to 'owner' and 'operator' could benefit from further clarification or a more appropriate term may be considered (e.g. 'person or organisation responsible for the aircraft continuing airworthiness').	
	<u>GM M.A.305 paragraph 6.</u>	
	'Dirty Finger Print' is a slang term and can be expected to become more obsolete as the use of electronic signatures for maintenance activities becomes more prevalent. Please provide a definition for the term or consider an alternate term (e.g. certified task card) that includes	



response	<p>'dirty finger print' as an example.</p> <p>The distinction provided for the use of the term 'detailed maintenance records' as it applies to maintenance organisations versus owners/operators, in which it is clarified that maintenance organisations are required to retain more detail than owner/operators, is helpful however the reference to 'may not need' in respect of 'Dirty Finger Prints' to be retained by owner/operators is vague and appears subjective.</p> <p>Additional clarification is needed such as 'When a CRS for a major assembly details the work performed on discrete elements of that assembly then individual 'dirty finger prints' do not need to be transferred from the Part 145 organisation 5 to the owner/operator'.</p> <p>The guidance should not suggest that the owner/operator can treat the Part 145 as an extended library for future access to maintenance records and should instead be clear that the owner/operator should obtain from the Part 145 organisation all maintenance records necessary to demonstrate compliance with the owner/operators continuing airworthiness management obligations from the Part 145 organisation.</p>
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comment	92	comment by: AIRBUS
response	<p>1. PARAGRAPH / SECTION THE COMMENT IS RELATED TO:</p> <p>NPA 2014-04, page 15/44, GM M.A.305</p> <p>2. PROPOSED TEXT / COMMENT:</p> <p>It is proposed to modify the paragraph (1) of the GM M.A.305 to read:</p> <p>“(1) ‘Applicable airworthiness limitation parameter’ and ‘applicable parameter’ mean ‘in flight hours’ and/or ‘in flight cycles’ and/or ‘in landings’ and/or ‘in calendar time’, and/or ‘in any other applicable usage measurement unit’, as appropriate”.</p> <p>This proposal has to be read in conjunction with point M.A.305(d)1. for example.</p> <p>3. RATIONALE / REASON / JUSTIFICATION:</p> <p>For example, a life limitation may apply to some Auxiliary Power Unit (APU) rotating parts (ref. EASA AD 2010-0079). In such a case, the life limitation may be measured in cycles of APU usage. The current definition does not take into account the possibility of measurement units other than those listed.</p>	

comment	93	comment by: AIRBUS
response	<p>1. PARAGRAPH / SECTION THE COMMENT IS RELATED TO:</p> <p>NPA 2014-04, page 15/44, GM M.A.305</p>	



2. PROPOSED TEXT / COMMENT:

It is proposed to modify the paragraph (2) of the GM M.A.305 to read:

“(2) A ‘life limited part’ is a part for which the maintenance schedule of the aircraft maintenance programme requires the permanent removal from service when, or before, the specified mandatory life limitation in **any of the applicable parameters is reached.**”

3. RATIONALE / REASON / JUSTIFICATION:

A life limitation may be measured in more than one measurement unit, e.g. in flight hours and in flight cycles. The basic rule should be conservative, i.e. to require the replacement of life-limited parts at or prior to whichever of the mandatory life limitation in any applicable parameters is reached first (unless otherwise specified in the relevant DAH instructions for continued airworthiness or in the AD).

response

comment

94

comment by: AIRBUS

1. PARAGRAPH / SECTION THE COMMENT IS RELATED TO:

NPA 2014-04, page 15/44, GM M.A.305

2. PROPOSED TEXT / COMMENT:

It is proposed to modify the paragraph (4) of the GM M.A.305 to read:

“(4) The term ‘time controlled components’ embraces any component for which the maintenance schedule of the aircraft maintenance programme requires periodically the removal for restoration, ~~the~~ replacement, or ~~the~~ quantitative inspection of component’s performance **in a suitable approved workshop, after a service period controlled at component level.**”

Further, this paragraph refers to the term ‘restoration’ (GM M.A.305(d)(2) as well). Although the use of this term in this context is found appropriate, could the Agency confirm the term in the definition of ‘maintenance’ under which ‘restoration’ falls?

3. RATIONALE / REASON / JUSTIFICATION:

As currently written, the proposed definition could include components that are removed periodically after a service period controlled at the airframe level: e.g. hydraulic or air filters.

The proposed definition includes the words ‘or the quantitative inspection of component’s performance’. This suggests that all components subject to a functional check (i.e. a quantitative check) would need to be declared as time controlled components. This includes those that are checked on-aircraft (the majority) and thus extends the list of time controlled components without proven necessity for an appropriate control of scheduled maintenance. Therefore, it is assumed the time controlled components only relate to off-aircraft tasks.

Different definitions may be found in various locations of Regulations:

– The paragraph (h) of the Article 2 of the Regulation (EC) No 2042/2003 defines the term



‘maintenance’:

(h) ‘maintenance’ means any one or combination of overhaul, repair, inspection, replacement, modification or defect rectification of an aircraft or component, with the exception of pre-flight inspection.

– The Appendix II – Authorised Release Certificate EASA Form 1 defines the following terms:

(i) Overhauled. Means a process that ensures the item is in complete conformity with all the applicable service tolerances specified in the type certificate holder’s, or equipment manufacturer’s instructions for continued airworthiness, or in the data which is approved or accepted by the Authority. The item will be at least disassembled, cleaned, inspected, repaired as necessary, reassembled and tested in accordance with the above specified data.

(ii) Repaired. Rectification of defect(s) using an applicable standard (*).

(iii) Inspected/Tested. Examination, measurement, etc. in accordance with an applicable standard (*) (e.g. visual inspection, functional testing, bench testing etc.).

(iv) Modified. Alteration of an item to conform to an applicable standard (*).

* Applicable standard means a manufacturing/design/maintenance/quality standard, method, technique or practice approved by or acceptable to the Competent Authority.

– The point 21.A.431(c) in the Part-21 defines a repair:

(c) A ‘repair’ means elimination of damage and/or restoration to an airworthy condition following initial release into service by the manufacturer of any product, part or appliance.

However, there is no reference to the term ‘restoration’.

response

comment

95

comment by: AIRBUS

1. PARAGRAPH / SECTION THE COMMENT IS RELATED TO:

NPA 2014-04, pages 15-16/44, GM M.A.305

2. PROPOSED TEXT / COMMENT:

The following paragraph refers to the term ‘action’:

“(5) [...]. Any action that alters the periodicity of the maintenance task(s) or changes the parameter of this periodicity should be recorded.”

Could the Agency confirm the term ‘action’ covers all cases?

It is proposed to amend the paragraph (5) of the GM M.A.305 to read:

“(5) [...]. Any ~~action~~ **approved data** that alters the periodicity of the maintenance task(s) or changes the parameter of this periodicity should be recorded.”

3. RATIONALE / REASON / JUSTIFICATION:

It is believed that an action is not systematically necessary to affect the periodicity of a



maintenance task. The term 'approved data' seems more appropriate (e.g. revision of a periodicity for the inspection of an existing repair design).

response

comment

96

comment by: AIRBUS

1. PARAGRAPH / SECTION THE COMMENT IS RELATED TO:

NPA 2014-04, page 16/44, GM M.A.305

2. PROPOSED TEXT / COMMENT:

It is proposed to modify the paragraph (6) of the GM M.A.305 to read:

“(6) The term ‘Detailed maintenance records’ in point M.A.305 refers to those records produced by maintenance organisations that are required to be kept by the owner/operator person or organisation responsible for the aircraft continuing airworthiness. They contribute to determine the aircraft continuing airworthiness and the serviceability of both operational and emergency equipment, in particular for the configuration of the aircraft in accordance with Part M relevant for and the need for future maintenance. These are different from only a part of the detailed maintenance records required to be kept by a maintenance organisation as per M.A.614 or 145.A.55(c). Whereas maintenance organisations are required to retain all detailed records to demonstrate that they worked in compliance with their respective requirements, aircraft owner/operator the person or organisation responsible for the aircraft continuing airworthiness needs to retain those records required for assessing the aircraft configuration and the airworthiness of the aircraft, engine(s), propeller(s) and all installed components installed subject to mandatory instructions and associated airworthiness limitations. ‘Dirty finger prints’ may not need to be transferred from the maintenance organisation to the aircraft owner/operator person or organisation responsible for the aircraft continuing airworthiness. [...]”.

It is proposed to simultaneously modify the AMC M.A.614(a) and GM 145.A.55(a) to read:

“AMC M.A.614(a) Maintenance records

1. Properly executed and retained **aircraft continuing airworthiness records and maintenance records** provide owners, operators and maintenance personnel with information essential in controlling unscheduled and scheduled maintenance, and trouble shooting to eliminate the need for re-inspection and rework to establish airworthiness.

The prime objective is to have secure and easily retrievable **maintenance records** with comprehensive and legible contents. The **aircraft maintenance records** should contain basic details of all serialised **aircraft** components and all other **significant aircraft** components **subject to mandatory instructions and associated airworthiness limitations installed that are affected by the maintenance carried out**, to ensure traceability to such **installed aircraft** component documentation and associated **M.A.304 M.A.401** maintenance data.”

GM 145.A.55(a) Maintenance records



“1. Properly executed and retained **aircraft continuing airworthiness records and maintenance records** provide owners, operators and maintenance personnel with information essential in controlling unscheduled and scheduled maintenance, and trouble shooting to eliminate the need for re-inspection and rework to establish airworthiness.

The prime objective is to have secure and easily retrievable **maintenance records** with comprehensive and legible contents. The **aircraft maintenance records** should contain basic details of all serialised **aircraft** components and all other **significant aircraft** components **subject to mandatory instructions and associated airworthiness limitations installed that are affected by the maintenance carried out**, to ensure traceability to such **installed aircraft** component documentation and associated maintenance data as specified in 145.A.45.”

3. RATIONALE / REASON / JUSTIFICATION:

The Annex IV of Regulation (EC) No 216/2008 sets out the essential requirements for air operations referred to in Article 8, and in particular with respect to continuing airworthiness in the paragraph 6. It states that the aircraft must not be operated unless the operational and emergency equipment necessary for the intended flight is serviceable. Point M.A.201 ‘Responsibilities’ reminds that the person or organisation responsible for the continuing airworthiness of an aircraft shall ensure that no flight takes place unless any operational and emergency equipment fitted is correctly installed and serviceable or clearly identified as unserviceable. In order to ensure consistency, a wording about operational and emergency equipment is added to the paragraph (6) of the GM M.A.305 and is based on the introductory sentence of point M.A.301, which defines the continuing airworthiness tasks.

This new GM confirms that in some cases, the person or organisation responsible for the aircraft continuing airworthiness is no longer required to keep some detailed maintenance records associated with the maintenance work carried out. The term ‘all components installed’ is not precise enough. The person or organisation responsible for the aircraft continuing airworthiness should be provided with records only when they are necessary to demonstrate compliance with M.A.305. Wording about components has been amended for consistency with paragraph (e) of the AMC M.A.305(c)2.

Then, the amendment of the AMC M.A.614(a) and the GM 145.A.55(a) is proposed to ensure consistency with the paragraph (6) of the GM M.A.305 introduced by the NPA 2014-04. The use of the term ‘aircraft record’ in the first paragraph of the AMC M.A.614(a) and the GM 145.A.55(a) is confusing:

Is reference made to aircraft continuing airworthiness records, maintenance records, or both?

The notion of ‘other significant aircraft components’ is ambiguous. Some competencies pertaining to the design domain are required to establish the list of such ‘other significant aircraft components’: should the design approval holders be not involved, some components could be missed, or conversely, the list could create an unnecessary burden on maintenance organisations. Therefore, a provision referring to ‘other components subject to mandatory instructions and associated airworthiness limitations’ has been added for consistency with the paragraph (6) of the GM M.A.305.



response

comment

97

comment by: AIRBUS

1. PARAGRAPH / SECTION THE COMMENT IS RELATED TO:

NPA 2014-04, page 16/44, GM M.A.305

2. PROPOSED TEXT / COMMENT:

It is proposed to modify the paragraph (6) of the GM M.A.305 to read:

“[...]”

Where the maintenance organisation retains the detailed maintenance records in accordance with 145.A.55(c) ~~and or~~ M.A.614(c), the ~~owner/operator~~ **person or organisation responsible for the aircraft continuing airworthiness** should receive the aircraft **and/or component** certificate(s) of release to service ~~performed during~~ **issued at the completion of the maintenance and together with the associated detailed maintenance records, when these certificates and detailed maintenance records are** necessary to determine the aircraft continuing airworthiness and **the serviceability of both operational and emergency equipment, in particular for—its** the aircraft configuration, **and the need for future maintenance. The aircraft certificate of release to service should—**which includes directly or indirectly references to all: [...]”.

3. RATIONALE / REASON / JUSTIFICATION:

The aircraft certificate of release to service is issued at the completion of (not during) any maintenance (point 145.A.50(b)).

The person or organisation responsible for the aircraft continuing airworthiness should receive data/documents only when these data/documents are necessary to determine the aircraft continuing airworthiness and the serviceability of both operational and emergency equipment. Further, component maintenance needs to be taken into account to achieve this objective.

The Annex IV of Regulation (EC) No 216/2008 sets out the essential requirements for air operations referred to in Article 8, and in particular with respect to continuing airworthiness in the paragraph 6. It states that the aircraft must not be operated unless the operational and emergency equipment necessary for the intended flight is serviceable. Point M.A.201 ‘Responsibilities’ reminds that the person or organisation responsible for the continuing airworthiness of an aircraft shall ensure that no flight takes place unless any operational and emergency equipment fitted is correctly installed and serviceable or clearly identified as unserviceable. In order to ensure consistency, a wording about operational and emergency equipment is added to the paragraph (6) of the GM M.A.305 and is based on the introductory sentence of point M.A.301, which defines the continuing airworthiness tasks.

The instructions to complete an EASA Form 1 specify that the block 12 describes the work [...], either directly or by reference to supporting documentation, necessary to determine the airworthiness of item(s) in relation to the work being certified. Therefore, the reference to



	<p>data/documents necessary to determine the aircraft continuing airworthiness and/or the serviceability of both operational and emergency equipment may be included in the supporting documentation related to the EASA Form 1.</p>
response	
comment	<p>98 comment by: AIRBUS</p> <p>1. PARAGRAPH / SECTION THE COMMENT IS RELATED TO:</p> <p>NPA 2014-04, page 16/44, GM M.A.305</p> <p>2. PROPOSED TEXT / COMMENT:</p> <p>The paragraph (8) of the GM M.A.305 states “Some abnormal conditions that could be kept under this requirement could be lightning strikes, hard landings, long term storage, propeller or rotor over-speed, over-torque, impact on a main rotor blade, etc.”</p> <p>Could the Agency clarify the reasons why ‘long term storage’ is considered as an abnormal condition?</p> <p>It is proposed to modify the paragraph (8) of the GM M.A.305 to read:</p> <p>“(8) ‘Other maintenance required for continuing airworthiness’ means other unscheduled maintenance due to abnormal or particular conditions or events with an impact on the continuing airworthiness of the aircraft at the time of its return to service. It is not intended to request every single condition described in the maintenance data, i.e. e.g. Aircraft Maintenance Manual chapter 5, but just the ones that cannot be captured by other means, for example when those are not included in the records for repairs. Some abnormal or particular conditions or events that could be kept under this requirement could be lightning strikes, hard landings, long term storage, propeller or rotor over-speed, over-torque, impact on a main rotor blade, etc.</p> <p>Such maintenance may include component maintenance performed in a suitable workshop to appropriately address the abnormal or particular condition or event, e.g. to confirm the serviceability of operational and/or emergency equipment.”</p> <p>3. RATIONALE / REASON / JUSTIFICATION:</p> <p>The term ‘other maintenance required for continuing airworthiness’ is used in the point M.A.305(e)2.(iii) to contrast with the term ‘scheduled maintenance’. Therefore, can ‘other maintenance required for continuing airworthiness’ be anything but unscheduled maintenance? If it can, some explanations are requested.</p> <p>The term ‘abnormal or particular conditions or events’ is proposed so that long term storage is not considered as an abnormal condition or event, like dust storms or tail runway impacts can be.</p> <p>The Annex IV of Regulation (EC) No 216/2008 sets out the essential requirements for air operations referred to in Article 8, and in particular with respect to continuing airworthiness in the paragraph 6. It states that the aircraft must not be operated unless the operational</p>



and emergency equipment necessary for the intended flight is serviceable. Point M.A.201 'Responsibilities' reminds that the person or organisation responsible for the continuing airworthiness of an aircraft shall ensure that no flight takes place unless any operational and emergency equipment fitted is correctly installed and serviceable or clearly identified as unserviceable. In order to ensure consistency, a wording about operational and emergency equipment is added to the paragraph (8) of the GM M.A.305 and is based on the introductory sentence of point M.A.301, which defines the continuing airworthiness tasks.

response

comment

99

comment by: AIRBUS

1. PARAGRAPH / SECTION THE COMMENT IS RELATED TO:

NPA 2014-04, pages 16-17/44, GM M.A.305

2. PROPOSED TEXT / COMMENT:

The paragraph (9) of the GM M.A.305 states:

“Such records [in-service history records] document each time a life limited part is placed in service or removed from service. They should clearly: [...]

(iv) show the total in-service life accumulated in flight hours and/or flight cycles and/or landings and/or calendar time and/or any other applicable parameter, as appropriate, corresponding to the dates of installation and removal of the part.”

Could the Agency clarify which total in-service life accumulated is to be shown?

Is it the total in-service life accumulated by:

- the part,
- the next higher product or particular component (i.e. the APU for example or the propeller, the engine, or the aircraft) the part is fitted to,
- both the part and the next higher product or particular component, or
- something else?

It is proposed to modify the paragraph (9) of the GM M.A.305 to read:

“Such records document each time a life limited part is placed in service or removed from service. They should clearly: [...]

(iv) Show the total in-service life accumulated in flight hours and/or flight cycles and/or landings and/or calendar time and/or any other applicable parameter, as appropriate, corresponding to the dates of installation and removal of the part.

The life accrued by the life limited part between any installation and a consecutive removal should be consistent with the life accumulated by the relevant product/particular component (e.g. the Auxiliary Power Unit) that is recorded in accordance with point M.A.305(b)1. for the same period.”



3. RATIONALE / REASON / JUSTIFICATION:

Compliance with mandatory life limitations is crucial to the aircraft continuing airworthiness as established by point M.A.305. The quality of the mandatory life limitations control is dependent on the three elements involved in calculations:

- the selection (and adjustment, if necessary) of the relevant life limitations, which depend on the configuration of the product/particular component,
- the accuracy of calculations of the life limited part's accumulated life, and
- the accuracy of the calculation of the life limited part's remaining life.

Extensive experience on large aeroplane life limited parts shows that a significant source of errors in the control of mandatory life limitations is the lack of checks of the part's life accumulation. To correct this gap, it is necessary to request a confirmation that the life accrued by the life limited part, between an installation and a consecutive removal, is consistent with the life accumulated by the relevant product/particular component for the same period.

response

comment

161

comment by: *Belgian CAA*

- GM M.A.305 § (5) : the word "in" should be added in : "...by the affected components in the applicable parameter, as appropriate...".

response

comment

162

comment by: *Belgian CAA*

- GM M.A.305 § (6) : it is important to refer also to the necessity to ensure the traceability of the work performed to be able to demonstrate that the aircraft is in line with the M.A.902 requirements. We can propose this kind of additional wording : " 'Detailed maintenance records' are those records required to be kept by the owner/operator to be able to determine the continuing airworthiness and configuration of the aircraft in accordance with Part-M relevant for future maintenance **and/or to ensure the traceability of the work performed on aircraft to demonstrate compliance with M.A.902**". - GM M.A.305 § (6) : concerning the content of this paragraph after the first sentence, we have some matter of concern. The operator/owner needs to have the detailed records of the works performed on aircraft to ensure their responsibilities in term of M.A.201 and to be in compliance with the M.A.902. In these circumstances, if the operator/owner does not receive the record like work cards ("dirty finger prints") but only a document (like a tally sheet) that refers only to a work card number or an AD number or a repair description, the operator/owner cannot ensure adequately their responsibilities described in the M.A.201 and M.A.708 (for PART-M Subpart G) for example. However, with this GM paragraph, in our understanding, it seems that a simple cross-reference is sufficient for EASA.



We think this approach is not a good way :

a) to ensure an adequate level of safety with sufficient proof. Indeed, it is important to have sufficient “safety nets” to avoid as much as possible any safety issue. Moreover, in case of serious incident or accident, without access to sufficient records (like dirty finger prints that contain all the details of works performed), an adequate investigations and adequate corrective/preventive actions necessary to improve the safety in aviation will not be possible. We can give you the following example that is based on a loss of an aircraft several years ago : a crash occurred 12 years after a reparation was performed on the aircraft. The repair was not performed adequately and it was discovered with the dirty finger prints and the wreckage. With the proposal of the NPA, it will not be possible to do the investigation correctly due to the fact that important information will not be available. This example can be enlarged to other incidents also.

b) to give sufficient information to the operator/owner to ensure the continuing airworthiness of the aircraft. Indeed, if the operator/owner does not have access to the dirty finger prints (work cards), he does not have the necessary information to perform the adequate review to up-date his “information technology system”. For example, without dirty fingers prints, when applicable, how the operator/owner can verify : *the corrosion findings on its aircraft ; *the result of certain inspections that have an impact for the future follow-up (ex : AD that have different requirements depending of the result of the inspection,...);

*the reliability study and the development of the maintenance program based on the findings during maintenance checks ;

*the requirements for repairs/damage follow-up ;

....

This comment could have also an impact on the “AMC M.A.305 (f)” as it is written in the NPA.

response

comment

175

comment by: *Chris GRUENER, BOC Aviation Pte. Ltd.*

GM M.A. 305 (6)

1. The terms owner/operator are often used together and intermingled, a clear separation should be stated as to their responsibility regarding commercial aviation. If the term "owner" is only required to cover general aviation, a more precise terminology would be good in order to avoid confusion with aircraft lessors/financers. This applies not only to this paragraph.

2. The sentence "Dirty finger prints may not be needed..." is not very precise and may lead to problems when aircraft are transferred between different operators who have different understandings of what may or not may be needed. The regulation should clearly state that an operators needs all detailed maintenance records to demonstrate airworthiness. This also includes maintenance compliance proof such as stamped jobcards



response	<p>(e.g. where jobcards record certain measurements/dimensions/findings). The term "dirty finger prints" should include any other future equivalent of "dirty finger prints", I encourage the use of a more precise term and use DFP as one example (e.g. "Proof of maintenance performance, e.g. stamped jobcards 'dirty finger prints').</p>
comment	<p>204 comment by: Klaus Lehmkoeester - CAMO, DE.MG.1016, LBA.MG.1016</p> <p>Dirty finger prints:</p> <p>Did any one from you an aircraft maintenance? Any worker uses a checklist to do his job. And, of course, it is normal that a dirty finger print will land on the paper.</p> <p>Sorry, but this proposal is a big bullshit. Delete it, quick!</p> <p>(Or, may I can use such derictive to fire the damned maintenance stuff, when he puts a dirty finger print on the papers?)</p>
response	
comment	<p>211 comment by: DLH and LHT</p> <p>GM M.A.305 (2): "[...] maintenance schedule of the aircraft maintenance programme [...]" should be changed into "[...] airworthiness limitation section [...]". Else, e.g. oxygen bottles, cartriges or filters, having a maintenance task "discard" would be treated the same.</p>
response	
comment	<p>216 comment by: DLH and LHT</p> <p>GM M.A.305 (9) (iii): Please note comment No. 214 (with regard to App III to GM1 M.B.303(b) 'Key Risk Elements' C.2 Component control Typical inspection items 4.)</p>
response	
comment	<p>219 comment by: Baines Simmons Limited</p> <p>Comment 1</p> <p>GM M.A.305 Aircraft continuing airworthiness record system</p> <p>(1) This definition is too restrictive. For example, certain engine components may have maintenance tasks and/or lives expressed in terms of "engine cycles" which do not necessarily correlate to "flight cycles". The record system must be able to indicate/control the maintenance tasks and/or lives of such components in relation to the parameter defined in the design approval holder's source document, e.g. the MRB report or Engine Manual Chapter 5.</p>



We recommend the following definition:

(1) Applicable airworthiness limitation parameter' and 'applicable parameter' mean 'in flight hours' and/or 'flight cycles' and/or 'landings' and/or 'calendar time', **and/or other parameter, as defined in the aircraft maintenance programme, e.g. engine cycles,** as appropriate.

Comment 2

(6) We believe the differentiation between "**detailed maintenance records**" in respect to M.A.305 and the differing interpretation in respect of 145.55(c) is unnecessary and will cause confusion. It also appears to place an additional burden on the maintenance organisation to extract information and provide this to the owner/CAMO, instead of simply transferring the "dirty finger prints" (or electronic copies thereof) as is current practice.

If EASA continues to consider the need for this difference, then:

- a new term should be used in M.A.305, e.g. "detailed maintenance information", and
- rule material should describe who is responsible for extracting this "information" from the (dirty finger print) "records", and
- how this should be done.

Comment 3 (refer also to comment 217)

There does not appear to be a requirement to keep CRS and detailed maintenance records in relation to defect identification and/or investigation and/or rectification. "other maintenance required for continuing airworthiness" could include this, but the definition in the GM only relates to "abnormal" or "occurrence-based" defects. We feel this is a significant omission and must be included as follows:

M.A.305 Aircraft Continuing Airworthiness Record System

(e)

...

2 General data:

...

(iii) the certificate of release to service and detailed maintenance records of all scheduled maintenance, **defect investigation and rectification**, or other maintenance required for continuing airworthiness in respect of the aircraft, engine(s), propeller(s), as appropriate;

response

comment

224

comment by: *Eamon STAPLETON*

Para 9: The term "in-service history records" has been introduced and is defined as "such records document each time a life limited part is placed in service or removed from service". In the Regulatory Impact Assessment Para 4.3.3 and Analysis of Impacts Para 4.4.3, "In



service history" records are referred to in both areas as the keeping of "some records", "not keeping this history from the birth of the component, but from a certain time" and "only some records are requested". The statements in 4.3.3 and 4.4.3 do not seem to cover the definition from GM M.A. 305 Para. 9 and as such it would appear that the impact of this definition for life limited parts has not been completely addressed.

Also, one of the issues that is intended to be addressed by this NPA is the lack of harmonisation with FAA requirements in relation to continuing airworthiness records, but in Para. 4.3.8 and 4.4.8, this has been listed as already covered by the Bilateral Agreement - this issue would not appear to be clearly addressed in the existing Bilateral Agreement as the requirements for the retention of records for life limited parts differs significantly from the FAA requirements in this regard (Ref. FAA AC 120-16F Chapter 8-12) which leads to issues during the transfer of parts between these jurisdictions.

response

comment

231

comment by: AEA

GM M.A. 305 (3):" The 'current status of life limited parts' should indicate, for each affected part,.....".

Comment: in the case of engines, the same part could be installed in different engine models with , most likely, also different thrust ratings . So a wider interpretation is necessary.

response

comment

232

comment by: AEA

GM M.A. 305 (4):". The term 'time controlled components' embraces any component for which

the maintenance schedule of the aircraft maintenance programme requires periodically the removal for restoration, the replacement, or the quantitative inspection of component's performance.....

Comment: Aircraft maintenance programmes for the same type of aircraft worldwide may differ. Therefore (because of pooling and leasing contracts) it is safer to refer to OEM MRB/MPD. So the text should read:

.....". The term 'time controlled components' embraces any component for which the maintenance schedule of the OEM MRB/MPD requires periodically the removal for restoration, the replacement, or the quantitative inspection of component's performance.....

response



comment	<p>233 comment by: AEA</p> <p>GM M.A. 305 (5)</p> <p>Comment:</p> <p>The text proposes that the current status of time controlled components should include the life accumulated by the affected components. As proposed, these components could include non-serialized parts, such as filters, batteries, cartridges of fire extinguishers, etc. Maintenance actions to such parts are typically managed with aircraft level instructions in the aircraft maintenance program, and not at component level. Requiring component level tracking of such parts would result in a significant burden to the operators.</p> <p>Suggested resolution:</p> <p>Restrict the requirement to include the life accumulated by the affected components in the current status of time controlled components only to components that were serialized by the Design Approval Holder (DAH).</p>
response	
comment	<p>234 comment by: AEA</p> <p>GM M.A. 305 (5) : “.....since the last accomplishment of scheduled maintenance specified in the maintenance schedule of the aircraft maintenance programme”.</p> <p>Comment: change text to add “engine”:</p> <p>“.....since the last accomplishment of scheduled maintenance specified in the maintenance schedule of the <u>aircraft / engine</u> maintenance programme”.</p>
response	
comment	<p>235 comment by: AEA</p> <p>GM M.A.305 (6): which includes references to all:</p> <ul style="list-style-type: none"> — taskcards, — modifications, — airworthiness directives, — repaired and non-repaired damage, and — measurements relating to defects. <p>Comment: This last bullet , “measurements relating to defects” would be an undue burden on Maintenance Organisations’ record keeping activities. Please explain what is meant here.</p>
response	



comment	<p>236</p> <p style="text-align: right;">comment by: <i>AEA</i></p> <p>GM M.A.305 (9) (iv): “Any other events that would affect the life limitation, such as a modification</p> <p>(in accordance with airworthiness directives, service bulletins or any product improvements) that affects the life limitation or changes the limitation parameter, must also be included in the in-service history record.</p> <p>Not all modifications would necessarily be pertinent to the life limitation of the component”.</p> <p>Comment: identical components can be installed on different engines. The situation that some repairs (on such components) may be allowed on one engine type but not on another engine type should also be covered here. “Departures” (one-time approval of deviations) can also be engine type specific.</p>
response	
comment	<p>251</p> <p style="text-align: right;">comment by: <i>AEA</i></p> <p>GM M.A.305 (2): “[...] maintenance schedule of the aircraft maintenance programme [...] ” should be changed into “[...] airworthiness limitation section [...]”. Else, e.g. oxygen bottles, cartridges or filters, having a maintenance task “discard” would be treated the same.</p>
response	
comment	<p>252</p> <p style="text-align: right;">comment by: <i>AEA</i></p> <p>GM M.A.305 (9) (iii): Please note comment No. 214 (with regard to App III to GM1 M.B.303(b) 'Key Risk Elements' C.2 Component control Typical inspection items 4.)</p>
response	
comment	<p>260</p> <p style="text-align: right;">comment by: <i>CAI FIRST</i></p> <p>(4) The term ‘time controlled components’ embraces any component for which the maintenance schedule of the aircraft maintenance programme requires periodically the removal for restoration, the replacement, or the quantitative inspection of component’s performance (for ELT batteries ref. to AMC 1 CAT.IDE.A.280, AMC1 NCC.IDE.A.215, AMC1 NCO.IDE.A.170).</p> <p>(6) ‘Detailed maintenance records’ are those records required to be kept by the owner/operator to be able to determine the continuing airworthiness and configuration of the aircraft in accordance with Part-M relevant for future maintenance. These are different from the detailed maintenance records required to be kept by a maintenance organisation as</p>



per M.A.614 or 145.A.55(c). Whereas maintenance organisations are required to retain all detailed records to demonstrate that they worked in compliance with their respective requirements, aircraft owners/operators need to retain those records required for assessing the aircraft configuration and the airworthiness of the aircraft and all components installed. 'Dirty finger prints' may not need to be transferred from the maintenance organisation to the aircraft owner/operator but often dirty finger are necessary to assess the aircraft configuration and must be retained (i.e. if an operator engineering order or TCH maintenance data address a multiple choice of task)

JUSTIFICATION:

-provision to following tasks may be added

AMC1 CAT.IDE.A.280 Emergency locator transmitter (ELT)

BATTERIES

(a) All batteries used in ELTs should be replaced (or recharged if the battery is rechargeable) when the equipment has been in use for more than 1 cumulative hour or in the following cases:

(1) Batteries specifically designed for use in ELTs and having an airworthiness release certificate (EASA Form 1 or equivalent) should be replaced (or recharged if the battery is rechargeable) before the end of their useful life in accordance with the maintenance instructions applicable to the ELT.

(2) Standard batteries manufactured in accordance with an industry standard and not having an airworthiness release certificate (EASA Form 1 or equivalent), when used in ELTs should be replaced (or recharged if the battery is rechargeable) when 50 % of their useful life (or for rechargeable, 50 % of their useful life of charge), as established by the battery manufacturer, has expired.

(3) The battery useful life (or useful life of charge) criteria in (1) and (2) do not apply to batteries (such as water-activated batteries) that are essentially unaffected during probable storage intervals.

(b) The new expiry date for a replaced (or recharged) battery should be legibly marked on the outside of the equipment.

AMC1 NCC.IDE.A.215 Emergency locator transmitter (ELT),

AMC1 NCO.IDE.A.170 Emergency locator transmitter (ELT)

-dirty finger often is the mean to assess which task or maintenance data was applied

response

comment

269

comment by: DGAC France

This comment has been attached to GM M.A.305 (1) but if retained it would lead to changes in several over paragraphs.



The term “applicable parameter” when used for instance in M.A.305 (b)(1) only covers “calendar times” which is not directly written in that paragraph.

It is recommended to avoid the use of the term in conjunction with a list of its items:

“Flight cycles (FC) and/or flight hours(FH) and/or applicable parameters” should either be “applicable parameters” or “FC and/or FH and/or landings and/or calendar times”.

DGAC prefers that last way to write items as it is directly explicit.

Regarding the “applicable airworthiness limitation parameter”, it is only used once in M.A.305(d)(1). It is recommended to remove from the GM that definition, and directly put appropriate words in the corresponding referenced paragraph.

Proposed modification:

Example of change:

M.A.305(d)1) : current status of life limited parts including the life accumulated by each affected part in relation to the ~~applicable airworthiness limitation parameter~~ appropriate limitation expressed in flight cycles or flight hours or landings or calendar times ; and

response

comment

276

comment by: *DAC Luxembourg*

COMMENT DACL-2014-04-03

GM M.A.305 (2) AND (4) REWORDED AS FOLLOW

(2) A ‘LIFE LIMITED PART’ IS A PART FOR WHICH THE MAINTENANCE SCHEDULE OF THE AIRCRAFT MAINTENANCE PROGRAMME REQUIRES THE PERMANENT REMOVAL FROM SERVICE WHEN, OR BEFORE, THE SPECIFIED MANDATORY LIFE LIMITATION **APPROVED UNDER THE AUTHORITY OF THE STATE OF DESIGN**, IN APPLICABLE PARAMETER, IS REACHED. (4)THE TERM ‘TIME CONTROLLED COMPONENTS’ EMBRACES **ALL** THE COMPONENTS **OTHER THAN LIFE LIMITED PARTS** FOR WHICH THE MAINTENANCE SCHEDULE OF THE AIRCRAFT MAINTENANCE PROGRAMME REQUIRES PERIODICALLY THE REMOVAL FOR RESTORATION, THE REPLACEMENT, OR THE QUANTITATIVE INSPECTION OF COMPONENT’S PERFORMANCE

REASON / JUSTIFICATION:

THE DEFINITIONS, AS DESCRIBED IN THE PROPOSED GM M.A.305, ARE CONFUSING: THE ‘TIME CONTROLLED COMPONENTS’ SEEMS TO ENCOMPASS THE DEFINITION OF ‘LIFE LIMITED PARTS’. NEVERTHELESS, BOTH DEFINITIONS APPEAR AT THE SAME TIME IN OTHER PROPOSALS AS SEGREGATE CONCEPTS (E.G. TITLE OF SECTION M.A.503 OR IN M.A.710 (A) 7). AS SUCH, THEY SHOULD BE CLEARLY DISTINGUISHED BY DEFINING THEIR CONTENT AND ORIGIN.

response



comment

279

comment by: DAC Luxembourg

COMMENT DACL-2014-04-04

Rewrite GM M.A.305 (6) to avoid the loss of airworthiness records by using only the reference on the CRS. In particular, the “references to all” in the following sentence should be suppressed:

“(…) the owner/operator should receive the aircraft release to service performed during the maintenance and necessary to determine the aircraft continuing airworthiness and its configuration, which includes ~~references to all~~: (…)”

REASON/JUSTIFICATION:

As written, one can understand that demonstration of the continuing airworthiness of the aircraft is limited to the use of references from the previous maintenance package to plan the “relevant future maintenance”.

The definition of detailed maintenance records for the Part M organisation **should encompass in addition to the proposed definition all the elements necessary to demonstrate the continuing airworthiness of the aircraft**. As an example, the detailed maintenance records of the Part 145 include several additional information useful to track the airworthiness (Ex: the dimensional information required by AMC M.A.801(f) and AMC 145.A.50(b)). However, those information are not contained in the “**references**”.

After the 2 years period, this additional information retained by the Part 145 could be lost.

While it can be easily understood that all work cards and “dirty finger prints” do not need to be transferred to the owner/operator, it is however important to include **all** the information pertinent to the continuing airworthiness (specific methods / measurements / level of deterioration / etc.) but not covered by the actual proposed definition of “detailed maintenance record” for the Part M.

response

comment

280

comment by: DGAC France

M.A.305 and associated AMC /GM precise what is expected for each aircraft covered by the Basic Rule EC 216/2008 in term of continuing airworthiness records. It should be important to sensibilize the actors (owners, operators, CAMOs) there are in certain cases others additional rules in this domain which could be defined by the owners by contract with operators/CAMO due to the potential consequences on the values of the aircraft, a simple nota on this domain could be very useful.

Proposed modification:

Add the following note at the end of GM M.A.305 :

“Note : M.A.305 and associated AMC /GM precise what the aircraft continuing airworthiness records are. It does not prevent the Operators/CAMO to keep additional records as per their



response	<u>commercial/financial contract with aircraft owners/operators”.</u>
comment	<p>294 comment by: <i>Regio Lease</i></p> <p>Attachments #2 #3 #4 #5 #6 #7</p> <p>Page 16, §6 3rd phrase. It is not clear. Does it mean that owner/operator keep exactly the same things as the maintenance organisation? or just the release and list (reference) of tasks performed?</p> <p>We see a risk of safety (mainly during redeliveries to owner by operator) from our understanding. From our experiments, there are lots of mistakes on the status, so, if we just keep the status, we may miss many things. DFP is the only way to cross check the statuses as of today. (See OCR attached provided to DGAC).</p> <p>To be clear, the term "detailed maintenance records" seems to not be convenient in the Part M as we are only working on statuses? the details are in the MRO (if he keeps the detailed data).</p>
response	
comment	<p>297 comment by: <i>Regio Lease</i></p> <p>(iv) why is there "any other applicable parameter"? mismatch with the definition. From our point of view, it is not in accordance with "detailed maintenance records". to determine the MTS (movement traceability sheet), we need the DFPs.</p>
response	
comment	<p>309 comment by: <i>IATA</i></p> <p>GM M.A.305 item (9) - IATA has worked with industry stakeholders on a draft template to define such contents and can share the contents of the template to be used as the industry “standard”.</p>
response	
comment	<p>315 comment by: <i>IATA</i></p> <p>General comment: We propose that there is an effective data for the new record management. The new information on “in-service history records” should apply after an effective day; therefore, an operator should not have to go back to create such historical records if it had a different approved system prior to the effective date.</p>



response

comment

316

comment by: IATA

General Comment: It needs to be a clear differentiation between the in-service history records for Engine, APU, Landing Gear LLPs and parts such as O₂ generators, squibs etc. Items that have an expiration date only (O₂ generators, etc.) should be treated differently than parts having a cycle/flight hour limitation (engine disks etc.).

response

comment

320

comment by: René Meier, Europe Air Sports

page 16/44

(6) "Detailed mainenance records"

What is the meaning of "dirty finger prints"?

Proposal:

Please replace this term.

Rationale:

This is colloquial English, most probably not understood by many within the community.

response

comment

330

comment by: SAS Technical Operations

SAS suggest EASA to clarify that there is no need for an "in-service history" for Life Limited Parts which does not have an operational history dependent limitation e.g. different limits for different applications, weight variants, thrust ratings etc.

If there is an operational history dependent limitation on the Life Limited Part an "in-service history" is needed in order to recalculate the usage and calculate the new limit. But for the standard LLP this is not the case.

response

comment

345

comment by: Luftsport Verband Bayern / Germany

For us it does not make any sense to have a definition of "life limited parts" and "time controlled component" to be based on the content of the maintenance program [point (2) and (4)].

The definition should be based on requirements issued by the Type Certificate Holder of the aircraft or the component.

The term "current status" is not defined at all. Does "current" mean "after each flight" as



response	<p>stipulated in M.A.305 (b), or once per day, once per year??</p> <p>Under (6): is "measurements relating to defects" correct? (measures relating to defects?)</p>
comment	<p>367 comment by: ASD MRO Working Group</p> <p>GM M.A.305 (6) states that the owner/operator needs to ‘retain those records required for assessing the aircraft configuration and the airworthiness of the aircraft and all components installed’. Please clarify ‘all components’ as used in this sentence as it would imply that the record detail and records retention requirements are no different for CM Components than Time Controlled Components or LLPs?</p>
response	

3. Proposed amendments — 3.2. Draft Decision — 3.2.1. Annex I to Decision 2003/19/RM (AMC to Part-M): — Point AMC M.A.305(b)1

p. 17

comment	<p>100 comment by: AIRBUS</p> <p>1. PARAGRAPH / SECTION THE COMMENT IS RELATED TO:</p> <p>NPA 2014-04, page 17/44, AMC M.A.305(b)1</p> <p>2. PROPOSED TEXT / COMMENT:</p> <p>It is proposed to amend the AMC M.A.305(b)1 to read:</p> <p>“(a) Some gas turbine engines are assembled from modules and the total life accumulated in service for the complete engine may not be kept. When owners and operators wish to take advantage of the modular design, then the total life accumulated in service for each module, and maintenance records for each module, should be maintained. The continuing airworthiness records as specified should be kept with the module and should show compliance with any mandatory requirements pertaining to that module.</p> <p>(b) The accomplishment of some scheduled maintenance tasks may be controlled by usage measurement units asynchronous to those used for recording the in-service life accumulation of the aircraft, engine(s) and/or propeller(s). The recording of in-service life accumulation may be necessary also in other measurement units to ensure the continuing airworthiness of the aircraft. For example, a mandatory life limitation measured in cycles of Auxiliary Power Unit usage may apply to some rotating parts. In such a case, APU cycles need to be recorded.</p> <p>It is not intended to request the recording of in-service life accumulation in measurement units of usage for every single component. It is limited to the particular components involved by at least one mandatory maintenance task from the maintenance schedule of the aircraft maintenance programme that is controlled by such asynchronous usage</p>
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measurement units.”

3. RATIONALE / REASON / JUSTIFICATION:

For example, a life limitation may apply to some Auxiliary Power Unit (APU) rotating parts (ref. EASA AD 2010-0079). In such a case, the life limitation may be measured in cycles of APU usage. The requirement does not take into account the possible need for recording lives asynchronous to those of products.

See also the comment on M.A.305(b)1.

response

comment

144

comment by: CAA-NL

We suggest to create a new AMC M.A.305(a) & (d)

Proposal:

‘ The inclusion of the certificate of release to service in the aircraft continuing airworthiness records means that the date and/or flight parameter at which the maintenance was performed, including a unique reference to the CRS document should be processed in the record system in order to establish the next maintenance due and to establish traceability to the maintenance (repair/modification) performed.

For components, this information should be included on the in-service history card unless the applicable authorized release form (EASA Form 1 or equivalent) contains all relevant information required by M.A.305.

For a component (i.e., an assembly) that contains several sub component which are subject to airworthiness limitations (e.g., landing gears and APU’s), the part- and serialnumber and other relevant information of the installed subcomponents should be included in the assembly in-service history record. ’

Explanation:

There is no AMC to the rule. To provide clarification and AMC.

response

comment

256

comment by: CAI FIRST

Some gas turbine engines are assembled from modules and the total life accumulated in service for the complete engine may not be kept. When owners and operators wish to take advantage of the modular design, then the total life accumulated in service for each module, **as well as in-service history if applicable**, and maintenance records for each module, should be maintained. The continuing airworthiness records as specified should be kept with the module and should show compliance with any mandatory requirements pertaining to that module



response	JUSTIFICATION: In line with GM MA 305 (9) and reason of mantaining Total Life
comment	335 comment by: <i>Baines Simmons Limited</i> AMC M.A.305(b)1 Aircraft continuing airworthiness record system We support the need for this explanation on the modularity of engines, but also believe it should refer to modular <u>propellers</u> , as follows: "Some gas turbine engines and some propellers are assembled from modules and the total life accumulated in service for the complete engine or propeller may not be kept."
response	

3. Proposed amendments — 3.2. Draft Decision — 3.2.1. Annex I to Decision 2003/19/RM (AMC to Part-M): — Point AMC M.A.305(c)1

p. 17

comment	14 comment by: <i>Nayak Aircraft Services</i> Die Lesart kann so interpretiert werden ,das hier auf die Flugzeugmuster und nicht auf Flugzeugbaureihen Bezug genommen wird.. Das bedeutet bei einer Cessna 172N, dass die komplette Cessna 172 Serie (A bis S) abgebildet werden müsste, und z.B. alle möglichen Propellertypen und Motormuster abgedeckt zu können. In den AD-Listen werden dann alle Motoren von Continental über Lycoming bis Thielert aufgezeichnet werden. Die Folge ist, dass Seitenlange und unüberschaubare A/D-Listen entstehen werden. Die Sicherheit des Flugzeuges wird dadurch keinesfalls erhöht, im Gegenteil sie wird verschlechtert, da die Übersichtlichkeit fehlt, und wesentliche Punkte vergessen werden können. Zur Zeit haben diese Flugzeuge im Schnitt schon 15 bis 20 Seiten AD-Übersichts-Listen. Dieses würde nach der geplanten Umsetzung auf das 5 bis 10 Fache ansteigen. Eine eindeutige definition ist erforderlich, damit die Papierflut in engen Grenzen gehalten wird. Axel Neitzert techn. Referent BBAL
response	
comment	22 comment by: <i>AIR FRANCE</i> AMC MA.305 (c) 1 (a) :



- Notify if a current AD status needs to indicate all link withg former "Superseded AD"?
- 2nd paragraph : Replace "Why it is not applicable" by "why it is not concerned"
- 3rd paragraph : Replace "for repetitive ADs or measures, only the date of the last...." by "for repetitive ADs or measures, only the applicable parameters of the last"
- Add clarification about recording date : do we have to record "execution" or "release to service" date ?

response

comment

103

comment by: AIRBUS

1. PARAGRAPH / SECTION THE COMMENT IS RELATED TO:

NPA 2014-04, page 17/44, AMC M.A.305(c)1

2. PROPOSED TEXT / COMMENT:

It is proposed to amend the AMC M.A.305(c)1 to read:

~~(a)~~ The current status of ADs, and measures mandated by the competent authority in immediate reaction to a safety problem, should identify the product/component, the ~~applicable~~ **ADs applicable to the product and components thereof**, including revision or amendment numbers and the date on which the status was updated. **It should not list those superseded or cancelled.**

If the AD is generally applicable to the ~~aircraft~~ **product** or component type but is not applicable to the particular aircraft, engine, propeller or component, then this should be identified with the reason why it is not applicable.

The AD status should include the ~~release to service~~ date on which the AD or measure was accomplished **(the date the certificate of release to service was issued)**, and where the AD or measure is controlled by flight hours and/or flight cycles and/or landings and/or any other applicable parameter, as appropriate, it should include the corresponding total life accumulated in service on the date when the AD or measure was accomplished. For repetitive ADs or measures, only ~~the dates of~~ the last and next applications should be recorded in the current status. The status should also specify the method of compliance and which part of a multi-part AD or measure has been accomplished, where a choice is available in the AD or measure.

When the AD is multi-part or requests assessments of certain inspections, this information should be shown as well.

The current status of AD should reference the certificate(s) of release to service showing the demonstration of compliance."

3. RATIONALE / REASON / JUSTIFICATION:

Editorial: there is no need for bullet (a) because there is no bullet (b).

The term 'applicable' used alone may be the source of different interpretations (ADs



applicable to a product vs. ADs that apply because they are not cancelled or superseded). The wording ‘ADs applicable to the product and components thereof’ helps in addressing different situations (for example, an engine managed separately. Refer to AMC M.A.305(b)1). The term ‘product’ is defined in the Regulation (EC) 216/2008.

Experience shows it is necessary to clarify the Agency’s position on the need (or absence thereof) for listing the ADs and measures that have been superseded or cancelled. This will prevent endless discussions, for example at the time of aircraft transfer. It is proposed to not list them: traceability is ensured at the Agency or competent authority level.

The wording ‘the date the certificate of release to service was issued’ is preferred to the term ‘release to service date’. The term ‘certificate of release to service’ is widely used in the Part-M and Part-145.

For repetitive AD, the date of the last and next applications is not necessarily enough: record of flight hours and/or flight cycles and/or landings and/or any other applicable parameter may be needed. To keep consistency with the preceding sentence, reference to the ‘date’ has been deleted.

A link between the continuing airworthiness management domain and the maintenance domain should be ensured. This link will contribute to support the compliance with the point M.A.305(e)2.(i). The AD status should therefore refer to the certificate(s) of release to service, which refer to the items listed in GM M.A.305(6).

response

comment

163

comment by: *Belgian CAA*

- AMC M.A.305 (c) 1. § a : the text : “For repetitive ADs or measures, only the dates of the last and next application should be recorded in the current status” needs to be corrected by : “For repetitive ADs or measures, only **the last application in the applicable** parameter and next application should be recorded in the current status”.

Indeed, it is important to record the last performance of an AD with the adequate parameter as required

by the corresponding AD, which is not only the calendar time.

response

comment

237

comment by: *AEA*

AMC M.A. 305(c)1(a):”.... The AD status should include the release to service date on which the AD or

measure was accomplished, and...”

Comment: e.g. in the case of engines, an AD on an engine part could be released first, and



the complete engine could be released much later, so does the release to service date relate to the part or the product?

response

comment

257

comment by: CAI FIRST

AMC M.A.305(c)1 Aircraft continuing airworthiness record system (a) The current status of ADs, and measures mandated by the competent authority in immediate reaction to a safety problem, should identify the product/component, the applicable ADs including revision or amendment numbers and the date on which the status was updated. If the AD is generally applicable to the aircraft or component type but is not applicable to the particular aircraft, engine, propeller or component, then this should be identified with the reason why it is not applicable.

In case component(s), engine, propeller is affected by the AD the status should include engine(s), propeller(s) and components subjected to the AD i.e. the status should include compliance with respect to each component, when more than 1 component per type is installed, and show evidence of the aircraft applicable configuration.

The status of AD should be sufficiently detailed to identify any field loadable software which is used for operating or controlling the aircraft

The AD status should include the release to service date on which the AD or measure was accomplished, and where the AD or measure is controlled by flight hours and/or flight cycles and/or landings and/or any other applicable parameter, as appropriate, it should include the corresponding total life accumulated in service with reference to the applicable/suitable parameter(s) on the date when the AD or measure was accomplished.

If the AD is not already accomplished i.e. the terms are not yet expired, the current status of compliance of AD should include the next accomplishment data with reference to applicable parameters and dates.

For repetitive ADs or measures, only the dates and applicable/suitable parameters of the last and next application should be recorded in the current status.

The status should also specify the method of compliance and which part of a multi-part AD or measure has been accomplished, where a choice is available in the AD or measure. When the AD is multi-part or requests assessments of certain inspections, this information should be shown as well.

JUSTIFICATION:

in case of more than 1 component of the same type installed it should be clear the applicable configuration and/or status by each component installed (in line with AMC 305 c (2) e) with reference to AD;

Added provision for field loadable software (in line with AMC 305 c (2) c)

Added provision for next due in case of 'one time AD' not yet expired;



response	Added provision to show that, for repetitive AD, applicable parameters (i.e AD within 6000 FH or FC or 1 yr which ever occur first or later) are not expired;
comment	299 comment by: <i>Regio Lease</i> §3, 2nd phrase. About repetitive AD. There are some ADs followed by hours. Why should we only follow them by date? Why don't we add "applicable parameters" and last performance and next due.
response	

3. Proposed amendments — 3.2. Draft Decision — 3.2.1. Annex I to Decision 2003/19/RM (AMC to Part-M): — Point AMC M.A.305(c)2 p. 17-18

comment	41 comment by: <i>René Meier, Europe Air Sports</i> page 16/44 (8) "Other maintenance required..." Proposal: Please replace "other" with "additional". Rationale: Reading the text we think this fits better.
response	
comment	49 comment by: <i>Liam CREAVEN</i> <u>AMC M.A.305(c)2 paragraph (b)</u> This new AMC material replaces previous examples of substantiating data that may be retained by the owner/operator in AMC M.A.305 (d) however the list is reduced. While it is reasonable that detailed compliance reports generated by the DAH, and accepted by the Authority in finding compliance, should remain proprietary the list should be expanded to include master drawing lists (in order that completeness of the data applied to the aircraft may be verified) and other reports that are cumulative in nature (such as electronic load analysis). <u>AMC M.A.305(c)2 paragraph (c)</u> Further clarification is required around the term 'field loadable software' which implies that the software may not be changed in maintenance shop. An alternative term would be preferable to clarify that the intent is to refer to software that is regarded as a part or



component of the aircraft which is significant in terms of operating or controlling the aircraft (whether the software is installed in the field or not).

AMC M.A.305(c)2 paragraph (e)

Please include further clarification regarding the components for which the status must be known by owner/operators as indicated below (i.e. insert 'mandatory instructions and associated...'):

'It is not expected to have the status of modifications and repairs per each component. This status should include engine(s), propeller(s) and components subjected to mandatory instructions and associated airworthiness limitations, and it is not intended that it should be retained for other components'.

response

comment

106

comment by: AIRBUS

1. PARAGRAPH / SECTION THE COMMENT IS RELATED TO:

NPA 2014-04, pages 17-18/44, AMC M.A.305(c)2

2. PROPOSED TEXT / COMMENT:

It is proposed to amend the paragraph (a) of the AMC M.A.305(c)2 to read:

“(a) Status of current modifications and repairs means a list of modifications and repairs embodied ~~on~~ **since the original delivery from the Production Approval Holder/Original Equipment Manufacturer of (and still existent upon) the aircraft, engine(s), propeller(s), or component(s) thereof, as appropriate. The status should also list the un-repaired damages/degradations.** It should include the identification of the aircraft, engine(s), ~~or~~ propeller(s), **or component(s) thereof, as appropriate, and the date of the certificate of release to service and the corresponding total life accumulated in service by the affected item when the modification or repair was accomplished, or the un-repaired damages/degradations assessed. The status of current modifications and repairs should reference the pertinent certificate(s) of release to service.** Where a modification or repair creates the need for the accomplishment of ~~repetitive~~ **scheduled** maintenance tasks, the reference to the applicable tasks **from the maintenance schedule** of the aircraft maintenance programme should be added. The status should include the reference to the data in accordance with M.A.304 that provides the accomplishment procedure for the modification or repair. It should also specify which part of a multi-part modification or repair has been accomplished and the method of compliance, where a choice is available in the data.”

3. RATIONALE / REASON / JUSTIFICATION:

The instructions of the Key Risk Element C3 in the appendix III to GM1 M.B.303(b) support the idea that the repair status should list the un-repaired damages or degradations that are currently embodied. In addition, the status of current modifications and repairs should record only the modifications/repairs/un-repaired damages or degradations that are still



existent: For example, a repair may be replaced by another one as a result of a larger damage at the same location. In such a case, the initial repair should not be listed.

Reference to components in the paragraph (a) is added for consistency with the paragraph (e) contents.

The total life accumulated in service by the affected item at the time of the repair/modification accomplishment or of damage/degradations assessment is also added. This information may become necessary for example to schedule future maintenance resulting from repair re-assessment (e.g. Part-26 for ageing aircraft structure: replacement of a repair after a number of flight hours/flight cycles due to widespread fatigue damage considerations), and for consistency with the other statuses.

The reference to ‘repetitive’ maintenance tasks has been extended to any ‘scheduled’ maintenance task (e.g. the replacement of a repair is not necessarily repetitive, but it may need to be scheduled).

The term ‘maintenance schedule’ (of the aircraft maintenance programme) has been added for consistency with the wording of GM M.A.305.

A link between the continuing airworthiness management domain and the maintenance domain should be ensured. This link will contribute to support the compliance with the point M.A.305(e)2.(ii). The status of current modifications and repairs should therefore refer to the certificate(s) of release to service, which refer to the items listed in GM M.A.305(6).

Note: In the AMC M.A.305(c)2, the meaning of ‘status’ is “a list of...”. In the paragraph (a) of AMC M.A.305(c)3, the meaning of ‘status’ is “the last and next accomplishment data for...”. Using two meanings for a single term will be a source of confusion. As a result of the improvements introduced in the AMC M.A.305(e) on IT systems, it is probably preferable to define this term like in the following, and to adjust the different definitions using it accordingly:

“Within the frame of point M.A.305, ‘status’ means the data establishing the level of compliance of an aircraft, engine, propeller, or component thereof, with a requirement. Each status should:

(i) identify the aircraft, the engine, the propeller or the component it applies to,

(ii) be dated, and

(iii) include the relevant total in-service life accumulated in flight hours and/or flight cycles and/or landings and/or any other applicable parameter, as appropriate, on the date of the status.”

response

comment

107

comment by: AIRBUS

1. PARAGRAPH / SECTION THE COMMENT IS RELATED TO:



NPA 2014-04, page 18/44, AMC M.A.305(c)2

2. PROPOSED TEXT / COMMENT:

It is proposed to amend the paragraph (b) of the AMC M.A.305(c)2 to read:

“(b) The data may include:

[...]

(4) aircraft maintenance programme changes and instructions for ~~continuing~~ continued airworthiness; and/or

[...]”

3. RATIONALE / REASON / JUSTIFICATION:

The terms ‘aircraft maintenance programme’ and ‘instructions for continued airworthiness’ have been used for consistency with the titles of point M.A.302 and point 21.A.449 (and 21.A.61, 21.A.107, and 21.A.120), respectively.

response

comment

108

comment by: AIRBUS

1. PARAGRAPH / SECTION THE COMMENT IS RELATED TO:

NPA 2014-04, page 18/44, AMC M.A.305(c)2

2. PROPOSED TEXT / COMMENT:

It is proposed to amend the paragraph (c) of the AMC M.A.305(c)2 to read:

“(c) The status of modifications should be sufficiently detailed to identify any installed **field loadable sSoftware Aircraft Part (LSAP)** ~~which is~~ used for operating or controlling the aircraft, **whose Part Number evolves independently of the target hardware aircraft part, as identified in the instructions for continued airworthiness of the relevant design approval holders. A field loadable software can be loaded without removal of the equipment from the aircraft or engine. Other types of field loadable software parts not used for operating or controlling,** such as navigational data bases or entertainment systems, are not considered under this recording requirement.”

3. RATIONALE / REASON / JUSTIFICATION:

The control of software part configuration is more and more important with the introduction of new technologies. Therefore, the initiative that has led to the introduction of this paragraph is strongly supported.

Some competencies pertaining to the design domain are required to establish the list of software parts for which configuration control is necessary: should the design approval holders be not involved, some important software parts could be missed, or conversely, the list could create an unnecessary burden on the person or organisation responsible for the aircraft continuing airworthiness. Therefore, a provision referring to the instructions for



continued airworthiness of the relevant design approval holders is essential.

The term ‘Loadable Software Aircraft Part (LSAP)’ is preferred to ‘Field Loadable Software (FLS)’ as this latter may unfortunately suggest that software parts loaded in shop are not covered. It is reminded that FLS is defined as any loadable software that is designed to be loaded on the aircraft without removal of the target hardware from the aircraft.

Both terms LSAP and FLS can be found in the ARINC 667 classification of loadable software.

In addition, the use of ‘Loadable Software Aircraft Part’ reminds to the reader that some software parts are aircraft parts. The Article 3 of the Regulation (EC) 216/2008 defines the term ‘parts and appliances’:

QUOTE

‘parts and appliances’ shall mean 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.

UNQUOTE

response

comment

109

comment by: AIRBUS

1. PARAGRAPH / SECTION THE COMMENT IS RELATED TO:

NPA 2014-04, page 18/44, AMC M.A.305(c)2

2. PROPOSED TEXT / COMMENT:

It is proposed to amend the paragraph (e) of the AMC M.A.305(c)2 to read:

“(e) It is not expected to have the status of modifications and repairs per each component. This status should include engine(s), propeller(s) and components subjected to **mandatory instructions and associated** airworthiness limitations, and it is not intended that it should be retained for other components.”

3. RATIONALE / REASON / JUSTIFICATION:

To be consistent with the wording used in Key Risk Element A2 in the appendix III to GM1 M.B.303(b).

response

comment

153

comment by: CAA-NL

We suggest to add item (f) to AMC M.A.305(c)2 :

‘The list of embodied repairs should at least contain the following parameters for each single repair-entry:



- Description of repair (e.g., patch, blend, crack, dent)
 - Location of repair (e.g., reference to stringers, frames, lefthand/righthand)
 - Reference to approved maintenance data (substantiation documentation: reference data such as DTA, EASA/DOA minor repair approval, SRM).
 - Supplemental inspections and limitations, if applicable.
 - Date of accomplishment of the repair.
 - Optional parameters are for example:
 - o Reference to damage report.
 - o Reference to accomplishment instructions.
 - o Reference to instruction for continuing airworthiness.
 - o Dimensions of repair.
 - o Number of flight cycles/hours at the date of accomplishment of the repair.
 - o Operator specific parameters.
- The use of a chart showing the top / side view identifying the location of the damages and repairs (a.k.a. a Dent & Buckle Chart) is recommended.'
- Explanation:
- To provide clarification and AMC.

response

comment

164

comment by: *Belgian CAA*

- AMC M.A.305 (c) 2 § a : concerning the repair status, it could be useful to identify the category of the repair (permanent, interim or temporary). It is also important to demonstrate adequate follow-up easily. The record of the follow-up is necessary in case of repetitive inspection but also in case of interim repair or temporary repairs that can request actions within a specific time frame with short term repetitive inspection or without any repetitive inspection. In these circumstances, it could be interesting to include in this AMC the necessity to record the information of applicable parameter when the repair is performed and the next due or the limitation in case of interim repair.
- AMC M.A.305 (c) 2 § a : for the modification, it could be useful to refer to the applicable maintenance data and not only to the “accomplishment procedure”. Indeed, it is important to take into account the ICA and particularly the document containing the requirements in term of scheduled maintenance to ensure adequate follow-up. Moreover, in the text, it could be better to replace the wording “repetitive maintenance tasks” by “scheduled maintenance tasks”. Indeed, for modifications and for repairs, it is possible to have a one-time inspection or an hard time limitation.



response

comment

165

comment by: *Belgian CAA*

-AMC M.A.305 (c) 2 § b : the reference to the “Master Drawing List or equivalent” could be added. Indeed, this document is necessary to have an overview about the impact of a modification on the continuing airworthiness (ex : applicable ICA). It is also important to include the approval document (STC approval, DOA approval, Repair Approval,...). Concerning the item (4), it could be useful to put the reference to the “instructions for continuing airworthiness” in a specific item to be in line with the general definition of an ICA given in the PART-21. Indeed, the ICA is not only related to document containing the scheduled maintenance tasks required for the maintenance program but also the WDM, IPC, AMM, SRM,...It could be put in item (3) with example of SRM, AMM,... Perhaps, for clarity it could be better to split this article in two sections : one for the modification related data and one for the repair related data.

response

comment

176

comment by: *Chris GRUENER, BOC Aviation Pte. Ltd.*

AMC M.A. 305(c)2 point (b)

We are seeing increasing emphasis of regulators looking at the electric load analysis (ELA) of the aircraft, which makes sense given the increasing importance of the electrical systems in modern aircraft (A350, B787). Therefore I encourage to expand the list to also include the ELA.

response

comment

177

comment by: *Chris GRUENER, BOC Aviation Pte. Ltd.*

AMC M.A.305(c)2 point (c)

Please provide a more precise definition of field loadable software. A number of different terms is used, sometimes with the same, sometimes different meaning (e.g. "software part no", "loadable software aircraft part", etc.). The definition as given in the current text is a bit vague, since a FLS can also be loaded during a shop visit of the component and then also has to be included in this status.

response

comment

178

comment by: *Chris GRUENER, BOC Aviation Pte. Ltd.*

M.A. 305(c)2 point (e)

It should be clarified which kind of airworthiness limitations are meant, e.g. compliance with



response	airworthiness directives.
comment	<p>238 comment by: AEA</p> <p>AMC M.A. 305(c)2(a)</p> <p>Suggested text: where a modification or repair creates the need for the accomplishment of repetitive maintenance tasks, this should be noted.</p>
response	
comment	<p>239 comment by: AEA</p> <p>AMC M.A. 305(c)2(c):</p> <p>Comment: add the word “such” as shown below:</p> <p>“A field loadable software can be loaded without removal of the equipment from the aircraft or engine. Other types of field loadable software not used for operating or controlling, <u>such</u> as navigational data bases or entertainment systems, are not considered under this recording requirement.”</p>
response	
comment	<p>240 comment by: AEA</p> <p>AMC M.A. 305(c)2(d)</p> <p>Comment:</p> <p>The text “For the purpose of recording modifications in accordance with the current paragraph” is unclear.</p> <p>Suggested resolution:</p> <p>Please specify “the current paragraph”.</p>
response	
comment	<p>241 comment by: AEA</p> <p>AMC M.A. 305(c)2(e)</p> <p>Comment:</p> <p>The text “It is not expected to have the status of modifications and repairs per each component” could suggest that the status of modifications and repairs is not expected to be recorded for individual components. This is unclear and appears to be in contradiction with</p>



the next sentence: “This status should include engine(s), propeller(s) and components subjected to airworthiness limitations, and it is not intended that it should be retained for other components”, which implies that the status of modifications and repairs on all individual components listed in the airworthiness limitations must be recorded.

Suggested resolution:

Please specify clearly that the status of modifications and repairs should only be recorded for engine(s), propeller(s) and components that are listed in the airworthiness limitations. If this is not the intent of the proposed text, then please clarify otherwise.

response

comment

300

comment by: *Regio Lease*

AMC MA305 c2 (e) 1st phrase is not necessary as it may create trouble. Can we remove it or putting it at the end?

response

comment

317

comment by: *IATA*

Item (b) (4)

This item may be beyond the scope of this NPA: There are differences in the definitions of Instructions for Continuing Airworthiness between EASA and FAA. It will be very useful for the whole industry if these definitions are harmonized.

response

comment

341

comment by: *Baines Simmons Limited*

AMC M.A.305(c)2 Aircraft continuing airworthiness record system

This makes reference to "instructions for continuing airworthiness". We believe this should read "instructions for **continued** airworthiness", as used in Part-21 and various Certification Specifications, e.g. CS-25.

response

comment

346

comment by: *Luftsport Verband Bayern / Germany*

response

comment

359

comment by: *Ralf Keil*

Vor dem Hintergrund zu erwartender Erleichterungen im Rahmen der „Road Map General



Aviation“ zu restriktiv. Die EASA hat erkannt, dass insbesondere der Bereich des Luftsportes derzeit überreguliert ist. Die komplette Anwendung des AMC in diesem Punkt bringt keinerlei Erleichterung oder Vereinfachung, solange die lange angekündigten CS „Standard Changes und Repair“ nicht wirksam werden.

response

3. Proposed amendments — 3.2. Draft Decision — 3.2.1. Annex I to Decision 2003/19/RM (AMC to Part-M): — Point GM M.A.305(c)2

p. 18

comment

10

comment by: AOPA-Sweden

AMC MA 305(c)2 (d):

1. ~~"For the purpose of recording modifications in accordance with the current paragraph, a~~ A component replaced by a fully interchangeable alternate component is not considered a modification, if this condition is ~~published~~ approved by the design approval holder (DAH)- or in the case of instruments and avionics is qualified to the same or higher ETSO/TSO or is equivalent from a Form-Fit-Function analysis."

For GA, the DAH rarely issues interchangeability information for avionics and other components installed after aircraft delivery. Therefore a "Form-Fit-Function" and TSO/ETSO criteria should be considered. Many e.g. older radios are no longer available, and the available replacement item often fits straight in to the existing rack or fittings without any modifications at all. This type of replacement of components should not be considered a modification in any context at least for ELA-2 and below and for non-IFR required components.

2. The word "published" could stop DAH approvals via e-mail and limit such approvals to manual revisions, which typically happens every six months.

response

comment

51

comment by: Liam CREAVEN

Please consider alternate term to Field Loadable Software (see related comment in AMC M.A. 305 (c) 2)

response

comment

110

comment by: AIRBUS

1. PARAGRAPH / SECTION THE COMMENT IS RELATED TO:

NPA 2014-04, page 18/44, GM M.A.305(c)2

2. PROPOSED TEXT / COMMENT:



Could the Agency clarify the GM M.A.305(c)2? What is the objective of this GM?

It is proposed to amend the GM M.A.305(c)2 to read (if the following fulfils the initial objective of this GM):

“The status of modifications embodied ~~could~~ **may** include:

(a) ~~The List of the~~ **List of installed physical** components,

(b) ~~The List of installed incorporeal component~~ **other modifications not covered by the previous point.**

When aircraft require a specific ~~field~~ **Loadable sSoftware Aircraft Part (LSAP)** configuration to ~~function-operate~~ correctly, a specific listing with this information may be necessary ~~too.~~”

3. RATIONALE / REASON / JUSTIFICATION:

The paragraph (b) refers to “other modifications not covered by the previous point”, but the previous point (seemingly the paragraph (a)) refers to “the installed components”. These paragraphs do not refer to items of the same nature, making the meaning of this GM difficult to understand.

response

comment

242

comment by: AEA

GM M.A. 305(c)2

Comment:

The text is not clear.

GM M.A. 305(c)2 paragraph (a) proposes that the status of modifications could include a list of the installed components, while according to (b) a “list of other modifications not covered by the previous point” should be included.

Under (b) it is not clear what is meant by “other modifications”, because (a) only requires a list of components and not of modifications.

Under (b) it is not clear what is meant by “the previous point”, most likely this GM M.A. 305(c)2(a), but this is not clear. If “the previous point” refers to GM M.A. 305(c)2(a), then that implies that all modifications must be recorded, and not only those listed in the airworthiness limitations.

Suggested resolution:

It is suggested re-write this paragraph to clearly state the intent. The intent of this paragraph should be in-line with the intent of AMC M.A. 305(c)2(e).

response

comment

243

comment by: AEA



response	<p>GM M.A. 305(c)2</p> <p>Comment:It is actually proposed to delete this guidance. It will only create confusion.</p>
comment	<p>273 comment by: <i>DGAC France</i></p> <p>DGAC France believes that the « software » configuration is properly identified, either through the part number component in which it is loaded, or by other means such as a major change to download a new revision of software. The software is not a material that can be checked without proper tools. The sentence “when aircraft require a specific field loadable software configuration to operate correctly” is too vague.</p> <p>The GM is only understood when read with and after the AMC M.A.305(c)(3) point (e). Maybe the mentioned (e) might be expanded, so the GM is not needed at all.</p> <p><u>Proposed modification:</u></p> <p>DGAC believes this GM does not add much clarification and recommends this GM to be deleted.</p>
response	
comment	<p>334 comment by: <i>NFO Technical Committee</i></p> <p>Service bulletins, AD and taskcards. Sometimes may be confusing and difficult to find, identify, the work to be done, witch aircraft in your fleet is to be done, which in turn can lead to mistakes being made. They should be clear, including aircraft S / N.</p> <p>then you got the taskcard the layout must provides an easy overview and clear, natural signature field / stop during the work. Many different skills/professionals may be involved.</p> <p>Work cards where you with simple glance can see what to do and natural stop with clear signing point (easier control of work done) will promote safety and human factor, lot of the work is performed at night. It is also better that everything comes out clearly from the factory than it is adjusted/designed at each airliners engineering office.</p> <p>The creation of computer systems that are easy to use must higher up the agenda.</p> <p>this is a general response.</p>
response	
comment	<p>342 comment by: <i>Baines Simmons Limited</i></p> <p>It is not clear as to what GM M.A.305(c)2 Aircraft continuing airworthiness record system relates.</p>



Is this providing an explanation to AMC M.A.305(c)2 or the requirement M.A.305(c)2 itself?

There is no direct reference to "**The status of modifications embodied**" in either the (proposed) regulation or AMC.

It is not clear as to what **(a) List of the installed components** could mean or how it should be applied.

It is not clear as to what **(b) List of other modifications not covered by the previous point** could mean. What is "the previous point"?

Guidance Material must clearly relate to current rule material and should be clear in its meaning.

Without knowing the answers to the above, we are not in a position to suggest an alternative at this time.

response

3. Proposed amendments — 3.2. Draft Decision — 3.2.1. Annex I to Decision 2003/19/RM (AMC to Part-M): — Point GM M.A.305(c)3

p. 18-19

comment

23

comment by: *AIR FRANCE*

(b) : Replace "For repetitive tasks, only the date of the last" by "For repetitive tasks, only the applicable parameters at the date of the last"

response

comment

102

comment by: *AIRBUS*

1. PARAGRAPH / SECTION THE COMMENT IS RELATED TO:

NPA 2014-04, page 17/44 and following, AMC M.A.305(c)3 (as well as AMC M.A.305(c)1 and 2)

2. PROPOSED TEXT / COMMENT:

Could the Agency clarify the calendar reference for task accomplishment to be stated in the different reports required by point M.A.305(c)? Is it the date the task is completed or the date the certificate of release to service is issued (taking into account both cases, aircraft maintenance and component maintenance)?

In addition, could the Agency clarify the correct course of actions to take when new/revised maintenance data (point M.A.401/point 145.A.45) are issued during the period defined by the date the work order is issued, and the date the certificate of release to service is issued? Can compliance be declared in reports required by the point M.A.305(c) when former maintenance data have been used?

3. RATIONALE / REASON / JUSTIFICATION:



The calendar reference is essential to calculate the next accomplishment of repetitive maintenance tasks:

- Aircraft maintenance: a number of aircraft maintenance tasks may be completed, and the corresponding release to service may be issued 6 months later (e.g. heavy maintenance checks requiring extensive downtime).

- Component maintenance: the installation on aircraft of a serviceable landing gear sliding tube following the detection of a shock absorber leak (the replacement part has been stored for 15 months after overhaul). Which date is the reference to schedule the next overhaul: the date of the last overhaul (*), the date of storage (storage or re-commissioning?), or the date of installation on aircraft (**)?

(*) date of overhaul completion or date the certificate of release to service is issued?

(**) date of installation completion or date the certificate of release to service is issued?

It may have a significant impact on the next due. The AMC should provide explicitly the reference date in order to eliminate ambiguity and resulting non-compliances.

Maintenance data revision cycles (Part-21 process) interfere inevitably and regularly with on-going maintenance checks (Part-M/Part-145 process). How should new/amended maintenance data (e.g. the Aircraft Maintenance Manual) be managed when they are received after the issuance of the work order or after tasks completion, but before the date the certificate of release is issued? Does a given task need to be performed again in accordance with the new/amended maintenance data because the certificate of release to service has not been issued yet? The persons creating these statuses/reports ask themselves the question “can compliance be declared (in the report)?”. The AMC should provide explicitly the correct course of actions to take in such situations in order to eliminate this ambiguity, resulting non-compliances, and recurring questions.

Note: for consistency of contents, these comments have taken the date the certificate of release to service as the reference.

response

comment

111

comment by: AIRBUS

1. PARAGRAPH / SECTION THE COMMENT IS RELATED TO:

NPA 2014-04, pages 18-19/44, AMC M.A.305(c)3

2. PROPOSED TEXT / COMMENT:

It is proposed to amend the AMC M.A.305(c)3 to read:

“(a) The current status of compliance with the aircraft maintenance programme means the last and next accomplishment data for the scheduled tasks specified in the aircraft maintenance programme. **It should include:**

(i) an identifier specific enough to allow an easy and accurate identification of the task to



be carried out, such as a task reference combined with a task title or short description of the work to be performed,

(ii) ~~Accomplishment data pertinent to the engine, propeller or component should be stated when a task is controlled at the engine, propeller, or component level.~~ the engine, propeller, or component identification (Part Number and Serial Number) when the task is controlled at the engine, propeller, or component level,

(iii) the date when the task was accomplished (the date the certificate of release to service was issued) and for repetitive tasks when it is due next time, as well as the terminating action when it is performed, and

(iv) the reference of the certificate of release to service showing the demonstration of compliance.

The current status of life limited components and the current status of time controlled components may not be included, but referenced in the current status of compliance with the aircraft maintenance programme.

(b) Where the task is controlled by flight hours and/or flight cycles and/or landings and/or calendar time and/or any other applicable parameter, the total in-service life accumulated by the aircraft, engine, propeller or component (as appropriate) in the suitable parameter(s) should also be included. ~~For repetitive tasks, only the date of the last and next applications should be recorded, as well as the terminating action when it is performed."~~

3. RATIONALE / REASON / JUSTIFICATION:

The definition of the current status of compliance with the aircraft maintenance programme should provide a similar level of details as for the current status of ADs, and measures mandated by the competent authority in immediate reaction to a safety problem (for example).

The GM M.A.305 states that "A 'life limited part' is a part for which the maintenance schedule of the aircraft maintenance programme requires..." and "The term 'time controlled components' embraces any component for which the maintenance schedule of the aircraft maintenance programme requires...".

A clarification is added to prevent the duplication in the current status of compliance with the aircraft maintenance programme of data already provided in the current status of life limited parts and in the current status of time controlled components. Further, the (partial or complete) duplication of regulation requirements creates hazards (potential future contradictions between requirements, confusion, etc.) and makes the compliance demonstration more complex than necessary. The duplicated data in the different status mentioned here above could contradict each other and create confusion.

response

comment

166

comment by: *Belgian CAA*

AMC M.A.305 (c) 3 § (b) : the text : "For repetitive tasks, only the date of the last and next



applications should be recorded, as well as the terminating action when it is performed.” needs to be corrected by : “For repetitive tasks, only the last and next applications in the applicable parameter should be recorded, as well as the terminating action when it is performed.” Indeed, it is important to record the last performance of a task with the adequate parameter as required by the corresponding aircraft maintenance program task, which is not only the calendar time.

response

comment 244 comment by: AEA

AMC M.A. 305(c)3 (b)

Comment: What type of components would require recording of “total in-service life”? Life – limited components we presume.

response

comment 259 comment by: CAI FIRST

AMC M.A.305(c)3 Aircraft continuing airworthiness record system (a) The current status of compliance with the aircraft maintenance programme means the last and next accomplishment data (referring to the applicable parameter) for the scheduled tasks specified in the aircraft maintenance programme. Accomplishment data pertinent to the engine, propeller or component should be stated when a task is controlled at the engine, propeller, or component level.

(b) Where the task is controlled by flight hours and/or flight cycles and/or landings and/or calendar time and/or any other applicable parameter, the total in-service life accumulated by the aircraft, engine, propeller or component (as appropriate) in the suitable parameter(s) should also be included. For repetitive tasks, only the date and suitable parameters of the last and next applications should be recorded, as well as the terminating action when it is performed.

JUSTIFICATION: last and in particular next due should be related and shown referring to the applicable parameters

response

comment 301 comment by: Regio Lease

a) why it is should and not shall? from our point of view, it is stronger than should.

b) on the last sentence "date" should be replaced by "applicable parameters" as for Repetitive ADs; and "should" replaced by "shall".

response



3. Proposed amendments — 3.2. Draft Decision — 3.2.1. Annex I to Decision 2003/19/RM (AMC to Part-M): — Point GM M.A.305(d)2

p. 20-21

comment	<p>7 comment by: <i>ParTem Aviation</i></p> <p>para (c)2. - there appears to be a misunderstanding of the terms "on condition" and "condition monitoring" such that these terms are effectively transposed. Heading should be "2. Condition Monitoring". "On Condition" is the fly-to-failure condition.</p>
response	
comment	<p>11 comment by: <i>AOPA-Sweden</i></p> <p>GM MA 305(d)(2) (c):</p> <p>(2) On-Condition</p> <p>"It is a preventive.... failure in service"</p> <p>Note: Components which are not time controlled are instead subject to Condition-Monitoring. These components are permitted to remain in service without preventive maintenance until functional failure occurs (i.e. they are "fly to failure")</p> <p>May be replaced by something similar to this (from FAA): <i>MSG-2 introduced condition monitoring. This process is for systems, components, or appliances that have neither HT nor OC maintenance as their primary maintenance process. It is accomplished by appropriate means available to an operator for finding and solving problem areas. The user must control the reliability of systems or equipment based on knowledge gained by analysis of failures or other indications of deteriorations.</i></p> <p>Turbine engines are frequently operated under various Condition-Monitoring systems where engine parameters are downloaded and analysed in real time to find problems before they occur and to find the economically optimum time of removal for refurbishment of modules.</p> <p>They definitely do not "fly to failure".</p>
response	
comment	<p>54 comment by: <i>Liam CREAVEN</i></p> <p><u>GM M.A.305(d)(2) add item (3) in place of Note:</u></p> <p>Please revise the sentence to be clearer as indicated below:</p> <p>'(3) Note: Condition Monitoring</p> <p><i>Components which are not time controlled are instead subject to Condition-Monitoring. These components are permitted to remain in service without preventive maintenance until a functional failure occurs (i.e. they are 'fly-to failure').'</i></p>



response

comment

112

comment by: AIRBUS

1. PARAGRAPH / SECTION THE COMMENT IS RELATED TO:

NPA 2014-04, page 20/44, GM M.A.305(d)(2)

2. PROPOSED TEXT / COMMENT:

It is proposed to modify GM M.A.305(d)(2) to read:

“The maintenance schedule of the aircraft maintenance programme may require:

(a) the removal of a component for periodic restoration **in a suitable approved workshop** to return the component to a specified standard (e.g. removal of landing gear for overhaul);(b) the periodic replacement **in a suitable approved workshop** of a component by a new one when it is not possible to restore the item to a specific standard of failure resistance (e.g. discarding of ~~filters~~ **universal joints of a gearbox**, batteries, discharge cartridges of fire extinguishers, etc.);(c) a quantitative inspection **performed in a suitable approved workshop** to confirm periodically that a component meets specified performance standards (e.g. functional check of ~~aileron hinge bearings for excessive play~~ **the portable emergency locator transmitter, inspection of the portable VHF transceiver**, functional check of ~~emergency exit locking mechanism~~ **the elevator servocontrol relief valve**, etc.). The component is left in service (no further maintenance action taken) on the condition that it continues to fulfil its intended purpose within specified performance limits until next scheduled inspection.

Components subject to the above maintenance schedule requirements are termed ‘time controlled components’.

Note: The maintenance in accordance:

– with (a) and (b) assumes a predictable deterioration of the component: the overall reliability invariably decreases with age; and

– with (c) assumes a gradual deterioration of the component: failure resistance can reduce and drop below a defined level.

The maintenance period is controlled at component level. [...]”**3. RATIONALE / REASON / JUSTIFICATION:**

The examples chosen are potentially misleading (e.g. is it necessary to remove the aileron from the aircraft to perform the functional check?). New examples are proposed.

The last sentence in paragraph (c) is extracted so that it applies to the paragraphs (a) to (c).

Consistency with the comment on the paragraph (4) of the GM M.A.305 has been checked.

response



comment

113

comment by: AIRBUS

1. PARAGRAPH / SECTION THE COMMENT IS RELATED TO:

NPA 2014-04, pages 20-21/44, GM M.A.305(d)(2)

2. PROPOSED TEXT / COMMENT:

It is proposed to modify GM M.A.305(d)(2) to read:

“[...]

For aircraft maintenance programmes developed under a primary maintenance process oriented methodology (e.g. Maintenance Steering Group ~~1 (MSG 1) or MSG 2~~), the term ‘time controlled component’ ~~applies~~ **pertains to the ‘Hard Time’ components and ‘On-Condition’ components primary maintenance processes.** Such terms mean:

(1) Hard Time

This is a ~~preventative~~ **preventive** process in which known deterioration of a component is limited to an acceptable level by the maintenance actions which are carried out at periods related to time in service (e.g. calendar time, number of cycles, number of landings). The prescribed actions return the component to its original condition.

(2) On-Condition

It is a preventive process in which the component is inspected or tested, at specified periods, to an appropriate standard in order to determine whether it can continue in service. The purpose is to remove the component before its failure in service.

(3) ~~Note:~~ Condition Monitoring

This is a process in which a parameter of condition in a component (vibration, temperature, oil consumption, etc.) is monitored to identify the development of a fault.

Components ~~which are not time controlled are instead~~ subject to Condition-Monitoring. ~~These components~~ are permitted to remain in service without preventive maintenance until a functional failure occurs (~~i.e. they are~~ ‘fly-to-failure’).

Note: For components that are not subject to any of these primary maintenance processes, corrective maintenance is carried out after failure detection and is aimed at restoring components to a condition in which they can perform their intended function (‘fly-to-failure’).”

Could the Agency confirm the term in the definition of ‘maintenance’ under which ‘test’ falls?

3. RATIONALE / REASON / JUSTIFICATION:

For sake of consistency, either the term ‘preventative’ or the term ‘preventive’ should be used rather than both in these definitions.

Different definitions may be found in various locations of Regulations:

– The paragraph (h) of the Article 2 of the Regulation (EC) No 2042/2003 defines the term



‘maintenance’:

(h) ‘maintenance’ means any one or combination of overhaul, repair, inspection, replacement, modification or defect rectification of an aircraft or component, with the exception of pre-flight inspection.

No reference to ‘test’ is made.

– The Appendix II – Authorised Release Certificate EASA Form 1 defines the following terms:

(i) Overhauled. Means a process that ensures the item is in complete conformity with all the applicable service tolerances specified in the type certificate holder’s, or equipment manufacturer’s instructions for continued airworthiness, or in the data which is approved or accepted by the Authority. The item will be at least disassembled, cleaned, inspected, repaired as necessary, reassembled and tested in accordance with the above specified data.

(ii) Repaired. Rectification of defect(s) using an applicable standard (*).

(iii) Inspected/Tested. Examination, measurement, etc. in accordance with an applicable standard (*) (e.g. visual inspection, functional testing, bench testing etc.).

(iv) Modified. Alteration of an item to conform to an applicable standard (*).

* Applicable standard means a manufacturing/design/maintenance/quality standard, method, technique or practice approved by or acceptable to the Competent Authority.

– The point 21.A.431(c) in the Part-21 defines a repair:

(c) A ‘repair’ means elimination of damage and/or restoration to an airworthy condition following initial release into service by the manufacturer of any product, part or appliance.

So is a test an inspection? If it is an inspection, what are the particularities of a test compared with the other inspections?

For sake of consistent editorial rules, an item (3) should be introduced for ‘condition monitoring’ instead of using a note in the item (2) ‘on-condition’. This would improve the readability of this paragraph.

The definition of Condition Monitoring proposed in the NPA may give the impression that Condition Monitoring needs to be implemented for all components not addressed by the first two primary maintenance processes (Hard Time and On-Condition). In fact, such a monitoring is expensive and is therefore only recommended for some components (e.g. engines). Further, it may also give the impression that no proactive action is to be done under the Condition Monitoring primary maintenance process: This process generates no scheduled maintenance task but gives the possibility to arrange for maintenance or take other actions in anticipation of failure in order to avoid its consequences.

Although the intent is understood, the wording “(i.e. they are ‘fly-to failure’)” at the end of the definition may be misleading, as the objective under Condition Monitoring is to avoid a failure. This justifies the need for the note: the components not subject to any primary maintenance process are subject to corrective maintenance (‘fly-to-failure’).



response

comment

145

comment by: CAA-NL

We suggest to add an Appendix XII to AMC M.A.305(d) or to supply this template in the form of GM

Proposal:

Propose to provide a template for an 'in-service history card' . Template to be developed in the working group, taking into account existing practices and other authority templates currently in use.

Explanation:

To create an standard as guidance material.

response

comment

206

comment by: Klaus Lehmkoeester - CAMO, DE.MG.1016, LBA.MG.1016

GM M.A.305 (d) (2):

Any maintenance handbook for aircrafts have specific check items for many several parts. The period for the checks are defined very clear. I think that there is no further need for a definition for check some parts, e.g. aileron hinge.

Do you do such quantitative inspections at your vehicle? Remember: Very critical are the hinges in the steering column!

response

comment

213

comment by: DLH and LHT

GM M.A.305 (d) (2) (c): "Components subject to the above maintenance schedule requirements are termed 'time controlled components.'"

-> (a) to (c) is affected -> text has to be shifted.

This is important, because (b) includes components like filters and cartridges that should be treated as 'just time controlled' with maintenance task "discard". Named components are not part of the Airworthiness Limitation Section.

response

comment

245

comment by: AEA

GM M.A. 305(d)2

Comment: we perceive a "philosophy-change" introduced with this GM in the Aircraft



response	<p>continuing airworthiness record system: a move is made from following/tracking and tracing on aircraft level to component level</p>
comment	<p>246 comment by: AEA</p> <p>GM M.A. 305(d)2(b) :</p> <p>Comment: GM M.A. 305 (4) refers to “current status of time controlled components” . Items mentioned in GM M.A.305(d)(2)(b) could just as well be categorized in Life Limited Part, because permanent removal from service before limit in AMP is reached is required.</p>
response	
comment	<p>253 comment by: AEA</p> <p>GM M.A.305 (d) (2) (c): "Components subject to the above maintenance schedule requirements are termed 'time controlled components.'"</p> <p>-> (a) to (c) is affected -> text has to be shifted.</p> <p>This is important, because (b) includes LLP's like filters and cartridges that should be treated as 'just time controlled' with maintenance task "discard". Named components are not part of the Airworthiness Limitation Section.</p>
response	
comment	<p>274 comment by: DGAC France</p> <p>This GM is named as “aircraft continuing airworthiness record system”. It is a very clear and useful GM. But it is mainly describing some tasks of maintenance to be performed, in order to check and change components that are sensible to ageing issues. It is more linked to details about M.A.301 point 3.</p> <p>it seems to DGAC France it would be better attached to M.A.301 point 3.</p> <p><u>Proposed modification:</u></p> <p>Rename GM M.A.305 (d)(2) into GM M.A.301 and name it as “accomplishment of maintenance for time controlled components”</p>
response	
comment	<p>275 comment by: DGAC France</p> <p>In § (1), in the sentence : “The prescribed actions return the component to its original condition.”, the term “original condition” is not very precise: it could be understood as its status as a brand new component, it could be understood as the status it had at previous</p>



response	<p>check. It might be better to say the actions aim at restoring the airworthiness margin</p> <p><u>Proposed modification:</u></p> <p>Modify as suggested :</p> <p>The prescribed actions return <u>restore</u> the component <u>margins regarding to the applicable time limitations to its original condition.</u></p>
comment	<p>286 comment by: <i>DGAC France</i></p> <p>At the end of the (c) subparagraph, there is a kind of definition “Components subject to the above maintenance schedule requirements are termed time controlled components”. This is redundant (and hopefully equivalent) with the definition of components within GM.M.A.305 item (4) page 15.</p> <p><u>Proposed modification:</u></p> <p>It is therefore recommended a slight modification here as follows to avoid a double definition:</p> <p>(c)... scheduled inspection.</p> <p><u>Note: Those three type of actions may be applied for Components subject to the above maintenance schedule requirements are termed time controlled components as defined in GM.M.A.305 item (4).</u></p>
response	
comment	<p>288 comment by: <i>European Sailplane Manufacturers</i></p> <p>In the definition of GM M.A.305(d)(2) we oppose the usage of the cited examples.</p> <p>In the way it is written, first of all it is indicated (or at least implied) that a "time controlled component" should be mentioned in the maintenance schedule of an AMP.</p> <p>Then three examples are given.</p> <p>Examples (a) and (b) are equivalent to the well established practices for life limited / service life limited parts.</p> <p>Example (c) is another thing - this example of a regular check at aileron hinges for play moves now many parts and components into the realm of "time controlled parts".</p> <p>If this then consequently implies that all these parts need now mention in the AMP we have reached a situation, where a simple change in the GM triggers requests by NAAs for accordingly amended AMPs for literally tens of thousands of aircraft in Europe.</p> <p>This is not acceptable.</p> <p>In the case of small aircraft maintenance manuals have been written (and approved by the</p>



authorities) which contain the information to safely maintain and service the aircraft. We oppose any effort by EASA or other authorities to move the content of these maintenance manuals into the AMPs because this is a paper exercise which creates effort without safety benefit. It also creates costs as these AMPs need approval.

We have already seen examples where NAAs requested to list a monthly check and lubricating of a door seal in the AMP!

It is acceptable to use the AMP to remind the owner / operator / maintainer to remind about parts which have a limited (calendar or service) time for use, but please do not require to copy-paste all listed checks in a maintenance manual into the AMP.

response

comment

321

comment by: *René Meier, Europe Air Sports*

page 20/44

GM M.A.305(d)2 Aircraft continuing airworthiness record system

The provisions proposed do not fit for operations with non-complex aircraft in a VMC/VFR sports and recreational environment. We oppose therefore to any integration of the contents of maintenance manuals of these aircraft into the AMP's.

Rationale:

If it fits CAT it definitely not fits our segment of General Aviation. It is a pure "paper exercise" without any safety benefit, only adding costs.

AMP's require approval, this is not for free. Within our community the more money we are obliged to spend on documents we do not need means the less money is available for flying, the lower the training, the lower the safety of flight. Not only states suffer from budget constraints...

response

comment

347

comment by: *Baines Simmons Limited*

GM M.A.305(d)(2) Aircraft continuing airworthiness record system

This text provides a useful explanation of the philosophies behind MSG-1 and MSG-2 based maintenance programmes. However most large transport aeroplanes have maintenance programmes based upon MSG-3, which does not embrace the same terminology.

Does this mean that this text is ONLY applicable to MSG-1 and MSG-2 programmes? If so, where is the parallel guidance for MSG-3 programmes?

Is it the intention of EASA to consider all those MSIs with scheduled maintenance tasks as "time controlled components"? If so, we believe the combination of this GM and the new M.A.305(e) 3 requirements will add a significant burden to industry in terms of increased



response	data segregation and retention, no matter how well intentioned.
comment	<p>349 comment by: <i>Luftsport Verband Bayern / Germany</i></p> <p>The trailing sentence of this chapter will create a lot of additional "time controlled components" which some NAAs will subsequently ask to be included in the Maintenance Programm, such as valve tappet, ignition contactors, carburetor needles and seats,</p> <p>This is again additional paperwork without any benefit because all these items are listed in the check lists of the TCH and must not be listed in another document again.</p>
response	
comment	<p>360 comment by: <i>Ralf Keil</i></p> <p>Der Versuch der Unterscheidung bei „laufzeitkontrollierten Komponenten“ nach Ablaufzeit (Hard Time) und Zustandsüberwachung (On-Condition) ist zunächst einmal ein logischer Ansatz. Fraglich ist die Einstufung durch die zuständigen Behörden. Das Beispiel eines Motors in einem Luftfahrzeug <2t wird dadurch noch immer nicht beantwortet.</p> <p>Ein Hersteller EMPFIEHLT im Normalfall sowohl eine Limitierung sowohl nach Kalenderzeit (Jahre) wie auch nach Zyklen (Flugstunden). Wer legt nach dieser NPA fest, welche Angabe „Hard Time“ und welche „On-Condition“ ist, solange der Hersteller nur eine Empfehlung ausspricht?</p>
response	

3. Proposed amendments — 3.2. Draft Decision — 3.2.1. Annex I to Decision 2003/19/RM (AMC to Part-M): — Point AMC M.A.305(e)

p. 21-23

comment	<p>16 comment by: <i>Stefan Stroeker</i></p> <p>Regarding AMC M.A.305(e) - Aircraft continuing airworthiness record system, there is the need of additional Guidance Material (GM) given. CAMO's could implement these IT system based requirements better when having more explanation, e.g. possibilities of data transfer techniques like Migration of Flat Files/Use of Interface Modules or how to track any change of aircraft continuing airworthiness records.</p> <p>Many thanks and best regards, Stefan Ströker</p>
response	
comment	<p>24 comment by: <i>AIR FRANCE</i></p>



response	<p>(g) : Replace "The reconstructed records should be submitted...." by " If incomplete reconstruction, the statement should be submitted....." because we consider that acceptance from authority is not necessary if full reconstruction is done.</p>
comment	<p>43 comment by: René Meier, Europe Air Sports</p> <p>page 22/44</p> <p>(f) Digitised Record Retention</p> <p>"The system used...must...":</p> <p>Question:</p> <p>Does this "must" fit with the usual way "must", "shall", "should" are used in the text?</p>
response	
comment	<p>56 comment by: Liam CREAVEN</p> <p><u>AMC M.A.305(e) paragraph (c):</u></p> <p>The topic of this section would appear to be better described as 'Form of Records' with some amendments to the related text. The following minor amendment is proposed:</p> <p><i>"(c) Form of records-keeping:</i></p> <p><i>Producing and/or keeping continuing airworthiness records in a form acceptable to the competent authority normally means in either material/physical or electronic state, or a combination of both.</i></p> <p><i>Retention of records should be done in one of the following formats:</i></p> <p><i>(1) original paper document or secured set of electronic data as the original form (either paper or via an approved electronically signed form), or</i></p> <p><i>(2) a paper reproduction of a paper document (original or copy), or</i></p> <p><i>(3) an electronic reproduction of a secured set of electronic data (original or copy), or</i></p> <p><i>(4) a printed reproduction of a secured set of electronic data (original or copy), or</i></p> <p><i>(25) as an electronically digitised reproduction-copy of the original-a paper document form (original or copy), or</i></p> <p><i>(36) as a microfilm or scanned reproduction-copy of the original-a paper document form (original or copy), or</i></p> <p><i>(4) as a paper form where the paper record is a printed reproduction of an original form from either (1), (2) or (3) above.</i></p> <p><i>Where IT systems are used to retain documents and data, it should be possible to print a</i></p>



paper version of the documents and data kept.”

AMC M.A.305(e) paragraph (e):

Please amend the section to consider that a digitised record may be made from a copy as well as an original. The following minor amendment is proposed:

“(e) Digitised Records:

*Digitised records may be created from ~~an original~~ **a paper-record document (original or copy)** or as a ~~digital electronic original~~ **secured set of electronic data**. When created from ~~an original~~ **a paper-record document**:*

- (1) the creation date of the digitised record should be stored with the digitised record,*
- (2) it is advisable to create an individual digitised record for each ~~original~~ **document**, and*
- (3) if an organisation creates a large number of digitised records, the use of database technology should ease the future retrieval of the record.”*

AMC M.A.305(e) paragraph (f):

This section describes the security of digitised records and the security principal is generic and should apply irrespective of form of the source data. The following minor amendment is proposed:

“(f) Digitised Record Retention:

*Digitised records when created from ~~an original~~ **a paper-record document**, or as a ~~digital electronic original~~ **secured set of electronic data**, should be stored on a system which is secured and kept in an environment protected from damage (e.g. fire, flooding, excessive temperature or accidental erasing). [...]*

The system used for retention of digitised records must:

- 1. Ensure the integrity (**whatever the record creation form**) and accuracy of the record (when created from ~~an original~~ **a paper-record document**).*
- 2. Ensure that access to the digitised record has safeguards against alteration of the data.*
- 3. Provide assurance that the data has not been modified after creation.*

[...]

*Computer backup discs, tapes etc., should be stored in a different location from that containing the current working discs, tapes, etc., and in a safe environment. Where the competent authority has approved a system for digitised record keeping satisfying the above, the ~~original~~ **paper-record document** may be permanently disposed of.”*

response

comment

114

comment by: AIRBUS

1. PARAGRAPH / SECTION THE COMMENT IS RELATED TO:



NPA 2014-04, page 21/44, AMC M.A.305(e)

2. PROPOSED TEXT / COMMENT:

Could the Agency clarify the reasons why the term ‘other’ is used in the paragraph (a) and (b) of the AMC M.A.305(e)?

Should the paragraph (a) read the following?

“(a) The information that constitutes the aircraft continuing airworthiness records may be entered in an information technology (IT) system and/or ~~other~~ documents equivalent in scope and detail.

[...]

(b) ‘~~Other~~ Documents equivalent in scope and detail’ could be an aircraft logbook, a **technical logbook**, engine logbook(s) or engine module log cards, propeller logbook(s) and log cards for life limited parts and time controlled components. [...]”?

3. RATIONALE / REASON / JUSTIFICATION:

For sake of understanding. It is not clear why the term ‘other’ has been used. It seems to imply that an IT system is a system of documents.

The technical logbook to show compliance with the point M.A.305(b)3. is missing in the paragraph (b).

response

comment

118

comment by: AIRBUS

1. PARAGRAPH / SECTION THE COMMENT IS RELATED TO:

NPA 2014-04, pages 21-22/44, AMC M.A.305(e)

2. PROPOSED TEXT / COMMENT:

It is proposed to modify the paragraph (b) of the AMC M.A.305(e) to read:

“[...]

Any logbook/logcard should contain:

(1) Identification of the product, ~~part~~ or component it refers to;

(2) Type, **part number**, serial number and registration, as appropriate, of the aircraft, engine, propeller, engine module, or **particular** component to which the ~~particular~~ **individual** component has been fitted, along with the reference to the installation and removal;

(3) The date and **the corresponding** accumulated total **life in flight** ~~time hours~~ and/or flight cycles and/or landings and/or calendar time **and/or in any other applicable measurement unit**, as appropriate; and

(4) Any AD, modification, repair, maintenance or deferred maintenance tasks applicable.

If fulfilling the applicable requirements, a logbook/log card as described above could be a



means to comply with the current status of life limited parts and time controlled components and/or the in-service history record for each life limited part.”

3. RATIONALE / REASON / JUSTIFICATION:

The term ‘part’ is covered by the term ‘component’ as defined in the Regulation (EC) No 2042/2003 (paragraph (c) of the Article 2).

Reference to ‘part number’ is added for the identification of components.

The term ‘particular component’ is already used and defined in the proposed amendments of the AMC M.A.305(b)1. Consistency is necessary.

The current proposed amendment does not take into account the possibility of measurement units other than those listed, for example cycles of APU usage.

response

comment

119

comment by: AIRBUS

1. PARAGRAPH / SECTION THE COMMENT IS RELATED TO:

NPA 2014-04, page 22/44, AMC M.A.305(e)

2. PROPOSED TEXT / COMMENT:

It is proposed to modify the paragraph (c) of the AMC M.A.305(e) to read:

“[...]”

(c) Form of records ~~keeping:~~

Producing and/or keeping continuing airworthiness records in a form acceptable to the competent authority normally means in either material/physical or electronic state, or a combination of both.

Retention of records should be done in one of the following formats:

(1) original paper document or secured set of electronic data as the original form (either paper or via an approved electronically signed form), or

(2) a paper reproduction of a paper document (original or copy), or

(3) an electronic reproduction of a secured set of electronic data (original or copy), or

(4) a printed reproduction of a secured set of electronic data (original or copy), or

(25) as an electronically digitised reproduction-copy of the original a paper document form (original or copy), or

(36) as a microfilm or scanned reproduction-copy of the original a paper document form (original or copy), or

(4) as a paper form where the paper record is a printed reproduction of an original form from either (1), (2) or (3) above.



Where IT systems are used to retain documents and data, it should be possible to print a paper version of the documents and data kept.”

3. RATIONALE / REASON / JUSTIFICATION:

The production and the retention of records may be carried out by different organisations (e.g. as a result of sub-contracted continuing airworthiness management tasks, refer to Appendix II to M.A.201(h)(1)). Therefore, both activities should be taken into account.

The records of used aircraft that have already been transferred several times are frequently copies of copies: relying on copies of the original form only is not flexible enough, and may lead to an immediate non-compliance for a significant portion of the in-service fleet.

response

comment

120

comment by: AIRBUS

1. PARAGRAPH / SECTION THE COMMENT IS RELATED TO:

NPA 2014-04, page 22/44, AMC M.A.305(e)

2. PROPOSED TEXT / COMMENT:

It is proposed to modify the title of the paragraph (d) of the AMC M.A.305(e) to read:

“(d) Material/Physical-Non-digitised records:

All physical records should [...]”

3. RATIONALE / REASON / JUSTIFICATION:

For sake of consistency with the terms used in this paragraph.

response

comment

121

comment by: AIRBUS

1. PARAGRAPH / SECTION THE COMMENT IS RELATED TO:

NPA 2014-04, page 22/44, AMC M.A.305(e)

2. PROPOSED TEXT / COMMENT:

It is proposed to modify the paragraph (e) of the AMC M.A.305(e) to read:

“(e) Digitised Records:

Digitised records may be created from ~~an original a paper-record document (original or copy)~~ or as a ~~digital-electronic original~~ secured set of electronic data. When created from ~~an original a paper-record document~~:

(1) the creation date of the digitised record should be stored with the digitised record,

(2) it is advisable to create an individual digitised record for each ~~original document~~, and



(3) if an organisation creates a large number of digitised records, the use of database technology should ease the future retrieval of the record.”

3. RATIONALE / REASON / JUSTIFICATION:

The records of used aircraft that have already been transferred several times are frequently copies of copies: relying on the original version of the paper document only (excluding first reproduction, or subsequent copies of such a reproduction) is not flexible enough, and may lead to an immediate non-compliance for a significant portion of the in-service fleet.

response

comment

123

comment by: AIRBUS

1. PARAGRAPH / SECTION THE COMMENT IS RELATED TO:

NPA 2014-04, pages 22-23/44, AMC M.A.305(e)

2. PROPOSED TEXT / COMMENT:

It is proposed to modify the paragraph (f) of the AMC M.A.305(e) to read:

“(f) Digitised Record Retention:

Digitised records when created from ~~an original a paper record document~~, or as a ~~digital electronic original secured set of electronic data~~, should be stored on a system which is secured and kept in an environment protected from damage (e.g. fire, flooding, excessive temperature or accidental erasing). [...]

The system used for retention of digitised records must:

1. Ensure the integrity (~~whatever the record creation form~~) and accuracy of the record (when created from ~~an original a paper record document~~).
2. Ensure that access to the digitised record has safeguards against **inadvertent** alteration of the data.
3. **Ensure the authenticity of the record (identification of the person who created** ~~Provide assurance that~~ the data ~~and/or has not been~~ **modified them** after creation).

[...]

Computer backup discs, tapes etc., should be stored in a different location from that containing the current working discs, tapes, etc., and in a safe environment. Where the competent authority has approved a system for digitised record keeping satisfying the above, the ~~original paper record document~~ may be permanently disposed of.”

3. RATIONALE / REASON / JUSTIFICATION:

The records of used aircraft that have already been transferred several times are frequently copies of copies: relying on the original version of the paper document only (excluding first reproduction, or subsequent copies of such a reproduction) is not flexible enough, and may lead to an immediate non-compliance for a significant portion of the in-service fleet.



response	Authenticity/Integrity: For sake of clarity.
comment	150 comment by: CAA-NL
	<p>We suggest to add the following sentence to point (c)</p> <p>Proposal:</p> <p>‘In the case an IT system is used as a continuing airworthiness record system, the IT system should have a change log detailing the original entry and the correction made, marked by date and time and identifying the person making the correction.’</p> <p>Explanation:</p> <p>To provide clarification and AMC in case an IT system is used for the continuing airworthiness records system similar to the paper system.</p>
response	
comment	151 comment by: CAA-NL
	<p>AMC M.A.305(e) point (b)</p> <p>Proposal:</p> <p>Change ‘logcards’ into ‘<i>in-service history record</i>’</p> <p>Explanation:</p> <p>For consistency with M.A.305(e)3</p>
response	
comment	152 comment by: CAA-NL
	<p>Proposal:</p> <p>Change AMC M.A.305(e) item (f):</p> <p>‘Where the competent authority has approved <i>accepted</i> a system for ...’</p> <p>Explanation:</p> <p>The authority does not approve a digitized record keeping system.</p>
response	
comment	167 comment by: Belgian CAA
	- AMC M.A.305 (e) § (b) : to be in line with the wording used in the M.A.305 (e), the text



response	<p>“other document equivalent in scope and detail” needs to be replaced by “data equivalent in scope and details”.</p> <p>-AMC M.A.305 (e) § (b) (4) : it could be more appropriate to speak about AD status, modification status, repair status, maintenance program and to add the deferred maintenance rectification.</p>
comment	<p>179 comment by: <i>Chris GRUENER, BOC Aviation Pte. Ltd.</i></p> <p>AMC M.A. 305(e) point (e)</p> <p>The regulation should clearly state that digitized records should be legible and all required details (stamps, notes, drawings) should be clearly identifiable. We have seen gruesome scans of records that were hardly legible in crucial parts (e.g. AD compliance).</p>
comment	<p>192 comment by: <i>UK CAA</i></p> <p>Page No: 23</p> <p>Paragraph No: AMC M.A.305(e)(2)</p> <p>Comment: The paragraph implies that any EASA Form 1 of components used to perform a modification or repair are not required to be kept. For components with an airworthiness limitation, demonstration of its history is required and the Form 1 would provide this. It should be clear that although not required to be kept by the maintenance organisation, copies should be kept by the operator.</p> <p>Justification: The operator should have a complete set of records, this should include any release documentation for components fitted to the aircraft.</p> <p>Proposed Text: “AMC M.A.305(e)(2) Aircraft continuing airworthiness record system</p> <p>(1) EASA Form 1 and the Certificate of Conformity of the components used to perform a modification/repair are not part of the substantiation data for a modification/repair, which are retained by the maintenance organisation. Copies should be provided to the operator to be kept with the aircraft records.”</p>
response	
comment	<p>225 comment by: <i>AEA</i></p> <p>Other paragraphs in M.A. 305 (e) on page 11 and 12 refer to 24 months. This is inconsistent with the recently adopted approach to keep records in Part M and Part 145 for 36 months in</p>



response	order to align to record retention period for the ARC inspection.
comment	<p>258 comment by: <i>CAI FIRST</i></p> <p>AMC M.A.305(e) Aircraft continuing airworthiness record system (a) The information that constitutes the aircraft continuing airworthiness records may be entered in an information technology (IT) system and/or other documents equivalent in scope and detail. IT systems acceptable for supporting the aircraft continuing airworthiness records should: (1) include functions so that search of data and production of status, including a printable paper version, is possible; (2) allow a transfer of the aircraft continuing airworthiness records data from one system to another using an industry wide/worldwide data format or allow printing information; (3) contain safeguards which prevent unauthorised personnel from altering data; and (4) ensure the integrity of the data, including traceability of amendments.</p> <p>JUSTIFICATION: AMC 305(e) c doesn't specify explicitly that status should be produced in a paper versions.</p> <p>Paper version status are assessed and archived during the Airworthiness Review.</p> <p>From experience some IT system do not produce all informations in a paper versions.</p>
response	
comment	<p>261 ❖ comment by: <i>Dassault Aviation</i></p> <p>Dassault-aviation comment pages 6,35,40,43,21-22</p> <p>"Lack of guidance on the acceptability of new technology, such as RFID (Radio Frequency Identification) "</p> <p>It seems regrettable to exclude evolutionary technologies -as RFID- of acceptable means.</p> <p>Dassault-Aviation suggest to add a future opportunity for RFID use when this technology will be on control.</p>
response	
comment	<p>262 comment by: <i>Dassault Aviation</i></p> <p>Dassault-Aviation suggest to add a sentence as :</p> <p>RFID data are accepted when validity is demonstrated</p>
response	
comment	<p>277 comment by: <i>DGAC France</i></p>



The purpose of this AMC is to describe that the requested record system may be “paper-driven” or “electronically stored” information. Therefore the (a) paragraph describes the IT technology and requirements. The (b) reminds the names of paper documents. But the 4 points under (b) are already covered as the “contents” of the “records”. It is not usefull here to repeat those information.

Proposed modification:

Delete the 4 points within (b) subparagraphs as follows:

~~Any logbook/logcard should contain:~~

- ~~(1) Identification of the product, part or component it refers to;~~
- ~~(2) Type, serial number and registration, as appropriate, of the aircraft, engine, propeller, engine module, or component to which the particular component has been fitted, along with the reference to the installation and removal;~~
- ~~(3) The date and accumulated total flight time and/or flight cycles and/or landings and/or calendar time, as appropriate; and~~
- ~~(4) Any AD, modification, repair, maintenance or deferred maintenance tasks applicable.~~

response

comment

302 comment by: *Regio Lease*
 b) weight variant and/or rating as applicable seem to miss.

response

comment

303 comment by: *Regio Lease*
 c) form of record keeping: can we consider that we are allowed to destroy the paper form once it is digitalized? how can we consider a scan printed as original? who endorse the responsibility to sign them?
 for e-signature shall we only consider the EC 93-1999? when transferring aircraft records to the next owner/operator, shall we accept digitalized data transfert? what about signatories and DFP signed? does one person can endorse the whole signatures?

response

comment

304 comment by: *Regio Lease*
 f) 5) what is the definition of safe environment? is "out of the office area" enough? what about transfert of electronic record to an organization not approved by the authority on the e-signatures and electronic/IT system retention/recording?
 g) Is there a formal acceptance from the authority for acceptance of recovery and FH/FC



response	validation?
comment	<p>305 comment by: <i>Regio Lease</i></p> <p>1) Maybe we can be more accurate by telling that CoC or EASA Form 1 of components used to perform a modification/repair of an equipment is not mandatory? because for example, we should need CoC or EASA Form 1 for computers, repair of structural part, etc. to accept and endorse the modification isn't it?</p> <p>For DOA modifications for example, we should have the EASA form 1 of the equipments/parts used no?</p>
response	
comment	<p>313 comment by: <i>IATA</i></p> <p>AMC M.A.305(e) - item (c) (1)</p> <p>“Electronically signed form”: The electronic signature needs to be well defined. Different states use different processes to define an electronic signature. Will an e-signature by one state be recognized by another? IATA is offering to continue working with the industry to define an aviation industry standard that can be used on a global level and ensure recognition by various agencies.</p>
response	
comment	<p>333 comment by: <i>NFO Technical Committee</i></p> <p>The time spendt on the computer is pointing in the wrong direction. In the -90 you have only 1 window to work in. The time to record fault on the aircraft system was "fast". Now you need to Log on, accepting, deny in several windows then you have done your work. refilling, changing bulbs, refastened screws an so on. Today we need somthing that are a lot easier, this to ensure better feedback about errors found on aircraft and aircraft components.</p> <p>The problem today is that you go through many windows in the computer program, and its not a copy of the log book. The danger we see is that all is not necessarily recorded during technical checks. The job is quicker to perform than it takes you through all the data windows. We need a text that say somthing about the record systems layout and functionality, its need to be easy to understand and work in to ensure highest level of safety and keep in mind a lot of work is done during nightshift.What about Human Factor</p>
response	
comment	<p>350 comment by: <i>Luftsport Verband Bayern / Germany</i></p>



response	<p>AMC M.A.305 (e) (b) (3):</p> <p>This paragraph may require the engine and propeller logbooks to be kept "current" while we assume date and so on has to be entered on installation and removal only.</p>
comment	<p>353 comment by: <i>Baines Simmons Limited</i></p> <p>Comment 1</p> <p>AMC M.A.305(e) Aircraft continuing airworthiness record system</p> <p>We believe such IT systems should allow for the "locking down" of data in response to accidents, serious incidents, and/or other occurrences that may have significant safety implications.</p> <p>We recommend adding point (5) as follows:</p> <p>"(5) ensure data can be "locked down" or otherwise secured from any alterations being made, in the light of any accident, serious incident and/or occurrence that may have serious safety implications."</p> <p>Comment 2</p> <p>We believe the wording in paragraph (b) (1) may cause confusion between the overlapping terms referred to. The definition of component includes "parts and appliances" (Regulation (EC) 2042/2003).</p> <p>We recommend the following:</p> <p>(1) Identification of the product or component it refers to;</p>
response	<p>355 comment by: <i>Baines Simmons Limited</i></p> <p>AMC M.A.305(e) Aircraft continuing airworthiness record system</p> <p>Paragraph (f) contains the word "must"; this is not appropriate for AMC. Paragraph (f) should read as follows:</p> <p>(f) Digitised Record Retention:</p> <p>...</p> <p>The system used for retention of digitised records should:</p> <p>... "</p>



to Part-M): — Point AMC M.A.305(e)(2)

comment	8	comment by: <i>ParTem Aviation</i>
	<p>para. (1) - not clear that substantiating data forms part of the continuing airworthiness records but EASA Form 1 should be retained by the MRO (if that is the intention of this paragraph). Suggest the following text:</p> <p>(1) EASA Form 1 and the Certificate of Conformity of the components used to perform a modification/repair are not part of the substantiation data for a modification/repair and should be retained by the maintenance organisation.</p>	
response		
comment	25	comment by: <i>AIR FRANCE</i>
	<p>Clarify the meaning of this paragraph regarding EASA form1 is not part of substantiating data ?</p> <p>Please illustrate your expectation regarding this paragraph related to EASA Form1 need.</p>	
response		
comment	52	comment by: <i>Liam CREAVEN</i>
	<p><u>AMC M.A. 305(e)(2) point (1)</u></p> <p>The intent of this AMC is not clear due to punctuation and alternate meanings for 'component' (which may mean 'materials' in this case). Clarification is required whether this refers to substantiation of compliance with the design requirement, or substantiation of the quality processes used to produce the material used in a repair or modification. If the reference is to substantiation of compliance with the design requirement then the owner/operator would require appropriate 'substantiation data' but if the intent is substantiation of quality procedures used in the production of the material used by the maintenance organisation then the maintenance organisation would need to retain appropriate substantiation. An alternative sentence may be:</p> <p><u>'EASA Form 1 and the Certificate of Conformity of the components and/or materials used to perform a modification/repair are retained by the maintenance organisation and are not part of the substantiation data for a modification/repair required to be retained by the owner or operator'.</u></p>	
response		
comment	124	comment by: <i>AIRBUS</i>
	<p>1. PARAGRAPH / SECTION THE COMMENT IS RELATED TO:</p>	



NPA 2014-04, page 23/44, AMC M.A.305(e)(2)

2. PROPOSED TEXT / COMMENT:

Could the Agency clarify in the following sentence what is retained by the maintenance organisation amongst the EASA Form 1, the Certificate of Conformity, and the substantiation data?

“(1) EASA Form 1 and the Certificate of Conformity of the components used to perform a modification/repair are not part of the substantiation data for a modification/repair, which are retained by the maintenance organisation.”

Should it be modified to read the following?

“(1) EASA Form 1 and the Certificate of Conformity of the components used to perform a modification/repair are not part of the substantiation data for a modification/repair, ~~which~~ **These [EASA Form 1/Certificate of Conformity/substantiation data]** are retained by the maintenance organisation.”

3. RATIONALE / REASON / JUSTIFICATION:

For sake of understanding. It is not clear what the Regulator expects from the persons or organisations responsible for the maintenance and/or the aircraft continuing airworthiness.

response

comment

125

comment by: AIRBUS

1. PARAGRAPH / SECTION THE COMMENT IS RELATED TO:

NPA 2014-04, page 23/44, AMC M.A.305(e)(2)

2. PROPOSED TEXT / COMMENT:

Could the Agency clarify what an ‘interim assessment’ means in the following sentence?

“(2) In the case of an AD with several steps or with interim assessments during its application, these intermediate steps are part of the detailed maintenance records.”

3. RATIONALE / REASON / JUSTIFICATION:

For sake of understanding.

response

comment

168

comment by: Belgian CAA

AMC M.A.305 (e) (2) § (1) and AMC M.A.305 (e) (3) § (1) : based on this text, it seems important to clarify that the record related to the components needs to be kept, in the general record for components, to ensure traceability. In the case of the “AMC M.A.305(e) (3) § (1)”, it is little confused with the other article “GM M.A.305 (e) (3)”.



response

comment

247

comment by: AEA

AMC M.A.305(e)(2)(1)

Comment: change text into: “...(1) include functions so that search of data and generating production of a status-overview is possible;...”

response

comment

248

comment by: AEA

AMC M.A.305(e)(1)(1)

Comment:

The proposed text states that:

“EASA Form 1 and the Certificate of Conformity of the components used to perform a modification/repair are not part of the substantiation data for a modification/repair, which are retained by the maintenance organisation.” This could suggest that the substantiation data for a modification/repair, instead of the EASA Form 1 and the Certificate of Conformity, are retained by the maintenance organization. However, the substantiation data for a modification/repair are part of an EASA Part 21 design, and should be retained by the Design Approval Holder (DAH).

Suggested resolution:

It is proposed to change the text to:

“EASA Form 1 and the Certificate of Conformity of the components used to perform a modification/repair are not part of the substantiation data for a modification/repair. EASA Form 1 and the Certificate of Conformity of the components are retained by the maintenance organisation.”

response

3. Proposed amendments — 3.2. Draft Decision — 3.2.1. Annex I to Decision 2003/19/RM (AMC to Part-M): — Point AMC M.A.305(e)(3)

p. 23

comment

26

comment by: AIR FRANCE

Please illustrate your expectation regarding this paragraph related to EASA Form1 need.

response

comment

44

comment by: René Meier, Europe Air Sports



response	<p>page 23</p> <p>AMC M.A.305(e)(3)</p> <p>(2) Conservative methods...</p> <p>Proposal:</p> <p>Please replace "conservative" by "traditional" or "purpose-tailored..."</p> <p>Rationale:</p> <p>"conservative" is a political term, not a technical one.</p> <p>We propose "Any suitably safe method to manage missing historical periods is acceptable..."</p>
comment	<p>55 comment by: <i>Liam CREAVEN</i></p> <p><u>GM M.A.305(e)(3):</u></p> <p>The caveat ‘unless this is the means to fulfil another requirement quoted in M.A.305, (e.g. maintenance programme task compliance)’ is unclear since condition monitoring components may remain in service without preventive maintenance until failure. We propose that the Agency revise this sentence as follows:</p> <p><i>‘The EASA Form 1 or equivalent, and associated detailed maintenance records, is are not requested to be kept for ‘condition monitoring’ components unless this is the means to fulfil another requirement quoted in M.A.305, (e.g. maintenance programme task compliance demonstration of AD compliance).</i></p> <p>When condition monitoring components are subject to reliability monitoring further guidance material is beneficial. GM M.A. 305(e)(3) could therefore be elaborated as follows:</p> <p><i>‘It may be necessary to record the maintenance status for condition monitoring components which are monitored under a reliability/health monitoring programme as applicable in accordance with the aircraft maintenance programme. A fitted component list of components monitored for reliability by the person or organisation responsible for the aircraft continuing airworthiness may be kept in order to record the installed component part and serial number, time of component installation and applicable monitored criteria.’</i></p>
response	<p>126 comment by: <i>AIRBUS</i></p> <p>1. PARAGRAPH / SECTION THE COMMENT IS RELATED TO:</p> <p>NPA 2014-04, page 23/44, AMC M.A.305(e)(3)</p> <p>2. PROPOSED TEXT / COMMENT:</p>



It is proposed to modify the AMC M.A.305(e)(3) to read:

“(1) An EASA Form 1 **or equivalent** and detailed maintenance records are not **meant requested to be kept** to support every installation/removal shown in the in-service history records.”

3. RATIONALE / REASON / JUSTIFICATION:

The wording “are not requested to be kept to support” has been found more explicit than “are not meant to support”. The proposal is based on GM M.A.305(e)(3).

response

comment

127

comment by: AIRBUS

1. PARAGRAPH / SECTION THE COMMENT IS RELATED TO:

NPA 2014-04, page 23/44, AMC M.A.305(e)(3)

2. PROPOSED TEXT / COMMENT:

Could the Agency clarify who is responsible for deciding what is conservative and what is not, as a result of the following paragraph?

“(2) Conservative methods to manage missing historical periods are acceptable to establish the current status of the life limited part. In case of use of a conservative method, the supporting documents should be endorsed. Recommendations from the DAH on the procedures to record or reconstruct the in-service history should be considered.”

Should it read the following?

“(2) Conservative methods to manage missing historical periods **that are approved under the Annex (Part-21) to Regulation (EU) No 748/2012** are acceptable to establish the current status of the life limited part. [...]. **Additional** Recommendations from the DAH on the procedures to record or reconstruct the in-service history should be considered.”

Could the Agency clarify who is responsible for endorsing the supporting documents and what are the supporting documents?

3. RATIONALE / REASON / JUSTIFICATION:

Experience shows that what is conservative and what is not varies from one person/organisation to another. Further, a person or organisation responsible for the aircraft continuing airworthiness may in good faith consider that a given method is conservative whereas the pertinent Type Certificate Holder (i.e. a very particular DAH) can demonstrate the opposite.

Responsibilities have to be clarified with regards to which documents have to be endorsed and by whom.

response



comment	149	comment by: CAA-NL
	<p>We suggest to add AMC No. 2 to M.A.305(e)</p> <p>Proposal:</p> <p>‘In case of escalations and deviations to the maintenance program, all supporting information and maintenance records of the reviews required by M.A.302(d)(iii) should be retained for the period for at least 36 months after the escalation/deviation has been approved’.</p> <p>Explanation:</p> <p>Currently, there is no rule of retaining the records of the reviews. To ensure that a verification can be performed for the validity of the escalation, AMC is created to explain that to comply with the rule, the records of the reviews must be retained.</p>	
response		

comment	215	comment by: DLH and LHT
	<p>AMC M.A.305 (e) (3) (1): Amendment should be made:</p> <p>If an EASA Form 1 is used as supporting document, it might be the EASA Form 1 of the Next Higher Assy and is not necessarily the individual EASA Form 1 of the component.</p>	
response		

comment	254	comment by: AEA
	<p>AMC M.A.305 (e) (3) (1): Amendment should be made: If an EASA Form 1 is used as supporting document, it might be the EASA Form 1 of the Next Higher Assy and is not necessarily the individual EASA Form 1 of the component.</p>	
response		

comment	306	comment by: Regio Lease
	<p>1) We should be careful on where is the limit of an EASA Form 1? as understood here, no need of EASA form 1 for an engine or landing gears... we need at least the last one isn't it?</p>	
response		

3. Proposed amendments — 3.2. Draft Decision — 3.2.1. Annex I to Decision 2003/19/RM (AMC to Part-M): — Point GM M.A.305(e)(3)

p. 24

comment	171	comment by: AIRBUS
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1. PARAGRAPH / SECTION THE COMMENT IS RELATED TO:

NPA 2014-04, page 24/44, GM M.A.305(e)(3)

2. PROPOSED TEXT / COMMENT:

Could the Agency clarify why EASA Form 1 for 'condition monitoring' components should be kept when they are the means to fulfil a requirement quoted in the point M.A.305 other than in the paragraph (e)(3)*? (Maybe with some examples other than the compliance with the aircraft maintenance programme tasks)

* i.e. the retention of records for life limited parts and time controlled components.

It is proposed to amend the GM M.A.305(e)(3) to read:

"The EASA Form 1 or equivalent, and associated detailed maintenance records ~~is~~ are not requested to be kept for 'condition monitoring' components ~~unless this is the means to fulfil another requirement quoted in M.A.305, (e.g. maintenance programme task compliance)~~. However, it may be necessary to keep some detail maintenance records for those components monitored under a reliability/health monitoring programme, if applicable within the frame of the aircraft maintenance programme.

For components that are not subject to any of the primary maintenance processes described in the GM M.A.305(d)(2) (i.e. Hard Time, On-Condition, Condition Monitoring), the EASA Form 1 or equivalent, and associated detailed maintenance records are not requested to be kept as well."

3. RATIONALE / REASON / JUSTIFICATION:

If the explanation of the exception is not clear and simple, it may be confusing to refer to 'condition monitoring' components in a GM related to a paragraph dedicated to life limited parts and time controlled components:

By definition (ref. to GM M.A.305(d)(2)), a 'condition monitoring' component is permitted to remain in service without preventive maintenance until its functional failure ('fly to failure'): it cannot be a life limited part or a time controlled component. Consequently, the point M.A.305(e)(3) seems to be not applicable.

In addition, the example chosen (i.e. aircraft maintenance programme task compliance) to illustrate the exception is ambiguous: this kind of components is subject to unscheduled maintenance only, mainly for their replacement. For much more critical parts, the paragraph (1) of the AMC M.A.305(e)(3) confirms that an EASA Form 1 and detailed maintenance records are not meant to support every installation/removal of the life limited part shown in the in-service history records. So from the standpoint of the aircraft continuing airworthiness, what is the added value of keeping the EASA Form 1 for a 'condition monitoring' component? This deserves an explanation.

With regard to the detailed maintenance records related to 'condition monitoring' components, it may be necessary to keep some of them in order to fulfil a requirement of a reliability/health monitoring programme following the instructions of the Appendix I to AMC M.A.302 and AMC M.B.301(b).



The case of components not subject to any primary maintenance process is also explicitly addressed.

response

comment 180 comment by: Chris GRUENER, BOC Aviation Pte. Ltd.

The regulation should clearly state that all detailed maintenance records are needed to demonstrate airworthiness compliance, the maintenance programme task compliance is maybe not a very good example, AD compliance would be a better one.

response

comment 193 comment by: UK CAA

Page No: 24

Paragraph No: GM M.A.305(e)3

Comment: The word “requested” should be replaced with ‘required’.

Justification: Clarity.

Proposed Text: “The EASA Form 1 or equivalent is not **required** ...”

response

comment 362 comment by: Baines Simmons Limited

GM M.A.305(e)(3) Aircraft continuing airworthiness record system

We believe this paragraph contains a number of typographical errors, and, by definition, condition monitored components do NOT have scheduled maintenance tasks associated with them, otherwise they would be "Hard Time" or "On Condition". Hence this paragraph should read as follows:

The EASA Form 1 or equivalent is not **required** to be kept for ‘condition **monitored**’ components unless this is the means to fulfil another requirement quoted in M.A.305, (e.g. Airworthiness Directive compliance).

response

3. Proposed amendments — 3.2. Draft Decision — 3.2.1. Annex I to Decision 2003/19/RM (AMC to Part-M): — Point AMC M.A.305(f)

p. 24

comment 129 comment by: AIRBUS

1. PARAGRAPH / SECTION THE COMMENT IS RELATED TO:



NPA 2014-04, page 24/44, AMC M.A.305(f)

2. PROPOSED TEXT / COMMENT:

It is proposed to amend the AMC M.A.305(f)* to read:

~~“When an owner/operator the person or organisation responsible for the aircraft continuing airworthiness arranges in accordance with the Appendix II to M.A.201(h)(1) for the relevant maintenance a subcontracted organisation to retain copies of the continuing airworthiness records on his/her/its behalf, the owner/operator person or organisation responsible for the aircraft continuing airworthiness will continue to be responsible for the retention of records. If they cease to be the owner/operator of the aircraft, they also remain responsible for transferring the records to the new owner/operator of the aircraft.”~~

* Concurrent amendment: AMC M.A.307(a).

3. RATIONALE / REASON / JUSTIFICATION:

A maintenance organisation is not the only possible sub-contracted organisation.

The point M.A.305(f) addresses the control of aircraft continuing airworthiness records in accordance with M.A.305 (i.e. production and retention). It does not control the transfer of aircraft continuing airworthiness records like the point M.A.307 does.

So, the acceptable means of compliance linked to the responsibility for keeping records should be addressed in the AMC M.A.305(f) while those linked to the responsibility for transferring records should be addressed in the AMC M.A.307(a).

response

comment

130

comment by: AIRBUS

1. PARAGRAPH / SECTION THE COMMENT IS RELATED TO:

Point M.A.307

AMC M.A.307

2. PROPOSED TEXT / COMMENT:

It is proposed to amend the paragraph (a) of point M.A.307 to read:

~~“(a) The owner or operator person or organisation responsible for the aircraft continuing airworthiness shall ensure when an aircraft, an engine, a propeller, or a component is permanently transferred from one owner or operator to another that the M.A.305 continuing airworthiness records necessary to demonstrate compliance with point M.A.305 and, if applicable, M.A.306 operator’s technical log are also transferred.”~~

It is proposed to amend the AMC M.A.307(a)* to read:

“Where an owner/operator terminates his operation, all retained continuing airworthiness records should be passed on to the new owner/operator or stored. **When the person or organisation responsible for the aircraft continuing airworthiness arranges for the relevant**



maintenance organisation to retain (in accordance with M.A.305) copies of the continuing airworthiness records on his/her/its behalf, the person or organisation responsible for the aircraft continuing airworthiness will continue to be responsible for transferring the records to the new owner/operator of the aircraft.

[...].”

* Concurrent amendment: AMC M.A.305(f).

3. RATIONALE / REASON / JUSTIFICATION:

At the aircraft level, the transfer of continuing airworthiness records is appropriately controlled by the current version of point M.A.307.

The rework of point M.A.305, and in particular the new paragraph (e)3., rightly sheds light on components and makes them more visible than before. This paragraph demonstrates that some continuing airworthiness records rather relate to engines/engine modules, propellers, and components than to the aircraft itself. When an engine/engine module, a propeller or a component is transferred (e.g. standard exchanges) these records should also be transferred. As a consequence, the point M.A.307 needs to be amended to reflect this reality.

The term ‘the person or organisation responsible for the aircraft continuing airworthiness’ is preferred to ‘owner/operator’ to explicitly cover the case of a CAMO arranging for the relevant maintenance organisation to retain copies of the continuing airworthiness records on its behalf.

response

comment

369

comment by: *Baines Simmons Limited*

AMC M.A.305(f) Aircraft continuing airworthiness record system

This paragraph is easily applied in relation to aircraft used for CAT operations, whereby the operator and the managing CAMO are one and the same organisation.

However for non-CAT aircraft the owner/operator and the CAMO managing the continuing airworthiness may be separate organisations and the proposed wording does not adequately cater for this scenario.

We suggest the following wording would assist with the principle in each situation:

When an owner/operator **or CAMO** arranges for the relevant maintenance organisation to retain copies of the continuing airworthiness records on its behalf, the owner/operator **or that CAMO** will continue to be responsible for the retention of records. If they cease to be the owner/operator **or CAMO** of the aircraft, then **the owner/operator is** responsible for transferring the records to the new owner/operator **or CAMO** of the aircraft.

response



to Part-M): — Point AMC M.A.305(h)6

comment

146

comment by: CAA-NL

Although not in the original EASA proposal:

We suggest to add a new AMC No. 2 to M.A.307(a)

“In case of a permanent transfer of a component to another owner/operator, the previous owner/operator should ensure that all relevant documents (such as but not limited to the in-service history card, status of AD’s, status of modifications and repairs, all relevant Authorised Release Certificates, substantiation of non-generic modifications and repairs) should be transferred to the new owner/operator. “

Explanation:

To provide clarification and acceptable means of compliance

response

3. Proposed amendments — 3.2. Draft Decision — 3.2.1. Annex I to Decision 2003/19/RM (AMC to Part-M): — Point AMC M.A.501(b)

p. 25

comment

131

comment by: AIRBUS

1. PARAGRAPH / SECTION THE COMMENT IS RELATED TO:

NPA 2014-04, page 25/44, AMC M.A.501(b)

Point M.A.501

Point 145.A.42

AMC 145.A.42(b)

2. PROPOSED TEXT / COMMENT:

It is proposed to amend the point M.A.501 to read:

“[...]

(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.~~ [...]”

It is proposed to amend the AMC M.A.501(b) to read:

“(3) The person referred to under M.A.801 or the M.A. Subpart F or Part-145 approved maintenance organisation should ~~be satisfied~~ ensure that the component in question meets the approved data/standard. ~~Care should be taken in ensuring prior to installation that compliance with the approved configuration and maintenance data/standard is demonstrated such as the required design and modification standards.~~ This may be



accomplished by, amongst others:

- reference to the ~~(S)TC~~DAH holder or manufacturer's parts catalogue or other approved data (i.e.e.g. Service Bulletins), and
- **checking the pertinent data described in M.A.305(c) and (d).**

~~Care should also be taken in ensuring compliance with applicable AD and the status of any service life limited life limited parts and time controlled components fitted to the aircraft component."~~

It is proposed to amend point 145.A.42 to read:

"(b) Prior to installation of a component, the organisation shall ensure that the particular component is eligible to be fitted ~~when different modification and/or airworthiness directive standards may be applicable."~~

It is proposed to amend the AMC 145.A.42(b) to read:

1. The EASA Form 1 or equivalent identifies the status of an aircraft component. Block 12 'Remarks' on the EASA Form 1 in some cases contains vital airworthiness related information which may need appropriate and necessary actions.

2. The receiving organisation should be satisfied that the component in question is in satisfactory condition and has been appropriately released to service.

3. In addition, tThe organisation should ensure that the component **in question** meets the approved data/standard. **Care should be taken in ensuring prior to installation that compliance with the approved configuration and maintenance data/standard is demonstrated such as the required design and modification standards.** This may be accomplished by, amongst others:

- reference to the **DAH holder or** manufacturer's parts catalogue or other approved data (i.e.e.g. Service Bulletins, **the Airworthiness Limitations Section for Critical Design Configuration Control Limitations**), and
- **checking the pertinent data described in M.A.305(c) and (d).**

~~Care should also be taken in ensuring compliance with applicable airworthiness directives, the status of any life limited parts fitted to the aircraft component as well as Critical Design Configuration Control Limitations."~~

3. RATIONALE / REASON / JUSTIFICATION:

A recent experience has shown that an operator/a maintenance organisation may unintentionally install a component that is not eligible for the aircraft, although compliance with the points M.A.501(b)/145.A.42(b) is demonstrated:

These points give the impression to focus on the different modification and/or airworthiness directive standards/configurations (e.g. with the help of the IPC). Unintentional deviations (often referred to as concessions, non-conformances, divergences, repairs, technical adaptations, technical variations, etc...) may include restrictions on the affected component's



eligibility for fitment to aircraft.

The rework of point M.A.305, and in particular the new paragraph (e)3., rightly sheds light on components and makes them more visible than before. This paragraph demonstrates that some continuing airworthiness records rather relate to engines/engine modules, propellers, and components than to the aircraft itself: e.g. engine life limited parts status. When an engine/engine module, a propeller or a component is transferred (e.g. standard exchanges) these records should also be transferred (refer to comment on M.A.307 amendment): these records will be an essential contributor to determine if the component may be fitted to the aircraft or not.

As a consequence, the points M.A.501/145.A.42 need to be amended to reflect this reality. The Key Risk Elements A.1, A.2, A.3, B.3, C.1, C.2, C.3, C.4 have been a source to identify possible gaps.

response

comment

147

comment by: CAA-NL

The AMC states: “The EASA Form 1 or equivalent identifies the [airworthiness] status of an aircraft component. Block 12 ‘Remarks’ on the EASA Form 1 in some cases contains vital airworthiness related information which may need appropriate and necessary actions.”

That is not always correct: after maintenance the EASA Form 1 is used to release the work carried out, it is not a statement that the component is airworthy.

Proposal:

Change the text into:

The ~~EASA Form 1 or equivalent~~ *in-service history record* identifies the *airworthiness* status of an aircraft component. Block 12 ‘Remarks’ on the EASA Form 1 after maintenance in some cases contains vital airworthiness related information which may need appropriate and necessary actions.

Explanation:

To ensure that during the receiving inspection, the in-service history record is the prime document to be reviewed.

A widely adopted practice in the industry is that during the receiving inspection, only the Authorised Release Form is checked and not the ‘maintenance history card’. This practice stems from the practice that operators sent out a particular components for maintenance work and received the same component. In such case, it was sufficient only to verify that the maintenance ordered was indeed performed, hence by checking the Authorised Release Certificate.

However, components are more and more interchanged with another component (a.k.a. exchange) from pooling contracts (total care packages) where the ownership changes. During the receiving inspection of such components, it is not sufficient to only review the last



Authorised Release Certificate, but to review the full history of the component, including all applicable AD's, performed modifications and repairs (the latter with possible restricted certified airworthiness limitations and/or additional inspection). Thus the emphasis during the receiving inspection should be changed. An amendment to AMC 145.A.42(b) and AMC M.A.501(b) is proposed.

response

3. Proposed amendments — 3.2. Draft Decision — 3.2.1. Annex I to Decision 2003/19/RM (AMC to Part-M): — Point AMC M.A.504(c)

p. 25

comment

132

comment by: AIRBUS

1. PARAGRAPH / SECTION THE COMMENT IS RELATED TO:

NPA 2014-04, page 25/44, AMC M.A.504(c)

2. PROPOSED TEXT / COMMENT:

It is proposed to amend the AMC M.A.504(c) to read:

"1. The following types of components should typically be classified as unsalvageable:

(...)

(d) ~~certified life limited parts~~ **life limited parts** that have reached or exceeded their ~~certified life limits~~ **specified mandatory life limitation specified in the maintenance schedule of the aircraft maintenance programme**, or have missing or incomplete records;

3. RATIONALE / REASON / JUSTIFICATION:

For consistency of terms used.

response

3. Proposed amendments — 3.2. Draft Decision — 3.2.1. Annex I to Decision 2003/19/RM (AMC to Part-M): — Point AMC M.A.504(d)(2)

p. 25

comment

133

comment by: AIRBUS

1. PARAGRAPH / SECTION THE COMMENT IS RELATED TO:

NPA 2014-04, page 25/44, AMC M.A.504(d)(2)

2. PROPOSED TEXT / COMMENT:

Could the Agency remind the reference of the requirement imposing on manufacturers producing approved aircraft components to maintain records of serial numbers for 'retired' life limited parts?

Could the Agency confirm that the deletion of reference to 'critical' parts/components in the



core text of the Part-M and/or its AMC will not create any hazards?

3. RATIONALE / REASON / JUSTIFICATION:

The reference to the requirement in the Part-21 and/or Certification Specifications would ensure consistency of requirements for initial and continuing airworthiness.

The deletion of reference to 'critical' parts/components may have a direct impact on rotorcraft. For example, CS 27.602 and CS 29.602 define a critical part as a part, the failure of which could have a catastrophic effect upon the rotorcraft, and for which critical characteristics have been identified which must be controlled to ensure the required level of integrity. If the type design includes critical parts, a critical parts list shall be established. Procedures shall be established to define the critical design characteristics, identify processes that affect those characteristics, and identify the design change and process change controls necessary for showing compliance with the quality assurance requirements of Part-21. It has not been possible to identify in these CS a requirement imposing the systematic assignment of a life limitation to rotorcraft critical parts.

Are requirements for initial and continuing airworthiness consistent? Is such a list of critical parts required for aeroplanes?

Note: For engines, the CS-E imposes a holistic approach:

CS-E 515 requires an engineering plan, a manufacturing plan and a service management. These three plans define a closed-loop system which links the assumptions made in the engineering plan to how the part is manufactured and maintained in service. The integrity of engine critical parts is established by:

An engineering plan, the execution of which establishes and maintains that some parameters for design are sufficiently well known or predictable to allow each engine critical part to be withdrawn from service at or before an approved life limitation (before hazardous failure effects can occur).

A manufacturing plan which identifies the specific manufacturing constraints necessary to consistently produce engine critical parts with the attributes required by the engineering plan.

A service management plan which defines in-service processes for maintenance of engine critical parts which will maintain attributes consistent with those required by the engineering plan.

These processes become part of the Instructions for Continued Airworthiness used by the person or organisation responsible for the aircraft continuing airworthiness to develop an aircraft maintenance programme.

response

3. Proposed amendments — 3.2. Draft Decision — 3.2.1. Annex I to Decision 2003/19/RM (AMC to Part-M): — Point AMC M.A.613(a)

p. 25



comment	<p>2</p> <p style="text-align: right;">comment by: <i>Arturas Vegys</i></p> <p>This point indicates that "Inspected" should be stated in block 11 of EASA Form 1.</p> <p>But Appendix II to Part M describes the permissible entries for block 11, stating that only four entries are available for use: Overhauled, Repaired, Inspected/Tested, Modified.</p> <p>This leads to misunderstanding from the issuer of EASA Form 1 whether to use "Inspected" or "Inspected/tested".</p>
response	

comment	<p>137</p> <p style="text-align: right;">comment by: <i>AIRBUS</i></p> <p>1. PARAGRAPH / SECTION THE COMMENT IS RELATED TO:</p> <p>NPA 2014-04, page 25/44, AMC M.A.613(a)</p> <p>NPA 2014-04, page 29/44, AMC No 2 to 145.A.50(d)</p> <p>2. PROPOSED TEXT / COMMENT:</p> <p>It would be advisable to review both of these AMC in order to direct the reader to the point M.A.305. Meanwhile, it is proposed to amend the AMC M.A.613(a) to read:</p> <p>“[...]</p> <p>2.4. An EASA Form 1 issued in accordance with this paragraph 2 should be issued by signing in block 14b and stating ‘Inspected’ in block 11. In addition, block 12 should specify:</p> <p>(...)</p> <p>2.4.4. detail of life used for service life limited life limited parts and time controlled components being any combination of life since new fatigue, life accumulated by the time controlled components since the last accomplishment of scheduled maintenance specified in the aircraft maintenance programme overhaul or storage life;</p> <p>2.6. Used aircraft components removed from a serviceable aircraft.</p> <p>(...)</p> <p>(g) The total in-service life accumulated in flight hours and/or flight cycles and/or landings and/or any other applicable parameter should be established flight hours/cycles/landings as applicable of any service life limited for life limited parts and time controlled components, including together with the life accumulated by the time controlled components since the last accomplishment of scheduled maintenance task(s) specified in the aircraft maintenance programme time since overhaul should be established.</p> <p>[...]”</p> <p>It is proposed to amend the AMC No 2 to 145.A.50(d) to read:</p> <p>“[...]</p> <p>2. In the case of the issue of EASA Form 1 for components in storage before Part-145 and</p>
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Part-21 became effective and not released on an EASA Form 1 or equivalent in accordance with 145.A.42(a) or removed serviceable from a serviceable aircraft or an aircraft which has been withdrawn from service the following applies:

(...)

2.4.4. Detail of life used for ~~service life limited parts~~ life limited parts and time controlled components being any combination of ~~life since new~~ **fatigue, life accumulated by the time controlled components since the last accomplishment of scheduled maintenance task(s) specified in the aircraft maintenance programme overhaul** or storage life.

(...)

2.6.1 Serviceable aircraft components removed from a Member State registered aircraft may be issued with an EASA Form 1 by an appropriately rated organisation subject to compliance with this subparagraph.

(...)

(g) The **total in-service life accumulated in flight hours and/or flight cycles and/or landings and/or any other applicable parameter should be established flight hours/cycles/landings as applicable of any** ~~service life limited parts~~ for life limited parts and time controlled components, **including together with the life accumulated by the time controlled components since the last accomplishment of scheduled maintenance task(s) specified in the aircraft maintenance programme** ~~time since overhaul should be established.~~

(...)”

3. RATIONALE / REASON / JUSTIFICATION:

These AMC contain details under the responsibility of the person or organisation managing the aircraft continuing airworthiness: e.g. in the sub-paragraphs 2.4.3. and 2.4.4., 2.6.1. items (d), (f), (g) and (h). For such details, an approach like the one proposed in the paragraph (b) of points M.A.614 and 145.A.55 would limit duplications and needs for revision when the point M.A.305 is amended. In other words, the maintenance organisation should be directed to the person or organisation responsible for the aircraft continuing airworthiness in order to obtain, before issuing the EASA Form 1, the component records necessary to demonstrate compliance with M.A.305.

M.A.305 wordings have been used to modify these AMC.

Fatigue is not the only damage source generating life limitations (for example, refer to CS-25, Appendix H, paragraph H25.4, sub-paragraph (a)(1) for fatigue & (a)(3) for EWIS). It is preferable to refer to ‘life since new’.

The required periodic maintenance task(s) from the maintenance schedule of the aircraft maintenance programme specific to the time controlled components is/are not systematically overhauls. Therefore, it is preferable to refer to the ‘life accumulated by the time controlled components since the last accomplishment of scheduled maintenance specified in the aircraft maintenance programme’.



response

comment

148

comment by: CAA-NL

AMC No2 145.A.50(d) and AMC M.A.613(a) please use the term 'maintenance history record' in paragraphs 2.4.5 and 2.6.1(e).

Proposal:

Replace 'maintenance history record' with 'in-service history record'

Explanation:

For consistency with M.A.305

response

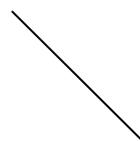
comment

249

comment by: AEA

AMC M.A.613(a)

Comment : also cross out "service" in the sentence at 2.6 (g):


 "... (g) The flight hours/cycles/landings as applicable of any service life-limited life limited parts and time controlled components including time since overhaul should be established...."

response

3. Proposed amendments — 3.2. Draft Decision — 3.2.1. Annex I to Decision 2003/19/RM (AMC to Part-M): — Point AMC M.A.710(a)

p. 26

comment

134

comment by: AIRBUS

1. PARAGRAPH / SECTION THE COMMENT IS RELATED TO:

NPA 2014-04, page 26/44, AMC M.A.710(a)

2. PROPOSED TEXT / COMMENT:

It is proposed to amend the AMC M.A.710(a) to read:

"(1) A full documented review is a check of at least the following categories of documents:

- ~~status list~~ of ~~service life limited component~~ life limited parts and time controlled components,"

3. RATIONALE / REASON / JUSTIFICATION:



response

For consistency with the terms used in point M.A.305.

3. Proposed amendments — 3.2. Draft Decision — 3.2.1. Annex I to Decision 2003/19/RM (AMC to Part-M): — Points AMC M.A.901(d) and (g)

p. 26

comment

135

comment by: AIRBUS

1. PARAGRAPH / SECTION THE COMMENT IS RELATED TO:

NPA 2014-04, page 26/44, AMC M.A.901(d) and (g)

2. PROPOSED TEXT / COMMENT:

It is proposed to amend the AMC M.A.901(d) and (g) to read:

“(g) Statement

(...)

- ~~component service life~~ **mandatory airworthiness** limitations **for components**, and;”

3. RATIONALE / REASON / JUSTIFICATION:

For consistency with the terms used in point M.A.305.

response

comment

169

comment by: Belgian CAA

AMC M.A.901 (d) and (g) : it could be useful to change the wording to be in line with the “new” wording in the proposed regulation in term of “life limited parts” and “time controlled components” to harmonize the wording through whole regulation and AMC/GM. We can suggest for this AMC a wording like : “approved limits for life limited parts and time controlled components”.

response

3. Proposed amendments — 3.2. Draft Decision — 3.2.1. Annex I to Decision 2003/19/RM (AMC to Part-M): — Point 2.11 of Appendix XI to AMC M.A.708(c)

p. 26

comment

82

comment by: AIRBUS

1. PARAGRAPH / SECTION THE COMMENT IS RELATED TO:

Point M.A.708(b)



2. PROPOSED TEXT / COMMENT:

It is proposed to modify the point M.A.708 to read:

“(b) For every aircraft managed, the approved continuing airworthiness management organisation shall:

[...]

8. coordinate scheduled maintenance, the application of airworthiness directives, the replacement of **service** life limited parts, and component **inspection maintenance** to ensure the work is carried out properly,

[...]”

3. RATIONALE / REASON / JUSTIFICATION:

Amendment of this point should be contemplated (holistic approach for consistency).

response

3. Proposed amendments — 3.2. Draft Decision — 3.2.1. Annex I to Decision 2003/19/RM (AMC to Part-M): — Appendix III to GM1 M.B.303(b)

p. 27-28

comment 9

comment by: *ParTem Aviation*

Supporting information, para (b). "components for which failure resistance can reduce and drop below a defined level: Inspections are scheduled to detect potential failures. Reference is made to 'On-condition' components: They are called such because components, which are inspected, are left in service (no further maintenance action taken) on the condition that they continue to meet specified performance standards." These are not "time controlled components" as defined. Furthermore, the terms "On Condition" and "Condition Monitoring" have been transposed, also in notes to this paragraph. (cf. GM M.A.305(d)(2)(c)(2), p.21)

response

comment 136

comment by: *AIRBUS*

1. PARAGRAPH / SECTION THE COMMENT IS RELATED TO:

NPA 2014-04, pages 27-28/44, Appendix III to GM M.B.303(b)

2. PROPOSED TEXT / COMMENT:

It is proposed to amend the Appendix III to GM M.B.303(b) to read:

“[...]

Supporting Information

[...]



Components affected by scheduled maintenance are of two types:

Life-limited components are of two types:

- ~~— components subject to a certified life limit;~~
- ~~— components subject to a service life limit.~~

a) Components with a **certified life limit mandatory life limitation** must be permanently removed from service when, or before, their operating limitation is exceeded. The life limitation is controlled at the component level (in opposition to aircraft level).

[...]

Typical inspection items

[...]

4. Check current status of **life limited parts** ~~life-limited components~~. This status can be requested upon each transfer throughout the operating life of the part:

- a. **It must identify** ~~the~~ the life limitation, the component’s total accumulated life, and the life remaining before the component’s life limitation is reached (indicating Hours, Cycles, Landings, Calendar time, as necessary).
- b. ~~If relevant for the determination of the remaining life, It must be substantiated by in-service history records a full installation history indicating the number of hours, cycles or calendar time relevant to each installation on these different types of aircraft/engine.”~~

3. RATIONALE / REASON / JUSTIFICATION:

For consistency with the terms and definitions used in point M.A.305/AMC/GM.

response

comment

170 comment by: *Belgian CAA*

Appendix III to GM1 M.B.303(b) : in the box entitle “supporting information”, it could be useful to replace “a) Components with a certified life-limit must be permanently removed from service when, or before...” by “a) Components **which are “life limited parts”** must be permanently removed from service when, or before...” to harmonize the wording used in this NPA. Same remark for the text in the box entitled “Typical inspection items”, “6. Check that life-limited and time controlled components are correctly marked during a physical survey.” could be improved by “6. Check that life-limited **parts** and time

response

comment

198 comment by: *Swedish Transport Agency*

Appendix III to GM1 M.B.303(b)

- C.2 Component control, In the right column “Typical inspection items”, Item 6:



	<ul style="list-style-type: none"> We propose a change for consequence use of “life limited part” NPA: “Check that life-limited and time controlled components are correctly marked during a physical survey.” To: Check that life-limited part and time controlled components are correctly marked during a physical survey.
response	
comment	<p>214 comment by: DLH and LHT</p> <p>App III to GM1 M.B.303 (b) 'Key Risk Elements' C.2 Component Control Supporting information (a):</p> <p>"[...] certified life-limit [...]" -> "certified" should be deleted</p> <p>App III to GM1 M.B.303 (b) 'Key Risk Elements' C.2 Component Control Typical inspection items 4. b.:</p> <p>"If relevant for the determination of the remaining life, a full installation history indicating the number of hours, cycles or calendar time relevant to each installation on these different types of aircraft/engine."</p> <p>-> This sentence might indicate that a "full installation history indicating [...]" is only needed "if relevant" what is in contradiction to GM M.A.305 (9) (iii).</p>
response	
comment	<p>255 comment by: AEA</p> <p>App III to GM1 M.B.303 (b) 'Key Risk Elements' C.2</p> <p>Component Control Supporting information (a): "[...] certified life-limit [...]" -> "certified" should be deleted</p> <p>App III to GM1 M.B.303 (b) 'Key Risk Elements' C.2</p> <p>Component Control Typical inspection items 4. b.:</p> <p>"If relevant for the determination of the remaining life, a full installation history indicating the number of hours, cycles or calendar time relevant to each installation on these different types of aircraft/engine."</p> <p>-> This sentence might indicate that a "full installation history indicating [...]" is only needed "if relevant" what is in contradiction to GM M.A.305 (9) (iii).</p>
response	
comment	<p>314 comment by: IATA</p>



Appendix III to GM1 M.B.303(b) 'KEY RISK ELEMENTS'

Typical inspection items

4.b. 2nd line

The word "landings" needs to be added after cycles.

Comment: It is unclear why both words "cycles" and "landings" are used separately. They mean the same; therefore, it is proposed to use: "cycles/landings" vs. "cycles" and "landings" throughout the whole NPA.

response

3. Proposed amendments — 3.2. Draft Decision — 3.2.2. Annex II to Decision 2003/19/RM (AMC to Part-145) — AMC No 2 to 145.A.50(d)

p. 29

comment

138

comment by: AIRBUS

1. PARAGRAPH / SECTION THE COMMENT IS RELATED TO:

NPA 2014-04, page 25/44, AMC M.A.613(a)

NPA 2014-04, page 29/44, AMC No 2 to 145.A.50(d)

2. PROPOSED TEXT / COMMENT:

It would be advisable to review both of these AMC in order to direct the reader to the point M.A.305. Meanwhile, it is proposed to amend the AMC M.A.613(a) to read:

"[...]

2.4. An EASA Form 1 issued in accordance with this paragraph 2 should be issued by signing in block 14b and stating 'Inspected' in block 11. In addition, block 12 should specify:

(...)

2.4.4. detail of life used for ~~service-life limited~~ life limited parts and time controlled components being any combination of ~~life since new~~ fatigue, life accumulated by the time controlled components since the last accomplishment of scheduled maintenance specified in the aircraft maintenance programme ~~overhaul~~ or storage life;

2.6. Used aircraft components removed from a serviceable aircraft.

(...)

(g) The ~~total in-service life accumulated in flight hours and/or flight cycles and/or landings and/or any other applicable parameter should be established flight hours/cycles/landings as applicable of any service-~~ life limited for life limited parts and time controlled components, ~~including together with the life accumulated by the time controlled components since the last accomplishment of scheduled maintenance task(s) specified in the aircraft maintenance programme~~ ~~time since overhaul should be established.~~



[...]”

It is proposed to amend the AMC No 2 to 145.A.50(d) to read:

“[...]

2. In the case of the issue of EASA Form 1 for components in storage before Part-145 and Part-21 became effective and not released on an EASA Form 1 or equivalent in accordance with 145.A.42(a) or removed serviceable from a serviceable aircraft or an aircraft which has been withdrawn from service the following applies:

(...)

2.4.4. Detail of life used for ~~service life limited parts~~ life limited parts and time controlled components being any combination of **life since new**~~fatigue~~, **life accumulated by the time controlled components since the last accomplishment of scheduled maintenance task(s) specified in the aircraft maintenance programme** ~~overhaul~~ or storage life.

(...)

2.6.1 Serviceable aircraft components removed from a Member State registered aircraft may be issued with an EASA Form 1 by an appropriately rated organisation subject to compliance with this subparagraph.

(...)

(g) The **total in-service life accumulated in flight hours and/or flight cycles and/or landings and/or any other applicable parameter should be established** ~~flight hours/cycles/landings as applicable of any~~ ~~service life limited parts~~ **for life limited parts and time controlled components, including together with the life accumulated by the time controlled components since the last accomplishment of scheduled maintenance task(s) specified in the aircraft maintenance programme** ~~time since overhaul should be established.~~

(...)”

3. RATIONALE / REASON / JUSTIFICATION:

These AMC contain details under the responsibility of the person or organisation managing the aircraft continuing airworthiness: e.g. in the sub-paragraphs 2.4.3. and 2.4.4., 2.6.1. items (d), (f), (g) and (h). For such details, an approach like the one proposed in the paragraph (b) of points M.A.614 and 145.A.55 would limit duplications and needs for revision when the point M.A.305 is amended. In other words, the maintenance organisation should be directed to the person or organisation responsible for the aircraft continuing airworthiness in order to obtain, before issuing the EASA Form 1, the component records necessary to demonstrate compliance with M.A.305.

M.A.305 wordings have been used to modify these AMC.

Fatigue is not the only damage source generating life limitations (for example, refer to CS-25, Appendix H, paragraph H25.4, sub-paragraph (a)(1) for fatigue & (a)(3) for EWIS). It is preferable to refer to ‘life since new’.

The required periodic maintenance task(s) from the maintenance schedule of the aircraft



response	<p>maintenance programme specific to the time controlled components is/are not systematically overhauls. Therefore, it is preferable to refer to the ‘life accumulated by the time controlled components since the last accomplishment of scheduled maintenance specified in the aircraft maintenance programme’.</p>
comment	<p>154 comment by: CAA-NL</p> <p>AMC No2 145.A.50(d) and AMC M.A.613(a) please use the term ‘maintenance history record’ in paragraphs 2.4.5 and 2.6.1(e).</p> <p>Proposal:</p> <p>Replace ‘maintenance history record’ with ‘in-service history record’</p> <p>Explanation:</p> <p>For consistency with M.A.305</p>
response	
comment	<p>155 comment by: CAA-NL</p> <p>Although not in the EASA proposal we suggest a new AMC 145.A.42(b) Acceptance of components stating: “The EASA Form 1 or equivalent identifies the [airworthiness] status of an aircraft component. Block 12 ‘Remarks’ on the EASA Form 1 in some cases contains vital airworthiness related information which may need appropriate and necessary actions.”</p> <p>That is not always correct: after maintenance the EASA Form 1 is used to release the work carried out, it is not a statement that the component is airworthy.</p> <p>Proposal:</p> <p>Change the text into:</p> <p>The EASA Form 1 or equivalent <i>in-service history record</i> identifies the <i>airworthiness</i> status of an aircraft component. Block 12 ‘Remarks’ on the EASA Form 1 after maintenance in some cases contains vital airworthiness related information which may need appropriate and necessary actions.</p> <p>Explanation:</p> <p>To ensure that during the receiving inspection, the in-service history record is the prime document to be reviewed.</p> <p>A widely adopted practice in the industry is that during the receiving inspection, only the Authorised Release Form is checked and not the ‘maintenance history card’. This practice stems from the practice that operators sent out a particular components for maintenance work and received the same component. In such case, it was sufficient only to verify that the maintenance ordered was indeed performed, hence by checking the Authorised Release</p>



Certificate.

However, components are more and more interchanged with another component (a.k.a. exchange) from pooling contracts (total care packages) where the ownership changes. During the receiving inspection of such components, it is not sufficient to only review the last Authorised Release Certificate, but to review the full history of the component, including all applicable AD's, performed modifications and repairs (the latter with possible restricted certified airworthiness limitations and/or additional inspection). Thus the emphasis during the receiving inspection should be changed. An amendment to AMC 145.A.42(b) and AMC M.A.501(b) is proposed.

response

3. Proposed amendments — 3.2. Draft Decision — 3.2.2. Annex II to Decision 2003/19/RM (AMC to Part-145) — Point GM 145.A.55 (a)

p. 29

comment 139

comment by: AIRBUS

1. PARAGRAPH / SECTION THE COMMENT IS RELATED TO:

NPA 2014-04, page 29/44, GM 145.A.55(a)

2. PROPOSED TEXT / COMMENT:

Could the Agency clarify the meaning of 'significant aircraft components' in the following sentence:

"The aircraft record should contain basic details of all serialised aircraft components and all other significant aircraft components installed during the maintenance performed, to ensure traceability to such installed aircraft component documentation and associated maintenance data as specified in 145.A.45."

Could the Agency remind the reference of the requirement imposing on Design Approval Holders to provide persons and organisations responsible under Part-M/Part-145 with a list of significant aircraft components?

3. RATIONALE / REASON / JUSTIFICATION:

The reference to the requirement in the Part-21 and/or Certification Specifications would ensure consistency of requirements for initial and continuing airworthiness.

The competencies to establish the list of significant aircraft components seem to pertain rather to the design domain than the maintenance domain.

response

3. Proposed amendments — 3.2. Draft Decision — 3.2.3. Decision 2012/018/R (AMC and GM to Part-CAT) — Point AMC1 CAT.IDE.A.105

p. 30



comment	<p>199</p> <p style="text-align: right;">comment by: Swedish Transport Agency</p> <p>AMC1 CAT.IDE.A/H.105, AMC1 NCC.IDE.A/H.105 , AMC1 NCO.IDE.A/H.105</p> <p>We propose the following change to the wording of the text for the purpose of better readability:</p> <p><i>“The operator should control and retain the status of the instruments, equipment or functions required for the intended operation, that are not controlled for the purpose of continuing airworthiness management. Examples of such instruments, equipment or functions could be, but are not limited to, equipment related to navigation approvals as FM immunity or certain software versions.”</i></p>
response	

comment	<p>200</p> <p style="text-align: right;">comment by: Swedish Transport Agency</p> <p>AMC1 CAT.IDE.A/H.105, AMC1 NCC.IDE.A/H.105 , AMC1 NCO.IDE.A/H.105</p> <p>We also propose that the operator should have a procedure described in the operations manual in order to define responsibilities.</p> <p>Proposed text:</p> <p><i>“GM1 CAT/NCC.IDE.A/H.105 MINIMUM EQUIPMENT FOR FLIGHT</i></p> <p><i>An operator should define, in its Operations Manual the responsibility to retain and control the status of instruments, equipment or functions required for the intended operation, that are not controlled for the purpose of continuing airworthiness management.”</i></p>
response	

4. Regulatory Impact Assessment (RIA) — 4.1. Issues to be addressed

p. 31-32

comment	<p>250</p> <p style="text-align: right;">comment by: AEA</p> <p>RIA 4.1</p> <p>Comment:</p> <p>The proposed text introduces the term “Information Tool (IT)”. At other locations in the NPA is in referred to as Information Technology (IT), which term is generally used in the industry.</p> <p>Suggested resolution:</p> <p>Use the term Information Technology (IT) consistently throughout the text.</p>
response	

4. Regulatory Impact Assessment (RIA) — 4.3. Policy options — 4.3.1. Inconsistency in the use of

p. 33



the terms 'Life Limited Parts' and 'Service Life Limited Parts'

comment 173

comment by: AIRBUS

1. PARAGRAPH / SECTION THE COMMENT IS RELATED TO:

NPA 2014-04, page 33/44, Regulatory Impact Assessment, paragraph 4.3.1.

2. PROPOSED TEXT / COMMENT:

Although the terms 'life limited parts' and 'time controlled components' have been adequately chosen and defined within the frame of this NPA, it is believed that the Regulatory Impact Assessment has not been sufficiently developed to shed enough light on the term 'critical components'.

The amendment of European regulations should be contemplated in order to deploy the term and concept of 'critical components' so that they are homogeneously used throughout the initial and continuing airworthiness processes for aircraft, engines, and propellers.

3. RATIONALE / REASON / JUSTIFICATION:

The term 'critical components' could complement the first two in order to address the issues specified in the ToR, and in particular the following one about the management of some components:

The point 145.A.50 'Certification of maintenance' states in the paragraph (d) that:

"A certificate of release to service shall be issued at the completion of any maintenance on a component whilst off the aircraft. The authorised release certificate "EASA Form 1" [...] constitutes the component certificate of release to service except if otherwise specified in point M.A.502(b) or M.A.502(e). [...]"

In the case of used components removed from an aircraft involved in an accident or incident, the AMC No 2 to 145.A.50(d) provides the following instructions in the paragraph 2.9:

"Such components should only be issued with an EASA Form 1 when processed in accordance with [instructions for used aircraft components removed from an aircraft withdrawn from service] and a specific work order including all additional necessary tests and inspections deemed necessary by the accident or incident. Such a work order may require input from the TC holder or original manufacturer as appropriate. [...]"

The work order is at the origin of the detailed maintenance records production. The notion of what is deemed necessary by the accident or incident and who determines it is very subjective in this AMC:

- Do all components warrant the same attention?

It is neither practical nor feasible to process every component in accordance with a specific work order when it is removed from the event-related aircraft, soon or later after the accident or incident. While the case of critical components, including life limited parts and time controlled components, is not disputed, there should be some flexibility for the other



components.

- Have all stakeholders been identified in order to appropriately define the specific work order?

The definition of the specific work order may require the participation of stakeholders usually not involved in this activity, such as the TC holder or original manufacturer, but also the competent authority. It should be explicitly stated, although it really seems quite self-evident. Further, the criteria for this involvement should be described (e.g. design approval holder or original manufacturer for components other than critical ones, and TC holder and competent authorities for critical components).

As a result of the NPA 2014-04 clarifications, the detailed maintenance records created for such components will be kept by the person or organisation responsible for the aircraft continuing airworthiness in accordance with the instructions of the paragraphs (6) or (8) of the GM M.A.305. They will be retained until the information contained therein is superseded by new information equivalent in scope and detail, i.e. in most cases they will be kept until the component is permanently withdrawn from service. Nevertheless, some of these detailed maintenance records will be retained for some, but not all components:

- Required to be kept for:

- Life limited parts, and

- Time controlled components.

- Not required to be kept for:

- Components subject to the 'condition monitoring' primary maintenance process, and

- Components that are not subject to any of the primary maintenance processes described in the GM M.A.305(d)(2).

Therefore, it appears that some aeroplane components (critical in the sense of the CS-E 15(e) definition) may be inappropriately assessed and the associated detailed maintenance records not retained by the person or organisation responsible for the aircraft continuing airworthiness.

It may result in a misrepresentation of the aircraft continuing airworthiness.

The RIA states:

QUOTE

From the safety perspective, defining the need of records depending on the criticality of a component is a sensible way of addressing the issue. But 'critical components' are not always defined by the DAH, which could create some uncertainty. [...] As a first step, the DAH would have to define 'critical components'

UNQUOTE

This proposal provides contributions to solve some issues related to continuing airworthiness and maintenance records that have not been addressed. It also suggests developments that



are necessary to ensure consistency between initial and continuing airworthiness.

response

comment

322

comment by: *René Meier, Europe Air Sports*

page 33/44

4.3.1. Inconsistency

We opt for "Option 0"

Rationale:

There is no safety risk and any change only will add to costs, not to safety.

response

4. Regulatory Impact Assessment (RIA) — 4.3. Policy options — 4.3.3. Different interpretations of the need for 'back to birth' traceability

p. 34

comment

323

comment by: *René Meier, Europe Air Sports*

page 34/44

4.3.3. Different interpretations..."back to birth" traceability

We favour "Option 2"

Rationale:

We think "back to birth" never was an acceptable term. On the other any such change only will add to costs, not to safety, in the end it might be more reasonable to do nothing, opt for "Option 0".

response

4. Regulatory Impact Assessment (RIA) — 4.3. Policy options — 4.3.6. Lack of guidance on the acceptability of record copies (scanned, photocopy)

p. 35

comment

17

comment by: *Julien ALBRECHT*

Hi everybody,

Electronic scanned records should always be at least as readable as originals.

As Director of a Tech Rec scanning company since 2005, we have been facing many cases where records were already scanned but in so low quality that the electronic format was just not useable at all.



Every thing had to be re scanned from scratch.

I would recommend such minimum requirements:

- 240 Dpi (storage space is not a problem anymore today).
- Color (Because there is a reason why there are stamps with "Original in Red" put on pages.

Scanning in Black and white should always be avoided.

Digital records for Certificates, AD dirty finger prints should be digitally stamped to avoid any modifications.

Storage of such files should be no more complicated or long than getting back to records.

Storage and indexes provided should be certified as readable/useable in 20 years.

best regards.

response

4. Regulatory Impact Assessment (RIA) — 4.3. Policy options — 4.3.7. Lack of guidance on the acceptability of new technology, such as RFID (Radio Frequency Identification)

p. 35

comment

261 ❖

comment by: *Dassault Aviation*

Dassault-aviation comment pages 6,35,40,43,21-22

"Lack of guidance on the acceptability of new technology, such as RFID (Radio Frequency Identification) "

It seems regrettable to exclude evolutionary technologies -as RFID- of acceptable means.

Dassault-Aviation suggest to add a future opportunity for RFID use when this technology will be on control.

response

4. Regulatory Impact Assessment (RIA) — 4.4. Analysis of impacts — 4.4.1. Inconsistency in the use of the terms 'Life Limited Parts' and 'Service Life Limited Parts'

p. 36-37

comment

324

comment by: *René Meier, Europe Air Sports*

page 36/44

4.4.1. Inconsistency..."Life Limited Parts" and "Service Life Limited Parts

5. General aviation and Proportionality issues.

You write "no impact is expected. We say: Of course will there be an impact when anything else than "Option 0" will be accepted.



response	<p>Rationale:</p> <p>No change will ever be free of charge.</p>
comment	<p>363 comment by: SVFB/SAMA</p> <p>The result clearly proposes use of "Time controlled components" and "life limited parts and all the other results.</p> <p>From an airline standpoint as well as aircraft above the historic limit of 5.700 but 15'000 kg/45'000kg we consider the proposed rule will be simpler.</p> <p>The recreational community will understandably forward arguments, which explain that it will be more burden for them without a safety benefit.</p> <p>This once more shows, that this regulation should probably be limited to scheduled airlines and truly large aircraft in a first step and EASA should try to solve this problem of "one rule does not fit all" with the EC in a radical approach.</p>
response	

4. Regulatory Impact Assessment (RIA) — 4.4. Analysis of impacts — 4.4.2. Different interpretations as to which components require an EASA Form 1 or equivalent, and which documents are considered equivalent to an EASA Form 1	p. 37
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comment	<p>325 comment by: René Meier, Europe Air Sports</p> <p>page 37/44</p> <p>4.4.2. Different interpretations...EASA Form 1</p> <p>5. General aviation and Proportionality issues</p> <p>We think we will be affected as anyone else in the aviation community.</p> <p>Rationale:</p> <p>As long as we are part of the system we will be affected.</p>
response	

4. Regulatory Impact Assessment (RIA) — 4.4. Analysis of impacts — 4.4.3. Different interpretations of the need for 'back to birth' traceability	p. 38-39
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comment	<p>45 comment by: René Meier, Europe Air Sports</p> <p>page 38/44</p>
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4.4.3. Different interpretations

(5) General Aviation and Proportionality issues

Question:

What is the meaning of "some guidance"?

Rationale:

Guidance never is a problem when it comes as clear statement.

response

4. Regulatory Impact Assessment (RIA) — 4.4. Analysis of impacts — 4.4.6. Lack of guidance on the acceptability of records copies (scanned, photocopy) p. 39-40

comment

326

comment by: *René Meier, Europe Air Sports*

page 40/44

4.4.6. Lack of guidance...records copies

We favour "Option 1":

Rationale:

At last a statement as regards the fact that not all aviation is equal...

response

4. Regulatory Impact Assessment (RIA) — 4.4. Analysis of impacts — 4.4.7. Lack of guidance on the acceptability of new technology, such as RFID (Radio Frequency Identification) p. 40-41

comment

261

comment by: *Dassault Aviation*

Dassault-aviation comment pages 6,35,40,43,21-22

"Lack of guidance on the acceptability of new technology, such as RFID (Radio Frequency Identification) "

It seems regrettable to exclude evolutionary technologies -as RFID- of acceptable means.

Dassault-Aviation suggest to add a future opportunity for RFID use when this technology will be on control.

response

4. Regulatory Impact Assessment (RIA) — 4.4. Analysis of impacts — 4.4.8. Lack of harmonisation with the FAA requirements in relation to continuing airworthiness records p. 41



comment	<p>327</p> <p>page 41/44</p> <p>4.4.9. Safety Recommendation</p> <p>We go for "Option 0".</p> <p>Rationale:</p> <p>It fits, no change is required.</p>	comment by: <i>René Meier, Europe Air Sports</i>
response		

4. Regulatory Impact Assessment (RIA) — 4.5. Comparison and conclusion — 4.5.1. Comparison of options	p. 42-43
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comment	<p>261 ❖</p> <p>Dassault-aviation comment pages 6,35,40,43,21-22</p> <p>"Lack of guidance on the acceptability of new technology, such as RFID (Radio Frequency Identification) "</p> <p>It seems regrettable to exclude evolutionary technologies -as RFID- of acceptable means.</p> <p>Dassault-Aviation suggest to add a future opportunity for RFID use when this technology will be on control.</p>	comment by: <i>Dassault Aviation</i>
response		

comment	<p>328</p> <p>page 42/44</p> <p>4.5.1. Comparison of options</p> <p>Many thanks for this table, but it is quite difficult to interpret and because it lacks a final conclusion. Our conclusion on NPA 2014-04, however, is clear: It contains useful parts, but extensive re-work is required and the applicability to General Aviation of many of the proposed future provisions by General Aviation specialists is of utmost importance to this segment of aviation.</p> <p>Rationale:</p> <p>Only rarely the specificities of General Aviation were catered for, too many parts of the proposed texts were more or less directly broken down from a big airliners to a non-complex aircraft mostly operating in VFR/VMC conditions within the structure of a group or club for sports or recreational flying.</p> <p>, particularly due to the "-" values used.</p>	comment by: <i>René Meier, Europe Air Sports</i>
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response

4. Regulatory Impact Assessment (RIA) — 4.5. Comparison and conclusion — 4.5.2. Safety Recommendation p. 43

comment

329

comment by: *René Meier, Europe Air Sports*

page 43/44

4.5.2 Safety Recommendation

We would like to add in this place that we urgently ask all competent authorities to accept that recommendations are recommendations, not more, not less. We heard this repeatedly during the past months, e.g. when dealing with piston-engines TBO. Recommendations never were meant to be hard law, so please comply with this fact at all levels, in doing so you help to stop the decline of General Aviation we face in many member states, caused by high costs, administrative burdens, interpretations, discrepancies in the application of the ever-growing number of provisions of all kinds applicable in many cases to the oldest form of flying machines, the balloons, to the largest and newest transport aircraft of our times.

response



5. Appendix A — Attachments

 [EASA NPA 2014-04 — AWG.pdf](#)

Attachment #1 to comment [#373](#)

 [SB_25-617 flow chart.pdf](#)

Attachment #2 to comment [#294](#)

 [AC134_1404.pdf](#)

Attachment #3 to comment [#294](#)

 [ADF F-2005-164.pdf](#)

Attachment #4 to comment [#294](#)

 [OCR_1404.pdf](#)

Attachment #5 to comment [#294](#)

 [captain seat actuator.pdf](#)

Attachment #6 to comment [#294](#)

 [DOSSIER DFP.PDF](#)

Attachment #7 to comment [#294](#)