



**COMMENT RESPONSE DOCUMENT (CRD)  
TO NOTICE OF PROPOSED AMENDMENT (NPA) 2007-09**

**for amending Commission Regulation (EC) No 2042/2003 of 20 November 2003 on the continuing airworthiness of aircraft and aeronautical products, parts and appliances, and on the approval of organisations and personnel involved in these tasks**

**and**

**for amending the Executive Director Decision No 2003/19/RM of 28 November 2003 on Acceptable Means of Compliance and Guidance Material to Commission Regulation (EC) No 2042/2003 on the continuing airworthiness of aircraft and aeronautical products, parts and appliances, and on the approval of organisations and personnel involved in these tasks**

**'Part-145 single and multiple releases'**

## Explanatory Note

### I. General

1. The purpose of the Notice of Proposed Amendment (NPA) 2007-09 was to propose an amendment to:
  - Commission Regulation (EC) No 2042/2003<sup>1</sup> of 20 November 2003 laying down implementing rules for the continuing airworthiness of aircraft and aeronautical products, parts and appliances, and on the approval of organisations and personnel involved in these tasks, and to
  - Decision of the Executive Director of the Agency No 2003/19/RM of 28 November 2003<sup>2</sup>.

The corresponding rulemaking task was 145.012.

This NPA proposed the introduction of:

- Maintenance Release Certificates (MRC) issued by each Part-145 organisation participating in a maintenance event.
- A Base Maintenance Release Certificate (BMRC) issued after a base maintenance event, once all the corresponding MRCs had been issued and activities had been properly coordinated.
- A final Certificate of Release to Service (CRS), issued before flight, once all the MRCs and BMRC had been issued and once it is ensured that all the maintenance ordered by the operator has been completed or properly deferred, and all activities have been properly coordinated.
- A Primary Maintenance Organisation (PMO), nominated by the Operator, and responsible for the coordination of maintenance activities during a maintenance event and responsible for the issuance of the final Certificate of Release to Service before flight.

### II. Consultation

2. The NPA 2007-09 was published on 28 June 2007 on the website of the Agency at: ([http://www.easa.europa.eu/ws\\_prod/r/r\\_archives.php](http://www.easa.europa.eu/ws_prod/r/r_archives.php)).

By the closing date of 28 October 2007, the European Aviation Safety Agency ('the Agency') had received 242 comments from National Aviation Authorities, professional organisations and private companies.

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<sup>1</sup> Regulation (EC) No 2042/2003 of 20 November 2003 on the continuing airworthiness of aircraft and aeronautical products, parts and appliances, and on the approval of organisations and personnel involved in these tasks, OJ L 315, 28.11.2003, p. 1. Regulation as last amended by Commission Regulation (EC) No 127/2010 of 5 February 2010 (OJ L 40, 13.02.2010).

<sup>2</sup> Decision No 2003/19/RM of the Executive Director of the European Aviation Safety Agency of 28 November 2003 on acceptable means of compliance and guidance material to Commission Regulation (EC) No 2042/2003 of 20 November 2003 on the continuing airworthiness of aircraft and aeronautical products, parts and appliances, and on the approval of organisations and personnel involved in these tasks. Decision as last amended by Decision 2010/002/R of 28 April 2010.

### III. Publication of the CRD

3. All comments received have been acknowledged and incorporated into this Comment Response Document (CRD) with the responses of the Agency.
4. In responding to comments, a standard terminology has been applied to attest the Agency's acceptance of the comment. This terminology is as follows:
  - **Accepted** – The comment is agreed by the Agency and any proposed amendment is wholly transferred to the revised text.
  - **Partially accepted** – Either the comment is only agreed in part by the Agency, or the comment is agreed by the Agency but any proposed amendment is partially transferred to the revised text.
  - **Noted** – The comment is acknowledged by the Agency but no change to the existing text is considered necessary.
  - **Not accepted** – The comment or proposed amendment is not shared by the Agency .

**NOTE: The resulting text placed in Appendix A at the end of the document highlights the changes as compared to the current rule.**

5. The Agency Opinion will be issued at least two months after the publication of this CRD to allow for any possible reactions of stakeholders regarding possible misunderstandings of the comments received and answers provided.
6. Such reactions should be received by the Agency not later than **5 October 2010** and should be submitted using the Comment-Response Tool at <http://hub.easa.europa.eu/crt>.

### IV. Main changes introduced after the NPA

7. The comments received through the external consultation of the NPA showed a significant concern from National Authorities and stakeholders about the complexity and implications of the concept proposed in the NPA.
8. In order to address these concerns, a review group was set up, composed of the members of the working group in charge of drafting the NPA plus one expert from the Standardisation Department (EASA) and one expert from Industry representing the European Regional Airlines (ERA).
9. After reviewing the comments, the review group decided to simplify significantly the concept proposed while maintaining the objectives of the task. The changes can be summarised as follows:
  - a. The concept proposed in the NPA, which was based on the issuance of three different certificates (Maintenance Release Certificate MRC, Base Maintenance Release Certificate BMRC and Certificate of Release to Service CRS), has been replaced by a much more simplified concept based on the issuance of one or several Certificates of Release to Service and a Final Certificate of Release to Service (see 145.A.50(a) and (b)). In particular:
    1. Certificates of Release to Service (CRS) (145.A.50(b)(1)):
      - They are issued by each Part-145 organisation involved in a maintenance event.

- Their purpose is to certify the maintenance performed by that organisation and, as a consequence, they have to be issued by certifying staff with the appropriate licence categories and type/group ratings.
- The Part-M Subpart G organisation (CAMO) may decide whether it prefers to use a Technical Log where every task is released or a Technical Log where tasks are signed-off and then they are released as a block of tasks. See examples in AMC M.A.306(a) and AMC 145.A.50(b)(1), paragraph 4.
- They can be issued even if non-compliances are found (i.e. NDT inspection performed by a D1 rated organisation, where cracks are found) or even if the aircraft is left in a non-airworthy configuration (i.e. the work order requires removing the engines for preservation purposes) as long as this is properly recorded in the CRS and it is notified to the CAMO. See AMC 145.A.50(b)(1).

Nevertheless, all these non-compliances or non-approved configurations will need to be eventually rectified or properly deferred, with the corresponding CRS.

- Certifying staff take full responsibility for the maintenance and deferred items covered by the Certificate of Release to Service they have issued.

2. Final Certificate of Release to Service (Final CRS) (145.A.50(b)(2)):

- It is issued by the Part-145 organisation which has been designated by the CAMO to do so. See M.A.306(b)7 and Appendix II to AMC M.A.708(c), item 2.20.
- Its purpose is to certify and notify to the pilot that all the maintenance ordered by the CAMO has been completed or properly deferred. However, it does not act as certification of the maintenance performed or as certification of those items deferred, since this is already accomplished by the corresponding CRS described in 145.A.50(b)(1). This is the reason why, for example, a B1 certifying staff with the appropriate type/group rating can issue a Final CRS covering line and base maintenance.
- As a consequence, the certifying staff issuing the Final CRS fully relies on the CRS issued by each Part-145 organisation and in the coordination performed following the procedures established by the CAMO (AMC M.A.708(b)7) and following the conditions of the contract between the CAMO and the Part-145 organisation (Appendix II to AMC M.A.708(c), item 2.22).

- b. The certification statement contained in the CRS and in the Final CRS is identical to the one contained in the current rule.
- c. The GM 145.A.50 introduced in the NPA in order to better describe the certification process and in order to provide examples of Technical Logs has been removed for the following reasons:
  1. The new proposed system is much simpler, which makes unnecessary the guidance for the certification process.
  2. The examples of Technical Log have been now introduced as AMC material to Part-M (operator's responsibility), in point AMC M.A.306(a). In addition, AMC 145.A.50 incorporates now guidance of how the Part-145 organisation may complete the operator's Technical Log.

- d. The concept of Primary Maintenance Organisation (PMO), which was introduced in the NPA, has been removed. Instead, it has been emphasised in M.A.708(b)7 and AMC M.A.708(b)7 that the responsibility for coordination remains on the Continuing Airworthiness Management Organisation (CAMO). This has been also clarified in AMC M.A.306(a)3.
  - e. It has been clarified in AMC M.A.306(a)3 that, although the issuance by a Part-145 organisation of a final certificate of release to service certifies that all maintenance ordered by the CAMO has been performed or properly deferred, this does not necessarily mean that the aircraft is airworthy at that moment. The CAMO is still responsible for the airworthiness of the aircraft and for ensuring that all the continuing airworthiness requirements are met before a flight takes place. This is the purpose of the maintenance statement required by point M.A.306(a)3.
  - f. The changes proposed in the NPA in point 145.A.55 'Maintenance Records' have been removed due to the more simplified certification process and the removal of the PMO.
  - g. In order to provide sufficient time for the affected stakeholders and competent authorities, it has been proposed that the entry into force will be 1 year after publication of the new Regulation in the Official Journal of the European Union.
10. The Agency would like to note that the new concept proposed in this CRD was agreed by all the members of the review group. Furthermore, it is a concept which is currently being used by several airlines.
11. **Finally, please note that the changes proposed by this task 145.012 only affect the release of aircraft maintenance in Part-145 organisations. It does not affect maintenance for components (released on an EASA Form 1 or equivalent) nor maintenance performed in Subpart F maintenance organisations.**

**NOTE: The final proposed text, indentifying the differences with the current text, is contained in the Appendix A at the end of this document, after the replies to the comments.**

## V. Regulatory Impact Assessment

In view of the significantly simplified concept introduced in this CRD, a Regulatory Impact Assessment of the new proposal has been performed as follows:

### 12. Purpose and intended effect

Paragraph 145.A.50(a) of Annex II to Commission Regulation (EC) No 2042/2003 states: *'A certificate of release to service shall be issued by appropriately authorised certifying staff on behalf of the organisation when it has been verified that all maintenance ordered has been properly carried out by the organisation in accordance with the procedures specified in 145.A.70, taking into account the availability and use of the maintenance data specified in point 145.A.45 and that there are no non-compliances which are known to endanger flight safety.'*

Furthermore, paragraph 145.A.50(b) states *'A certificate of release to service shall be issued before flight at the completion of any maintenance.'*

From the wording of this point 145.A.50(b) it is possible to draw the following two interpretations:

- **Interpretation 1:** There must be a single certificate of release to service covering all the maintenance performed before flight (since 145.A.50(b) says '**A** certificate of release to service ...').
- **Interpretation 2:** The maintenance performed before flight can be divided in as many maintenance items as desired (since 145.A.50(b) says '... at the completion of **any** maintenance'), and for each one of those maintenance items a certificate of release to service is issued.

This ambiguity of the Regulation has originated in Europe different methods of releasing an aircraft, including single release, multiple releases and variations/combinations of both, each one with its own advantages and disadvantages, which could be summarised as follows:

- **Single Release:** The aircraft certificate of release to service is issued by a single person following single or multiple maintenance actions, which are appropriately signed-off by authorised personnel.
  - Advantages:
    - The pilot receives a single release which tells him/her that all the maintenance ordered by the operator had been completed.
    - If properly implemented it should ensure that all the maintenance actions have been properly coordinated.
  - Disadvantages:
    - Implies that the person signing the single release to service (and his/her organisation) must have in the scope of work/authorisation all the tasks covered by the release.
    - The full responsibility for all the maintenance actions falls on that person.
    - Very difficult to implement when several maintenance organisations are involved in a maintenance event.
- **Multiple Release:** Several certificates of release to service are issued, each one of them covering certain maintenance tasks.
  - Advantages:
    - Each organisation and each certifying staff can take responsibility only for the maintenance tasks they have performed and certified.
  - Disadvantages:
    - The pilot receives several certificates of release to service, making more difficult to verify that all the maintenance ordered by the operator has been completed.
    - They do not clearly address the coordination activities needed between the different certifying staff or between different organisations.

As it was already stated in the Terms of Reference (ToR) of the task 145.012, this coexistence could lead to misunderstandings and possible safety issues, which led to the

industry and national aviation authorities to request a clarification of this issue and, if possible, to retain only one of the systems.

However, the work performed during this task 145.012 led to the conclusion that it was not reasonable to retain only one of those systems, because each one of them has its own advantages and disadvantages. It was better to create a system that takes on board the benefits of both systems and at the same time provides flexibility to the operator and to the maintenance organisations. This system should ensure and clearly notify the pilot that all tasks have been accomplished and appropriately coordinated, should provide a clear line of responsibilities and, at the same time, should allow typical practices such as the release of maintenance when defects are found (i.e. NDT inspections) or when the aircraft is left in a non-approved configuration (i.e. removal of an engine for preservation).

All this, complemented by sufficient AMC/GM material, should ensure a higher harmonisation during implementation and an improvement in safety.

### 13. The option selected

The concept proposed in this CRD is based on the issuance of one or several Certificates of Release to Service and a Final Certificate of Release to Service (see 145.A.50(a) and (b)). In particular:

#### a. Certificates of Release to Service (CRS) (145.A.50(b)(1)):

- They are issued by each Part-145 organisation involved in a maintenance event.
- Their purpose is to certify the maintenance performed by that organisation and, as a consequence, they have to be issued by certifying staff with the appropriate licence categories and type/group ratings.
- The Part-M Subpart G organisation (CAMO) may decide whether it prefers to use a Technical Log where every task is released or a Technical Log where tasks are signed-off and then they are released as a block of tasks. See examples in AMC M.A.306(a) and AMC 145.A.50(b)(1), paragraph 4.
- They can be issued even if non-compliances are found (i.e. NDT inspection performed by a D1 rated organisation, where cracks are found) or even if the aircraft is left in a non-airworthy configuration (i.e. the work order requires removing the engines for preservation purposes) as long as this is properly recorded in the CRS and it is notified to the CAMO. See AMC 145.A.50(b)(1).

Nevertheless, all these non-compliances or non-approved configurations will need to be eventually rectified or properly deferred, with the corresponding CRS.

- Certifying staff take full responsibility for the maintenance and deferred items covered by the Certificate of Release to Service they have issued.

#### b. Final Certificate of Release to Service (Final CRS) (145.A.50(b)(2)):

- It is issued by the Part-145 organisation which has been designated by the CAMO to do so. See M.A.306(b)7 and Appendix II to AMC M.A.708(c), item 2.20.
- Its purpose is to certify and notify to the pilot that all the maintenance ordered by the CAMO has been completed or properly deferred. However, it does not act

as certification of the maintenance performed or as certification of those items deferred, since this is already accomplished by the corresponding CRS described in 145.A.50(b)(1). This is the reason why, for example, a B1 certifying staff with the appropriate type/group rating can issue a Final CRS covering line and base maintenance.

- As a consequence, the certifying staff issuing the Final CRS fully relies on the CRS issued by each Part-145 organisation and in the coordination performed following the procedures established by the CAMO (AMC M.A.708(b)7) and following the conditions of the contract between the CAMO and the Part-145 organisation (Appendix II to AMC M.A.708(c), item 2.22).

#### 14. **Advantages of the option selected**

- Clear line of responsibilities:
  - Certification of maintenance (CRS): Each Part-145 organisation certifies and is responsible for its own work with the issuance of the CRS. This can be even further detailed so each certifying staff certifies their own work (their own CRS).
  - Final release of the aircraft (Final CRS) to the pilot:
    - Only in relation to the maintenance ordered by the CAMO.
    - Relies on the certification of maintenance performed with the CRS.
  - Responsibility for the airworthiness of the aircraft and for defining the coordination procedures remains in the CAMO.
- It is possible to certify work even if non-compliances are found (i.e. NDT inspection performed by a D1 rated organisation, where cracks are found) or even if the aircraft is left in a non-airworthy configuration (i.e. the work order requires removing the engines for preservation purposes).
- The pilot receives a single release (Final CRS) which tells him/her that all the maintenance ordered by the operator has been completed.
- If properly implemented it should ensure that all the maintenance actions have been properly coordinated.

#### 15. **Impact of the option selected**

##### a. Safety impact

The Agency is convinced that the impact on safety is positive due to:

- More clear line of responsibilities.
- In all cases the pilot receives a final CRS certifying that all maintenance ordered has been completed or properly deferred.
- More guidance and emphasis on the coordination activities.

##### b. Economic impact

- Operators will need to modify the Technical Log. Nevertheless, many operators already revise their Technical Logs periodically to adapt to new regulations or because of internal requests from their operational departments. The Agency

believes that this impact can be minimised with an appropriate transition provision as follows:

COMPENSATING MEASURE: Entry into force 1 year after publication, to allow operators to use their stock of Technical Logs.

- Operators and Part-145 organisations will need to modify the procedures for maintenance certification and provide training to their personnel. Nevertheless, the concept finally proposed in this CRD is not so different from the current rule and the Agency does not anticipate a large impact. As a matter of fact, some organisations are already using a similar system.

COMPENSATING MEASURE: Entry into force 1 year after publication, to allow organisations to change their procedures and provide training to the affected personnel.

- Some organisations (those currently using the Multiple Release system) will have to add one more signature for the Final CRS.
- Category A certifying staff will not be able to issue the final CRS if there were other persons involved in the maintenance event. This affects those organisations which are currently using the Multiple Release system.

c. Environmental impact

- NONE

d. Social impact

- There is a positive impact due to the more clear line of responsibilities. Certifying staff will have a more clear view of what they are accountable for.
- However, category A certifying staff will not be able to issue the final CRS if there were other persons involved in the maintenance event. This affects those organisations which are currently using the Multiple Release system.

e. Impact on other regulatory systems

- No impact is anticipated on FAA or Canadian repair stations with EASA Part-145 approval because:
  - the certification statements remain unchanged,
  - it is still possible to use certifying staff with local licence (instead of Part-66 licence) outside the EU,
  - the changes do not affect component maintenance (they are still released under FAA 8130-3 or TCCA Form One).

f. Equity and fairness impact

- The changes affect Part-145 organisations but not Subpart F maintenance organisations. However, the Agency believes that this is reasonable because Subpart F maintenance organisations work in a much simpler environment, with lower coordination requirements.



VI. CRD table of comments, responses and resulting text

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|---------------------------|--|---|
| <b>(General Comments)</b> |  | - |
|---------------------------|--|---|

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| comment  | 1 | comment by: <i>Cobham Advanced Composites Ltd</i> |
|          |   | Acceptable  |
| response |   | <i>Noted</i>                                      |

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|---------|---|---|
| comment | 2 | comment by: <i>Jari LYYTINEN</i>  |
|         |   | <p>I would like to comment the proposed amendments NPA 2007-09 in the point of view of a CAMO with all of the maintenance activities contracted to external contractors.</p> <p>Supposedly the original intention in Part M and Part 145 has been harmonizing the procedures and ensuring free competition between Maintenance Organizations within the member states. Mainly this goal has been well achieved and the implementation of these regulations has generated new business in form of stand-alone CAMOs and Maintenance Organisations.</p> <p>According to current regulation the Continuing Airworthiness Management Organisation is responsible of airworthiness of the aircraft it manages. This means that it is responsible to ensure that all required maintenance is duly carried out and released before flight (M.A.201 and 145.A.50(e)). Therefore, the CAMO is responsible to order all required maintenance tasks from appropriately approved Maintenance Organisation(s). The Maintenance Organisation in turn is responsible of carrying out the ordered work and of informing the CAMO of any noticed defects or outstanding maintenance actions. When all required maintenance actions have been appropriately accomplished, the CAMO can consider the aircraft airworthy.</p> <p>This far everything is simple and clear. The confusion starts when the Maintenance organization is mandated to assume responsibility of the airworthiness of the aircraft (if 145.A.50(a) is interpreted so that the Maintenance Organisation may not issue CRS if the aircraft is known to be unairworthy, even if the ordered work has been properly carried out and the aircraft is in that respect airworthy). This leads to a confusion that the CRS would be some sort of Certificate of Airworthiness of the aircraft, which it is not (ref. AMC 145.A.50(b) 1).</p> <p>On my opinion the proposed different types of CRS's and the concept of 'Primary Maintenance Organisation' would only worsen this confusion and add complexity. A better solution would be to emphasize that the CRS is never issued for an aircraft but only for the work carried out, and to let the CAMO bear the</p> |

responsibility that it has its approval for. 145.A.50(a) could be amended so that it clearly limits the Maintenance Organisation's responsibility of airworthiness to its own work.

How could a Maintenance Organisation assume any responsibility of the airworthiness of the aircraft, when the CAMO has no obligation to inform the Maintenance Organisation of all the defects known to it? And why should the aircraft be airworthy after some maintenance action in the first place? The aircraft must be airworthy only before flight, but not necessarily if it is not flown. In any case all maintenance carried out must be appropriately released in order to get the aircraft airworthy in later point of time. (The operator may wish to fly the aircraft days or even years later.)

My proposal is to amend 145.A.50(a) to read "...and that there are no non-compliances *within the maintenance performed* which are known that hazard seriously the flight safety." No other changes to regulation would be required.

response *Partially accepted*

The proposed concept has been simplified (only CRS and final CRS). For details see the Explanatory Note of the CRD.

The responsibility for the airworthiness of the aircraft belongs to the CAMO. This has been made fully clear in AMC M.A.306(a)3 and AMC 145.A.50(b)2.

The concept of Primary Maintenance Organisation has been removed, although it is the responsibility of the Operator to designate an organisation responsible for issuing the final CRS.

The Part-145 organisation cannot issue a Final CRS if they know about non-compliances which endanger the flight safety. This does not mean they have to do an inspection outside what has been ordered by the CAMO. However, if they became aware of such non-compliance they cannot issue the Final CRS.

comment

3

comment by: *Aircraft Engineers International (AEI)*

Opinion:

It is AEI's collective opinion (as expressed by AEI's Affiliates) that this NPA according to Option 6 is a milestone in European aviation harmonisation and an excellent NPA, and as such, AEI has only a few minor detailed comments, which are registered in relation to the specific text that they apply to.

Reason:

Most importantly this NPA ensures a high safety standard by requiring that the different certificates specified in this NPA are only issued by properly licensed, competent and qualified personnel.

The NPA creates a certification system where the responsibility for the work carried out is clearly put with the person and organisation who is responsible for the work carried out. Not only that, it also clearly puts the responsibility for ensuring that personnel (who issues the different certificates) have the required

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| response | <p>qualifications and authorisations, with the organisation that is responsible for this personnel. Furthermore it ensures that the whole process of issuing certificates by different Aircraft Maintenance Organisations is clearly defined and properly organised by introducing the concept of PMO. It also has a positive influence on Human Factors, because a standardised system contributes to reduce risk of human error. At the same time all this is achieved at a minimal cost increase to industry.</p> <p><i>Noted</i></p> <p>The Agency welcomes the comment.</p> |   |
| comment  | 18   | <p>comment by: <i>Air Berlin Technik</i></p> <p>General comment to this NPA:</p> <p>We consider this NPA senseless in its entirety and recommend to introduce none of the proposed changes at all.</p> <p>The provisions of this NPA just create additional administrative/bureaucratic burden in an environment where time counts. In most cases, the effect would just be more paperwork - neither more safety nor awareness - resulting in more required ground time and thus in additional costs.</p> <p>We do not see ANY safety benefit in making a simple rule more complicated. On the contrary: a more complicated rule creates more confusion which in our opinion is ALWAYS a safety hazard. At the moment, the rules are simple and thus clear. If the existing rules of Part-145 and Part-M would be correctly applied, all the safety concerns which are being raised by this NPA would be resolved. For correctly and consistently applying the existing rules, the rules (which should be regarded as well established as they date back from the JAR-145 system) do not need to be changed, but just explained. As a consequence, an amended AMC would be fully sufficient if clarification is required.</p> |
| response | <p><i>Partially accepted</i></p> <p>The proposed concept has been significantly simplified while achieving the objectives of the task. However, changes to the rule (and not only to the AMC) have been necessary. Please refer to the Explanatory Note of the CRD for more details.</p>   |   |
| comment  | 26   | <p>comment by: <i>AEA</i></p> <p>While the AEA concurs with the objectives of ToR 145-012 to:</p> <ul style="list-style-type: none"> <li>• emphasize the need for proper coordination of maintenance when several AMO (Approved Maintenance Organisations) work on the same aircraft, and</li> <li>• harmonise and streamline as far as possible the release to service system across the Industry,</li> </ul> <p>it fundamentally disagrees with the NPA proposal to introduce 3 levels of release to service. AEA further disagrees with the introduction of a PMO (Primary Maintenance Organisation) which proves redundant if not conflicting with existing</p>   |

Part M requirement.

AEA also believes that this highly theoretical proposal is far too complex to be implemented safely and that the cost implications for the Industry have been widely underestimated (if, in some cases, not evaluated at all).

Finally, the NPA proposal, by introducing a "new concept of certification of maintenance" and transferring a significant part of the CAMO responsibility in term of maintenance control to the new "PMO" goes far beyond the terms of reference published under ToR 145-012. This should not have been done without proper consultation of the Safety Standard Consultative Committee.

For all these reasons (which are further explained in detailed comments) the AEA request the NPA to be withdrawn and redrafted on the basis of ToR 145-012 and a proper Regulatory Impact Assessment

response *Partially accepted*

The proposed concept has been significantly simplified while achieving the objectives of the task. However, the NPA has not been re-issued. Please refer to the Explanatory Note of the CRD for more details.

comment 50

comment by: AEA

In order to give an overview of AEA's opinion on the NPA and its reasons for requesting its withdrawal, its comments are summarised below - cross reference to detailed comments are indicated in italics:

- Principles of "regulating by objectives" not followed: proposed rule is far too prescriptive in term of company internal organisation requirements- *see comments nr 22-23-24-25-28.*
- RIA incomplete and biased
  - o International consequences not properly assessed (impact on bilateral agreements, compatibility with other foreign regulations) - *see comments nr 27-32-48-49.*
  - o RIA procedure (plus/minus comparison table) not followed (the NPA is based on option 6, which is not the result of a formal RIA procedure, but a compromise between drafting group members) - *see comments nr 20-33-34.*
  - o Negative economical impact due to changing procedures, forms and Tech Log, training personnel, modifying contracts is largely underestimated - *see comments nr 27-28-31,*
  - o Positive safety impact is overestimated and not justified - no justification that current system is not safe enough (incident/accident records?) - *see comments nr 27-30-44-45*
  - o Negative safety impact due to added complexity is underestimated - *see comments nr 27-29-30-49*
- Drafting group did not comply with the terms of reference (ToR 145-012)

- see comment nr 21

- o SSCC and AGNA not consulted as required on the change of scope of the drafting group - see comment nr 19
- Interference/incompatibility with Part M CAMO responsibilities
  - o CAMO maintenance control responsibility (i.e. Part M) transferred to new PMO (AMO, i.e. Part 145) - see comments nr 19-35
  - o Need to redesign Technical Logs - see comments nr 24-47-48
- Huge complexity of MRC/BMRC/CRS +PMO and illogical results, e.g.:
  - o The NPA introduces 3 levels of release to service with 3 different release statements and 3 different levels of responsibility for certifying staff - see comments nr 22-25-36-37-40-42
  - o Line Maintenance certifying staff to sign CRS which endorses completion of all base maintenance performed before flight, - see comments nr 38-40
  - o The PMO signing the CRS might not (and will generally not) be in practice the Prime Maintenance Contractor of the CAMO, - see comments nr 23-38-39
  - o 8 pages explanations on the new Release to Service concept in the GM is a clear demonstration that the proposed system is by far too complex - see comments nr 37-43

response *Partially accepted*

The reply has been provided in each particular comment number.

comment

61

comment by: SAMCO

In our opinion NPA 2007-09 is too complex and causes conflicting regulations (see further remarks)  
 The NPA shifts the responsibility for coordination of maintenance from the operator/owner to the PMO  
 The intended function of PMO should be a Part M responsibility rather than a Part 145 responsibility.  
 We feel that the responsibility for coordinating the completion of maintenance lies and should remain with the owner/operator/Part M  
 This is more in line with the intent of Part M where the operator/owner is responsible that the aircraft is kept in an airworthy condition (Part M.A.201) and that all required maintenance is performed whereas the Part 145 is responsible that the requested maintenance is performed to the correct standards.  
 In our opinion the Part M organization should therefore coordinate the maintenance and issue a statement after completion of maintenance that all work ordered has been completed (similar to the maintenance statement regarding the statement that all scheduled maintenance has been completed)

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|          | <p>This task can be subcontracted to a Part 145 organization however under the responsibility and quality system of the Part M organization.<br/>         (This system is identical to Part M Continuous Airworthiness task which are the responsibility of the owner/operator as per their AOC/Part M approval but can be performed by a Part145 organization)<br/>         This would require only amending Part M and instead of Part M, Part 145 and Part 66</p> |
| response | <p><i>Accepted</i></p>   |
|          | <p>The proposed concept has been significantly simplified while achieving the objectives of the task. Please refer to the Explanatory Note of this CRD for more details.</p>   |

|          |  |                          |
|----------|--|--------------------------|
| comment  | 62   | comment by: <i>SAMCO</i> |
|          | <p>In the NPA the PMO is made responsible for coordinating the maintenance but has no legal contract with the other Part 145 organizations involved as the maintenance is in general subcontracted to the other Part145 organizations involved by the operator/owner.<br/>         This could create a legal conflict between the individual Part 145 organizations and operator/owner<br/>         For instance the operator/owner accepts deferring a defect from another Part 145 organization where the PMO may feel that the defect could/should not be deferred.<br/>         The other Part 145 organization issues a MRC with the deferred defect whereas the PMO refuses to issue a CRS</p> <p>With the CRS the PMO states that all maintenance ordered has been properly performed or deferred<br/>         It is questionable whether the PMO has the knowledge and experience to make such a statement especially when work was performed by other Part 145 organizations outside the Part 145 approval of the PMO</p> |                          |
| response | <p><i>Accepted</i></p>   |                          |
|          | <p>The concept of Primary Maintenance Organisation has been removed, although it is the responsibility of the Operator to designate an organisation responsible for issuing the final CRS.</p>   |                          |

|         |  |                                      |
|---------|--|--------------------------------------|
| comment | 73   | comment by: <i>Midcoast Aviation</i> |
|         | <p>We understand the need to ensure that all work performed is properly completed, certified and that the aircraft or other aviation article is released to service for all work performed. We concur with your position that there is a possibility for error, or a lack of coordination, when multiple entities perform work an article at the same time. We also believe there is a high possibility for error, when a system is overly complex.</p> <p>We find the system described in the NPA to;</p> <ul style="list-style-type: none"> <li>• Be overly complex, being both time consuming and increasing the</li> </ul> |                                      |

possibility of error, and;

- Appears to put a repair station in a position to release an aircraft or other article for service, for which it may not be rated. This would be in instances when some part of the work scope is beyond their authority and is contracted to another EASA approved repair station which is rated for that portion of the work scope.

We recommend a simpler approach, as outlined below, which would help avoid the complexity and possibility of error, while ensuring control of all maintenance performed and the release to service for such maintenance.

- When an operator contracts one repair station to perform the entire work scope, that repair station will be responsible to ensuring that all work performed is certified and that the aircraft or other article is released to service for all work performed, and;
  - When that repair station subcontracts to one or more certificated repair stations, it will ensure that those subcontracted repair stations certify the work they performed and release the aircraft or other article to service, for all work they performed
  - When a certified repair station subcontracts to one or more noncertificated persons, it will inspect, certify and release the aircraft or other article to service for all work performed.
- When an operator contracts two or more repair stations to perform work at the same time, the operator will ensure that each repair station certifies the work they performed and releases the aircraft or other article for that work. Each repair station will ensure control in accordance with the above bullet points, including control as indicated to any entity it contracts a portion of that work to.

response *Partially accepted*

The proposed concept has been significantly simplified while achieving the objectives of the task. However, it is important to note that the organisation issuing the Final CRS does not take responsibility for the work performed by the other Part-145 organisations (each one has issued its own CRS). See AMC 145.A.50(b)2.

Please refer to the Explanatory Note of this CRD for more details.

comment

74

comment by: ICAA

Note: On a meeting held in Copenhagen 3<sup>rd</sup> and 4<sup>th</sup> October 2007 the Nordic Group consisting of members from Denmark, Finland, Iceland, Norway and Sweden came to a common conclusion regarding NPA 2007-09

General comments from Iceland to NPA 2007-09:

- Option 1 should be taken i.e. Do nothing!
- There are no problems with the current system to date. The existing system hasn't caused any problems.
- Uncertainty of the operators' responsibility, not clearly defined in the NPA.
- An appropriately approved Part-145 maintenance organisation can directly contract other Part-145 maintenance organisations themselves, though it is mentioned that this may require the operator's "agreement". The "agreement" in the current **regulation** means a maintenance contract between the operator and all Part-145 organisations being contracted by the operator.
- In the introduction of the NPA (page 5) it is stipulated, "This could lead to lack of coordination and misunderstandings, and possibly to safety issues." This statement refers to the current Part-145 regulation.

We are of the opinion that NPA 2007-09 will introduce misunderstandings and lack of coordination that may affect safety issues.

- The concept of this NPA only applies to operators that contracts many organisations within and perhaps outside its own territory.
- Should the NPA be accepted, then it's absolutely necessary with an extensive transition period for the introduction. Some reasons are, the necessity for training of the industry and the competent authorities. Also all competent authorities and the industry are heavily involved in the implementation of the remaining EC regulations i.e. the "opt-outed" parts of 2042/2003 that require a lot of effort for the next few years to come.
- Another important factor is the economical impact. MOE, CAMEs, Tech Logs and all existing maintenance contracts have to be amended by the organisations, reviewed and finally approved by the competent authorities. In view of this, the costs will increase to an unacceptable level for all parties concerned.

response *Partially accepted*

The proposed concept has been significantly simplified while achieving the objectives of the task. In particular, the responsibilities of the operator have been further clarified (AMC M.A.306(a)3, M.A.708(b)7, AMC M.A.708(b)7, new paragraph 1.14 introduced in the CAME, AMC 145.A.50(b)2). In addition, a 1 year transition phase has been proposed in order to ensure proper amendment of Technical Logs. Please refer to the Explanatory Note of this CRD for more details.

However:

- The Agency does not agree with the proposal of “doing nothing”.
- The Agency does not agree with the statement that there is not a problem with the current rule.

comment

80

comment by: CAA-NL

CAA-NL does not approve and thus fully and strongly rejects this NPA. The reasons for this are the following:

1. A solution is being presented for something for which it is not clear what the actual problem is.
2. To our opinion, the rights and privileges of certifying staff are being influenced. In chapter D it is identified that there is a positive impact but we would argue that there is a negative impact because the rights and privileges of certifying staff are being influenced and, maybe more importantly, will also be felt as such **social burden**. Uneasiness among certifying staff will have an impact on aviation safety.
3. It seems that a large scale solution is being presented for a small scale issue. This requires a simple efficient solution rather than a complicated system.
4. A complicated system is being presented as final solution (option 6). A system with many forms, many signatures etc. and so many sources of error. **Safety burden**.
5. Also time consuming to have the aircraft on the flight line again. **Economic burden**. It is predictable how the system will function in order to avoid delays in having the aircraft fly again.
6. Especially smaller companies will encounter further greater difficulties in coping with such a complicated system. **Economic burden**.
7. We strongly believe that an operator responsibility which may not be appropriately exercised, is now being addressed by putting extra disproportionate workload at maintenance organizations. **Economic burden**.
8. Under chapter F (impact foreign requirements) it is mentioned that there may be an impact. But this NPA makes harmonization with USA/FAA more difficult. **Regulatory burden**.
9. The process of development of the proposal as outlined in the NPA (chapter 4) appears to be such that with the outcome, everybody may be equally unhappy.
10. We are also surprised to learn about the existence of the multiple release. In Part-145 under 145.A.50 it is only stated that **a** certificate of release to

|          |  |
|----------|--|
|          | <p>service shall be issued ... Aren't we trying to adapt whole Europe in order to enable one or a very limited number of countries to proceed with this practice?</p>  |
| response | <p><i>Partially accepted</i></p> <p>The Agency does not agree that 145.A.50 forbids the "multiple release" practice. The sentence "... a certificate of release to service shall be issued..." is being interpreted frequently as allowing the release of each maintenance action. Furthermore, it is a fact that both systems are co-existing in Europe, and it is also a fact that both systems have their own problems.</p> <p>That is why the proposed rule consists on maintenance certification by each organisation, plus a final release to tell the pilot that all the maintenance is completed or properly deferred.</p> <p>Nevertheless, in view of the comments received, the Agency has significantly simplified the proposal (only CRS and final CRS). Please refer to the Explanatory Note of the CRD.</p> <p>In addition, it has been made fully clear that the responsibility for the airworthiness of the aircraft belongs to the CAMO (AMC M.A.306(a)3 and AMC 145.A.50(b)2).</p> <p>The concept of Primary Maintenance Organisation has been removed, although it is the responsibility of the Operator to designate an organisation responsible for issuing the final CRS.</p> <p>A new Regulatory Impact Assessment has been performed and it is part of the Explanatory Note to this CRD.</p> |

|         |  |
|---------|--|
| comment | <p>93</p> <p>comment by: <i>Swedish Transport Agency, Civil Aviation Department (Transportstyrelsen, Luftfartsavdelningen)</i></p>   |
|         | <p>A Nordic Group consisting of members from Denmark, Finland, Iceland, Norway and Sweden met on October 3-4 in order to review this NPA and came to the final conclusion.</p> <ul style="list-style-type: none"> <li>• All five authorities are in favour of Option 1 i.e. Do nothing!</li> <li>• There are no problems with the current system to date. The existing system hasn't caused any problems.</li> <li>• Uncertainty of the operators' responsibility, not clearly defined in the NPA.</li> <li>• An appropriately approved Part-145 maintenance organisation can directly contract other Part-145 maintenance organisations themselves, though it is mentioned that this may require the operator's "agreement". The "agreement" in the current regulation means a maintenance contract between the operator and <u>all</u> Part-145 organisations being contracted by the operator.</li> </ul> |

- In the introduction of the NPA (page 5) it is stipulated, "This could lead to lack of coordination and misunderstandings, and possibly to safety issues." This statement refers to the current Part-145 regulation.

We are certain and convinced that by the introduction of the NPA this will introduce misunderstandings and lack of coordination that may affect safety issues.

- The new concept may be acceptable but it needs much more in depth explanations and clear definitions.
- The concept of this NPA only applies to operators that contracts many organisations within and perhaps outside its own territory.
- Should the NPA be accepted, then it's absolutely necessary with an extensive transition period for the introduction. Some reasons are, the necessity for training of the industry and the competent authorities. Also all competent authorities and the industry are heavily involved in the implementation of the remaining EC regulations i.e. the "opt-outed" parts of 2042/2003 that require a lot of effort for the next few years to come.
- Another important factor is the economical impact. All MOE:s and all existing contracts have to be amended by the organisations, scrutinised and finally approved by the competent authorities. In view of this, the costs will increase to an unacceptable level for all parties concerned.

Also Tech Logs may have to be amended. Many operators have already printed Tech Logs that are kept in stock. It may also be necessary to compile new instructions and conduct training etc. Both the industry and the competent authorities are affected by this NPA.

response

*Partially accepted*

The proposed concept has been significantly simplified while achieving the objectives of the task. In particular, the responsibilities of the operator have been further clarified (M.A.708(b)7, AMC M.A.708(b)7, new paragraph 1.14 introduced in the CAME, AMC 145.A.50(b)2).

In addition, a 1 year transition phase has been proposed in order to ensure proper amendment of Technical Logs.

Please refer to the Explanatory Note of this CRD for more details.

However:

- The Agency does not agree with the proposal of "doing nothing".
- The Agency does not agree with the statement that there is not a problem with the current rule.

comment

|     |   |
|-----|---|
| 106 | comment by: <i>Swedish Transport Agency, Civil Aviation Department (Transportstyrelsen, Luftfartsavdelningen)</i> |
|-----|---|

**145.A.65 (b)3 Note: Not paragraph in this NPA**

With many different contracted/subcontracted MO:s, it seems unlikely to meet the intent of this paragraph.

response *Noted*

The Agency agrees with the comment. Certainly, when different organisations are involved, proper coordination takes utmost importance. That is the reason for the changes proposed in this task 145.012.

145.A.65(b)3 requires the appropriate procedures to be in place.

comment

117

comment by: *Association of Dutch Aviation Technicians NVLT*

- This NPA is a good improvement for the certification of maintenance; it will enhance the flight safety.
  1. The single release to service statement is an extra build in safety barrier.
  2. There are no misunderstandings anymore for the pilot if all maintenance has been performed.
- However, due the fact that the mandatory inspection before flight the so-called Pre-flight PFI inspection is according Part-M not to be considered as maintenance, one has to be aware that the Aircraft is not fit for the intended flight if the Pre-flight inspection has not been carried out even dough the single CRS has been issued!
- Still the Pilot has to verify 2 different types of statements before he could depart safely, one is the CRS and the other is the accomplishment of the Pre-flight inspection.
- The Certifying Staff who issue the CRS has no formal obligation to verify if the Pre-flight inspection has been carried out before he issues the CRS.
- The mechanic, pilot or Certifying Staff who is performing the Pre-flight inspection has no formal obligation to verify if the CRS has been issued, because according Part-M the Pre-flight inspection does not include defect rectification.
- Note: There is still a need for a formal procedure in Part-M, Part-145 to unsure that both statements "CRS" and "PFI" have been accomplished before flight.
  - This procedure has to ensure the pilot can depart safely.

response *Noted*

The Agency would like to clarify that the purpose of the task 145.012 (and of the proposed final CRS) is to make sure that the pilot knows when all the maintenance ordered by the operator has been completed. However, the final

CRS does not necessarily mean that the aircraft is airworthy. This is the responsibility of the Operator/CAMO (see new AMC M.A.306(c)3). This includes the proper performance of the "Pre-flight inspection". It is the responsibility of the operator to establish appropriate procedures to ensure that the pilot knows when it has been completed.

comment

119

comment by: CAA CZ

- From our point of view there is no urgent need to implement the policy as proposed. The presented policy further increases the administrative burden.  
 - In case the Primary maintenance organisations would have an obligation to carry out the check of co-ordination with other maintenance organisations (which were involved in the maintenance of the aircraft) before issuance of the MRC, the implementation of MBRC would not be necessary. The system of MRC and CRS issuance would be, from our point of view, sufficient; considering that more often the maintenance is carried out within one organization only.

response

*Accepted*

The proposed concept has been significantly simplified while achieving the objectives of the task. In addition, a 1 year transition phase has been proposed in order to ensure proper amendment of Technical Logs. Please refer to the Explanatory Note of this CRD for more details.

comment

120

comment by: DGAC France

DGAC France is overly satisfied of the debate initiated by the NPA and wants to thank the working group for highlighting some important questions. DGAC France has further coordinated the review of the NPA with French users to identify practical implementation problems of the rule and guideline proposed by the NPA. This has lead in France to numerous debates with strong vigorous positions among participants that confirm the debate raised by the NPA.

Following that NPA assessment and internal debates, DGAC France conclusions are as follows: .

- We recognise the need to clarify the concepts and remove ambiguities around maintenance certification, aircraft release to service, the responsibilities of the various entities, the practical consequences of those certificates and what they mean
- We recognise the need to harmonise practices when disharmony could lead to safety issues. On the other hand, modifications to existing proven practices should be avoided as much as possible.
- We thus consider that the new "MRC", "BMRC", "PMO" and "CRS" concepts are too complex and may create confusion within organisations and authorities. The proposal to create a very different certification system could generate some major useless gaps with the others international systems with the associated consequences.
- In addition, it is important to not create a specific certification system for the Part 145 aircraft maintenance environment compared to the Part 145 equipment/engine maintenance environment and Part M/F maintenance

environment.

- DGAC France is of the opinion that regulation shall be written in terms of objectives and shall leave some flexibility to organisations on procedures and means to comply with the regulation, acceptable to their competent authorities.

Explicitly or implicitly, the NPA tries to improve 4 different areas where experience has shown ambiguities or inconsistencies:

1. The signification of a CRS in terms of conformity to a work order vs certification that the aircraft is ready for service.
2. Coordination and managing of interfaces when the operator has contracted several Part 145 organisations to work on the same aircraft at the same time.
3. Coordination and managing of interfaces within a Part 145 organisation concerning several work orders from the operator or because it has been decided to split a work order.

4. Responsibilities and practical means to ensure that that an aircraft is considered ready for release to service before each flight and in particular that the flight will not take place if the aircraft is not airworthy although the CAMO has launched all the necessary work orders.

Rather than adding new certificates or changing names of existing certificates, DGAC would like to recommend the introduction of requirements by objectives to achieve those four issues as follows:

1) The DGAC supports the need to certify that maintenance ordered has been properly carried out and that outstanding defects and non compliance have been properly recorded and notified, especially for the purposes explained in paragraph 13.1 of the explanatory note. However we consider that there is no need for a new MRC and that the existing CRS could meet this objective with limited modifications to 145.A.50 and associated AMCs.

Notably, the possibility to deviate from the principle of 145.A.50(a), i.e. to sign a CRS although non-compliances, defects or incomplete work-order have been detected, or although the organisation has been unable to complete all maintenance ordered, should be extended to the cases where the aircraft is left not serviceable (e.g. engine removed, crack after NDT inspection, AD not applied), provided the CRS clearly indicates that the aircraft is not serviceable (similar to the provisions of AMC 145.A.50(d) for the Form 1).

One should also question whether a Part 145 organisation should sign the CRS when it does not receive confirmation by the operator that the appropriate tasks will be performed before flight (or in case of doubt concerning such confirmation). *Note : although the NPA is only addressing Part 145 maintenance a similar amendment should be brought to Subpart H of Part M.*

2) Concerning the second issue, we propose to reinforce the need for better coordination by amending M.A.708(b) and adding a new AMC as follows :

**"M.A.708**

(a) ...

(b) For every aircraft managed, the approved continuing airworthiness management organisation shall:

...

8. ensure the proper coordination of scheduled and unscheduled maintenance, the application of airworthiness directives, the replacement of service life limited parts, and component inspection to ensure the work is carried out properly."

New AMC MA708 (b) 8

"When the maintenance to be performed on an aircraft is contracted to more than one organisation, the continuing airworthiness management organisation may contract one of them to act as primary maintenance organisation and,

- verify that all required certificates of release to service have been issued (it should verify that these certificates contain all the applicable information, there is reference to all the work ordered to the corresponding Part-145 organisation and the certifying staff issuing the certificate is properly identified. However, the PMO is not responsible for the appropriate performance of the work certified by each certificate or for the use of appropriate maintenance personnel or certifying staff during such work. This is the responsibility of the organisation issuing the corresponding certificate),

- ensure proper scheduling and communication of the different contractors working in the same area/system,

- ensure that only personnel working for the contracted Part-145 organisations, as notified by the operator, perform maintenance on the aircraft, which may be achieved by receiving a list of the personnel that will be working in the aircraft,

- ensure that the procedures imposed by the operator are fulfilled,

- ensure that there is no conflict between the tasks performed by different Part-145 organisations, and if such conflict arises, ensure it is properly managed in accordance with the applicable maintenance or operator procedures (for example, ETOPS operator's procedures).."

-

3) Concerning the third issue, in the case where a contracted Part 145 organisation intends to issue several CRS for a unique maintenance event (either because this organisation has received several work orders from the operator or because it has been decided to split a work order), Part 145 should be revised to require that this Part 145 organisation shall organise and coordinate the maintenance event (global conformity to the work ordered by the operator, compatibility of differed items under each CRS, interfaces between the tasks covered by the different CRS). However, the way such coordination is ensured should be left to the Part 145 organisation.

In addition, Part 145 should also consider the case where in the frame of the internal coordination in line maintenance, different works to be performed (routine checks, complaints of the last flight, defects observed by the Part 145 and others additional works required by the Part M/G) are considered to represent a unique global work order from the operator. In such case, when the tasks to be performed

are linked to different type maintenance specialities, it should be possible for a category B certifying staff assisted by a B1 and/or a B2, as appropriate, to issue a unique CRS, in parallel to what is possible for a category C for base maintenance in 145.A.30.

It is therefore proposed

a) to introduce a new 145.A.47(d) as follows:

**"145.A.47**

...

**(d) The organisation shall ensure that all maintenance activities carried out directly or subcontracted are properly coordinated."**

b) to introduce in 145.A.30 the possibility for a category B, assisted by B1 and/or B2 support staff, to issue a single CRS.

4) The ultimate justification for the new single CRS concept proposed by the NPA is to have a single certificate ensuring to the operations (pilot) that the aircraft is ready to service. The DGAC considers that:

- the certification that an aircraft is considered ready for release to service is a continuing management responsibility (part M) and not a maintenance responsibility (Part 145).

- the regulation should give flexibility to the CAMO to exercise this responsibility to ensure that an aircraft is considered ready for release to service before each flight.

- For commercial air transport operations, clear procedures should be in place between the continuing airworthiness management personnel and the operations personnel in order to ensure that an aircraft is not dispatched when not in compliance with M.A.902.

We thus propose to add an item in appendix V to AMC M.A.704, part I after the item 1.11 – pre-flight conditions– as follows:

"Appendix V to AMCM.A.704

...

1.11 Pre-flight inspections.

**1.12. For commercial air transport operators, communication on airworthiness status with operational control.**

~~1.12~~ 1.13 Aircraft weighing.

~~1.13~~ 1.14 Check flight procedures."

### **1.12 Communication on airworthiness status with operational control**

*(For commercial air transport operators, this paragraph should describe how the Continuing airworthiness management organisation organises the management of information and its transmission, so that the operator's operational control does not dispatch an aircraft that would not comply with M.A. 902 )*

response

*Partially accepted*

The proposed concept has been significantly simplified while achieving the objectives of the task.

However:

- The Agency does not agree on the proposal to extend the amendments to Part-M Subpart F maintenance organisations. In these organisations the maintenance environment is much more simple, not having the same problems related to contracting of different organisations.
- Although the new proposal clarifies the responsibilities of the CAMO/Operator (AMC M.A.306(a)3, M.A.708(b)7, AMC M.A.708(b)7, new paragraph 1.14 introduced in the CAME, AMC 145.A.50(b)2), the Agency believes that it is not the objective of this task to clarify when and how the CAMO/Operator determines that the aircraft is airworthy. Further rulemaking action may be necessary.

Please refer to the Explanatory Note of the CRD for more details.

comment

122

comment by: CAA-Norway

The Norwegian authority is in favour of Option 1 i.e. Do nothing!

- There are no problems with the current system to date. The existing system hasn't caused any problems.
- Uncertainty of the operators' responsibility, not clearly defined in the NPA.
- An appropriately approved Part-145 maintenance organisation can directly contract other Part-145 maintenance organisations themselves, though it is mentioned that this may require the operator's "agreement". The "agreement" in the current regulation means a maintenance contract between the operator and all Part-145 organisations being contracted by the operator.
- In the introduction of the NPA (page 5) it is stipulated, "This could lead to lack of coordination and misunderstandings, and possibly to safety issues." This statement refers to the current Part-145 regulation.

We are certain and convinced that by the introduction of the NPA this will introduce misunderstandings and lack of coordination that may affect safety issues.

- The new concept may be acceptable but it needs much more in depth explanations and clear definitions.
- The concept of this NPA only applies to operators that contracts many organisations within and perhaps outside its own territory.
- Should the NPA be accepted, then it's absolutely necessary with an extensive transition period for the introduction. Some reasons are, the necessity

for training of the industry and the competent authorities. Also all competent authorities and the industry are heavily involved in the implementation of the remaining EC regulations i.e. the "opt-outed" parts of 2042/2003 that require a lot of effort for the next few years to come.

- Another important factor is the economical impact. All MOE:s and all existing contracts have to be amended by the organisations, scrutinised and finally approved by the competent authorities. In view of this, the costs will increase to an unacceptable level for all parties concerned.

Also Tech Logs may have to be amended. Many operators have already printed Tech Logs that are kept in stock. It may also be necessary to compile new instructions and conduct training etc. Both the industry and the competent authorities are affected by this NPA.

response *Partially accepted*

The proposed concept has been significantly simplified while achieving the objectives of the task. In particular, the responsibilities of the operator have been further clarified (M.A.708(b)7, AMC M.A.708(b)7, new paragraph 1.14 introduced in the CAME, AMC 145.A.50(b)2).

In addition, a 1 year transition phase has been proposed in order to ensure proper amendment of Technical Logs.

Please refer to the Explanatory Note of the CRD for more details.

However:

- The Agency does not agree with the proposal of "doing nothing".
- The Agency does not agree with the statement that there is not a problem with the current rule.

comment

151

comment by: *Ludwig Hessler*

The NPA will change three regulations (Part-145, Part-M and Part-66) where in the past a lot of work was spent to harmonise the regulations with other systems (for example the FAA system).

Is this NPA harmonised with the FAA system or other systems?

Some bilateral agreements would be effected and these agreements would have to be revised to take the NPA 2007-09 into account.

response

*Accepted*

The proposal has been significantly simplified in this CRD and does not affect bilateral agreements.

Please refer to the Explanatory Note of this CRD for more details.

comment

160

comment by: *Harrods Aviation*

We must keep in mind Part 145 Maintenance Organisation are already required to

have a procedure which controls Manufactures and other working parties.

This NPA has removed the focus from the Base Maintenance environment, where mostly there are sufficient personnel and indeed support staff to manage all the various aspects and contracted in specialist organisations, to a very highly stressful area where pressures and staff numbers can be limited and at time short in the line maintenance environment, to finally issue the Certificate of Release to Service, for an aircraft which has had almost all the work performed in Base Maintenance. The Human Factor issues this NPA bring to the Line Maintenance environment is astronomical especially due to the amount of additional partial MRC's he is looking for as verification that the aircraft is indeed complete. Remember all this is happening while he is trying to satisfy all the other turn round aircraft and other scheduled Line Maintenance work.

This also brings to mind for the maintenance performed under the Base Maintenance Environment – when will the calendar base frequency items be due again, since these were issued with a MBRC and it could be some weeks after this that the aircraft is complete and is issued with a CRS?

response *Accepted*

The proposed concept has been significantly simplified while achieving the objectives of the task. Please refer to the Explanatory Note of the CRD for more details.

comment

161

comment by: *European Regions Airline Association*

ERA disagrees with the proposal to introduce 3 levels of Certificate of Release to Service. It is also felt that the proposal contained within this NPA is highly complex and that there will be considerable cost implications for Industry. It is ERA's opinion that, if implemented as per the recommendations of this NPA, the effect on safety will be detrimental.

By introducing a new concept of certification of maintenance and transferring a significant part of the CAMO responsibility in terms of maintenance control to the proposed Prime Maintenance Organisation goes far beyond the original Terms of Reference 145-012.

It is also the opinion of ERA that the introduction of the PMO concept conflicts with existing Part M requirements.

It is for these reasons that ERA requests the cancellation of this NPA such that it may be redrafted following more closely the published ToR 145-012.

response *Partially accepted*

The proposed concept has been simplified (only CRS and final CRS). For details see the Explanatory Note of the CRD.

The responsibility for the airworthiness of the aircraft belongs to the CAMO. This has been made fully clear in AMC M.A.306(a)3 and AMC 145.A.50(b)2.

The concept of Primary Maintenance Organisation has been removed, although it is the responsibility of the Operator to designate an organisation responsible for

issuing the final CRS.

However, the Agency does not agree that the ToR has not been followed. For this reason the NPA is not cancelled and the proposed CRD has been issued.

comment

168

comment by: Airbus

**1. PARAGRAPH / SECTION OUR COMMENT IS RELATED TO:**

NPA2007-09 Explanatory Note, Draft Opinion and Draft Decision

**2. ~~PROPOSED TEXT~~ / COMMENT:**

When developing the changes to EC No.2042/2003 and Decision ED 2003/19/RM, EASA obviously did not take into account research results on "Organizational Accidents" as published by James T. Reason ("Managing the Risk of Organizational Accidents", Ashgate 1997, ISBN 1840141042, books on Human Error 1991 and other publications). J.T. Reason is an international recognized expert in this field and involved in activities of the "International Society of Air Safety Investigators".

One of his key messages is that adding an additional layer of check function does not necessarily improve safety and reliability of check results. Another, too much regulation may result in a system of constraints that is impossible to obey without the risk of being somewhere in non-compliance, or to shut down business activities.

In practice, if one certifying staff signed off a maintenance task and his supervisor also signed off because he may rely on the professional experience of the first, no person in the following approval/release loop usually will question the first signature.

Further, it is a psychological fact that people with administrative/coordinative responsibility tend to rely on the work done before by those they consider qualified and competent. They neither have the function nor the knowledge to reveal errors of those personnel.

This human behavior contributed to several aviation accidents. In the operations field, this led to the introduction of CRM instead of adding a check-pilot.

Thus, the PMO principle proposed with this NPA does not improve safety but creates another coordination level and increases bureaucratic and economic burden for industry. The operator ultimately remains responsible for Continued Airworthiness and maintaining his aircraft.

Currently most European operators are in the process to implement the CAMO concept. The implementation phase ends in September 2008.

This leads to the conclusion:

- The maturing of the CAMOs should be awaited before introducing more

complexity in aircraft maintenance certification.

- The "Operator-CAMO" should remain in its responsibility to ensure and manage maintenance and continued airworthiness, including coordination of subcontracting and accepting maintenance activities.

- Downstream the MRCs for base and line maintenance, a minimum of coordinating functions should be introduced. The necessity for those functions may depend on the kind and size of the operator and his fleet. Flexibility provisions in the regulations are needed to allow the most safe and economically efficient system.

**3. RATIONALE / REASON / JUSTIFICATION:**

The Agencies' decision for option 6 did not consider available research results for a key safety issue.

Consequently, the RIA led to an improperly justified decision.

response

*Accepted*

The proposed concept has been simplified (only CRS and final CRS). For details see the Explanatory Note of the CRD.

The responsibility for the airworthiness of the aircraft belongs to the CAMO. This has been made fully clear in AMC M.A.306(a)3 and AMC 145.A.50(b)2.

The concept of Primary Maintenance Organisation has been removed, although it is the responsibility of the Operator to designate an organisation responsible for issuing the final CRS.

NOTE: For Commercial Air Transport, the CAMO concept has been already in place since September 2005 (not September 2008 as it is mentioned by Airbus), except for Subpart I (Airworthiness Reviews).

comment

170

comment by: *TYROLEAN AIRWAYS*

From the content of this NPA it can clearly be seen that the workgroup could not agree to a common opinion. We believe that implementing a bit of each system presently used in Europe (and thereby trying to satisfy everyone) can't be basis for such a significant rule change. We strongly recommend to start work new for this subject and base it on a sound safety analysis!

One option which we recommend would also work under the existing regulation (Part M). CAMO's are requested to describe (in its CAME) how their contracted maintenance organisation are coordinated to obtain a proper CRS for their aircraft.

This would eliminate the proposed additional administration and bureaucracy which do not improve safety but only increase cost and complexity.

response

*Accepted*

The NPA proposal has been fully reviewed by the working group plus additional experts (from Industry and EASA).

The proposed concept has been simplified (only CRS and final CRS). For details see the Explanatory Note of the CRD.

The responsibility for the airworthiness of the aircraft belongs to the CAMO. This has been made fully clear in AMC M.A.306(a)3 and AMC 145.A.50(b)2.

The concept of Primary Maintenance Organisation has been removed, although it is the responsibility of the Operator to designate an organisation responsible for issuing the final CRS.

comment

174

comment by: CAA Finland, Communications

Finnish CAA; general comments to NPA 2007-09:

- Finnish CAA is in favour of Option 1 i.e. Do nothing!
- In Finland there are no problems with the current system to date.
- The responsibility of the operator is not clearly defined in the NPA.
- An appropriately approved Part-145 maintenance organisation can directly contract other Part-145 maintenance organisations themselves, even though it is mentioned that this may require the operator's "agreement". The "agreement" in the current regulation means a maintenance contract between the operator and all Part-145 organisations being contracted by the operator.
- In the introduction of the NPA (page 5) it is stipulated, "This could lead to lack of coordination and misunderstandings, and possibly to safety issues." This statement refers to the current Part-145 regulation.

We are certain and convinced that by the introduction of the NPA this will introduce misunderstandings and lack of coordination that may affect safety issues.

- The new concept itself may be acceptable, but it needs much more in depth explanations and clear definitions.
- The concept of this NPA only applies to operators that contracts many organisations within and perhaps outside its own territory.
- Should the NPA be accepted, then it's absolutely necessary with an extensive transition period for the introduction. Some reasons are, the necessity for training of the industry and the competent authorities. Also all competent authorities and the industry are heavily involved in the implementation of the remaining EU regulations i.e. the "opt-outed" parts of 2042/2003 that require a lot of effort for the next few years to come.

• Another important factor is the economical impact. All MOE:s and all existing contracts have to be amended by the organisations, scrutinised and finally approved by the competent authorities. In view of this, the costs will increase to an unacceptable level for all parties concerned.

Also Tech Logs may have to be amended. Many operators have already printed Tech Logs that are kept in stock. It may also be necessary to compile new instructions and conduct training etc. Both the industry and the competent authorities are affected by this NPA.

response *Partially accepted*

The proposed concept has been significantly simplified while achieving the objectives of the task. In particular, the responsibilities of the operator have been further clarified (M.A.708(b)7, AMC M.A.708(b)7, new paragraph 1.14 introduced in the CAME, AMC 145.A.50(b)2).

In addition, a 1 year transition phase has been proposed in order to ensure proper amendment of Technical Logs.  
Please refer to the Explanatory Note of the CRD for more details.

However:

- The Agency does not agree with the proposal of “doing nothing”.
- The Agency does not agree with the statement that there is not a problem with the current rule.

comment 211 comment by: *Association of Dutch Aviation Technicians NVLT*

If this NPA will accepted as is, or if this NPA will accepted after alteration with comments, will all other relevant European regulations and directives related to the Certification of maintenance, CRS be changed directly?

F.i. DIRECTIVE 2003/42/EC OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL  
of 13 June 2003 on occurrence reporting in civil aviation.

*Article 4* Mandatory reporting will show which person has to report

(c) a person who signs a certificate of maintenance review, or of release to service in respect of a turbine-powered or a public transport aircraft, or any equipment or part thereof, under the oversight of a Member State;

Question: At this moment this directive is in to force meaning that the certifying staff categories A,B1,B2 and C have to report. By implementation of this NPA as is, the category C certifying staff is not issuing a CRS any more this will conflict with DIRECTIVE 2003/42/EC.

response *Noted*

The proposed concept has been simplified (only CRS and final CRS).

Any possible conflict with Directive 2003/42/EC has been avoided.

comment

225

comment by: IACO - Hubert ARNOULD

Attachment [#1](#)

I was very surprised when I discover this NPA. For this reason it's absolutely necessary to write comments.

I wish my real JAR/PART 145 experience will persuade EASA to take my comments into account. See my qualification & experience on web site [www.iaco.aero](http://www.iaco.aero).

This NPA appear like the result of a very competent and intellectual team, but far away from the reality of the technicians and certification persons inside MRO. This personnel is always in a time constraint environment and with heavy responsibilities.

In the different training (HF, Quality, Rules, Procedures) that I animate for operators and Part 145 Organisations, each time, several questions are on the responsibilities and on the CRS. The important modification of the CRS concept will have an impact on the safety.

The diagram (page 8 of 59 of the NPA) the description is clear on the paper but not applicable on the tarmac. You will ask to a subcontractor with a scope for line maintenance with a A category personnel certification (without type qualification) to sign the CRS of a 8C check performed by Lufthansa Technick for example. Who will sign the CRS for the control flight after the C check? In the case of no discrepancy is observed during the control flight, the aircraft go directly to the next commercial schedule flight airport. Who will sign the CRS?

I always be reserved with the multi release CRS. Because for the captain only one CRS is necessary to take the aircraft. The CRS is a "RELEASE TO SERVICE" not a release of task.

ISO 9001-2000 could be a model for Part 145, I suggest to be closer to the ISO 9001-2000. In ISO we have a main processus with a "need of the client" (order from subpart G organisation to a Part 145 with a suit agreement domain) and a "satisfaction of the client" (CRS from Part 145). The main processus is the Part 145 production activity. The responsibilities and the scope of work (contract or work order) are clear.

### **Maintenance management**

The diagram (page 8 of 59 of the NPA) and this NPA try to find a solution to a very common problem. The management of the maintenance with his complexity.

This NPA try to find the solution with the multiple MRC, BMRC and CRS and to postpone the management at the end of the main processus. I think it's not adequate because too much persons are involved, they have not the different contracts, work orders, HIL, .... Because they are on the tarmac, not in an office environment. Because the base and line maintenance environment are very different, ...

Two solutions are offer to manage a base maintenance check by a few number of persons trained and tailored in their environment for the scope of work of their MRO :

First one : The management of an A or C check must be made at the beginning of the processus or even better by the support processus (planning, control) when the Subpart G contract with a PMO a single global work order. This contract include discrepancies from the last Tech Log, daily check, and the open HIL from the MEL/CDL. In this case the certification staff use a check list before the CRS is sign. There is only one CRS reported by the PMO on the tech log for the crew. The check list verify all EASA Form 1, all CRS from each subcontracted work order, HIL is empty, Differed items are accepted by the Subpart G, ...

Second one : The management of an A or C check must be made at the beginning of the processus by the Subpart G organisation with multiple contracts to multiple Part 145 organisations suitable approved. The subpart G staff ensure that all CRS correspond to all contracts (include daily check), There is only one CRS reported by the Subpart G on the tech log for the crew.

### **CRS and Tech-Log**

A solution is used on the tech log for commercial transport. This solution answer to this NPA objective. This is the utilisation of two CRS boxes on the tech-log.

The first CRS box is on the top of the Tech Log : this is the daily check CRS. The crew during the pre-flight check that the daily check is sign by a Part 145 personal certification. This is the guaranty that the daily check, maintenance procedures of the MEL HIL, crew complains from the precedent flight are performed.

The second CRS box is on the bottom of the Tech Log. Near the crew complains and correctives actions. This CRS box is used to report a base maintenance check CRS, to answer to a complain between two daily checks, to open/close a MEL item.

### **Various**

Now with the Subpart G entry into service in Commercial transport and also in general aviation, it will be interesting to cut the content of the MOE. Are the chapters 2.9, 2.10, 2.11, 2.12 remain useful or could be reduced? The chapters 2.25, 2.15, 2.18, L2.3 could be reduced to one Chapter. For the Part 145 the chapter 2.11 on the AD's must be applicable only for the stock of parts and for the specialised organisation for the overhaul of equipments or engines (with mods applicable at the next shop maintenance).

response *Partially accepted*

The proposed concept has been simplified (only CRS and final CRS), with an additional box for the daily check.

Although the Agency agrees that the pilot only needs to see the final CRS, the current proposal introduces the need for each Part-145 organisation to issue their

own CRS before the final CRS is issued.

In addition, as stated in 145.A.50(b)2, category A certifying staff can only issue a final CRS when no base maintenance has been performed and all the line maintenance has been performed by that person.

Regarding the comments called "VARIOUS" in your proposal, the Agency notes that they are outside the scope of the task 145.012. Nevertheless, the Agency welcomes them for future possible rulemaking

comment

|     |  |
|-----|--|
| 226 | comment by: <i>SNMSAC Syndicat National des Mécaniciens Sol de l'Aviation Civile</i> |
|-----|--|

**SNMSAC Syndicat National des Mécaniciens de l'Aviation Civile (France)** has a **fully favourable opinion** on this NPA 2007-09. It will be a great step to increase the safety of A/C maintenance.

Reason:

This NPA shall **clearly identify** and **separate the responsibility** of all major steps of maintenance specially for base maintenance, witch is not the case now with the single release.

It will enforce that the issuing process of maintenance certificates is done by proper knowledge and qualification staff.

Human Factors will have to be taken in account by each AMO witch is good to limit the risk of error.

Standardization of issuing certificate process is great issue especially with the PMO concept.

response

|                                  |
|----------------------------------|
| <i>Noted</i>                     |
| The Agency welcomes the comment. |

comment

|     |                        |
|-----|------------------------|
| 234 | comment by: <i>ETF</i> |
|-----|------------------------|

The ETF welcomes NPA 2007-09. The NPA addresses the complex issue of single and multiple releases, an issue that should have a clear and logic line of responsibility. Apart from the comment to the amendment to paragraph M.A.708(b) the ETF supports the NPA.

response

|                                  |
|----------------------------------|
| <i>Noted</i>                     |
| The Agency welcomes the comment. |

comment

|     |  |
|-----|--|
| 236 | comment by: <i>Air Contractors Engineering</i> |
|-----|--|

· It is not clear what is going to be achieved by this except that Human Factors principals are being ignored by introducing another level of beaurocratic confusion

for certifiers.

- Regulatory Impact Assessment could not have been conducted by a certifying engineer or operating company.

- The only Positive safety impact will be on recruitment as a lot more certifiers will be required quickly and this will put undue pressure on operators and Part 145 companies to rush through poorly trained and inexperienced certifying engineers driving down the level of safety currently enjoyed.

The terms of reference TOR 145-012 do not seem to have been met.

Interference/incompatibility with Part M CAMO responsibilities

Line Maintenance personnel unfamiliar with the aspects of Base Maintenance could be releasing aircraft incorrectly certified that they are not going to be responsible for as they will not see the paper work prior to release.

Technical Logs and Ops Manual Part B would have to be completely redesigned

ARC reviews could become extremely complicated and time consuming preventing aircraft from operating.

Three levels of release to service with 3 different release statements and 3 different levels of responsibility for certifying staff

Line Maintenance certifying staff would sign CRS which endorses completion of all base maintenance performed before flight, If an aircraft is in maintenance in the other part of the world this could become extremely time consuming and seriously delay aircraft after maintenance.

The PMO signing the CRS will probably not be the Prime Maintenance Contractor.

Eight pages of explanations on the new Release to Service system in the GM is a clear warning that the proposed system is not going to work.

response

*Partially accepted*

The ToR published on the EASA website reads as follows:

"In Europe two systems of release to service coexist: single release and multiple releases. This can lead to misunderstandings and possibly to safety issues. It was therefore requested by industry and National Aviation Authorities to clarify this issue so that only one system remains, if possible.

Taking into account draft JAA TGL 41, support the development of an Opinion to amend Part-145 and associated AMC/GM material. Furthermore, Part-M and Part-66 need to be reviewed to ensure that these provisions are included."

The Agency does not agree that the ToR was not followed. The concept proposed in the NPA is based on a single release before flight with multiple certification underneath.

Nevertheless, in view of other comments received, the Agency has significantly

simplified the proposal (only CRS and final CRS). Please refer to the Explanatory Note of this CRD.

In addition, it has been made fully clear that the responsibility for the airworthiness of the aircraft belongs to the CAMO (AMC M.A.306(a)3 and AMC 145.A.50(b)2).

The concept of Primary Maintenance Organisation has been removed, although it is the responsibility of the Operator to designate an organisation responsible for issuing the final CRS.

comment

237

comment by: *Aeronautical Repair Station Association (ARSA)*

The Aeronautical Repair Station Association (ARSA or Association) represents entities around the world that are certificated under Title 14 CFR part 145. A majority of our members also hold European Aviation Safety Agency (EASA) part 145 approvals to perform maintenance on articles under EASA's regulatory control. Our members range from large corporations that also design, produce and operate aircraft to small familyowned businesses. We recognize the difficulty in promulgating regulations for the international aviation maintenance industry that take into account a myriad of organizations, let alone the variety of work this industry performs.

ARSA commends EASA's continual efforts to improve its regulations and apologizes for submitting its comments late. However, it has taken some time to sort through the changes in the above referenced Notice of Proposed Amendment (NPA) and formulate a response. The NPA was brought to our attention by a member in the European Union (EU) who is concerned that the proposed rulemaking unnecessarily complicates the procedural aspects of EASA maintenance releases without producing substantive changes.

#### Existing Release System Addresses NPA Concerns

ARSA believes the NPA will confuse an established maintenance release process without providing any real benefits. Under the existing system each person is responsible for the maintenance it performs. As maintenance steps on various components are built into a whole product (i.e., aircraft, aircraft engines or propellers) the successive maintenance organizations are already responsible for maintenance performed by lower tier organizations. The higher level maintenance organizations cannot accept work from another organization that does not conform to the air carrier's requirements.

In the end the maintenance organization that ultimately performs the work on the whole product must review the releases issued for each maintenance task ordered to ensure that all work was performed properly. This organization then issues the release to service for the whole product. This certificate certifies that the ordered work was performed properly (as evidenced by the numerous maintenance releases from other organizations) and in respect to that work, the product is released to service. The operator is, of course, ultimately responsible for operating an airworthy aircraft.

### Proposed Release System Adds Confusion

The NPA does little to change the existing system of maintenance releases. Instead it establishes a hierarchy of releases where a collection of lower-level releases ultimately leads to a single certificate of release to service for the aircraft. In this proposed system the lower-level maintenance releases certify that the maintenance carried out by that organization was properly performed. The aircraft remains in an unapproved state until a primary maintenance organization (PMO) verifies that all the maintenance tasks ordered were completed and issues a release to service. This release confirms that the aircraft is ready for release to service with respect to the work ordered by the operator. It does not cover any work the operator did not order and final airworthiness responsibility still rest with the operator.

### Clarification Better Suited for Guidance

ARSA commends EASA for trying to clarify the responsibilities where multiple maintenance releases are issued by several organizations. However, the Association recommends this be developed into guidance instead of amending the rules. This is an especially prudent considering the NPA only clarifies the existing rule that each maintenance organization only approves the work it performed for release to service, not the entire aircraft.

It is also in the interest of international harmonization. For example, EASA's existing release system is equivalent to the Federal Aviation Administration's (FAA). In the U.S. an FAA Form 8130-3 is issued to certify that the work described was accomplished in accordance with the regulations and in respect to that work the items are approved for return to service. Even when the work is accomplished on a complete aircraft, the 8130-3 only certifies that the ordered work was performed properly and is approved for return to service.

### Conclusion

For the reasons stated above, ARSA recommends that EASA incorporate the substance of the NPA into official guidance. Amending the regulations to clarify existing practices carries the risk of unintended and troublesome consequences that can only be reversed through another formal rulemaking procedure.

ARSA looks forward to working with EASA towards the implementation of the proposed recommendation and appreciates the agency's consideration of its comments.

response *Partially accepted*

In the comment, ARSA states:

*"In the end the maintenance organization that ultimately performs the work on the whole product must review the releases issued for each maintenance task ordered to ensure that all work was performed properly. This organization then issues the release to service for the whole product".*

However, this is not always true with the current regulation. In many occasions, there are several Part-145 organisations participating in a maintenance event.

This means that there is no “organisation that ultimately performs the work on the whole product”. In addition, there is no requirement for a final release before flight.

Nevertheless, based on the comments received from ARSA and other members of Industry and National Authorities, the proposed concept has been significantly simplified while achieving the objectives of the task.

No issues with existing bilateral agreements are expected.

Finally, the Agency would like to note that some changes to the rule (and not only to the AMC) have been necessary.

Please refer to the Explanatory Note of this CRD for more details.

## A. Explanatory Note - II. Consultation

p. 3-4

comment

212

comment by: UK CAA

The justification for the rule changes to EASA Part 145 and Part M as proposed by this NPA is unproven.

Justification:

The UK fixed wing aircraft fleet >5700kg currently (as of 14th September 2007); represents 20% of the total European Union fleet and represents 21% of the average EU fleet utilisation (Data source: Ascend CASE database).

This substantial fleet has line and base maintenance performed globally by Maintenance repair organisations (MRO's) that are both European and non-European based. With regard to the UK fleets the UK CAA has no feedback from operators and MRO that the single/dual maintenance releases is or has been problematic. Indeed the UK Mandatory Occurrence Reports (MOR) database was searched and for the last ten years revealed not one incident that could be associated with a causal factor borne from confusion by maintenance staff performing a release to service. Furthermore the UK CAA through its regional offices is not aware of any concerns being raised by the UK Aviation industry suggesting that they have found or are experiencing problems with the application of the existing release to service options defined in EASA Part 145.A35 and 145.A50.

The accepted system for the certification of base and line maintenance, has worked satisfactorily within the current regulatory framework since the inception of JAR-145 in 1992. It currently operates safely using Part 66 Licence ratings, in that for line maintenance the work and releases are performed by Category A and B1 or B2 and for base maintenance the work is performed and signed off by B1 and B2s then released by the Category C EASA Part 145 authorised staff.

The need to have an extra layer of certification to issue a “final” certificate of release in particular with Line maintenance is not only adding bureaucracy but is imposing additional regulatory burden and cost in the absence of any substantive justification.

The rule changes to EASA Part 145, Part M and their associated AMC's offer no perceived benefits, Indeed the changes will necessitate a change to current proven working practices and procedures introducing considerable potential for confusion and error.

There will be a need to:

- a) Change procedures within the MOE and CAMOE,
- b) Change current documentation, such as the Technical log,
- c) Retrain existing operational and MRO staff at all locations where aircraft are maintained,
- d) Re evaluate the contracted and working relationships between operators and MROs, and between MROs

Changes to working practices where there is doubt regarding any perceived benefits imposes additional problems and latent human factor issues for the organisations Quality departments and consequentially for the regulating NAA's. The additional "final" CRS will add a further burden in that extra staff may need to be employed by the operators and MRO's.

The UK has a very large and mature aviation industry that is truly international in where it operates, whom it employs and where it acquires its services. To date in the UK there are no reports, occurrence or feed back from this industry to suggest that there is an issue regarding maintenance certification or a need to reintroduce a final certificate of release to service in this manner and as such we cannot support this proposal as it stands nor the arguments that it will improve safety and harmonise standards.

response

*Partially accepted*

The issue at stake is not covering only the UK. As a matter of fact, it is a reality that both systems (single and multiple release) are co-existing in Europe, and it is also a fact that both systems have their own problems.

That is why the proposed rule consists on maintenance certification by each organisation, plus a final release to tell the pilot that all the maintenance is completed or properly deferred.

Nevertheless, in view of the comments received, the Agency has significantly simplified the proposal (only CRS and final CRS), and a transition phase of 1 year has been proposed in order for NAAs and Stakeholders to adapt.

A new Regulatory Impact Assessment has been performed and it is part of the Explanatory Note to this CRD.

comment

213

comment by: UK CAA

General comment on the definition of AMC 145.A.50 (b), Certificate to release to

service.

Justification:

'Certifies that the work specified except as otherwise specified was carried out in accordance with Part-145 and in respect to that work the aircraft/aircraft component is considered ready for release to service'.

The release statement implies that the work specified was carried out and the aircraft has been returned back to approved standard. It does not imply that the signatory can or should be held responsible for the complete integrity of the every part of the aircraft its systems and structure that is outside of the specific work scope/order.

In the same way an MRO who has been responsible for a maintenance input and who has contracted some work cannot be held responsible for the airworthiness of systems/structure that were not part of the agreed work scope which may be deteriorating or possibly have failed.

It appears that this lack of understanding of the CRS has lead to the premise for this proposal.

response

*Noted*

The Agency does not fully understand the comment.

As a matter of fact, it was not the intention of the NPA and not the intention of the current CRD to put on the organisation which issues the final CRS the responsibility for the complete integrity of every part or system of the aircraft. The final CRS ensures that all the work ordered by the Operator/CAMO has been completed or properly deferred.

Nevertheless, the proposed concept has been significantly simplified while achieving the objectives of the task.

In this proposal, the release statement is contained in AMC 145.A.50(b) and is basically the same statement as in the current regulation.

Please refer to the Explanatory Note of this CRD for more details.

**A. Explanatory Note - IV. Content of the draft opinion and draft decision - A)  
Background information**

p. 4-5

comment

6

comment by: *Air Berlin Technik*

We do not agree with the basic concern, as pointed out in the background information under point 9, which led to the development of this NPA.

If the existing rule for release to service in Part-145 would be CORRECTLY applied, in the mentioned case of various APPROVED maintenance organisations working on one and the same work package, the ONLY admissable way of release to service is what is called the "multiple release" here. Something like a "single release", where a maintenance organisation takes responsibility for the work RELEASED by another approved maintenance organisation, does not comply even

with the existing rule. This would rather be a "subcontractor" concept. Additionally, if the existing rules are followed correctly, the concern that misunderstandings and a lack of coordination would arise is irrelevant. There is already the requirement for clear work orders and to subdivide complex maintenance tasks into clear stages to ensure complete performance of maintenance tasks. This is fully sufficient. In consequence, the changes suggested by this NPA do not need to be introduced. Instead, EASA's Standardisation Directorate should be tasked to enforce the existing rule in a consistent manner in all 27+4 member states.

response *Not accepted*

The Agency does not agree that the current rule forbids the issuance of a single release when several Part-145 organisations are working simultaneously, without those organisations issuing their own CRS.

As a matter of fact, the current 145.A.50(b) reads:

"A certificate of release to service shall be issued before flight at the completion of any maintenance".

This is interpreted by some persons/organisation as requiring a single CRS before flight.

Nevertheless, in view of the comments received, the Agency has significantly simplified the proposal (only CRS and final CRS). Please refer to the Explanatory Note of the CRD.

In addition, it has been made fully clear that the responsibility for the airworthiness of the aircraft belongs to the CAMO (AMC M.A.306(a)3 and AMC 145.A.50(b)2).

The concept of Primary Maintenance Organisation has been removed, although it is the responsibility of the Operator to designate an organisation responsible for issuing the final CRS.

comment

7

comment by: *Air Berlin Technik*

We do not agree with the basic concern, as pointed out in the background information under point 10, which led to the development of this NPA.

If an operator indeed would not be aware of which ordered maintenance had been performed and which not, this would rather be an indication of disobedience of the current rules of Part-M and therefore rather gross negligence than an indication of Part-145 being ambiguous. After all, this is what a "CAMO" was introduced for! The role of coordinating every maintenance being performed and released by an appropriately approved maintenance organisation is a basic task of an operator's CAMO, so there is no need for duplicating this responsibility to maintenance organisations. Maybe EASA should rather start an initiative to ensure a complete and consistent introduction of Part-M than to suggest mixing up responsibilities of MOs and CAMOs. Duplication of responsibilities in fact might become a safety hazard because each involved party relies on the other, in consequence in fact NOBODY feels responsible and THEN the concerns

|          |  |
|----------|--|
|          | <p>might INDEED become reality!<br/>So instead of changing a well established rule, it should be taken care by EASA and NAAs that the current rules, which provide answers for all questions raised as basic concerns, are consistently applied in all 27+4 member states. A change in legislation is not acceptable as a response to different interpretation, especially if this would make everything more complicated.</p>   |
| response | <p><i>Partially accepted</i></p>   |
|          | <p>In view of the comments received, the Agency has significantly simplified the proposal (only CRS and final CRS). Please refer to the Explanatory Note of the CRD.</p> <p>In addition, it has been made fully clear that the responsibility for the airworthiness of the aircraft belongs to the CAMO (AMC M.A.306(a)3 and AMC 145.A.50(b)2).</p> <p>The concept of Primary Maintenance Organisation has been removed, although it is the responsibility of the Operator to designate an organisation responsible for issuing the final CRS.</p>   |
| comment  | <p>19 <span style="float: right;">comment by: AEA</span></p>   |
|          | <p>Paragraph 9 introduces the single release vs multiple releases systems. Then it further describes the single release concept as using a unique "final" aircraft certificate of release to service before flight. This is not the same issue. The single release concept is understood by the industry as the fact of using a single signature for a given work package, while the multiple release is where a series of signatures covers a number of tasks or groups of tasks. This is in essence mainly a Part 145 issue. Introducing the concept of a "final" CRS to determine that all required (or ordered) maintenance has been performed is a totally different issue which mainly interferes with the Part M requirement.</p> <p>By transferring the CAMO responsibility for ensuring through its own system that all ordered maintenance has been done, to an AMO through a "final CRS" concept, this NPA introduces a major change to Part M, the consequences of which have been widely underestimated in the Regulatory Impact Assessment.</p> <p>Furthermore, this major change to Part M was not stated as an objective in ToR 145-012. It was not discussed in the Safety Standard Consultative Committee (SSCC), as it should be when ToR are amended.</p> <p>It is not admissible that an NPA be presented on a subject not discussed within the SSCC.</p> <p><u>Therefore the NPA should be withdrawn and ToR re discussed within the SSCC.</u></p> |
| response | <p><i>Not accepted</i></p>   |
|          | <p>The ToR published on the EASA website, which was consulted and agreed by AGNA and SSCC, reads as follows:</p> <p>"In Europe two systems of release to service coexist: single release and multiple releases. This can lead to misunderstandings and possibly to safety issues. It was therefore requested by industry and national aviation authorities to clarify this issue so that only one system remains, if possible.</p> <p>Taking into account draft JAA TGL 41, support the development of an opinion to</p>   |

amend Part-145 and associated AMC/GM material. Furthermore, Part-M and Part-66 needs to be reviewed to ensure that these provisions are included."

The Agency does not agree that the ToR was not followed and it sees no justifications to withdraw the NPA. The proposed concept is based on a single release before flight with multiple certifications underneath.

Nevertheless, in view of the comments received, the Agency has significantly simplified the proposal (only CRS and final CRS). Please refer to the Explanatory Note of this CRD.

In addition, it has been made fully clear that the responsibility for the airworthiness of the aircraft belongs to the CAMO (AMC M.A.306(a)3 and AMC 145.A.50(b)2).

The concept of Primary Maintenance Organisation has been removed, although it is the responsibility of the Operator to designate an organisation responsible for issuing the final CRS.

comment

92

comment by: *Berufsverband Prüfer von Luftfahrtgerät*

To simplify the situation:

It's correct that the maintenance organisation (MO) doesn't have the overview if the complete maintenance of the aircraft is performed. The MO only have the overview about the maintenance ordered by the operator(CAMO). The solution with MRC, BMRC and CRS is very complex and will produce confusion. A simple way could be, that the MO issue a MRC with the statement, that the described work is performed i.a.w. Part 145. This MRC will be send to the CAMO. The CAMO must decide, if the Maintenance is completed i.a.w. AMP. If so, the CAMO issue a CRS with the statement, that the aircraft is ready for ready for release to service.

response

*Partially accepted*

The Agency has significantly simplified the proposal (only CRS and final CRS). Please refer to the Explanatory Note of the CRD.

In addition, it has been made fully clear that the responsibility for the airworthiness of the aircraft belongs to the CAMO (AMC M.A.306(a)3 and AMC 145.A.50(b)2).

The concept of Primary Maintenance Organisation has been removed, although it is the responsibility of the Operator to designate an organisation responsible for issuing the final CRS.

comment

171

comment by: *Svensk Flygteknikerförening, SFF (Org. of swedish Licensed Aircraft Engineers).*

The Swedish org of Licensed Aircraft Maintenance Engineers (Svensk Flygteknikerförening, SFF) fully support EASAs background information. The need for harmonisation and standardisation is one of the main goals with common

|          |   |
|----------|---|
|          | regulations. Different interested parties will probably point out their own system in their country as the best and that changes will cost money. SFF encourage EASA to put those regional interests aside and prioritize the main goal of standardization. The cost is small and the improvement is major. |
| response | <i>Noted</i>  |
|          | The Agency welcomes the comment.  |

|  |     |                                  |
|--|-----|----------------------------------|
| comment  | 199 | comment by: <i>Walter Gessky</i> |
| <p><b>IV. Content of the draft opinion and draft decision</b></p> <p><b>A) Background information</b></p> <p>The background information notifies the problem with regard to maintenance carried out by different organisations and gives the impression that the maintenance organisation has a responsibility for the work performed with regard to coordination and misunderstandings and difficulties to ensure that the work ordered by the operator has been properly accomplished or deferred.</p> <p>The background information does not take into consideration that according Part 145A.50(a) the certifying staff only sign the work ordered.</p> <p>The owner is according to M.A.201(a) responsible for the continued airworthiness of the aircraft and shall ensure that no flight takes place unless</p> <ul style="list-style-type: none"> <li>· The aircraft is maintained in an airworthy condition, and</li> <li>· The maintenance of the aircraft is performed in accordance with the approved maintenance programme.</li> </ul> <p>For commercial OPERATORS and in a controlled environment the subpart G organisation (CAMO) according M.A. 708(b)</p> <ul style="list-style-type: none"> <li>• shall ensure that the maintenance is carried out in accordance with the approved maintenance programme and released in accordance with M.A. Subpart H,</li> <li>• shall ensure that all applicable AD`s are applied,</li> <li>• shall ensure that all defects discovered during scheduled maintenance or reported are corrected by an appropriately approved maintenance organisation,</li> <li>• shall ensure that the aircraft is taken to an approved maintenance organisation whenever necessary,</li> <li>• shall coordinate scheduled maintenance, the application of AD`s, the replacement of service life limited parts, and component inspection to ensure that the work is carried out properly.</li> </ul> |     |                                  |

Only for general aviation operators without a contract with a CAMO the maintenance organisation might question that the operator do not carry out this functions in a safe manner.

response *Partially accepted*

The Agency has significantly simplified the proposal (only CRS and final CRS). Please refer to the Explanatory Note of the CRD.

In addition, it has been made fully clear that the responsibility for the airworthiness of the aircraft belongs to the CAMO (AMC M.A.306(a)3 and AMC 145.A.50(b)2).

The concept of Primary Maintenance Organisation has been removed, although it is the responsibility of the Operator to designate an organisation responsible for issuing the final CRS.

**A. Explanatory Note - IV. Content of the draft opinion and draft decision -  
B) Envisaged changes**

p. 5-11

comment

8

comment by: *Air Berlin Technik*

Point 12 frankly communicates to the public that the working group experts were not able to agree on preferring one of the options they developed. Not being able to agree but instead developing a "mixture" as a "compromise" in our opinion again clearly shows that not even the problem raised as a basic concern was evident. If there would be a clear and obvious problem, there would be a clear and obvious solution which everybody could agree on. As this is not the case, it must be asked which "individual" concerns drove the process. In our opinion, this is just another evidence for organisations and authorities not willing to adopt EU legislation and rather stick to old national rules. The real solution for the existing problems is not to change the rules, but to deliver better guidance to the involved parties how they should be applied and to make clear that it is regulation 2042/2003 which has to be followed and not some old national rules. This is a task for EASA's Standardisation Directorate.

response

*Partially accepted*

The Agency does not agree that when there is a clear problem there is always a clear solution.

Nevertheless, the proposed concept has been significantly simplified while achieving the objectives of the task.

However, changes to the rule (and not only to the AMC) have been necessary.

Please refer to the Explanatory Note of this CRD for more details.

comment

9

comment by: *Air Berlin Technik*

An "MRC" is not required.

The explanation of the idea behind the introduction already talks about "the maintenance ordered". So even the explanation admits that there is a duplication being introduced by such an "MRC" because we already have the requirement for

"clear work orders". This requirement for clear work orders fully ensures that there is always an overview of what is required to perform. The documentation of the performance of (sub-) work packages is also already ensured by existing legislation (by the provisions of Part-145.A.45 (e) and Part-145.A.55), so sufficient awareness of the performance status of a maintenance task is also possible if existing rules and "good maintenance practices" are being followed. Again, existing rules should rather be consistently applied instead of changing the rules just because some parties are not willing to obey them. Everything else would be a "dead end" approach!

response *Partially accepted*

The introduction of the MRC is independent form the fact that the current regulation requires the issuance of clear work orders. As a matter of fact, the objective of the MRC was to make sure that the work required by the work order is fully certified by the Part-145 organisation performing the work.

Nevertheless, the Agency has significantly simplified the proposal (only CRS and final CRS). Please refer to the Explanatory Note of the CRD.

In addition, it has been made fully clear that the responsibility for the airworthiness of the aircraft belongs to the CAMO (AMC M.A.306(a)3 and AMC 145.A.50(b)2).

The concept of Primary Maintenance Organisation has been removed, although it is the responsibility of the Operator to designate an organisation responsible for issuing the final CRS.

comment

10

comment by: *Air Berlin Technik*

A "BMRC" is not required.

If another organisation than the base maintenance organisation performs work which it is not approved for, it is a subcontractor of the base maintenance organisation and the responsibility and release is with the base maintenance organisation. If another organisation works under its own approval, this work must be released under this approval anyway. The base maintenance organisation is not and cannot be responsible and therefore the base maintenance organisation's release may not even refer to the other organisation's work. This is the existing rule if it is correctly applied, so there is no need for any kind of change!

In addition to that, it is the operator's and its CAMO's responsibility to properly assign the work ordered to one or more maintenance organisations according to the capabilities, which the CAMO has the express obligation to check. This should not be left to the decision of a maintenance organisation.

response

*Accepted*

The BMRC has been removed.

comment

11

comment by: *Air Berlin Technik*

A "final" certificate of release to service as it is described by this NPA creates

more problems than it solves. It is a contradiction in itself that an organisation shall give a single release, covering work which had not been performed by the organisation, and not being responsible for that. This would turn very basic and well-established principles in maintenance upside-down instead of being beneficial for safety. When each organisation issues a certificate of release to service for the work it has performed (including possible subcontractors), the responsibilities are clear. It is the operator's CAMO (not a contracted maintenance organisation!) which has to ensure that all required maintenance was indeed performed and released. Where is the sense in creating duplicating steps within this well working system?

It seems to us that this whole NPA had been developed by persons who have not yet completely realized the contents of Part-M!

response *Partially accepted*

The Agency has significantly simplified the proposal (only CRS and final CRS). Please refer to the Explanatory Note of the CRD.

In addition, it has been made fully clear that the responsibility for the airworthiness of the aircraft belongs to the CAMO (AMC M.A.306(a)3 and AMC 145.A.50(b)2).

The concept of Primary Maintenance Organisation has been removed, although it is the responsibility of the Operator to designate an organisation responsible for issuing the final CRS.

Nevertheless, the Agency is still of the opinion that a final CRS which ensures to the pilot that all the maintenance ordered by the operator has been completed (the pilot does not know which maintenance has been ordered by the operator, even if done through clear work orders). In addition, it is not a contradiction that the final CRS does not take responsibility for the work covered by the other CRSs. This responsibility belongs to the organisations issuing such CRSs.

comment

12

comment by: *Air Berlin Technik*

Point 16, number 2, contains a contradiction. First, it is being stated that "the continuation of the current technical log system" is possible, but then it is said that boxes have to be replaced and new fields have to be added.

As the layout of a technical log and any subsequent change must be approved, this would be a major impact (efforts for approval process, costs of discarding and reprinting of tech log stock).

As already stated, a lack of understanding for the already existing provisions of Part-M is also shown here by the working group because guidance for technical log layout is being provided by Part-145 related Guidance Material. The responsibility for the tech log according to Part-M is with the CAMO only, and subsequently guidance must be delivered with Part-M Guidance Material only!

response *Partially accepted*

Based on the comments, the Agency has significantly simplified the proposal (only CRS and final CRS). Please refer to the Explanatory Note of the CRD.

In addition, the examples of Technical Log have been introduced in Part-M (AMC

M.A.306(a)) for the operator, but also in Part-145 (AMC 145.A.50) in order to give guidance to the Part-145 organisation on how to fill the Technical Log of the operator/CAMO.

Certainly, the proposed changes will imply some amendments to the Technical Log. Nevertheless, a 1 year transition phase has been proposed.

comment 13 comment by: Air Berlin Technik

This diagram in itself shows the bureaucratic complexity of the envisaged changes. Such a complexity in itself creates a safety hazard, not a benefit. Responsible people may get completely "lost" in such confusing requirements and as a consequence make mistakes.

To at least try to avoid this, extensive training would be necessary. If the legislator comes to the conclusion that this system should be introduced, than the training efforts should also be paid for by him, meaning that the authorities should offer this training for free at the premises of the affected organisations.

Again, the far better approach would be that EASA defines the way of interpretation of the good existing rules and mandate NAAs to have their surveyors being trained accordingly.

response *Accepted*

The Agency has significantly simplified the proposal (only CRS and final CRS). Please refer to the Explanatory Note of this CRD.

comment 14 comment by: Air Berlin Technik

The diagram shows quite obviously coordination responsibilities of CAMOs being passed on or added to maintenance organisations. This would turn the whole current system of interaction between CAMOs and MOs, as it is intended by the legislator, upside-down. It would be a duplication which would not just create additional costs but could hazard safety because the nowadays clear responsibilities (MO for release to service of its own work; CAMO for ordering, coordination and proper release of all work) could become unclear and diluted.

We recommend to ensure consistent application of existing rules in their intended sense in all 27+4 member states rather than creation of artificially over-bureaucratized new rules (which for sure will bring more and even more severe problems).

response *Accepted*

The Agency has significantly simplified the proposal (only CRS and final CRS). Please refer to the Explanatory Note of the CRD.

In addition, it has been made fully clear that the responsibility for the airworthiness of the aircraft belongs to the CAMO (AMC M.A.306(a)3 and AMC 145.A.50(b)2).

The concept of Primary Maintenance Organisation has been removed, although it is the responsibility of the Operator to designate an organisation responsible for

issuing the final CRS.

comment

20

comment by: AEA

In paragraph 12, it is astonishing to read that the group, "after an impact assessment [...] decided that the methodology used was not appropriate". The Regulatory Impact Assessment (RIA) methodology, using a comparison table between all options proved appropriate for other NPA's, why not this one?

It is further explained that the NPA proposal arose from a "compromise" across the drafting group members rather than the RIA across the possible options.

The question arising is therefore: is the purpose of an NPA to equally please the drafting group members (the best compromise for the individuals of the group) or to find, through the RIA methodology, the best solution for the aviation community (even if this solution happens not to please all the drafting group members)?

In summary, the procedures for selecting the more appropriate option seem not to have been followed; the NPA should be withdrawn and redrafted based on the RIA methodology.

response

*Partially accepted*

As explained in the Regulatory Impact Assessment (page 15 of 59 of the NPA), the new option 6 (combination of other options) was established by the working group. The evaluation of the impacts was performed also on this option 6 and was selected as the better one.

Nothing in the Rulemaking Procedure says that new options cannot be added during the drafting process.

Nevertheless, the concept has been fully reviewed by the Review Group (working group plus 2 additional experts from the Industry and the Agency), and the proposal has been significantly simplified (only CRS and final CRS). Please refer to the Explanatory Note of this CRD.

comment

21

comment by: AEA

In paragraph 13, it is read that the NPA introduces a "new concept of certification of maintenance" .

This was not the original objective of ToR 145-012, which was to either to choose between the existing "single" and "multiple" release system, or to continue to use both systems in parallel.

At best, the ToR proposed to "clarify" the issue, not to introduce a "new concept of certification of maintenance", the consequences of which on the Industry being widely underestimated.

The ToR having not been followed, without proper consultation of the SSCC, the NPA should be withdrawn and the ToR rediscussed.

response

*Not accepted*

The ToR published on the EASA website, which was consulted and agreed by AGNA and SSCC, reads as follows:

"In Europe two systems of release to service coexist: single release and multiple

releases. This can lead to misunderstandings and possibly to safety issues. It was therefore requested by industry and national aviation authorities to clarify this issue so that only one system remains, if possible.

Taking into account draft JAA TGL 41, support the development of an Opinion to amend Part-145 and associated AMC/GM material. Furthermore, Part-M and Part-66 need to be reviewed to ensure that these provisions are included."

The Agency does not agree that the ToR was not followed and it sees no justifications to withdraw the NPA. The proposed concept is based on a single release before flight with multiple certifications underneath.

Nevertheless, in view of other comments received, the Agency has significantly simplified the proposal. Please refer to the Explanatory Note of this CRD.

comment

22

comment by: *AEA*

Paragraph 13 introduces three types of certification. This result in an incredibly complex release to service concept.

It is foreseen that the Industry would have the greatest difficulties to implement such a complicated system. During public workshops and conferences, it proved that EASA and NAA's had difficulties to make the Industry understand this concept. Requiring Certifying Staff to master this three levelled CRS concept will be very uneasy and the safety impact of this has not been properly evaluated.

The NPA should therefore be withdrawn and redrafted with a much simple and robust CRS concept.

Note: Europe would be the only part of the world with this three levelled CRS concept. Is the rest of the world less safe with a one level CRS ?

response

*Accepted*

The concept has been fully reviewed by the Review Group (working group plus 2 additional experts from the Industry and the Agency), and the proposal has been significantly simplified (only CRS and final CRS). Please refer to the Explanatory Note of this CRD.

comment

23

comment by: *AEA*

Paragraph 14 introduces the concept of a "PMO" (Primary Maintenance Organisation). This organisation is at the same time the organisation that is required to coordinate the maintenance works and the one who issue the "final" CRS before flight.

This may prove totally impracticable, where for instance the base maintenance organisation "A" actually coordinates the maintenance works and the subcontracted line maintenance organisation "B" issues the "final" CRS before flight (this is in fact a very common situation).

How can we require subcontractor "B" to coordinate works conducted by its contracting party "A"? In this case, the contractual arrangements between the CAMO, AMO "A" and AMO "B" have to be totally reconsidered.

More generally speaking, the whole concept of PMO + MRC/BMRC/CRS has been drafted irrespective of any consideration to necessary contractual arrangements

|          |   |    |                        |
|----------|---|----|------------------------|
|          | <p>between the CAMO and the AMO's. Possible consequences to the Industry have not been properly assessed.<br/>Therefore the NPA should be withdrawn and possible consequence on existing contractual arrangements between CAMO's and AMO's should be fully reassessed.</p>  |    |                        |
| response | <p><i>Accepted</i></p>  |    |                        |
|          | <p>The concept has been fully reviewed by the Review Group (working group plus 2 additional experts from the Industry and the Agency), and the proposal has been significantly simplified (only CRS and final CRS).</p> <p>In addition, it has been made fully clear that the responsibility for the airworthiness of the aircraft belongs to the CAMO (AMC M.A.306(a)3 and AMC 145.A.50(b)2).</p> <p>The concept of Primary Maintenance Organisation has been removed, although it is the responsibility of the Operator to designate an organisation responsible for issuing the final CRS.</p> |    |                        |
| comment  | <table border="1"> <tr> <td>24</td> <td>comment by: <i>AEA</i></td> </tr> </table>   | 24 | comment by: <i>AEA</i> |
| 24       | comment by: <i>AEA</i>  |    |                        |
|          | <p>While paragraph 16 states that it permits the "continuation of the current technical log system", the NPA shows on the contrary that Operators technical logs will have to be significantly re-engineered in order to introduce CMR, BCMR and CRS.</p> <p>This would have very important consequences in terms of documentation management, company procedures, crew training and maintenance organisation staff training.</p> <p>Such consequences have not been evaluated, <u>therefore the NPA should be withdrawn and all possible implications properly reassessed.</u></p>               |    |                        |
| response | <p><i>Partially accepted</i></p>  |    |                        |
|          | <p>Although the concept has been fully reviewed and the proposal has been significantly simplified (only CRS and final CRS), the proposed changes will imply some amendments to the Technical Log.</p> <p>For this reason, a 1 year transition phase has been proposed.</p>   |    |                        |
| comment  | <table border="1"> <tr> <td>25</td> <td>comment by: <i>AEA</i></td> </tr> </table>   | 25 | comment by: <i>AEA</i> |
| 25       | comment by: <i>AEA</i>  |    |                        |
|          | <p>The diagram in paragraph 18, page 8, clearly illustrates the extreme complexity of the whole concept. How can this be simply translated into company procedures so that all personnel involved properly understand it and use it in a safe manner.</p> <p>This diagram is another demonstration that proposed the release to service concept is impracticable and the NPA should be withdrawn</p>  |    |                        |
| response | <p><i>Accepted</i></p>  |    |                        |
|          | <p>The concept has been fully reviewed by the Review Group (working group plus 2 additional experts from the Industry and the Agency), and the proposal has been significantly simplified (only CRS and final CRS).</p>   |    |                        |

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|----------|---|------------------------|
| comment  | 44  | comment by: <i>AEA</i> |
|          | <p>Paragraph 10 states that the coexistence of two systems ("single" vs. "multiple" release) lead to "possible additional safety issues".</p> <p>Are there any safety records of accidents or major incidents related to this issue? There must be, as the RIA claims that option 6 would significantly increase the level of safety. Therefore two cases should be considered:</p> <ul style="list-style-type: none"> <li>• the current coexistence of 2 systems creates "significant" safety problems, then records should be shown in order to substantiate this, or</li> <li>• there is no "significant" safety issue, therefore option 6 will not "significantly" increase the level of safety and the whole NPA (considering its huge impact on stakeholders) should be withdrawn.</li> </ul>   |                        |
| response | <p><i>Partially accepted</i></p> <p>The concept has been fully reviewed by the Review Group (working group plus 2 additional experts from the Industry and the Agency), and the proposal has been significantly simplified (only CRS and final CRS).</p> <p>Please refer to the new Regulatory Impact Assessment contained in this CRD.</p>   |                        |
|          | 45  | comment by: <i>AEA</i> |
| comment  | <p>Paragraph 10 makes the assumption that an operator is possibly confronted to two release to service systems (Single Release vs Multiple Release) and this could lead to safety problems.</p> <p>From "real life" experience, this is not the opinion of AEA operators:</p> <ul style="list-style-type: none"> <li>• In base maintenance where complex work packages exist, there is de facto a single release system, because for one work package, a unique Category C certifying staff signature is required.</li> <li>• In line maintenance, depending on the maintenance tasks to be performed : <ul style="list-style-type: none"> <li>○ either there is a simple Work Package, for which the impact of having a single or multiple signatures is very limited in term of possible misunderstanding by the Operator,</li> <li>○ or maintenance entries are directly made on the Tech Log. In this case Part 145 organisations are required to use (and to be trained to use) the Operator's Tech Log, therefore, from a single operator's point of view, there is a unique maintenance release system.</li> </ul> </li> </ul> <p>In conclusion, contrary to the paragraph 10 statement, from an Operator's point of view, the "single" vs "multiple" release debate is a non safety issue.</p> <p>Therefore the withdrawal of this NPA should not have any impact on safety</p> |                        |
| response | <p><i>Partially accepted</i></p>  |                        |

The concept has been fully reviewed by the Review Group (working group plus 2 additional experts from the Industry and the Agency), and the proposal has been significantly simplified (only CRS and final CRS).

Please refer to the new Regulatory Impact Assessment contained in this CRD.

comment

46

comment by: *Ian Robinson, Patriot Aviation Group*

Pages 5 and 6 of the NPA outline the envisaged changes to be implemented. It is clear that these changes have been devised with medium to large maintenance organisations in mind. It is an extremely complex system compared to that which it replaces, therefore is unacceptable in that it places huge additional resource demands on the small maintenance organisation/operator.

This whole system should be completely revised, with the opinion sought from representatives of smaller aviation maintainers and operators within the industry.

response

*Accepted*

The concept has been fully reviewed by the Review Group (working group plus 2 additional experts from the Industry and the Agency), and the proposal has been significantly simplified (only CRS and final CRS).

comment

163

comment by: *European Regions Airline Association*

Paragraph B.12 states: "The group worked on refining the definition of the options and after an impact assessment on these, decided that the methodology used was not appropriate and the group could not agree on the options proposed. Therefore, the group reached a compromise by combining parts of several options. The majority of the group and the Agency agreed that this gave a reasonable solution to the problem of standardisation, while assuring an equal or higher level of safety."

It is the opinion of ERA that the above statement re-inforces its belief that a further full and proper review of this matter needs to be carried out with an expanded drafting group. It would appear from the above paragraph that the group "cherry picked" the "best" elements from a range of options. However, in ERA's opinion, on this occasion, the sum of the parts picked does not add up to make a whole and robust solution to this issue.

response

*Accepted*

As explained in the RIA (page 15 of 59 of the NPA), the new option 6 (combination of other options) was established by the working group. The evaluation of the impacts was performed also on this option 6 and was selected as the better one.

Nothing in the Rulemaking Procedure says that new options cannot be added during the drafting process.

Nevertheless, the concept has been fully reviewed by the Review Group (working group plus 2 additional experts from the Industry and the Agency), and the proposal has been significantly simplified (only CRS and final CRS). Please refer to the Explanatory Note of this CRD.

|          |     |  |
|----------|-----|--|
| comment  | 172 | comment by: <i>Svensk Flygteknikerförening, SFF (Org. of swedish Licensed Aircraft Engineers).</i>   |
|          |     | SFF supports the envised changes. It is a good compromise between existing systems and it also deals with todays situation with different 145-org performing parts of maintenance and the risk of maintenance actions "falling between tables".  |
| response |     | <i>Noted</i>   |
|          |     | The Agency welcomes the comment.   |
| comment  | 175 | comment by: <i>Swiss Federal Office of Civil Aviation (FOCA)</i>   |
|          |     | Swiss FOCA has a general concern that with the planned system, an owner of the B1 license will virtually obtain a C license approval (in particular with regard to a CRS he issues based on a BMRC). In order to avoid any confusion with regard to the general aircraft maintenance license system, the competence requirements as well as the roles and responsibilities of persons issuing the respective certificates must be clearly laid down. Swiss FOCA is of the opinion that further specifications in this regard are required in order not to dilute the differences between the B1 and C aircraft maintenance licenses. |
| response |     | <i>Not accepted</i>  |
|          |     | The proposal on the NPA and in the new CRD does not give category C privileges to a B1 licence holder. Only category C certifying staff can issue a CRS for Base Maintenance. What a category B1 can do is to issue a final CRS covering Base Maintenance, but only when a category C has issued the corresponding CRS for the Base Maintenance.   |
| comment  | 200 | comment by: <i>Walter Gessky</i>   |
|          |     | <p><b>The changes proposed with the NPA are <u>not</u> supported.</b></p> <p><b>Changes not related to the concept might be acceptable and will be notified.</b></p> <p><b>Changes proposed in the NPA which are acceptable:</b></p> <p>4.</p> <ul style="list-style-type: none"> <li>• 145A.30(i),</li> <li>• AMC.A.30(i),</li> </ul> <p><b>Justification:</b></p> <p>1. The maintenance organisation will only sign the work ordered and specified by the owner or his CAMO.</p>   |

The proposal introduces a complicated bureaucratic system with different maintenance certificates and gives the impression that the PMO has a certain coordination function (13).

As explained above, coordination is the responsibility of the owner and the CAMO in a controlled environment and not the maintenance organisation,

2. The maintenance organisation has no control over the work order. This will not be changed by the proposed amendment. A link between owner/CAMO and maintenance organisation with regard to the work order would be essential.

3. Coordination of scheduled maintenance is an important task for the CAMO and not for the maintenance organisation except when delegated to them and could be organised in a much easier less bureaucratic way.

4. The scenario, that the work is outsourced by the maintenance organisation, is mostly for parts and appliances, for which a Form One has to be issued and for specialised work like NDT, welding etc. and usually requires a maintenance contract between operator and Part 145 organisation.

5. The RIA does not adequately address the role and responsibility in the continued airworthiness management function of the aircraft owner and the CAMO.

The existing system with some clarifications with regard to the role of the owner and CAMO would be sufficient. Independent of the "single" or "multiple releases to service" it is always the owner/CAMO responsibility to ensure, that all maintenance was carried out according to the maintenance schedule.

response

*Partially accepted*

It is a reality that both systems (single and multiple release) are co-existing in Europe, and it is also a fact that both systems have their own problems.

That is why the proposed rule consists on maintenance certification by each organisation, plus a final release to tell the pilot that all the maintenance is completed or properly deferred.

Nevertheless, in view of the comments received, the Agency has significantly simplified the proposal (only CRS and final CRS), and a transition phase of 1 year has been proposed in order for NAAs and Stakeholders to adapt.

A new Regulatory Impact Assessment has been performed and it is part of the Explanatory Note to this CRD.

comment

216

comment by: UK CAA

Explanatory note paragraph 16 page 7  
This explanatory note does not fully account for the role of the operator.

Justification:  
The concept of Primary and secondary maintenance organisations is

acknowledged but does not fully account for the role of the operators Part M Subpart G continuing airworthiness management organisation to manage the various contracts.

Within base maintenance the proposals claim to promote flexibility in that the PMO develop a single format for the new certificate. This ignores the complexities that arise by ignoring the existing and well established processes, procedures and Performa's used by the existing organisations who are likely to be approved under Part 145 in their own right.

The whole essence of the Part 145 CRS in Part 145.A.50 is that the certification relates to "the work specified above, except as other wise specified ". This places the accountability and responsibility for the legally required CRS with the organisation doing the work.

response *Accepted*

The examples of Technical Log have been introduced in Part-M (AMC M.A.306(a)) for the operator, but also in Part-145 (AMC 145.A.50) in order to give guidance to the Part-145 organisation on how to fill the Technical Log of the operator/CAMO.

comment

223

comment by: *DASSAULT FALCON SERVICE*

In my opinion, the term "release" should be only for the release to service of the aircraft i.e. for the last certificate, because it is confusing if there is a "release" of the maintenance but not of the aircraft.

response

*Not accepted*

The concept has been fully reviewed by the Review Group (working group plus 2 additional experts from the Industry and the Agency), and the proposal has been significantly simplified (only CRS and final CRS).

The Agency has decided to use the same term "release" in both cases in order not to affect bilateral agreements.

comment

232

comment by: *Liam SISK*

This proposal including the introduction of the MRC and BMRC concept in addition to the CRS is unnecessarily complex and needs to be reconsidered by the Agency. The additional requirements included in the NPA are not justified, introduce multiple stages to the final release process and will be difficult to implement as proposed. The Agency must withdraw the NPA in its present format, revise the whole approach proposed and revert with a simpler and more workable solution to this matter.

response

*Accepted*

The concept has been fully reviewed by the Review Group (working group plus 2 additional experts from the Industry and the Agency), and the proposal has been significantly simplified (only CRS and final CRS). Please refer to the Explanatory Note of this CRD.

|          |  |   |
|----------|--|---|
| comment  | 233  | comment by: <i>Malta Department of Civil Aviation</i> |
|          | <p>It is not clear what the envisaged changes will attain, in terms of safety, and these changes are going to be very hard to manage, would create confusion and will be not easy to implement as it is not always possible to determine the PMO. Unnecessary complications in the certification of maintenance makes the system cumbersome and not always feasible.</p>   |   |
| response | <i>Accepted</i>  |   |
|          | <p>The concept has been fully reviewed by the working group plus 2 additional experts from the Industry and the Agency, and the proposal has been significantly simplified (only CRS and final CRS).</p> <p>The responsibility for the airworthiness of the aircraft belongs to the CAMO. This has been made fully clear in AMC M.A.306(a)3 and AMC 145.A.50(b)2.</p> <p>The concept of Primary Maintenance Organisation has been removed, although it is the responsibility of the Operator to designate an organisation responsible for issuing the final CRS.</p> |   |

**A. Explanatory Note - V. Regulatory Impact Assessment - 1. Purpose and Intended Effect**

p. 12

|          |  |                                       |
|----------|--|---------------------------------------|
| comment  | 15   | comment by: <i>Air Berlin Technik</i> |
|          | <p>Apart from the fact that something like a "single release" as mentioned here and further described on page 4 in our opinion does not comply even with the current legislation, why isn't the approach to just simply define the possibilities of a "single release" or a "multiple release" via an AMC, legalizing/suggesting both ways alternatively, including variations/combinations?<br/>We do not need any further bureaucratic approaches! Please be PRAGMATIC!</p>  |                                       |
| response | <i>Partially accepted</i>  |                                       |
|          | <p>The proposed concept has been significantly simplified while achieving the objectives of the task.<br/>However, changes to the rule (and not only to the AMC) have been necessary.<br/>Please refer to the Explanatory Note of the CRD for more details.</p>  |                                       |
| comment  | 16   | comment by: <i>Air Berlin Technik</i> |
|          | <p>We do not share the safety concerns raised here. Of course we fully agree that it must be ensured that all tasks have been accomplished. But current legislation, both Part-145 (for example by Part-145.A.45 (e) and Part-145.A.55) and especially Part-M, provide sufficient tools to ensure this. If these tools are not correctly, not completely or not consistently being applied by organisations and authorities, this should not be taken as a cause to change legislation, but rather to change the habits of those applying the rules. One of the main root causes for the problems presented here is in our opinion that Part-M, especially Sp. G</p> |                                       |

(CAMO), is still in its implementation phase and many organisations and authorities are still not as familiar with it as it should be desired. This is shown when it is being stated that "the question of responsibility is not clear in the case of coordination of multiple maintenance tasks/organisations and when addressing interface issues of similar maintenance tasks". Such coordination does not lay on the shoulders of an MO, but is one of the main tasks of a CAMO. Therefore, there is no need to change Part-145 in any way. Just correctly apply Part-M!  
In consequence, this NPA should not be introduced at all. As a compromise to those having raised the concerns and developed the draft rules, the issue could be re-visited after a period of time (for example 5 years) after full implementation of Part-M.

response *Not accepted*

The Agency does not agree that the current legislation provides all the necessary tools. As a matter of fact, nothing in the rule forbids the issuance of a single release when several Part-145 organisations are working simultaneously, without those organisations issuing their own CRS.

The current 145.A.50(b) reads:

"A certificate of release to service shall be issued before flight at the completion of any maintenance".

This is interpreted by some persons/organisation as requiring a single CRS before flight.

Nevertheless, the concept has been fully reviewed by the Review Group (working group plus 2 additional experts from the Industry and the Agency), and the proposal has been significantly simplified (only CRS and final CRS).

The responsibility for the airworthiness of the aircraft belongs to the CAMO. This has been made fully clear in AMC M.A.306(a)3 and AMC 145.A.50(b)2.

The concept of Primary Maintenance Organisation has been removed, although it is the responsibility of the Operator to designate an organisation responsible for issuing the final CRS.

Finally, taking into account the length of the adoption process, and the fact that we have proposed a 1 year transition period, the entry into force of the proposed changes will be much after the entry into force of Part-M (September 2005 for Commercial Air Transport).

comment

17

comment by: *Air Berlin Technik*

Regarding the objective of this NPA "to harmonise the application of the CRS within Europe, improve coordination of maintenance tasks and maintain or increase the safety level", it is our opinion that neither there is a need for this, nor that the NPA is able to achieve this objective.

If existing rules - which are already harmonised by being directly applicable in all EU member states by their character of a regulation - are not being correctly applied by some, the rules should not be changed, but consistently enforced.

The coordination of maintenance tasks is a responsibility of a CAMO, mandated by

Part-M. There is no need to duplicate (or even delegate?) this to a maintenance organisation.  
 Therefore, there is no safety hazard resulting from a gap in the current legislation at all. The safety level as achieved by the existing rules is very high.  
 Instead of trying to re-invent the wheel, not resulting in any benefit but just in increased bureaucracy and complexity, those who disregard the existing rules should be educated to apply the existing rules as they are intended.

response *Not accepted*

See reply to comment 16 above.

comment

201

comment by: *Walter Gessky*

The RIA does not address adequately the responsibility of the owner/CAMO. The owner is according to M.A.201(a) responsible for the continued airworthiness of the aircraft and shall ensure that no flight takes place unless

- The aircraft is maintained in an airworthy condition, and
- The maintenance of the aircraft is performed in accordance with the approved maintenance programme.

For commercial OPERATORS and in a controlled environment the subpart G organisation (CAMO) according M.A. 708(b)

- shall ensure that the maintenance is carried out in accordance with the approved maintenance programme and released in accordance with M.A. Subpart H,
- shall ensure that all applicable AD`s are applied,
- shall ensure that all defects discovered during scheduled maintenance or reported are corrected by an appropriately approved maintenance organisation,
- shall ensure that the aircraft is taken to an approved maintenance organisation whenever necessary,

shall coordinate scheduled maintenance, the application of AD`s, the replacement of service life limited parts, and component inspection to ensure that the work is carried out properly.

response *Partially accepted*

The Agency has significantly simplified the proposal (only CRS and final CRS). Please refer to the Explanatory Note of the CRD.

In addition, it has been made fully clear that the responsibility for the airworthiness of the aircraft belongs to the CAMO (AMC M.A.306(a)3 and AMC 145.A.50(b)2).

The concept of Primary Maintenance Organisation has been removed, although it

is the responsibility of the Operator to designate an organisation responsible for issuing the final CRS.

Further review of the owner/CAMO responsibilities is not the objective of this task and may be developed only through further rulemaking actions.

**A. Explanatory Note - V. Regulatory Impact Assessment - 2. Options - a. The options identified and evaluated**

p. 12-16

|          |   |   |
|----------|---|---|
| comment  | 51  | comment by: <i>NHAF Technical committee</i>               |
|          | Norsk Helikopter Ansattes Forbund, NHAF, have reviewed the NPA and strongly support option 6. This requirement seems to be the best way to harmonize the rules within EASA. Neither do we find any negative economical consequence.   |   |
| response | <i>Noted</i>  |   |
|          | The Agency welcomes the comment.  |   |
| comment  | 53  | comment by: <i>Odyseas ORFANOS</i>                        |
|          | Due to the fact that most of the Base Maintenance packages within a Maintenance Organisation are broken into jobcards, taskcards, workcards, inspection reports etc, in order to be signed off by B1 and B2 support staff, I think that the concept of Statement of Maintenance Release (SMR) should also be extended, as an option, to the Base Maintenance environment, in order to be an official way of signing off individual tasks, thus supporting the C Certifying Staff issuing the MRC for the workpackage. |   |
| response | <i>Not accepted</i>   |   |
|          | The concept of SMR was not introduced in the NPA. Nevertheless, the issuance of a release document certifying proper accomplishment of maintenance can only be signed by appropriate certifying staff. The Agency believes that the current system of sign-offs is adequate for the B1 and B2 support staff in the base maintenance environment.  |   |
| comment  | 54  | comment by: <i>Aircraft Engineers International (AEI)</i> |
|          | <p><b>6. Multiple maintenance certifications and single aircraft CRS (combination of previous options 2, 4a, 4b and 5)</b></p> <p>Comment: AEI supports Option 6</p> <p>Reason:</p> <p>Most importantly this NPA ensures a <b>high safety standard</b> by requiring that the different certificates are only issued by properly licensed, competent and qualified</p>   |   |

|          |  |
|----------|--|
|          | <p>personnel.<br/>The NPA creates a certification system where the responsibility for the work carried out is clearly put with the person and organisation who is responsible for the work carried out. Not only that, it also clearly puts the responsibility to ensure that personnel who issue the different certificates have the required qualifications and authorisations with the organisation that is responsible for this personnel. Furthermore it ensures that the whole process of issuing certificates by different Aircraft Maintenance Organisations is clearly defined and organised by introducing the concept of PMO. At the same time this is achieved in the most economic way.</p> |
| response | <i>Noted</i>   |
|          | The Agency welcomes the comment.   |

|          |  |   |
|----------|--|---|
| comment  | 67   | comment by: <i>SITEMA – Sindicato dos Técnicos de Manutenção de Aeronaves</i> |
|          | <p>SITEMA supports this option 6.<br/>JUSTIFICATION: Most importantly this NPA ensures a <b>high safety standard</b> by requiring that the different certificates are only issued by properly licensed, competent and qualified personnel. By <b>not</b> lowering the <b>SAFETY</b> standards, this NPA creates a certification system where it holds responsible for the work carried out, the person, and the organisation who is responsible for the work carried out. SITEMA is aware that before highering <b>SAFETY</b> standards, a common system must be achieved. Plus, it also clearly puts the responsibility to ensure that personnel who issue the different certificates have the required qualifications and authorisations with the organisation that is responsible for this personnel, and <u>no responsibility is taken whatsoever from the Operators</u>. Furthermore it ensures that the whole process of issuing certificates by different Aircraft Maintenance Organisations is clearly defined and organised by introducing the concept of PMO. At the same time this is achieved in the most economic way to all stakeholders. Also, this NPA has positive influence on Human Factors because a standardized system contributes to reduce human error risk. SITEMA is very happy to see that <b>EASA</b> is contributing to <b>SAFETY</b> and <b>STANDARDIZATION</b>, and rising <b>SAFETY</b> standards by <b>harmonizing</b> rules is the way to go. Well done!</p> |   |
| response | <i>Noted</i>   |   |
|          | The Agency welcomes the comment.   |   |

|         |  |   |
|---------|--|---|
| comment | 68   | comment by: <i>SITEMA – Sindicato dos Técnicos de Manutenção de Aeronaves</i> |
|         | <p>This option introduces a new concept of maintenance release and final CRS. A maintenance release certificate is a written statement <b>(the opposite is not true)</b> that “certifies that all the work specified except as otherwise specified was carried out and coordinated in accordance with Part-145”, i.e. in conformity with the maintenance data and maintenance procedures of the Part-145 maintenance organisation.<br/>JUSTIFICATION-<br/>This is to ensure no linguistic barriers will arise if someone reverses the position of the words “maintenance release certificate” and “written statement”. New</p> |   |

|          |   |                            |
|----------|---|----------------------------|
| response | <p>sentence in blue.</p> <p><i>Noted</i></p>  |                            |
| comment  | 118   | comment by: ANAE           |
| response | <p>The purpose of carrying the amendment was to improve the system in place. If no agreement could be reached it was not necessary to implement a change just because that was the original concept.</p> <p>A compromise on the system in place will have a severe negative financial impact on many companies at a time of belt tightening, (covering such things as: changes to Tech Logs; training of a complex new process etc.).</p> <p><i>Partially accepted</i></p> <p>The concept has been fully reviewed by the working group plus 2 additional experts from the Industry and the Agency, and the proposal has been significantly simplified (only CRS and final CRS). Please refer to the Explanatory Note of the CRD for more details.</p>   |                            |
| comment  | 152   | comment by: Ludwig Hessler |
| response | <p>We do not understand why there should be such a significant increase in the level of safety with the proposed multiple and single CRS. We are not informed about problems with the current system and do not believe that there is a lack of coordination under the actual system. Today the task of the coordination is delegated to the Part-M CAMO and we do not see a lack.</p> <p>As the CAMO is relatively new in some European country (for example in Germany) we believe that we should first adapt all organisations to the current regulations and have some time to get experience with this system.</p> <p>To change a new system at the beginning will bring confusion and is not to handle neither from the industry nor from the Authorities.</p> <p><i>Partially accepted</i></p> <p>One issue is that of the coordination, and another is how the pilot knows that all the work ordered by the operator has been properly accomplished.</p> <p>The Agency has significantly simplified the proposal (only CRS and final CRS). Please refer to the Explanatory Note of the CRD.</p> <p>In addition, it has been made fully clear that the responsibility for the airworthiness of the aircraft belongs to the CAMO (AMC M.A.306(a)3 and AMC 145.A.50(b)2).</p> <p>The concept of Primary Maintenance Organisation has been removed, although it is the responsibility of the Operator to designate an organisation responsible for issuing the final CRS.</p> |                            |

|          |  |  |
|----------|--|--|
| comment  | 173  | comment by: <i>Svensk Flygteknikerförening, SFF (Org. of swedish Licensed Aircraft Engineers).</i> |
|          | <p>SFF support option 6 as the best available option taking into account it is a good compromise. This option defines different categories of staff; from signing of a single task to the final CRS which is good. Of course harmonisation will have some impact regarding cost for new logbooks etc, but in this case we find the costs acceptable. What other standardisation moves by EASA could have been stopped if these changes are found to be expensive? The benefits are far more valuable to the European aviation standardisation project than the small costs it takes to implement.</p>  |  |
| response | <i>Noted</i>   |  |
|          | The Agency welcomes the comments.  |  |
| comment  | 214  | comment by: <i>UK CAA</i>  |
|          | <p>Regulatory Impact Assessment Paragraphs 1 (b) and 3 on pages 12 and 13</p> <p>The impact on the commercial air transport operator is more than just a technical log and nominated primary maintenance organisation (PMO).</p> <p>An operator in order to properly discharge its obligations under Part M Subpart G must arrange the maintenance. This should involve agreements with all contracted organisations as well as oversight of the maintenance process. The PMO may be forced to accept the involvement of other MROs who have been contracted by the operator to perform specialist maintenance functions, e.g. in-flight entertainment maintenance and repairs and engine repairs and overhauls.</p> |  |
| response | <i>Accepted</i>  |  |
|          | <p>The Agency has significantly simplified the proposal (only CRS and final CRS), and a transition phase of 1 year has been proposed in order for NAAs and Stakeholders to adapt.</p> <p>A new Regulatory Impact Assessment has been performed and it is part of the Explanatory Note to this CRD.</p>   |  |
| comment  | 215  | comment by: <i>UK CAA</i>  |
|          | <p>Regulatory Impact Assessment Paragraphs 2 on page 13</p> <p>Incorrect assumption</p> <p>The option suggests that the UK operates with a system of multiple releases as noted within paragraph 2(3). This is not the case as organisations also make extensive use of the single CRS with a coordination role.</p>   |  |
| response | <i>Partially accepted</i>  |  |
|          | The Agency has significantly simplified the proposal (only CRS and final CRS). Please refer to the Explanatory Note of the CRD.  |  |

In addition, it has been made fully clear that the responsibility for the airworthiness of the aircraft belongs to the CAMO (AMC M.A.306(a)3 and AMC 145.A.50(b)2).

The concept of Primary Maintenance Organisation has been removed, although it is the responsibility of the Operator to designate an organisation responsible for issuing the final CRS

comment

|     |  |
|-----|--|
| 227 | comment by: <i>SNMSAC Syndicat National des Mécaniciens Sol de l'Aviation Civile</i> |
|-----|--|

**6. Multiple maintenance certifications and single aircraft CRS (combination of options 2, 4a, 4b and 5)**  
*SNMSAC agree with this option N° 6*

*The reason is because this standardization will enforced all AMO to have sufficient number of LAME to sign the BMRC as well as sufficient number of B1 &/or B2 qualified staff to support the certifying staff C.*

*To be in accordance with this standard the qualification and training for the maintenance staff shall be correct and in accordance with the type of maintenance work to be performed according the rating endorsed by the AMO or MRO.*

response

*Noted*

The Agency welcomes the comments.

**A. Explanatory Note - V. Regulatory Impact Assessment - 2. Options - b. Equity and fairness issues identified**

p. 16

comment

|    |                        |
|----|------------------------|
| 27 | comment by: <i>AEA</i> |
|----|------------------------|

In paragraph b, option 6 is qualified as the "best compromise with minimum possible impact on stakeholders"

Comments nr 19 to 25 clearly show that the impact assessment on stakeholders is particularly flawed and minimised. The selection of option 6 is not properly justified; therefore the whole NPA should be withdrawn and redrafted on a proper Regulatory Impact Assessment

response

*Not accepted*

As explained in the RIA (page 15 of 59 of the NPA), the new option 6 was established by the working group (combination of other options). The evaluation of the impacts was performed also on this option 6 and was selected as the better one.

Nothing in the Rulemaking Procedure says that new options cannot be added during the drafting process.

Nevertheless, the concept has been fully reviewed by the Review Group (working group plus 2 additional experts from the Industry and the Agency), and the proposal has been significantly simplified (only CRS and final CRS). Please refer to the Explanatory Note of this CRD.

**A. Explanatory Note - V. Regulatory Impact Assessment - 3. Impacts - b. All impacts identified - A. Safety**

p. 17-20

|          |  |                 |
|----------|--|-----------------|
| comment  | 28   | comment by: AEA |
|          | <p>Page 19, under option 6, it is stated that the "MRC concept provides a more controlled and <u>flexible</u> approach to certify the maintenance"</p> <p>In reality, by imposing to all CAMO + AMO the same detailed framework for releasing aircraft to service, it considerably reduces the organisations flexibility in producing the release to service procedure the more appropriate to their scope of work, organisation scheme and contractual arrangements.</p>  |                 |
| response | <p><i>Noted</i></p> <p>The concept has been fully reviewed by the working group plus 2 additional experts from the Industry and the Agency, and the proposal has been significantly simplified (only CRS and final CRS). Please refer to the Explanatory Note of the CRD.</p>  |                 |
| comment  | 29   | comment by: AEA |
|          | <p>Page 19, option 6 is said to make the certification of maintenance more complex; however, the negative safety impact of this has not been assessed.</p>   |                 |
| response | <p><i>Noted</i></p> <p>The concept has been fully reviewed by the Review Group (working group plus 2 additional experts from the Industry and the Agency), and the proposal has been significantly simplified (only CRS and final CRS). Please refer to the Explanatory Note of this CRD.</p>  |                 |
| comment  | 30   | comment by: AEA |
|          | <p>Page 19, Option 6 is said to "significantly increase the level of safety". This statement is more than questionable as the alleged safety problems the NPA is supposed to solve have not been presented.</p> <p>The RIA should be re written showing incidents accidents records where the current Part 145 release to service system is at stake.</p> <p>Furthermore, the extremely complex release to service concept introduced by option 6 is rather likely to reduce the level of safety as it is questionable that all Certifying staff and crew members would properly master this system.</p> |                 |
| response | <p><i>Noted</i></p> <p>The concept has been fully reviewed by the Review Group (working group plus 2 additional experts from the Industry and the Agency), and the proposal has been</p>   |                 |

significantly simplified (only CRS and final CRS). Please refer to the Explanatory Note of this CRD.

comment

153

comment by: *Ludwig Hessler*

We do not understand why there should be such a significant increase in the level of safety with the proposed multiple and single CRS. We are not informed about problems with the current system and do not believe that there is a lack of coordination under the actual system. Today the task of the coordination is delegated to the Part-M CAMO and we do not see a lack.

As the CAMO is relatively new in some European country (for example in Germany) we believe that we should first adapt all organisations to the current regulations and have some time to get experience with this system.

To change a new system at the beginning will bring confusion and is not to handle neither from the industry nor from the Authorities.

response

*Partially accepted*

See reply to comment 152.

comment

154

comment by: *Ludwig Hessler*

We do not see a positive impact to the level of safety. We see a negative impact to the level of safety due to the very complex system with three different release statements and different level of responsibilities of the Part-145 organisations

response

*Noted*

The concept has been fully reviewed by the Review Group (working group plus 2 additional experts from the Industry and the Agency), and the proposal has been significantly simplified (only CRS and final CRS). Please refer to the Explanatory Note of this CRD.

comment

164

comment by: *European Regions Airline Association*

It is the opinion of ERA that the positive safety impact of this NPA is both overestimated and unjustified.

Furthermore the NPA, in the opinion of ERA, fails to provide an adequate safety case to support changing from the current system.

Therefore the Agency are requested to provide industry with a clear and indisputable safety case, supported by a full Regulatory Impact Assessment, that supports the need for a change in this regulation.

response

*Noted*

The concept has been fully reviewed by the Review Group (working group plus 2 additional experts from the Industry and the Agency), and the proposal has been significantly simplified (only CRS and final CRS). Please refer to the Explanatory

Note of this CRD.

comment

169

comment by: Airbus

**1. PARAGRAPH / SECTION OUR COMMENT IS RELATED TO:**

NPA2007-09 Explanatory Note, Regulatory Impact Assessment

**2. ~~PROPOSED TEXT~~ / COMMENT:**

The Regulatory Impact assessment does not consider the expected results from the implementation of the CAMO supervision on maintenance.

The safety assessment for option 1 'Do nothing' with respect to the proposed regulation change is therefore not correct.

The lack of coordination cannot develop further because the objective of the implementation of a CAMO is to ensure Continued Airworthiness by checking amongst other issues the completeness of the maintenance carried out regardless of the number of contracted organizations.

**3. RATIONALE / REASON / JUSTIFICATION:**

The Agencies' decision is not properly justified because not all impacts have been taken into account. Especially the impact of EC2042/2003 Part M – Subpart G has not been evaluated.

response

*Partially accepted*

One issue is that of the coordination, and another is how the pilot knows that all the work ordered by the operator has been properly accomplished. This is accomplished in the proposal of the CRD by the issuance of a Final CRS.

The Agency has significantly simplified the proposal (only CRS and final CRS). Please refer to the Explanatory Note of the CRD.

In addition, it has been made fully clear that the responsibility for the airworthiness of the aircraft belongs to the CAMO (AMC M.A.306(a)3 and AMC 145.A.50(b)2).

The concept of Primary Maintenance Organisation has been removed, although it is the responsibility of the Operator to designate an organisation responsible for issuing the final CRS.

**A. Explanatory Note - V. Regulatory Impact Assessment - 3. Impacts - b. All impacts identified - B. Economic**

p. 20-22

comment

31

comment by: AEA

Page 22, option 6 is said to have a minimum economical impact. This seems

totally underestimated as option 6, as shown in comments 19 to 25:

- fundamentally changes the concept of release to service,
- transfers maintenance control responsibilities from the CAMO to the AMO,
- requires significant changes to the operators technical log system, with consequences on crew and maintenance staff training,
- requires CAMO's to revise and renegotiate their maintenance contracts (added responsibilities to the new "PMO" will certainly increase the cost of contracted maintenance)
- assigns more responsibilities to certifying staff issuing the "final" CRS

response *Noted*

The Agency has significantly simplified the proposal (only CRS and final CRS). Please refer to the Explanatory Note of the CRD.

In addition, it has been made fully clear that the responsibility for the airworthiness of the aircraft belongs to the CAMO (AMC M.A.306(a)3 and AMC 145.A.50(b)2).

The concept of Primary Maintenance Organisation has been removed, although it is the responsibility of the Operator to designate an organisation responsible for issuing the final CRS.

Finally, in order to give enough time for amendments to the Technical Log and associated procedures, a 1 year transition period has been proposed.

comment 162

comment by: *European Regions Airline Association*

It is ERA's opinion that the economic impact associated with the changes required in the:

- organisation
- procedures
- forms
- tech logs
- training
- contract amendments, etc.

to be used by the maintenance organisations if this NPA is adopted has been largely underestimated in the Regulatory Impact Assessment.

Furthermore, without figures to support the Agency's claim of "minimum negative impact", how can Industry be assured that the full RIA process has been complied with and that all economic consequences have been quantified and assessed?

|          |   |
|----------|---|
|          | <p>ERA therefore request copies of all the Rough Order of Magnitude (ROM) costings that the Agency has carried out in compiling this RIA.</p>   |
| response | <p><i>Noted</i></p>   |
|          | <p>The Agency has significantly simplified the proposal (only CRS and final CRS), and a transition phase of 1 year has been proposed in order for NAAs and Stakeholders to adapt.</p> <p>A new Regulatory Impact Assessment has been performed and it is part of the Explanatory Note to this CRD.</p>  |
| comment  | <p>204 <span style="float: right;">comment by: <i>Regional CAE</i></span></p>   |
|          | <p>There is an incoherence between the end of this chapter and the chapter 4.b.(on page 25).</p> <p>At the end of this chapter, you are talking about one and only one "main 145 organisation" (the PMO): it is difficult in the case of the line maintenance. Indeed, today, we have a lot of line maintenance station and many of them are subcontracted by an other part 145 organisation which sign with its own agreement number.</p> <p>In this NPA, only the PMO can sign the CRS, so if only one PMO is tolerate, this significate that the PMO is obliged to have its own personel to release the aircraft in each line station, and there is not enough people for this.</p> <p>In the chapter 4.b. on page 25, you are talking about many "main 145 organisations" (PMO): it is more practical to make this because there is a lack of technicians in Europe, so if each organisation is obliged to have its own personel in each line station (sometimes, only for one day stop or transit by day), this lack will be more important.</p> <p>Is it possible to clarify what is the position of the EASA?</p> <p>If it is possible to have many PMO, are we obliged to declared them each time we need a CRS or only one time?</p> <p>For example, at Bremen, our subcontractor is NAYAK, so can we said that : "NAYAK is our PMO at BRE, Régional is our PMO at CFE, ..." or do we have to say "today, our aircraft need a CRS at BRE, so we declare you that our PMO will be NAYAK"?</p> |
| response | <p><i>Accepted</i></p>  |
|          | <p>The Agency has significantly simplified the proposal (only CRS and final CRS). Please refer to the Explanatory Note of the CRD.</p> <p>In addition, it has been made fully clear that the responsibility for the airworthiness of the aircraft belongs to the CAMO (AMC M.A.306(a)3 and AMC 145.A.50(b)2).</p> <p>The concept of Primary Maintenance Organisation has been removed, although it is the responsibility of the Operator to designate an organisation responsible for issuing the final CRS.</p>  |

**A. Explanatory Note - V. Regulatory Impact Assessment - 3. Impacts - b. All impacts identified - D. Social**

p. 23-24

|          |              |  |
|----------|--------------|--|
| comment  | 139          | comment by: <i>Association of Dutch Aviation Technicians NVLT</i>  |
|          |              | <p>1. The main purpose of the category A certifying staff is that they are working in a line maintenance environment.</p> <p>2.</p> <ul style="list-style-type: none"> <li>• By introducing the single CRS in this NPA it will result in the fact that the category A is not allowed to issue a CRS anymore if a other certifying staff (A,B1,B2) has issued a MRC in the operators techlog ATL.</li> </ul> <p>• According 145.A.30 the category A is allowed to issue a CRS after he/she has accomplished minor scheduled line maintenance and or simple defect rectification, this work has to be performed by them self's.</p> <p>1.</p> <ul style="list-style-type: none"> <li>• This problem did not occur with the multiple releases, if for instance several complaints had been released by certifying staff (B1,B2) in the ATL, and there was still a complaint or inspection left for the category A certifying staff.</li> <li>• He was allowed as last certifying staff to issue a CRS for this complaint or inspection.</li> <li>• After this last CRS the aircraft was considered ready for release to service.</li> </ul> <p>Conclusion: The operationally of the category A certifying staff in a line maintenance environment will be diminished by this NPA.</p> |
| response | <i>Noted</i> | <p>The Agency has significantly simplified the proposal (only CRS and final CRS). Please refer to the Explanatory Note of the CRD.</p> <p>Nevertheless, with the new proposal the situation is similar to the one exposed in your comment: The category A certifying staff will be allowed to issue the CRS for the work they have accomplished, but will only be able to issue the final CRS if no other certifying staff have been involved.</p> <p>Please refer to the new Regulatory Impact Assessment contained in this CRD.</p>  |
| comment  | 155          | comment by: <i>Ludwig Hessler</i>  |
|          |              | <p>We do not see the positive impact on working environment due to coordination when more than one organisation is involved. The coordination has to be done today from the CAMO. The coordination task has always to be done either by the CAMO or by the "PMO".</p>  |
| response | <i>Noted</i> | <p>The Agency has significantly simplified the proposal (only CRS and final CRS). Please refer to the Explanatory Note of the CRD.</p>   |

In addition, it has been made fully clear that the responsibility for the airworthiness of the aircraft belongs to the CAMO (AMC M.A.306(a)3 and AMC 145.A.50(b)2).

The concept of Primary Maintenance Organisation has been removed, although it is the responsibility of the Operator to designate an organisation responsible for issuing the final CRS.

**A. Explanatory Note - V. Regulatory Impact Assessment - 3. Impacts - b. All impacts identified - F. Foreign comparable regulatory requirements**

p. 24

comment

32

comment by: *AEA*

Page 24, the possible impact of option 6 on existing bilateral agreements, particularly with the USA, is widely underestimated.

Actually, EASA will be confronted with two possibilities:

- impose the CMR/BMRC/CRS + PMO concept to the US Part 145 AMO's
- considers the current FAA system of release to service equivalent in term of safety.

As it is very unlikely that both the FAA and the US Industry accept the CMR/BMRC/CRS + PMO concept, if EASA considers the FAA system equivalent in term of safety:

- why imposing the overly complex CMR/BCMR/CRS + PMO to the European Industry only if there is no safety added?
- the European Industry, when contracting work to US Maintenance Organisations, will have to deal with a different release to service concept than with European MO, thereby completely destroying the NPA objective of having a "single release system"
- how can a CAMO designate a PMO in the USA if this PMO does not rely on a CMR/BMRC/CRS system?

All this shows that, unless EASA manages to impose the CMR/BMRC/CRS + PMO concept to the FAA, the NPA implementation poses critical problems in the relationship with US AMO's.

response

*Accepted*

The Agency has significantly simplified the proposal (only CRS and final CRS). Please refer to the Explanatory Note of the CRD.

In addition, it has been made fully clear that the responsibility for the airworthiness of the aircraft belongs to the CAMO (AMC M.A.306(a)3 and AMC 145.A.50(b)2).

The concept of Primary Maintenance Organisation has been removed, although it is the responsibility of the Operator to designate an organisation responsible for issuing the final CRS.

**A. Explanatory Note - V. Regulatory Impact Assessment - 3. Impacts - b. All impacts identified - G. Equity and fairness**

p. 25

|          |  |                 |
|----------|--|-----------------|
| comment  | 33   | comment by: AEA |
|          | Option 6 is qualified as the "best compromise with minimum impact on stakeholders". However it has been demonstrated that the impact of such an option are very significant and constantly underestimated under this RIA (see also comments 27 to 32). |                 |
| response | <i>Noted</i>   |                 |
|          | The Agency has significantly simplified the proposal (only CRS and final CRS). Please refer to the Explanatory Note of the CRD.  |                 |
|          | In addition, it has been made fully clear that the responsibility for the airworthiness of the aircraft belongs to the CAMO (AMC M.A.306(a)3 and AMC 145.A.50(b)2).  |                 |
|          | The concept of Primary Maintenance Organisation has been removed, although it is the responsibility of the Operator to designate an organisation responsible for issuing the final CRS.  |                 |

**A. Explanatory Note - V. Regulatory Impact Assessment - 4. Summary and Final Assessment**

p. 25

|         |  |                 |
|---------|--|-----------------|
| comment | 34   | comment by: AEA |
|         | Option 6 is presented as the option "causing the lowest impact on stakeholders". However, as shown in comments 26 to 33, its impacts on Approved Maintenance organisations and Continuous Airworthiness Management Organisations have been constantly underestimated, if not denied, across this RIA:  |                 |
|         | <ul style="list-style-type: none"> <li>• the cost of its possible implementation, in term of procedure changes, contract renegotiations, maintenance personnel and flight crew training, Technical Log change is widely underestimated,</li> <li>• the introduction of the extremely complex concept of MRC/BMRC/CRS + PMO is likely to have an adverse impact on flight safety, by increasing the risk of maintenance personnel and flight crew not properly understanding or mastering the new release to service concept and the respective implications of the new MRC, BMRC and CRS,</li> <li>• the possible impact on bilateral agreements has not been properly assessed and need be thoroughly reviewed</li> </ul> |                 |
|         | This, associated to the fact that no clear explanation or justification on the safety issues that option 6 is supposed to solve, makes it clear that option 1 "do nothing" is by far preferable to option 6.   |                 |
|         | Therefore the NPA should be withdrawn.   |                 |

response

*Noted*

The Agency has significantly simplified the proposal (only CRS and final CRS). Please refer to the Explanatory Note of the CRD.

In addition, it has been made fully clear that the responsibility for the airworthiness of the aircraft belongs to the CAMO (AMC M.A.306(a)3 and AMC 145.A.50(b)2).

The concept of Primary Maintenance Organisation has been removed, although it is the responsibility of the Operator to designate an organisation responsible for issuing the final CRS.

comment

167

comment by: *Airbus*

**1. PARAGRAPH / SECTION OUR COMMENT IS RELATED TO:**

NPA 2007-09 Explanatory Note, Chapter V. Regulatory Impact Assessment

**2. ~~PROPOSED TEXT~~ / COMMENT:**

The NPA explains that the working group could not reach consensus to choose 1 out of 5 options to regulate certification of maintenance and release to service.

2 of these 5 options are described as being well implemented in a number of EU Member States. Obviously, there are no adverse experiences in those States. So it has to be assumed these options result in sufficient levels of safety, thus representing a "best industry/regulatory practice".

To achieve consensus, a 6<sup>th</sup> option had to be elaborated and assessed for its regulatory impact.

When analyzing the pros and cons of the 6 options, the added option 6, in terms of

- Safety, could increase the level of safety, but conversely would make maintenance certification more complex,
- Economic aspects, has negative or indefinite impacts,
- Social aspects, has positive or indefinite impacts which can be interpreted as an increased need for coordinating personnel, leading to additional cost impacts and administrative burdens for industry.

In particular the implementation of a new and more complex system for all Member States (see "safety aspects" above) could create confusion, uncertainties and consequently, safety gaps. Thus, the stated increase of level of safety can only be expected after a more or less long implementation phase compared to the established and proven systems in a large group of EU Member States.

**In this respect, the Regulatory Impact Assessment (RIA) does not clearly justify the chosen option 6.**

Based on the data provided in the RIA, the concern must be raised that the second best solution has been selected. The aforesaid leads to the conclusion, that:

- The NPA should be stopped for further work on the RIA, than possibly be subject to substantial rework dependant on the revised RIA, and –at least- be subject to a new consultation loop.
- The working group composition for further work needs to be more balanced between industry and Authorities.
- The goal should be an EU system for certification of maintenance and release to service based on lessons learnt and best industry practice to improve the level of safety and strengthen the EU aviation industry. In parallel and outside rulemaking procedures, mechanisms may be needed to support those Member States who may be less experienced or be faced with severe implementation issues.

In addition to the RIA issues, the “further work”-phase and the “more-balanced”-working group proposed above should also be used to discuss any comments requesting NPA-rework. In a parallel comment to specified Part M and Part 145 requirement/AMC, Airbus has identified issues that need consideration.

For Airbus, maintenance and its certification are too essential for aviation safety to be regulated under time and –possibly- political pressure.

**3. RATIONALE / REASON / JUSTIFICATION:**

Airbus has concerns about implementation issues and resulting safety gaps, economic and administrative burdens for industry, as well as about traceability and transparency of this rulemaking.

response

*Partially accepted*

The NPA proposal has been fully reviewed by the working group plus additional experts (from Industry and EASA).

The proposed concept has been significantly simplified (only CRS and final CRS) and a 1 year transition phase has been introduced in order for the NAAs and Stakeholders to adapt.

A new Regulatory Impact Assessment has been performed, which is part of the Explanatory Note to this CRD.

comment

231

comment by: *Liam SISK*

The disagreements within the group are clear from 4.a. "Summary and Final Assessment" and with the decision to develop a new option 6 which combines elements of other options it was inevitable that industry support for this selection will not be forthcoming. We need a simpler approach to this matter

response

which does not introduce the complexity contained within this NPA.

*Accepted*

The concept has been fully reviewed by the Review Group (working group plus 2 additional experts from the Industry and the Agency), and the proposal has been significantly simplified (only CRS and final CRS). Please refer to the Explanatory Note of this CRD.

**B. Draft Rules - I. Draft Opinion (EC) No 2042/2003**

p. 27

comment

149

comment by: *Association of Dutch Aviation Technicians NVLT*

**DRAFT OPINION (EC) NO 2042/2003**

Commission Regulation (EC) No 2042/2003 is hereby amended as follows:

**Article 2 "Definitions" is revised as follows:**

**Definitions**

Within the scope of the basic Regulation, the following definitions shall apply:

(b) 'certifying staff' means personnel responsible for the certification of maintenance carried out on an aircraft or a component.

To our point of view this new definition of the responsibility of the certifying staff is not complete.

**Before NPA 2007-09 COMMISSION REGULATION (EC) No 2042/2003**

*Article 2*

**Definitions**

(b) 'certifying staff' means personnel responsible for the release of an aircraft or a component after maintenance

;

Taken the official definition in account:

certifying staff is still and stays responsible for the releasing an aircraft or a component, however one has to define the word certifying staff in the official categories A,B1,B2,and C, and component.

The responsibilities must be absolutely clear for all interested parties such as the certifying staff involved, but also for the 145-organisation and Operator.

**After NPA 2007-09 COMMISSION REGULATION (EC) No 2042/2003**

*Article 2*

**Definitions**

(b) 'certifying staff' category A, B1 and B2 means personnel responsible for the certification of maintenance by issuing a maintenance release certificate and for releasing of an aircraft to service by issuing

a certificate of release to service.

(b1) 'certifying staff' category C means personnel responsible for the certification of maintenance by issuing

a base maintenance release certificate and for releasing of an aircraft to service by issuing

a certificate of release to service.

(b2) component 'certifying staff' means personnel responsible for the certification of maintenance carried on a component out the aircraft by issuing a certificate of release to service for that component.

response

*Not accepted*

Based on the new concept proposed by the CRD the Agency does not consider it necessary to amend the definitions contained in the current rule

comment

166

comment by: Airbus

**1. PARAGRAPH / SECTION OUR COMMENT IS RELATED TO:**

Article 2 "definitions"

Part-M paragraph M.A.708 Continuing airworthiness management

Part-145 paragraph 145.A.50 Certification of Maintenance

Part-145 paragraph 145.A.55 Maintenance records

AMC145.A.50(b)(2) certification of maintenance

AMC145.A.50(b)(3) certification of maintenance

**2. PROPOSED TEXT / COMMENT:**

The 5 following proposed statements are unclear:

M.A.708 Continuing airworthiness management

*"nominate a primary maintenance organisation (PMO)"*

*"the Operator shall inform the PMO of any maintenance ordered to any other contractors".*

## 145.A.55 Maintenance records

*"when working under the lead of a primary maintenance organisation (PMO)"*

*" the PMO shall provide the Operator with a copy of any document received from those organisations being coordinated"*

## AMC145.A.50(b)(2) certification of maintenance

*"However, the PMO issuing the CRS is not responsible for the appropriate performance of the work certified by each MRC or for the use of appropriate maintenance personnel or certifying staff during such work"*

The underlined statements introduce ambiguity and do not clarify the responsibility of the Operator versus the PMO to "ensure that all work ordered by the Operator has been properly accomplished or deferred" as identified in background information given in the NPA section A-9 for multiple releases issues.

## 145.A.50 Certification of Maintenance

We agree that the proposed concept of MRC is a valuable clarification that a Part-145 organisation is not certifying that an aircraft is ready for service. To the purpose of clarification, we think that the MRC could replace the CRS under 145.A.50. Under such assumption that the privilege of a Part-145 organisation becomes limited to issue a MRC, the privilege to issue a CRS shall consequently be transferred to the Operator under M.A.708.

We think that the Operator ordering the Maintenance to several Part-145 organisations by **SIGNED CONTRACT** is the unique entity **CAPABLE** *"to ensure that all maintenance ordered by the Operator has been completed or properly deferred and it has been ensured that all activities were properly coordinated."*

## Conclusion:

- a) We think the proposed amendments do not remove the inconsistencies identified in background information given in the NPA section A-9.
- b) We think the proposed amendments of M.A.708 and 145.A.50 (and impact on other paragraphs) shall be reworked for compliance with the existing M.A.201 & appendix 1 and appendix XI to AMC to M.A.708 (c)

## M.A.201 Responsibilities

- (a) The owner is responsible for the continuing airworthiness of an aircraft and shall ensure that no flight takes place unless:
  - the aircraft is maintained in an airworthy condition, and;
  - any operational and emergency equipment fitted is correctly installed and serviceable or clearly identified as unserviceable, and;
  - the maintenance of the aircraft is performed in accordance with the

approved maintenance programme as specified in M.A.302.

(h) In the case of commercial air transport the operator is responsible for the continuing airworthiness of the aircraft it operates and shall:

- be approved in accordance with Part-145 or contract such an organisation; and
- ensure that paragraph (a) is satisfied.

## Appendix 1

5.1. Obligations of the continuing airworthiness management approved organisation:

...

- organise for all maintenance to be carried out by an approved maintenance organisation
- organise for all applicable airworthiness directives to be applied,
  - organise for all defects discovered during scheduled maintenance or reported by the owner to be corrected by an approved maintenance organisation,
- coordinate scheduled maintenance, the application of airworthiness directives, the replacement of life limited parts, and component inspection requirements,

appendix XI to AMC to M.A.708 (c)

## 2.3. Subcontracting

The maintenance contract should specify under which conditions the Part-145 approved organisation may subcontract tasks to a third party (whether this third party is Part-145 approved or not)..

### 2.21. Exchange of information.

Each time exchange of information between the operator and the Part-145 approved organisation is necessary, the contract should specify what information should be provided and when (i.e. on what occasion or at what frequency), how, by whom and to whom it has to be transmitted.

### 2.22. Meetings.

In order that the competent authority may be satisfied that a good communication system exists between the Operator and the Part-145 approved organisation, the terms of the maintenance contract should include the provision for a certain number of meetings to be held between both parties.

Contract review.

Workscope planning meeting.

Technical meeting.

Quality meeting.

c) Finally, to remove inconsistencies linked to the multiple releases issues identified in background information given in the NPA section A-9, we think that additional rework might be needed on:

- Article 2 “Definitions” to be reviewed in order to define what is “maintenance coordination” between an Operator and several contracted Part-145 organisations.
- Part-M paragraph M.A.201 (h) also to be reviewed to define “maintenance coordination requirement” for the Operator who contracts several Part-145 organisations.
- Part-M paragraph M.A.708 (c), AMC to M.A.708 (c) and associated Appendix XI, Part-145 paragraph 145.A.75 (b) and 145.A.70 (a), AMC to 145.A.75 (b) and 145.A.70 (b) to be reviewed in order to define “sub-contracting work packages to several third parties” for a Part-145 approved organisation contracting and coordinating several Part-145 approved organizations.

### 3. RATIONALE / REASON / JUSTIFICATION:

#### 1) Industrial and legal approach

The NPA propose a new concept of PMO “Primary Maintenance Organisation”. Such PMO is supposed to “properly coordinate” works to be performed by several Part-145 organisations without signed contract between these Part-145 organisations and the PMO.

In such condition, we think that the PMO has no **CAPABILITY** to ensure proper coordination of other Part-145 organisations without mutual agreements on:

- each individual Part-145 organisation deliverables and interface with others Part-145 organisations and sub-tiers: work package contents & planning especially for component re-assembly, aircraft zone closure and tests
- the PMO Quality requirement (audits, inspections, defect reporting, rework, sub-tier qualification)
- the condition for work final acceptance
- PMO resources needed to continuously/finally ensure that all work ordered by an Operator has been properly accomplished e.g specialized services, engines specialists, qualified inspectors.

We think this is not acceptable with regards to the risk management in place in the Aeronautic Maintenance industry where a **SIGNED CONTRACT** is the unique document that can ensure unambiguous relationship between several entities to deliver safe product or services. With the foreseen NPA, no direct contract will

exist between the PMO and the various organizations; therefore, the PMO has no relationship and empowerment towards them.

We see a risk that “nominating” a PMO, the Operator is transferring his Continuing Airworthiness Management responsibilities defined in M.A.201 and appendix 1 to a PMO under an “administrative process” (e.g documentary review to check that MRC documents are stamped without physical inspection of the work performed, checking lists of personnel without assessment of qualifications, ..etc):

- this will increase maintenance administration costs to the detriment of business, and
- this will not decrease safety issues linked to multiple releases identified in background information given in the NPA section A-9.

We think that “proper coordination” is already defined in the M.A.201(h) and associated AMC: **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.

We think that “proper coordination” shall remain the responsibility of the Operator or the contracted CAMO. Such coordination shall be ensured through signed contractual arrangement where Continued Airworthiness Management responsibilities (M.A.201 and appendix 1) are agreed between all involved parties: the Operator ordering and coordinating maintenance and Part-145 organisations & contracted third parties performing the work.

## 2) Regulatory approach: International harmonization

As the Maintenance Business takes place in International environment, we also think that our approach remains consistent with International harmonization efforts and especially supports the bilateral agreement with FAA rules as exposed in:

CFR title 14 § 43.9 Content, form, and disposition of maintenance, preventive maintenance, rebuilding, and alteration records

(a) *Maintenance record entries.* Except as provided in paragraphs (b) and (c) of this section, each person who maintains, performs preventive maintenance, rebuilds, or alters an aircraft, airframe, aircraft engine, propeller, appliance, or component part shall make an entry in the maintenance record of that equipment containing the following information:

(4) If the work performed on the aircraft, airframe, aircraft engine, propeller, appliance, or component part has been performed satisfactorily, the signature, certificate number, and kind of certificate held by the person approving the work. **The signature constitutes the approval for return to service only for the work performed.**

CFR Title 14 § 121.709 Airworthiness release or aircraft log entry.

(b) The airworthiness release or log entry required by paragraph (a) of this section must—

(2) Include a certification that—

(ii) All items required to be inspected were **inspected by an authorized person who determined that the work was satisfactorily completed;**

(iv) **So far as the work performed is concerned, the aircraft is in condition for safe operation;** and

(3) Be signed by an authorized certificated mechanic or repairman except that a certificated repairman may **sign the release or entry only for the work for which he is employed and certificated.**

response *Partially accepted*

The proposed concept has been simplified (only CRS and final CRS). However, it is still based in the concept of maintenance certification by each organisation involved (CRS), plus issuance of a Final CRS to certify (and tell the pilot) that all the maintenance ordered had been completed.

This does not mean the the aircraft is airworthy, since the responsibility for the airworthiness of the aircraft belongs to the CAMO and goes beyond the maintenance ordered. This has been made fully clear in AMC M.A.306(a)3 and AMC 145.A.50(b)2.

The concept of Primary Maintenance Organisation has been removed, although it is the responsibility of the Operator to designate an organisation responsible for issuing the final CRS.

Please refer to the new Regulatory Impact Assessment contained in the Explanatory Note of this CRD

**B. Draft Rules - I. Draft Opinion (EC) No 2042/2003 - A) Part-M** p. 28

comment *140* comment by: *Association of Dutch Aviation Technicians NVLT*

Will in Part-M all the related release to service items altered and added with the new feature MRC and BMRC?

response *Noted*

The Agency does not fully understand the question. If the intention of the question is to know whether the proposed changes will be extended to Part-M Subpart F maintenance organisations, the reply is "not". The reason is that the maintenance environment is much simpler, with fewer organisations involved, and there is not the same need of coordination.

comment *202* comment by: *Walter Gessky*

**Delete the proposed changes and instead of the complicated changes proposed in NPA No 2007-09 the following changes to the**

**current requirement are proposed:**

**1. M.A. 201**

Add a new lit (k)

**“(k) in case where the owner of an aircraft has not contracted the task associated with continued airworthiness as specified in M.A. Subpart G, a written maintenance contract for each work order including the tasks of M.A.708(b), Items 3, 4, 5, 6, 7, 8 and 10 shall be established between the owner and an approved maintenance organisation.”**

**Justification:**

This provides the proper link in the case where the aircraft is not in a controlled environment (non commercial operation only) for commercial operation this is the responsibility of the CAMO.

**2. M.A. 708(b) 4.**

Change the text:

**“4. Ensure that the work order issued for all maintenance is to be carried out is in accordance with the approved maintenance programme and the work carried out is released in accordance with M.A. Subpart H.”**

**Justification:**

The CAMO has to ensure that the work order issued includes all maintenance required by the maintenance programme. A CRS is only valid when the owner/CAMO verifies that all tasks due according to the maintenance programme are accomplished ~~complied with~~.

response

*Partially accepted*

The concept has been fully reviewed by the Review Group (working group plus 2 additional experts from the Industry and the Agency), and the proposal has been significantly simplified (only CRS and final CRS). Please refer to the Explanatory Note of this CRD.

**B. Draft Rules - I. Draft Opinion (EC) No 2042/2003 - A) Part-M - M.A.306(a)2** p. 28

comment

52

comment by: FAA

Impact on part “M”

M.A. 306(a) 2. Operators Technical Log

2. The current aircraft certificate of release to service **and associated maintenance release certificates** and:

|          |  |    |   |
|----------|--|----|---|
|          | <p>Comment:</p> <p>We are concerned with the impact of "and associated maintenance release certificates" on US industry, providing all RTS certificates. The U.S only require those records applicable to the operator rule requirements and/or i.e. 91.417. Also the proposed requirement does not say copies of! There may be a problem with this down the road over copy of. People will start asking for the original document if a copy is not specified.</p>   |    |   |
| response | <p><i>Noted</i></p>  |    |   |
|          | <p>In response to the comments received the Agency has significantly simplified the proposed concept, being now based on CRS (Certificate of Release to Service) issued by each Part-145 organisation and a final CRS issued before flight. Both the CRS and final CRS have the same "statement" and both are incorporated in the technical log of the operator by signing the corresponding fields. The requirements contained in M.A.306(a)2 affect only to the aircraft release. Please note that all the changes introduced by the NPA and now by the CRD only affect aircraft maintenance, and not component maintenance in a workshop.</p> |    |   |
| comment  | <table border="1"> <tr> <td>75</td> <td>comment by: <i>ICAA</i></td> </tr> </table>   | 75 | comment by: <i>ICAA</i>   |
| 75       | comment by: <i>ICAA</i>  |    |   |
|          | <p>The new regulation will most probably mean that existing tech logs have to be revised. Obviously this will mean an increased economic burden for both the industry and the competent authority.</p>   |    |   |
| response | <p><i>Partially accepted</i></p>   |    |   |
|          | <p>The concept has been fully reviewed by the Review Group (working group plus 2 additional experts from the Industry and the Agency), and the proposal has been significantly simplified (only CRS and final CRS). Please refer to the Explanatory Note of this CRD.</p> <p>Despite of that, the proposed changes will imply some amendments to the Technical Log. For that reason, a 1 year transition period has been proposed.</p>   |    |   |
| comment  | <table border="1"> <tr> <td>94</td> <td>comment by: <i>Swedish Transport Agency, Civil Aviation Department (Transportstyrelsen, Luftfartsavdelningen)</i></td> </tr> </table>   | 94 | comment by: <i>Swedish Transport Agency, Civil Aviation Department (Transportstyrelsen, Luftfartsavdelningen)</i> |
| 94       | comment by: <i>Swedish Transport Agency, Civil Aviation Department (Transportstyrelsen, Luftfartsavdelningen)</i>  |    |   |
|          | <p><b>M.A. 306(a)2</b><br/>                 The new regulation will most probably mean that existing tech logs have to be revised. Obviously this will mean an increased economic burden for both the industry and the competent authority.</p>  |    |   |
| response | <p><i>Partially accepted</i></p>   |    |   |
|          | <p>The concept has been fully reviewed by the Review Group (working group plus 2 additional experts from the Industry and the Agency), and the proposal has been significantly simplified (only CRS and final CRS). Please refer to the Explanatory Note of this CRD.</p> <p>Despite of that, the proposed changes will imply some amendments to the</p>   |    |   |

Technical Log. For that reason, a 1 year transition period has been proposed.

comment 123 comment by: CAA-Norway

The new regulation will most probably mean that existing tech logs have to be revised. Obviously this will mean an increased economic burden for both the industry and the competent authority.

response *Partially accepted*

The concept has been fully reviewed by the Review Group (working group plus 2 additional experts from the Industry and the Agency), and the proposal has been significantly simplified (only CRS and final CRS). Please refer to the Explanatory Note of this CRD.

Despite of that, the proposed changes will imply some amendments to the Technical Log. For that reason, a 1 year transition period has been proposed.

comment 176 comment by: CAA Finland, Communications

The new regulation will most probably mean that existing tech logs have to be revised. Obviously this will mean an increased economic burden for both the industry and the competent authority.

response *Partially accepted*

The concept has been fully reviewed by the Review Group (working group plus 2 additional experts from the Industry and the Agency), and the proposal has been significantly simplified (only CRS and final CRS). Please refer to the Explanatory Note of this CRD.

Despite of that, the proposed changes will imply some amendments to the Technical Log. For that reason, a 1 year transition period has been proposed.

**B. Draft Rules - I. Draft Opinion (EC) No 2042/2003 - A) Part-M - M.A.708(b)7**

p. 28

comment 35 comment by: AEA

This concept of PMO constitutes a considerable change to the CAMO responsibility. So far, the CAMO is responsible for controlling the performance of required maintenance through its maintenance management system, allowing CAMO to tailor such a system to their own scope and complexity of activity and contractual arrangements.

The NPA if adopted would force CAMO to rely on PMO to ensure that all ordered maintenance has been performed. However, it appears that the PMO being the organisation issuing the final CRS is also the last organisation to touch the aircraft, in other words: in most cases a maintenance organisation. There is no objective reasons to force CAMO's to use such organisations to perform this tasks, knowing that these organisation are not the more competent to do it..

|          |   |
|----------|---|
|          | <p>It is not acceptable that an NPA forces CAMO's into an organisational scheme that is not likely to provide the more efficient system both in term of safety and economy: the rule should remain at a level where objectives are set, rather than solutions imposed (in other words: "regulating by objectives")</p>  |
| response | <p><i>Accepted</i></p>  |
|          | <p>The concept of PMO has been removed</p>  |
| comment  | <p>36 <span style="float: right;">comment by: <i>AEA</i></span></p>   |
|          | <p>The very fact that the rule introduces the possibility of several sequential PMO's (which results de facto in a multiple release system) is a demonstration that the MRC/BMRC/CRS + PMO concept is unable to provide a generic solution for a single release to service system</p>   |
| response | <p><i>Accepted</i></p>  |
|          | <p>The concept of PMO has been removed</p>  |
| comment  | <p>76 <span style="float: right;">comment by: <i>ICAA</i></span></p>  |
|          | <p>If an operator nominates a PMO to take the responsibility as per 145.A.50 (CRS), there must be a written contract. Nothing is mentioned about contracts. Also if the operator nominates several PMO:s there must be a contract signed with each one being nominated.</p> <p>The interpretation is that the responsibility for contracting maintenance is now taken from the CAMO and transferred to the PMO.</p> <p>Furthermore, it is not clear who is responsible for quality monitoring of the additional tasks of the nominated PMO involved in coordination of work performed by other MOs.</p> |
| response | <p><i>Accepted</i></p>  |
|          | <p>The concept of PMO has been removed</p>  |
| comment  | <p>95 <span style="float: right;">comment by: <i>Swedish Transport Agency, Civil Aviation Department (Transportstyrelsen, Luftfartsavdelningen)</i></span></p>  |
|          | <p><b>M.A. 708(b)7</b></p> <p>If an operator nominates a PMO to take the responsibility as per 145.A.50 (CRS), there must be a written contract. Nothing is mentioned about contracts. Also if the operator nominates several PMO:s there must be a contract signed with each one being nominated.</p> <p>The interpretation is that the responsibility for contracting maintenance is now taken from the CAMO and transferred to the PMO.</p> <p>Furthermore, it is not clear if the "nomination" rests within the Quality System of</p>   |

|          |                                     |
|----------|-------------------------------------|
|          | the operator or with the PMO.       |
| response | <i>Accepted</i>                     |
|          | The concept of PMO has been removed |

|          |  |                               |
|----------|--|-------------------------------|
| comment  | 124  | comment by: <i>CAA-Norway</i> |
|          | <p>If an operator nominates a PMO to take the responsibility as per 145.A.50 (CRS), there must be a written contract. Nothing is mentioned about contracts. Also if the operator nominates several PMO:s there must be a contract signed with each one being nominated.</p> <p>The interpretation is that the responsibility for contracting maintenance is now taken from the CAMO and transferred to the PMO.</p> <p>Furthermore, it is not clear if the "nomination" rests within the Quality System of the operator or with the PMO.</p> |                               |
| response | <i>Accepted</i>  |                               |
|          | The concept of PMO has been removed  |                               |

|          |   |                                   |
|----------|---|-----------------------------------|
| comment  | 156   | comment by: <i>Ludwig Hessler</i> |
|          | <p>This change would transfer the responsibility for the management of the maintenance to the Part-145 organisations (here to the PMO). But if more than one PMO is involved in the maintenance the responsibility of the management is partly at the CAMO and partly at the PMOs.</p> <p>We see the lost of the clear responsibility for the management of the maintenance. This should remain at the Part-M CAMO as it should be today (and is new in some European countries). A PMO is not necessary.</p> |                                   |
| response | <i>Accepted</i>   |                                   |
|          | The concept of PMO has been removed   |                                   |

|         |   |                           |
|---------|---|---------------------------|
| comment | 166 ❖   | comment by: <i>Airbus</i> |
|         | <p><b>1. PARAGRAPH / SECTION OUR COMMENT IS RELATED TO:</b></p> <p>Article 2 "definitions"</p> <p>Part-M paragraph M.A.708 Continuing airworthiness management</p> <p>Part-145 paragraph 145.A.50 Certification of Maintenance</p> <p>Part-145 paragraph 145.A.55 Maintenance records</p> <p>AMC145.A.50(b)(2) certification of maintenance</p> |                           |

AMC145.A.50(b)(3) certification of maintenance

## 2. PROPOSED TEXT / COMMENT:

The 5 following proposed statements are unclear:

M.A.708 Continuing airworthiness management

*"nominate a primary maintenance organisation (PMO)"*

*"the Operator shall inform the PMO of any maintenance ordered to any other contractors".*

145.A.55 Maintenance records

*"when working under the lead of a primary maintenance organisation (PMO)"*

*" the PMO shall provide the Operator with a copy of any document received from those organisations being coordinated"*

AMC145.A.50(b)(2) certification of maintenance

*"However, the PMO issuing the CRS is not responsible for the appropriate performance of the work certified by each MRC or for the use of appropriate maintenance personnel or certifying staff during such work"*

The underlined statements introduce ambiguity and do not clarify the responsibility of the Operator versus the PMO to "ensure that all work ordered by the Operator has been properly accomplished or deferred" as identified in background information given in the NPA section A-9 for multiple releases issues.

145.A.50 Certification of Maintenance

We agree that the proposed concept of MRC is a valuable clarification that a Part-145 organisation is not certifying that an aircraft is ready for service. To the purpose of clarification, we think that the MRC could replace the CRS under 145.A.50. Under such assumption that the privilege of a Part-145 organisation becomes limited to issue a MRC, the privilege to issue a CRS shall consequently be transferred to the Operator under M.A.708.

We think that the Operator ordering the Maintenance to several Part-145 organisations by **SIGNED CONTRACT** is the unique entity **CAPABLE** *"to ensure that all maintenance ordered by the Operator has been completed or properly deferred and it has been ensured that all activities were properly coordinated."*

Conclusion:

a) We think the proposed amendments do not remove the inconsistencies identified in background information given in the NPA section A-9.

b) We think the proposed amendments of M.A.708 and 145.A.50 (and impact on

other paragraphs) shall be reworked for compliance with the existing M.A.201 & appendix 1 and appendix XI to AMC to M.A.708 (c)

#### M.A.201 Responsibilities

- (a) The owner is responsible for the continuing airworthiness of an aircraft and shall ensure that no flight takes place unless:
- the aircraft is maintained in an airworthy condition, and;
  - any operational and emergency equipment fitted is correctly installed and serviceable or clearly identified as unserviceable, and;
  - the maintenance of the aircraft is performed in accordance with the approved maintenance programme as specified in M.A.302.

- (h) In the case of commercial air transport the operator is responsible for the continuing airworthiness of the aircraft it operates and shall:
- be approved in accordance with Part-145 or contract such an organisation; and
  - ensure that paragraph (a) is satisfied.

#### Appendix 1

5.1. Obligations of the continuing airworthiness management approved organisation:

...

- organise for all maintenance to be carried out by an approved maintenance organisation
- organise for all applicable airworthiness directives to be applied,
  - organise for all defects discovered during scheduled maintenance or reported by the owner to be corrected by an approved maintenance organisation,
- coordinate scheduled maintenance, the application of airworthiness directives, the replacement of life limited parts, and component inspection requirements,

appendix XI to AMC to M.A.708 (c)

#### 2.3. Subcontracting

The maintenance contract should specify under which conditions the Part-145 approved organisation may subcontract tasks to a third party (whether this third party is Part-145 approved or not)..

### 2.21. Exchange of information.

Each time exchange of information between the operator and the Part-145 approved organisation is necessary, the contract should specify what information should be provided and when (i.e. on what occasion or at what frequency), how, by whom and to whom it has to be transmitted.

### 2.22. Meetings.

In order that the competent authority may be satisfied that a good communication system exists between the Operator and the Part-145 approved organisation, the terms of the maintenance contract should include the provision for a certain number of meetings to be held between both parties.

Contract review.

Workscope planning meeting.

Technical meeting.

Quality meeting.

c) Finally, to remove inconsistencies linked to the multiple releases issues identified in background information given in the NPA section A-9, we think that additional rework might be needed on:

- Article 2 "Definitions" to be reviewed in order to define what is "maintenance coordination" between an Operator and several contracted Part-145 organisations.
- Part-M paragraph M.A.201 (h) also to be reviewed to define "maintenance coordination requirement" for the Operator who contracts several Part-145 organisations.
- Part-M paragraph M.A.708 (c), AMC to M.A.708 (c) and associated Appendix XI, Part-145 paragraph 145.A.75 (b) and 145.A.70 (a), AMC to 145.A.75 (b) and 145.A.70 (b) to be reviewed in order to define "sub-contracting work packages to several third parties" for a Part-145 approved organisation contracting and coordinating several Part-145 approved organizations.

## 3. RATIONALE / REASON / JUSTIFICATION:

### 1) Industrial and legal approach

The NPA propose a new concept of PMO "Primary Maintenance Organisation". Such PMO is supposed to "properly coordinate" works to be performed by several Part-145 organisations without signed contract between these Part-145 organisations and the PMO.

In such condition, we think that the PMO has no **CAPABILITY** to ensure proper

coordination of other Part-145 organisations without mutual agreements on:

- each individual Part-145 organisation deliverables and interface with others Part-145 organisations and sub-tiers: work package contents & planning especially for component re-assembly, aircraft zone closure and tests
- the PMO Quality requirement (audits, inspections, defect reporting, rework, sub-tier qualification)
- the condition for work final acceptance
- PMO resources needed to continuously/finally ensure that all work ordered by an Operator has been properly accomplished e.g specialized services, engines specialists, qualified inspectors.

We think this is not acceptable with regards to the risk management in place in the Aeronautic Maintenance industry where a **SIGNED CONTRACT** is the unique document that can ensure unambiguous relationship between several entities to deliver safe product or services. With the foreseen NPA, no direct contract will exist between the PMO and the various organizations; therefore, the PMO has no relationship and empowerment towards them.

We see a risk that "nominating" a PMO, the Operator is transferring his Continuing Airworthiness Management responsibilities defined in M.A.201 and appendix 1 to a PMO under an "administrative process" (e.g documentary review to check that MRC documents are stamped without physical inspection of the work performed, checking lists of personnel without assessment of qualifications, ..etc):

- this will increase maintenance administration costs to the detriment of business, and
- this will not decrease safety issues linked to multiple releases identified in background information given in the NPA section A-9.

We think that "proper coordination" is already defined in the M.A.201(h) and associated AMC: **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.

We think that "proper coordination" shall remain the responsibility of the Operator or the contracted CAMO. Such coordination shall be ensured through signed contractual arrangement where Continued Airworthiness Management responsibilities (M.A.201 and appendix 1) are agreed between all involved parties: the Operator ordering and coordinating maintenance and Part-145 organisations & contracted third parties performing the work.

## 2) Regulatory approach: International harmonization

As the Maintenance Business takes place in International environment, we also think that our approach remains consistent with International harmonization efforts and especially supports the bilateral agreement with FAA rules as exposed in:

CFR title 14 § 43.9 Content, form, and disposition of maintenance, preventive maintenance, rebuilding, and alteration records

(a) *Maintenance record entries.* Except as provided in paragraphs (b) and (c) of this section, each person who maintains, performs preventive maintenance, rebuilds, or alters an aircraft, airframe, aircraft engine, propeller, appliance, or component part shall make an entry in the maintenance record of that equipment containing the following information:

(4) If the work performed on the aircraft, airframe, aircraft engine, propeller, appliance, or component part has been performed satisfactorily, the signature, certificate number, and kind of certificate held by the person approving the work. **The signature constitutes the approval for return to service only for the work performed.**

CFR Title 14 § 121.709 Airworthiness release or aircraft log entry.

(b) The airworthiness release or log entry required by paragraph (a) of this section must—

(2) Include a certification that—

(ii) All items required to be inspected were **inspected by an authorized person who determined that the work was satisfactorily completed;**

(iv) **So far as the work performed is concerned, the aircraft is in condition for safe operation;** and

(3) Be signed by an authorized certificated mechanic or repairman except that a certificated repairman may **sign the release or entry only for the work for which he is employed and certificated.**

response

*Partially accepted*

The proposed concept has been simplified (only CRS and final CRS). However, it is still based in the concept of maintenance certification by each organisation involved (CRS), plus issuance of a Final CRS to certify (an tell the pilot) that all the maintenance ordered had been completed.

This does not mean the the aircraft is airworthy, since the responsibility for the airworthiness of the aircraft belongs to the CAMO and goes beyond the maintenance ordered. This has been made fully clear in AMC M.A.306(a)3 and AMC 145.A.50(b)2.

The concept of Primary Maintenance Organisation has been removed, although it is the responsibility of the Operator to designate an organisation responsible for issuing the final CRS.

Please refer to the new Regulatory Impact Assessment contained in the Explanatory Note of this CRD.

comment

177

comment by: *CAA Finland, Communications*

If an operator nominates a PMO to take the responsibility as per 145.A.50 (CRS), there must be a written contract. Nothing is mentioned about contracts. Also if

|          |   |
|----------|---|
|          | <p>the operator nominates several PMO:s there must be a contract signed with each one being nominated.</p> <p>The interpretation is that the responsibility for contracting maintenance is now taken from the CAMO and transferred to the PMO.</p> <p>Furthermore, it is not clear if the "nomination" rests within the Quality System of the operator or with the PMO.</p> |
| response | <i>Accepted</i>   |
|          | The concept of PMO has been removed.  |

|          |  |                    |
|----------|--|--------------------|
| comment  | 217  | comment by: UK CAA |
|          | <p>M.A.708 (b)7 Page 28</p> <p>Contradiction of responsibilities</p> <p>Justification:<br/>The proposal clearly requires the operator to nominate a PMO. The second paragraph then talks about several PMOs, which seems to contradict the first provision.</p> <p>It is recommended that if a PMO is not approved for both line and base maintenance, thereby being able to only act as a single PMO, then a base PMO and line PMO be nominated.</p> <p>This is building a level of complexity that has the potential for confusion and consequentially errors.</p> |                    |
| response | <i>Accepted</i>  |                    |
|          | The concept of PMO has been removed.   |                    |

|          |  |                    |
|----------|--|--------------------|
| comment  | 218  | comment by: UK CAA |
|          | <p>M.A.708 (b)7 Page 28</p> <p>M.A.708 amend the last sentence by replacing the word "one" with "organisation"</p> <p>Justification:<br/>Clarity</p> |                    |
| response | <i>Accepted</i>  |                    |

|         |  |                 |
|---------|--|-----------------|
| comment | 235  | comment by: ETF |
|         | <p>Regarding Paragraph M.A.708(b)</p> <p>The proposal to have one Primary Maintenance Organisation will give more clarity. Despite the fact that this addresses M.A. and 145 we question if there is an interface with OPS 1.175 (c) and 1.175 (i)(2).</p> |                 |

The consequences of the last sentence in the proposal on page 28 under M.A.708(b) is unclear in this respect. This brings up the following questions.  
 Is it possible for a multinational carrier to nominate one PMO in each country?  
 Is it possible for a multinational carrier to have type specific PMO?

response *Noted*

The proposed concept has been significantly simplified while achieving the objectives of the task. In particular, the responsibilities of the operator have been further clarified (AMC M.A.306(a)3, M.A.708(b)7, AMC M.A.708(b)7, new paragraph 1.14 introduced in the CAME, AMC 145.A.50(b)2). However, the concept of PMO has been removed.

**B. Draft Rules - I. Draft Opinion (EC) No 2042/2003 - A) Part-M - M.A.801**

p. 28

comment

55

comment by: *Aircraft Engineers International (AEI)*

**M.A.801 Aircraft certificate of release to service**

(a) Except for aircraft for which the certification of maintenance is performed released to service by

a Part-145 organisation, the certification of maintenance shall consist ~~on~~ of a certificate of release

to service shall be issued according to this Subpart.

Editorial Comment:

Replace ~~red stricken through~~-text with green underlined text

Reason:

Correct spelling

response

*Noted*

The change proposed by AEI is not relevant anymore in view of the new text proposed in the CRD

comment

219

comment by: *UK CAA*

M.A. 801 Page 28

Replace the word "on" with "of".

Justification:

Clarity - Grammatically incorrect

response

*Noted*

The change proposed by UK-CAA is not relevant anymore in view of the new text proposed in the CRD

**B. Draft Rules - I. Draft Opinion (EC) No 2042/2003 - B) Part-145**

p. 29

comment

141

comment by: *Association of Dutch Aviation Technicians NVLT*

Will in Part-145 all the related release to service items altered and added with the new feature MRC and BMRC?

response

*Noted*

The change proposed by NVLT is not relevant anymore in view of the new text proposed in the CRD. The original text contained in the current rule is maintained.

**B. Draft Rules - I. Draft Opinion (EC) No 2042/2003 - B) Part-145 - 145.A.30**

p. 29

comment

142

comment by: *Association of Dutch Aviation Technicians NVLT***Alteration Examples.**

**Before NPA 2007-09 145.A.30 Personnel requirements (1)(h)(i) B1 and B2** support staff shall ensure that all relevant tasks or inspections have been carried out to the required standard before the category C certifying staff issues the certificate of release to service.

**After NPA 2007-09 145.A.30 Personnel requirements (1)(h)(i) B1 and B2** support staff shall ensure that all relevant tasks or inspections have been carried out to the required standard before the category C certifying staff issues the certificate of release to service or a base maintenance release certificate.

response

*Not accepted*

The change proposed by NVLT is not relevant anymore in view of the new text proposed in the CRD.

comment

203

comment by: *Walter Gessky*

**Delete the proposed text and add instead of the complicated changes proposed in NPA No 2007-09 the following changes to the current texts are proposed:**

**145A.50(a)**

Change the following:

“(a) a release to service shall **only** be issued by appropriately authorised staff on

behalf of the organisation when it has been verified that all maintenance ordered **by a CAMO** has been..."

Add at the end:

**"In the case where the maintenance was not ordered by a CAMO, ~~then~~ the owner has to enter in a contract with the maintenance organisation to ensure that the content of the work ordered is in accordance with the maintenance programme."**

**Justification:**

The proposed wording establishes an official link between owner/CAMO and maintenance organisation with regard to the content of the work order.

The content of a work order issued by a CAMO is not questioned (M.A.708(b))

The owner in a non controlled environment is required to enter in a contract to ensure that the work order includes all required maintenance including AD`s.

response *Partially accepted*

The concept has been fully reviewed by the working group plus 2 additional experts from the Industry and the Agency, and the proposal has been significantly simplified (only CRS and final CRS). Please refer to the Explanatory Note of the CRD.

**B. Draft Rules - I. Draft Opinion (EC) No 2042/2003 - B) Part-145 - 145.A.35 p. 29-30**

comment

143

comment by: *Association of Dutch Aviation Technicians NVLT*

**Alteration Examples.**

**Before NPA 2007-09 145.A.35 Certifying staff and category B1 and B2 support staff**

(a) In addition to the appropriate requirements of 145.A.30(g) and (h), the organisation shall ensure that certifying staff and category B1 and B2 support staff have an adequate understanding of the relevant aircraft and/or components to be maintained together with the associated organisation procedures. In the case of certifying staff, this must be accomplished before the issue or re-issue of the certification authorisation.

'Category B1 and B2 support staff' means those category B1 and B2 staff in the base maintenance environment who do not hold necessarily certification privileges. 'Relevant aircraft and/or components', means those aircraft or components specified in the particular certification authorisation. 'Certification authorisation' means the authorisation issued to certifying staff by the organisation and which specifies the fact that they may sign certificates of release to service within the limitations stated in such authorisation on behalf of the approved organisation.

**After NPA 2007-09 145.A.35 Certifying staff and category B1 and B2 support staff**

(a) In addition to the appropriate requirements of 145.A.30(g) and (h), the organisation shall ensure that certifying staff and category B1 and B2 support staff have an adequate understanding of the relevant aircraft and/or components to be maintained together with the associated organisation procedures. In the case of certifying staff, this must be accomplished before the issue or re-issue of the certification authorisation.

‘Category B1 and B2 support staff’ means those category B1 and B2 staff in the base maintenance environment who do not hold necessarily certification privileges. ‘Relevant aircraft and/or components’, means those aircraft or components specified in the particular certification authorisation. ‘Certification authorisation’ means the authorisation issued to certifying staff by the organisation and which specifies the fact that they may certify maintenance within the limitations stated in such authorisation on behalf of the approved organisation.

Question due this text change in 145.A.35 the category C certifying staff scope of work will be diminished: f.i. if in a base maintenance environment the work package a “A” check has been performed and there are no other Complaints in the ATL, why can the category C certifying staff issue no more a CRS.

response *Noted*

The scope of category C certifying staff is not reduced. The term “certify maintenance” covers the issuance of all release certificates described in 145.A.50 (CRS and Final CRS). Please note that the title of point 145.A.50 is “Certification of Maintenance”.

**B. Draft Rules - I. Draft Opinion (EC) No 2042/2003 - B) Part-145 - 145.A.50 p. 30-32**

comment 37 comment by: AEA

The extreme length and complexity of this text is a self demonstration that the new release to service concept is by far too complex, hard to understand, difficult to transcribe into company procedures, and likely to be misunderstood by maintenance personnel, thereby possibly decreasing the level of safety.

response *Accepted*

The concept has been fully reviewed by the working group plus 2 additional experts from the Industry and the Agency, and the proposal has been significantly simplified (only CRS and final CRS). Please refer to the Explanatory Note of the CRD.

comment 48 comment by: AEA

As shown in GM 145.A.50, the introduction of a three levelled release to service system will require EU Operator's to redesign their Technical Log systems. This will also be true for non EU Operators who contract line maintenance to EU Part 145 Organisations.  
 This may prove simply not feasible as it is likely to be incompatible with their non EU Operator's National regulations.  
 This important aspect (and more generally speaking: international harmonisation issues) of the proposed rule has not been properly assessed, therefore the NPA should be withdrawn.

response *Partially accepted*

The concept has been fully reviewed by the working group plus 2 additional experts from the Industry and the Agency, and the proposal has been significantly simplified (only CRS and final CRS). Please refer to the Explanatory Note of the CRD.

Despite of that, the proposed changes will imply some amendments to the Technical Log. For that reason, a 1 year transition period has been proposed.

The new proposed concept does not create harmonisation issues.

comment

49

comment by: *AEA*

Most of aircraft maintenance Part 145 Organisations also work for non EU customers under foreign NAA regulations. These regulations are based on a one level release to service concept (AEA is not aware of any foreign regulation with such a MRC/BMRC/CRS system). This means that EU AMO's will have to implement two release to service systems in parallel, with different -if not contradictory-procedures, staff responsibilities, paperwork, etc..

This will further complicate the organisation's release to service procedures, make certifying staff training goals more difficult to achieve, etc...The confusion that this is likely to introduce may have a negative safety impact, which has not been assessed at all.

The MRC/BMRC/CRS concept is definitely too complex and would prove incompatible with other foreign maintenance regulations. It should be withdrawn.

response *Partially accepted*

The concept has been fully reviewed by the working group plus 2 additional experts from the Industry and the Agency, and the proposal has been significantly simplified (only CRS and final CRS). Please refer to the Explanatory Note of the CRD.

The new proposed concept does not create harmonisation issues.

comment

56

comment by: *Aircraft Engineers International (AEI)*

**145.A.50 Certification of maintenance**

(a) For the purpose of this Part, the certification of maintenance on aircraft shall

include:

- Maintenance release certificates (MRCs), and
- Base maintenance release certificate (BMRC), if applicable, and
- Certificate of release to service (CRS)

The issuance of MRCs and of a BMRC, if applicable, does not imply that the aircraft is ready

for service, ~~being necessary~~ since the issuance of a CRS before flight is mandatory.

Editorial Comment:

Replace ~~red stricken through~~ text with green underlined, and add green underlined text

Reason:

For better reading and understanding

response

*Accepted*

The intent of the comment has been adopted with a different wording.

comment

64

comment by: SAMCO

145.A.50 requires B1/B2 staff to issue the CRS when line maintenance has been performed after base maintenance whereas 66.A.20(a)(3) only allows C licensed staff to issue a release certificate after base maintenance?

response

*Noted*

The concept has been fully reviewed by the Review Group (working group plus 2 additional experts from the Industry and the Agency), and the proposal has been significantly simplified (only CRS and final CRS). Please refer to the Explanatory Note of this CRD.

With the new proposal B1 and B2 staff can issue the CRS after line maintenance and C staff can issue the CRS after base maintenance. All of them (B1, B2, C) can issue the final CRS.

comment

65

comment by: SAMCO

145.A.50(b) seems to always require the issue of a (B)MRC and CRS regarding maintenance, it does not allow the issue of only a CRS when all maintenance is performed by one Part 145 organization.

For instance a weekly inspection performed by one Part 145 organization staff is required to issue a MRC and CRS

145.A.50(a) seems to imply that a MRC or BMRC is not always required (MRCs

|          |  |
|----------|--|
|          | and BMRC as applicable) but does not specify when it is not required<br>145.A.50(a) and (b) seem to contradict each other  |
| response | <i>Noted</i>   |
|          | The concept has been fully reviewed by the Review Group (working group plus 2 additional experts from the Industry and the Agency), and the proposal has been significantly simplified (only CRS and final CRS). Please refer to the Explanatory Note of this CRD. |

|          |  |                          |
|----------|--|--------------------------|
| comment  | 66   | comment by: <i>SAMCO</i> |
|          | <p>Currently EASA allows the issue of separate EASA Form 1 for the same component if separate tasks are performed by separate Part 145 organizations of the same component. (AMC 145.A.50(d))<br/>Should the MRC system therefore also apply when component maintenance is performed by several Part 145 organizations prior to the PMO issuing an EASA Form 1?<br/>Furthermore AMC 145.A.50(b) does no longer provide a CRS text for component maintenance.</p> |                          |
| response | <i>Not accepted</i>  |                          |
|          | The scope of the tasks was limited to aircraft maintenance. In addition, component maintenance is covered by 145.A.50(d).  |                          |

|         |  |   |
|---------|--|---|
| comment | 70   | comment by: <i>SITEMA – Sindicato dos Técnicos de Manutenção de Aeronaves</i> |
|         | <p><b><u>PROPOSED TEXT/ COMMENT:</u></b></p> <p>(a) For the purpose of this Part, the certification of maintenance on aircraft shall include:</p> <ul style="list-style-type: none"> <li>- Maintenance release certificates (MRCs), and</li> <li>- Base maintenance release certificate (BMRC), if applicable, and</li> <li>- Certificate of release to service (CRS)</li> </ul> <p>The issuance of MRCs and of a BMRC, if applicable, does not imply that the aircraft is ready for service, since the issuance of a CRS before flight is mandatory.</p> <p><b><u>JUSTIFICATION:</u></b></p> <p>Most importantly this NPA ensures a <b>high safety standard</b> by requiring that the different certificates are only issued by properly licensed, competent and qualified personnel. By <b>not</b> lowering the <b>SAFETY</b> standards, this NPA creates a certification system where it holds responsible for the work carried out, the person, and the organisation who is responsible for the work carried out. SITEMA</p> |   |

is aware that before highering **SAFETY** standards, a common system must be achieved. Plus, it also clearly puts the responsibility to ensure that personnel who issue the different certificates have the required qualifications and authorisations with the organisation that is responsible for this personnel, and no responsibility is taken whatsoever from the Operators. Furthermore it ensures that the whole process of issuing certificates by different Aircraft Maintenance Organisations is clearly defined and organised by introducing the concept of PMO. At the same time this is achieved in the most economic way to all stakeholders. Also, this NPA has positive influence on Human Factors because a standardized system contributes to reduce human error risk. SITEMA is very happy to see that **EASA** is contributing to **SAFETY** and **STANDARDIZATION**, and rising **SAFETY** standards by **harmonizing** rules is the way to go. Well done!

response *Noted*

The Agency welcomes the comment.

comment

77

comment by: *ICAA*

First bullet pointing "i": Please clarify, does it mean that part of a base maintenance can be performed at line maintenance or by an organisation only holding a line maintenance approval? Currently a category A certifying staff is not considered as base maintenance support staff, only B1/B2 can be.

Therefore can a category A certifying staff now issue an MRC when he/she has performed maintenance in the base maintenance?

response *Noted*

The intent of this provision is to cover those cases where, during a base maintenance event, one of the organisations working is performing a job which could qualify as line maintenance (for example, an engine change). This organisation may not have in his approval the scope for base maintenance. However, the organisation can release the engine change under its line maintenance approval. Obviously, the engine change cannot be released by a category A.

comment

96

comment by: *Swedish Transport Agency, Civil Aviation Department (Transportstyrelsen, Luftfartsavdelningen)*

**145.A.50(b)(1) i**

First bullet point under "i": Please clarify; does it mean that part of a base maintenance can be performed at line maintenance or by an organisation only holding a line maintenance approval? Currently a category A certifying staff is not considered as base maintenance support staff, only B1/B2 can be.

Therefore can a category A certifying staff now issue an MRC when he/she has performed maintenance in the base maintenance?

response *Noted*

The intent of this provision is to cover those cases where, during a base

maintenance event, one of the organisations working is performing a job which could qualify as line maintenance (for example, an engine change). This organisation may not have in his approval the scope for base maintenance. However, the organisation can release the engine change under its line maintenance approval. Obviously, the engine change cannot be released by a category A

comment 97 comment by: *Swedish Transport Agency, Civil Aviation Department (Transportstyrelsen, Luftfartsavdelningen)*

**145.A.50 (3)**

No concerns. However the new text is very difficult to understand.

response *Noted*

The text has been simplified.

comment 125 comment by: *CAA-Norway*

First bullet pointing "i": Please clarify, does it mean that part of a base maintenance can be performed at line maintenance or by an organisation only holding a line maintenance approval? Currently a category A certifying staff is not considered as base maintenance support staff, only B1/B2 can be.

Therefore can a category A certifying staff now issue an MRC when he/she has performed maintenance in the base maintenance?

response *Noted*

The intent of this provision is to cover those cases where, during a base maintenance event, one of the organisations working is performing a job which could qualify as line maintenance (for example, an engine change). This organisation may not have in his approval the scope for base maintenance. However, the organisation can release the engine change under its line maintenance approval. Obviously, the engine change cannot be released by a category A.

comment 144 comment by: *Association of Dutch Aviation Technicians NVLT*

**Alteration Examples.**

**Before NPA 2007-09 145.A.50 Certification of maintenance**

(a) A certificate of release to service shall be issued by appropriately authorised certifying staff on behalf of the organisation when it has been verified that all maintenance ordered has been properly carried out by the organisation in accordance with the procedures specified in 145.A.70, taking into account the availability and use of the maintenance data specified in 145.A.45 and that there are no non-compliances which are known that hazard seriously the flight safety.

(b) A certificate of release to service shall be issued before flight at the

completion of any maintenance.

(d) 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 or airworthiness approval tag identified as EASA Form 1 in Appendix I to this Part constitutes the component certificate of release to service. When an organisation maintains a component for its own use, an EASA Form 1 may not be necessary depending upon the organisation's internal release procedures defined in the exposition.

**After NPA 2007-09 145.A.50 Certification of maintenance**

(a) A certificate of release to service, a maintenance release certificate and a base maintenance release certificate shall be issued by appropriately authorised certifying staff on behalf of the organisation when it has been verified that all maintenance ordered has been properly carried out by the organisation in accordance with the procedures specified in 145.A.70, taking into account the availability and use of the maintenance data specified in 145.A.45 and that there are no non-compliances which are known that hazard seriously the flight safety.

(b) A certificate of release to service, a maintenance release certificate and a base maintenance release certificate shall be issued before flight at the completion of any maintenance.

A certificate of release to service shall be issued at the completion of any maintenance shall be issued at the completion of any maintenance on a component whilst off the aircraft.

The authorised release certificate or airworthiness approval tag identified as EASA Form 1 in Appendix I to this Part constitutes the component certificate of release to service. When an organisation maintains a component for its own use, an EASA Form 1 may not be necessary depending upon the organisation's internal release procedures defined in the exposition.

NOTE: it is extremely important that before the certifying staff will issue a MRC, BMRC or a CRS they always should verify and ensure that all maintenance ordered has been properly carried out.

This mandatory verification and ensuring must be brought up in this NPA for the sake of aviation safety!

response

*Noted*

This was already included in the NPA in paragraphs 145.A.50(b)(1), 145.A.50(b)(2)(ii) and 145.A.50(b)(3)(ii). In the new proposal is also covered.

comment

150

comment by: *Association of Dutch Aviation Technicians NVLT*

**Following amendment on 145.A.50 Certification of maintenance is to our point not complete:**

Paragraph 145.A.50 is amended as follows:

145.A.50 Certification of maintenance

(3) A CRS shall be issued by appropriately authorised certifying staff on behalf of the PMO

when:

- i. all required MRCs for line maintenance and the BMRC for base maintenance, as applicable, have been issued, and
- ii. all maintenance ordered by the operator has been completed or properly deferred, and
- iii. it has been ensured that all activities were properly coordinated, and
- iv. it has been ensured that there are no non-compliances which are known that hazard seriously the flight safety.

**Our argumentation:**

What the NVLT is missing in this new amendment is the tremendously important roll of the certifying staff who will issue the CRS, namely he has to verify or better to say to unsure that the MRC's and the BMR'C effectively has been carried out by the appropriate authorised certifying staff.

He is the last line of defence regarding the flight safety before the aircraft will be released to service.

Without this verification anyone of any company could issue an unlawful MRC's or BMR'C, or anyone of any company could say that they have carried out their job!

Off course there is no need for the certifying staff who will issue the CRS, to verify how the maintenance actually has been performed.

response

*Not accepted*

When a Part-145 organisation issues a CRS it cannot be questioned whether it was done or not by appropriate certifying staff. In that case, we could also question who issued the Final CRS.

comment

166 ❖

comment by: Airbus

**1. PARAGRAPH / SECTION OUR COMMENT IS RELATED TO:**

Article 2 "definitions"

Part-M paragraph M.A.708 Continuing airworthiness management

Part-145 paragraph 145.A.50 Certification of Maintenance

Part-145 paragraph 145.A.55 Maintenance records

AMC145.A.50(b)(2) certification of maintenance

AMC145.A.50(b)(3) certification of maintenance

## 2. PROPOSED TEXT / COMMENT:

The 5 following proposed statements are unclear:

M.A.708 Continuing airworthiness management

*"nominate a primary maintenance organisation (PMO)"*

*"the Operator shall inform the PMO of any maintenance ordered to any other contractors".*

145.A.55 Maintenance records

*"when working under the lead of a primary maintenance organisation (PMO)"*

*" the PMO shall provide the Operator with a copy of any document received from those organisations being coordinated"*

AMC145.A.50(b)(2) certification of maintenance

*"However, the PMO issuing the CRS is not responsible for the appropriate performance of the work certified by each MRC or for the use of appropriate maintenance personnel or certifying staff during such work"*

The underlined statements introduce ambiguity and do not clarify the responsibility of the Operator versus the PMO to "ensure that all work ordered by the Operator has been properly accomplished or deferred" as identified in background information given in the NPA section A-9 for multiple releases issues.

145.A.50 Certification of Maintenance

We agree that the proposed concept of MRC is a valuable clarification that a Part-145 organisation is not certifying that an aircraft is ready for service. To the purpose of clarification, we think that the MRC could replace the CRS under 145.A.50. Under such assumption that the privilege of a Part-145 organisation becomes limited to issue a MRC, the privilege to issue a CRS shall consequently be transferred to the Operator under M.A.708.

We think that the Operator ordering the Maintenance to several Part-145 organisations by **SIGNED CONTRACT** is the unique entity **CAPABLE** *"to ensure that all maintenance ordered by the Operator has been completed or properly deferred and it has been ensured that all activities were properly coordinated."*

## Conclusion:

a) We think the proposed amendments do not remove the inconsistencies identified in background information given in the NPA section A-9.

b) We think the proposed amendments of M.A.708 and 145.A.50 (and impact on other paragraphs) shall be reworked for compliance with the existing M.A.201 & appendix 1 and appendix XI to AMC to M.A.708 (c)

## M.A.201 Responsibilities

- (a) The owner is responsible for the continuing airworthiness of an aircraft and shall ensure that no flight takes place unless:
- the aircraft is maintained in an airworthy condition, and;
  - any operational and emergency equipment fitted is correctly installed and serviceable or clearly identified as unserviceable, and;
  - the maintenance of the aircraft is performed in accordance with the approved maintenance programme as specified in M.A.302.

- (h) In the case of commercial air transport the operator is responsible for the continuing airworthiness of the aircraft it operates and shall:
- be approved in accordance with Part-145 or contract such an organisation; and
  - ensure that paragraph (a) is satisfied.

## Appendix 1

5.1. Obligations of the continuing airworthiness management approved organisation:

...

- organise for all maintenance to be carried out by an approved maintenance organisation
- organise for all applicable airworthiness directives to be applied,
  - organise for all defects discovered during scheduled maintenance or reported by the owner to be corrected by an approved maintenance organisation,
- coordinate scheduled maintenance, the application of airworthiness directives, the replacement of life limited parts, and component inspection requirements,

appendix XI to AMC to M.A.708 (c)

## 2.3. Subcontracting

The maintenance contract should specify under which conditions the Part-145 approved organisation may subcontract tasks to a third party (whether this third party is Part-145 approved or not)..

#### 2.21. Exchange of information.

Each time exchange of information between the operator and the Part-145 approved organisation is necessary, the contract should specify what information should be provided and when (i.e. on what occasion or at what frequency), how, by whom and to whom it has to be transmitted.

#### 2.22. Meetings.

In order that the competent authority may be satisfied that a good communication system exists between the Operator and the Part-145 approved organisation, the terms of the maintenance contract should include the provision for a certain number of meetings to be held between both parties.

Contract review.

Workscope planning meeting.

Technical meeting.

Quality meeting.

c) Finally, to remove inconsistencies linked to the multiple releases issues identified in background information given in the NPA section A-9, we think that additional rework might be needed on:

- Article 2 “Definitions” to be reviewed in order to define what is “maintenance coordination” between an Operator and several contracted Part-145 organisations.
- Part-M paragraph M.A.201 (h) also to be reviewed to define “maintenance coordination requirement” for the Operator who contracts several Part-145 organisations.
- Part-M paragraph M.A.708 (c), AMC to M.A.708 (c) and associated Appendix XI, Part-145 paragraph 145.A.75 (b) and 145.A.70 (a), AMC to 145.A.75 (b) and 145.A.70 (b) to be reviewed in order to define “sub-contracting work packages to several third parties” for a Part-145 approved organisation contracting and coordinating several Part-145 approved organizations.

### **3. RATIONALE / REASON / JUSTIFICATION:**

#### 1) Industrial and legal approach

The NPA propose a new concept of PMO “Primary Maintenance Organisation”. Such PMO is supposed to “properly coordinate” works to be performed by several Part-145 organisations without signed contract between these Part-145

organisations and the PMO.

In such condition, we think that the PMO has no **CAPABILITY** to ensure proper coordination of other Part-145 organisations without mutual agreements on:

- each individual Part-145 organisation deliverables and interface with others Part-145 organisations and sub-tiers: work package contents & planning especially for component re-assembly, aircraft zone closure and tests
- the PMO Quality requirement (audits, inspections, defect reporting, rework, sub-tier qualification)
- the condition for work final acceptance
- PMO resources needed to continuously/finally ensure that all work ordered by an Operator has been properly accomplished e.g specialized services, engines specialists, qualified inspectors.

We think this is not acceptable with regards to the risk management in place in the Aeronautic Maintenance industry where a **SIGNED CONTRACT** is the unique document that can ensure unambiguous relationship between several entities to deliver safe product or services. With the foreseen NPA, no direct contract will exist between the PMO and the various organizations; therefore, the PMO has no relationship and empowerment towards them.

We see a risk that "nominating" a PMO, the Operator is transferring his Continuing Airworthiness Management responsibilities defined in M.A.201 and appendix 1 to a PMO under an "administrative process" (e.g documentary review to check that MRC documents are stamped without physical inspection of the work performed, checking lists of personnel without assessment of qualifications, ..etc):

- this will increase maintenance administration costs to the detriment of business, and
- this will not decrease safety issues linked to multiple releases identified in background information given in the NPA section A-9.

We think that "proper coordination" is already defined in the M.A.201(h) and associated AMC: **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.

We think that "proper coordination" shall remain the responsibility of the Operator or the contracted CAMO. Such coordination shall be ensured through signed contractual arrangement where Continued Airworthiness Management responsibilities (M.A.201 and appendix 1) are agreed between all involved parties: the Operator ordering and coordinating maintenance and Part-145 organisations & contracted third parties performing the work.

## 2) Regulatory approach: International harmonization

As the Maintenance Business takes place in International environment, we also think that our approach remains consistent with International harmonization efforts and especially supports the bilateral agreement with FAA rules as exposed in:

CFR title 14 § 43.9 Content, form, and disposition of maintenance, preventive maintenance, rebuilding, and alteration records

(a) *Maintenance record entries.* Except as provided in paragraphs (b) and (c) of this section, each person who maintains, performs preventive maintenance, rebuilds, or alters an aircraft, airframe, aircraft engine, propeller, appliance, or component part shall make an entry in the maintenance record of that equipment containing the following information:

(4) If the work performed on the aircraft, airframe, aircraft engine, propeller, appliance, or component part has been performed satisfactorily, the signature, certificate number, and kind of certificate held by the person approving the work. **The signature constitutes the approval for return to service only for the work performed.**

CFR Title 14 § 121.709 Airworthiness release or aircraft log entry.

(b) The airworthiness release or log entry required by paragraph (a) of this section must—

(2) Include a certification that—

(ii) All items required to be inspected were **inspected by an authorized person who determined that the work was satisfactorily completed;**

(iv) **So far as the work performed is concerned, the aircraft is in condition for safe operation;** and

(3) Be signed by an authorized certificated mechanic or repairman except that a certificated repairman may **sign the release or entry only for the work for which he is employed and certificated.**

response *Partially accepted*

The proposed concept has been simplified (only CRS and final CRS). However, it is still based in the concept of maintenance certification by each organisation involved (CRS), plus issuance of a Final CRS to certify (and tell the pilot) that all the maintenance ordered had been completed.

This does not mean the the aircraft is airworthy, since the responsibility for the airworthiness of the aircraft belongs to the CAMO and goes beyond the maintenance ordered. This has been made fully clear in AMC M.A.306(a)3 and AMC 145.A.50(b)2.

The concept of Primary Maintenance Organisation has been removed, although it is the responsibility of the Operator to designate an organisation responsible for issuing the final CRS.

Please refer to the new Regulatory Impact Assessment contained in the Explanatory Note of this CRD.

comment

178

comment by: CAA Finland, Communications

|          |  |
|----------|--|
|          | 145.A.50(b)(1)i<br>First bullet pointing "i": Please clarify, does it mean that part of a base maintenance can be performed at line maintenance or by an organisation only holding a line maintenance approval? Currently a category A certifying staff is not considered as base maintenance support staff, only B1/B2 can be.<br><br>Therefore can a category A certifying staff now issue an MRC when he/she has performed maintenance in the base maintenance?   |
| response | <i>Noted</i>   |
|          | The intent of this provision is to cover those cases where, during a base maintenance event, one of the organisations working is performing a job which could qualify as line maintenance (for example, an engine change). This organisation may not have in his approval the scope for base maintenance. However, the organisation can release the engine change under its line maintenance approval. Obviously, the engine change cannot be released by a category A.  |
| comment  | 179 <span style="float: right;">comment by: CAA Finland, Communications</span>   |
|          | 145.A.50(3)<br>No Comments. However the new text is very difficult to understand.  |
| response | <i>Noted</i>   |
|          | The text has been simplified.  |
| comment  | 222 <span style="float: right;">comment by: UK CAA</span>  |
|          | 145.A.50 Pages 30 -31<br><br>Making a simple process un necessarily complex<br><br>Justification:<br>The whole concept of the category C licence in Part 66 was to act as a maintenance manager in issuing the CRS for a complex, series or combination of maintenance tasks or activities in base maintenance. The proposed process of certification privileges in this amendment to 145.A. 50 appears to continue the process of complex activities from base into line maintenance but then allows the maintenance management CRS to be signed by category B1 or B2 staff.<br><br>It would be better to continue the concept of base and line certification as it exists at present with improved clarity on the relationships of primary verses secondary organisations and the issue of separate CRS for base and line maintenance. |
| response | <i>Partially accepted</i>  |
|          | The concept has been fully reviewed by the working group plus 2 additional experts from the Industry and the Agency, and the proposal has been significantly simplified (only CRS and final CRS). Please refer to the Explanatory Note of the CRD.   |

|          |  |  |
|----------|--|--|
| comment  | 228  | comment by: <i>SNMSAC Syndicat National des Mécaniciens Sol de l'Aviation Civile</i> |
|          | <i>The issuance of MRCs and of a BMRC, if applicable, does not imply that the aircraft is ready for service, <del>being necessary</del> so the issuance of a CRS before flight <b>is mandatory</b>.</i>  |  |
| response | <i>Accepted</i>  |  |
|          | The intent of the comment has been adopted with a different wording  |  |
| comment  | 238  | comment by: <i>Modification and Replacement Parts Association</i>                    |
|          | Attachment <a href="#">#2</a>  |  |
|          | See attachment   |  |
| response | <i>Partially accepted</i>  |  |
|          | <p>The proposed concept has been significantly simplified and it is now based on the issuance of CRS by each Part-145 (maintenance certification) and issuance of a final CRS (certifying and notifying the pilot that all the maintenance ordered has been completed or properly deferred).</p> <p>The proposed system is still applicable only to Part-145 organisations. It is not applicable to Subpart F maintenance organisations because they work in a much more simple environment. Nevertheless, both systems are now much closer than in the case of the NPA proposal. As a consequence, the Agency does not believe that operators will have a tendency to consider the release by a Subpart F maintenance organisation as a "second class" release.</p> <p>Looking at your comments it seems one of your concerns is how an avionic maintenance organisation is going to release the work they have performed and how they are going to release the full aircraft. The position of the Agency is the following:</p> <ul style="list-style-type: none"> <li>• The content of this NPA and CRD only affects aircraft maintenance (including avionics tasks, which are certified by B2 certifying staff) and it does not affect component maintenance in a workshop (i.e, repair of an avionic box in the workshop). Component maintenance in a workshop is still released on a EASA Form 1 by certifying staff qualified under national rules.</li> <li>• If the Part-145 organisation simply removes and replaces an avionics box, they will issue the CRS covering that work. <ul style="list-style-type: none"> <li>○ If there is no other work to be performed on the aircraft, then this Part-145 organisation can issue the final CRS.</li> <li>○ If there is other work to be performed by another Part-145 organisation, this organisation will have to issue the corresponding CRS. The operator will have to decide then which of both Part-145 organisations is going to issue the final CRS. This final CRS can be</li> </ul> </li> </ul> |  |

issued by the Part-145 organisation who replaced the avionic box if agreed by the operator.

- The wording of 145.A.50 has been amended in order to make clear that it is still possible to use the exemptions provided by 145.A.50(j) (i.e. use of local licences instead of Part-66 licences at locations outside the EU).
- Regarding the responsibilities of each organisation:
  - The organisation issuing a CRS is responsible for the work covered by that CRS.
  - The organisation issuing the final CRS is responsible for verifying that all the maintenance ordered by the operator has been completed or properly deferred and that all CRSs covering such maintenance and deferments are available. However, the organisation issuing the final CRS is not responsible for the actual work covered by each CRS and it does not have to perform any oversight on the organisation issuing the corresponding CRS (see AMC 145.A.50(b)2).
  - The Part-145 organisations are not responsible for any maintenance which was due but was not ordered by the operator. This is the responsibility of the operator (see AMC M.A.306(a)3 and AMC 145.A.50(b)2).

In addition, in the new proposal the certification statements contained in the CRS and in the final CRS are identical to the current rule.

Furthermore, the new proposal (CRS plus final CRS) is already being used by different operators.

Finally, in order to allow sufficient time to adapt to the changes, a 1 year transition period has been proposed.

**B. Draft Rules - I. Draft Opinion (EC) No 2042/2003 - B) Part-145 - 145.A.55**

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|          |   |                        |
|----------|---|------------------------|
| comment  | 38  | comment by: <i>AEA</i> |
|          | <p>The requirement for the PMO to gather all BMRC and MRC before issuing a CRS shows places the maintenance control responsibilities onto the line maintenance organisations issuing the last CRS before flight, which is likely to be incommensurate with the competence capability of most line maintenance organisations. Today the operator maintenance control is performed by the CAMO, with possibly the support of a base maintenance organisation having the engineering competence to do so.</p> <p>Placing the maintenance control responsibility onto less competent organisations is likely to decrease the level of safety.</p> |                        |
| response | <i>Accepted</i>   |                        |

The PMO concept has been removed. Proposed changes to 145.A.55 have been removed.

comment

78

comment by: ICAA

It seems like the PMO has the main responsibility and therefore the control of the records, though paragraph (e) stipulates that the PMO shall provide the operator with the appropriate records/documents.

The main objective of Part-M is to ensure that the operator has full control of records/documentation. Therefore the operator shall have direct links with all maintenance organisations since the operator always has the ultimate responsibility. According to the new concept the operator is now only obliged to sign a contract with the PMO.

Currently an operator is obliged to sign contracts with all Part-145 organisations and monitor the contracted organisations to ensure all elements of the contract are fulfilled. The contract should be accepted by the competent authority

(e)

The operator shall be provided with the original records, not copies as stated

(f)

In M.A. 801 the text stipulates that certification of maintenance is "performed", not "issued" as in this paragraph.

response

*Accepted*

The PMO concept has been removed. Proposed changes to 145.A.55 have been removed.

comment

98

comment by: *Swedish Transport Agency, Civil Aviation Department (Transportstyrelsen, Luftfartsavdelningen)***145.A.55 (c)**

It seems like the PMO has the main responsibility and therefore the control of the records, though paragraph (e) stipulates that the PMO shall provide the operator with the appropriate records/documents.

The main objective of Part-M is to ensure that the operator has full control of records/documentation. Therefore the operator shall have direct links with all maintenance organisations since the operator always has the ultimate responsibility. According to the new concept the operator is now only obliged to sign a contract with the PMO.

Currently an operator is obliged to sign contracts with all Part-145 organisations and monitor the contracted organisations to ensure all elements of the contract are fulfilled. The contract should be accepted by the competent authority.

response

*Accepted*

The PMO concept has been removed. Proposed changes to 145.A.55 have been

|          |  |   |
|----------|--|---|
|          | removed.   |   |
| comment  | 99   | comment by: <i>Swedish Transport Agency, Civil Aviation Department (Transportstyrelsen, Luftfartsavdelningen)</i> |
|          | <b>145.A.55(e)</b><br>The operator shall be provided with the original records, not copies as stated.  |   |
| response | <i>Not accepted</i>  |   |
|          | <p>The PMO concept has been removed. Proposed changes to 145.A.55 have been removed. The word "copies" remains as in the current rule.</p> <p>The Agency notes that in the current 145.A.55 there is no mention to the word "original". It refers to "copies" for both the operator and the Part-145 organisation, which may be interpreted as "photocopies" or as "true original copies". This is also the case of the point 3.1 contained in the instructions to fill the EASA Form 1 (Appendix II to Part-M). Any possible clarification or change would require further rulemaking action.</p>   |   |
| comment  | 100  | comment by: <i>Swedish Transport Agency, Civil Aviation Department (Transportstyrelsen, Luftfartsavdelningen)</i> |
|          | <b>145.A.55(f)</b><br>In M.A. 801 the text stipulates that certification of maintenance is "performed", not "issued" as in this paragraph.   |   |
| response | <i>Noted</i>   |   |
|          | The PMO concept has been removed. Proposed changes to 145.A.55 and M.A.801 have been removed.  |   |
| comment  | 126  | comment by: <i>CAA-Norway</i>   |
|          | <p>145.A.55 (c)<br/>It seems like the PMO has the main responsibility and therefore the control of the records, though paragraph (e) stipulates that the PMO shall provide the operator with the appropriate records/documents.</p> <p>The main objective of Part-M is to ensure that the operator has full control of records/documentation. Therefore the operator shall have direct links with all maintenance organisations since the operator always has the ultimate responsibility. According to the new concept the operator is now only obliged to sign a contract with the PMO.</p> <p>Currently an operator is obliged to sign contracts with all Part-145 organisations and monitor the contracted organisations to ensure all elements of the contract are fulfilled. The contract should be accepted by the competent authority.</p> <p>145.A.55 (e)</p> |   |

|          |  |
|----------|--|
|          | The operator shall be provided with the original records, not copies as stated.<br>145.A.55(f)<br>In M.A. 801 the text stipulates that certification of maintenance is "performed", not "issued" as in this paragraph. |
| response | <i>Accepted</i>  |
|          | The PMO concept has been removed. Proposed changes to 145.A.55 have been removed.  |

|         |   |                    |
|---------|---|--------------------|
| comment | 166 ❖   | comment by: Airbus |
|         | <p><b>1. PARAGRAPH / SECTION OUR COMMENT IS RELATED TO:</b></p> <p>Article 2 "definitions"</p> <p>Part-M paragraph M.A.708 Continuing airworthiness management</p> <p>Part-145 paragraph 145.A.50 Certification of Maintenance</p> <p>Part-145 paragraph 145.A.55 Maintenance records</p> <p>AMC145.A.50(b)(2) certification of maintenance</p> <p>AMC145.A.50(b)(3) certification of maintenance</p> <p><b>2. PROPOSED TEXT / COMMENT:</b></p> <p>The 5 following proposed statements are unclear:</p> <p>M.A.708 Continuing airworthiness management</p> <p><i>"<u>nominate</u> a primary maintenance organisation (PMO)"</i></p> <p><i>"the Operator shall <u>inform</u> the PMO of any maintenance ordered to any other contractors".</i></p> <p>145.A.55 Maintenance records</p> <p><i>"when working under <u>the lead</u> of a primary maintenance organisation (PMO)"</i></p> <p><i>" the PMO shall provide the Operator with a copy of any document received from those organisations being <u>coordinated</u>"</i></p> <p>AMC145.A.50(b)(2) certification of maintenance</p> <p><i>"However, the PMO issuing the CRS <u>is not responsible for the appropriate performance of the work certified by each MRC or for the use of appropriate maintenance personnel or certifying staff during such work</u>"</i></p> <p>The underlined statements introduce ambiguity and do not clarify the</p> |                    |

responsibility of the Operator versus the PMO to “ensure that all work ordered by the Operator has been properly accomplished or deferred” as identified in background information given in the NPA section A-9 for multiple releases issues.

#### 145.A.50 Certification of Maintenance

We agree that the proposed concept of MRC is a valuable clarification that a Part-145 organisation is not certifying that an aircraft is ready for service. To the purpose of clarification, we think that the MRC could replace the CRS under 145.A.50. Under such assumption that the privilege of a Part-145 organisation becomes limited to issue a MRC, the privilege to issue a CRS shall consequently be transferred to the Operator under M.A.708.

We think that the Operator ordering the Maintenance to several Part-145 organisations by **SIGNED CONTRACT** is the unique entity **CAPABLE** *“to ensure that all maintenance ordered by the Operator has been completed or properly deferred and it has been ensured that all activities were properly coordinated.”*

#### Conclusion:

- a) We think the proposed amendments do not remove the inconsistencies identified in background information given in the NPA section A-9.
- b) We think the proposed amendments of M.A.708 and 145.A.50 (and impact on other paragraphs) shall be reworked for compliance with the existing M.A.201 & appendix 1 and appendix XI to AMC to M.A.708 (c)

#### M.A.201 Responsibilities

- (a) The owner is responsible for the continuing airworthiness of an aircraft and shall ensure that no flight takes place unless:
  - the aircraft is maintained in an airworthy condition, and;
  - any operational and emergency equipment fitted is correctly installed and serviceable or clearly identified as unserviceable, and;
  - the maintenance of the aircraft is performed in accordance with the approved maintenance programme as specified in M.A.302.
- (h) In the case of commercial air transport the operator is responsible for the continuing airworthiness of the aircraft it operates and shall:
  - be approved in accordance with Part-145 or contract such an organisation; and
  - ensure that paragraph (a) is satisfied.

#### Appendix 1

5.1. Obligations of the continuing airworthiness management approved

organisation:

...

- organise for all maintenance to be carried out by an approved maintenance organisation
- organise for all applicable airworthiness directives to be applied,
  - organise for all defects discovered during scheduled maintenance or reported by the owner to be corrected by an approved maintenance organisation,
- coordinate scheduled maintenance, the application of airworthiness directives, the replacement of life limited parts, and component inspection requirements,

appendix XI to AMC to M.A.708 (c)

### 2.3. Subcontracting

The maintenance contract should specify under which conditions the Part-145 approved organisation may subcontract tasks to a third party (whether this third party is Part-145 approved or not)..

#### 2.21. Exchange of information.

Each time exchange of information between the operator and the Part-145 approved organisation is necessary, the contract should specify what information should be provided and when (i.e. on what occasion or at what frequency), how, by whom and to whom it has to be transmitted.

#### 2.22. Meetings.

In order that the competent authority may be satisfied that a good communication system exists between the Operator and the Part-145 approved organisation, the terms of the maintenance contract should include the provision for a certain number of meetings to be held between both parties.

Contract review.

Workscope planning meeting.

Technical meeting.

Quality meeting.

c) Finally, to remove inconsistencies linked to the multiple releases issues identified in background information given in the NPA section A-9, we think that additional rework might be needed on:

- Article 2 "Definitions" to be reviewed in order to define what is

“maintenance coordination” between an Operator and several contracted Part-145 organisations.

- Part-M paragraph M.A.201 (h) also to be reviewed to define “maintenance coordination requirement” for the Operator who contracts several Part-145 organisations.
- Part-M paragraph M.A.708 (c), AMC to M.A.708 (c) and associated Appendix XI, Part-145 paragraph 145.A.75 (b) and 145.A.70 (a), AMC to 145.A.75 (b) and 145.A.70 (b) to be reviewed in order to define “sub-contracting work packages to several third parties” for a Part-145 approved organisation contracting and coordinating several Part-145 approved organizations.

### 3. RATIONALE / REASON / JUSTIFICATION:

#### 1) Industrial and legal approach

The NPA propose a new concept of PMO “Primary Maintenance Organisation”. Such PMO is supposed to “properly coordinate” works to be performed by several Part-145 organisations without signed contract between these Part-145 organisations and the PMO.

In such condition, we think that the PMO has no **CAPABILITY** to ensure proper coordination of other Part-145 organisations without mutual agreements on:

- each individual Part-145 organisation deliverables and interface with others Part-145 organisations and sub-tiers: work package contents & planning especially for component re-assembly, aircraft zone closure and tests
- the PMO Quality requirement (audits, inspections, defect reporting, rework, sub-tier qualification)
- the condition for work final acceptance
- PMO resources needed to continuously/finally ensure that all work ordered by an Operator has been properly accomplished e.g specialized services, engines specialists, qualified inspectors.

We think this is not acceptable with regards to the risk management in place in the Aeronautic Maintenance industry where a **SIGNED CONTRACT** is the unique document that can ensure unambiguous relationship between several entities to deliver safe product or services. With the foreseen NPA, no direct contract will exist between the PMO and the various organizations; therefore, the PMO has no relationship and empowerment towards them.

We see a risk that “nominating” a PMO, the Operator is transferring his Continuing Airworthiness Management responsibilities defined in M.A.201 and appendix 1 to a PMO under an “administrative process” (e.g documentary review to check that MRC documents are stamped without physical inspection of the work performed, checking lists of personnel without assessment of qualifications, ..etc):

- this will increase maintenance administration costs to the detriment of business, and
- this will not decrease safety issues linked to multiple releases identified

in background information given in the NPA section A-9.

We think that "proper coordination" is already defined in the M.A.201(h) and associated AMC: **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.

We think that "proper coordination" shall remain the responsibility of the Operator or the contracted CAMO. Such coordination shall be ensured through signed contractual arrangement where Continued Airworthiness Management responsibilities (M.A.201 and appendix 1) are agreed between all involved parties: the Operator ordering and coordinating maintenance and Part-145 organisations & contracted third parties performing the work.

## 2) Regulatory approach: International harmonization

As the Maintenance Business takes place in International environment, we also think that our approach remains consistent with International harmonization efforts and especially supports the bilateral agreement with FAA rules as exposed in:

CFR title 14 § 43.9 Content, form, and disposition of maintenance, preventive maintenance, rebuilding, and alteration records

(a) *Maintenance record entries*. Except as provided in paragraphs (b) and (c) of this section, each person who maintains, performs preventive maintenance, rebuilds, or alters an aircraft, airframe, aircraft engine, propeller, appliance, or component part shall make an entry in the maintenance record of that equipment containing the following information:

(4) If the work performed on the aircraft, airframe, aircraft engine, propeller, appliance, or component part has been performed satisfactorily, the signature, certificate number, and kind of certificate held by the person approving the work. **The signature constitutes the approval for return to service only for the work performed.**

CFR Title 14 § 121.709 Airworthiness release or aircraft log entry.

(b) The airworthiness release or log entry required by paragraph (a) of this section must—

(2) Include a certification that—

(ii) All items required to be inspected were **inspected by an authorized person who determined that the work was satisfactorily completed;**

(iv) **So far as the work performed is concerned, the aircraft is in condition for safe operation;** and

(3) Be signed by an authorized certificated mechanic or repairman except that a certificated repairman may **sign the release or entry only for the work for which he is employed and certificated.**

response

*Partially accepted*

The proposed concept has been simplified (only CRS and final CRS). However, it is still based in the concept of maintenance certification by each organisation involved (CRS), plus issuance of a Final CRS to certify (and tell the pilot) that all the maintenance ordered had been completed.

This does not mean the the aircraft is airworthy, since the responsibility for the airworthiness of the aircraft belongs to the CAMO and goes beyond the maintenance ordered. This has been made fully clear in AMC M.A.306(a)3 and AMC 145.A.50(b)2.

The concept of Primary Maintenance Organisation has been removed, although it is the responsibility of the Operator to designate an organisation responsible for issuing the final CRS.

Please refer to the new Regulatory Impact Assessment contained in the Explanatory Note of this CRD.

comment

180

comment by: *CAA Finland, Communications*

145.A.55(c)

It seems like the PMO has the main responsibility and therefore the control of the records, though paragraph (e) stipulates that the PMO shall provide the operator with the appropriate records/documents.

The main objective of Part-M is to ensure that the operator has full control of records/documentation. Therefore the operator shall have direct links with all maintenance organisations since the operator always has the ultimate responsibility. According to the new concept the operator is now only obliged to sign a contract with the PMO.

Currently an operator is obliged to sign contracts with all Part-145 organisations and monitor the contracted organisations to ensure all elements of the contract are fulfilled. The contract should be accepted by the competent authority.

response

*Accepted*

The PMO concept has been removed. Proposed changes to 145.A.55 have been removed.

comment

181

comment by: *CAA Finland, Communications*

145.A.55(e)

The operator shall be provided with the original records, not copies as stated.

response

*Not accepted*

The PMO concept has been removed. Proposed changes to 145.A.55 have been removed. The word "copies" remains as in the current rule.

The Agency notes that in the current 145.A.55 there is no mention to the word

"original". It refers to "copies" for both the operator and the Part-145 organisation, which may be interpreted as "photocopies" or as "true original copies". This is also the case of the point 3.1 contained in the instructions to fill the EASA Form 1 (Appendix II to Part-M). Any possible clarification or change would require further rulemaking action.

|          |   |   |
|----------|---|---|
| comment  | 182   | comment by: CAA Finland, Communications |
|          | 145.A.55(f)<br>In M.A. 801 the text stipulates that certification of maintenance is "performed", not "issued" as in this paragraph. |   |
| response | <i>Noted</i>  |   |
|          | The PMO concept has been removed. Proposed changes to 145.A.55 and M.A.801 have been removed.                                       |   |

**B. Draft Rules - I. Draft Opinion (EC) No 2042/2003 - B) Part-145 - 145.A.70(a)13**

p. 33

|          |  |   |
|----------|--|---|
| comment  | 79   | comment by: ICAA  |
|          | Does it mean that the Part-145 MO now only have to list the operator to whom it is the PMO.<br><br>Currently all operators shall be listed to whom the MO carries out maintenance.                       |   |
| response | <i>Noted</i>   |   |
|          | The PMO concept has been removed. Proposed changes to 145.A.70 have also been removed.   |   |
| comment  | 101  | comment by: Swedish Transport Agency, Civil Aviation Department<br>(Transportstyrelsen, Luftfartsavdelningen) |
|          | <b>145.A.70(a)</b><br>Does it mean that the Part-145 MO now only have to list the operator to whom it is the PMO.<br><br>Currently all operators shall be listed to whom the MO carries out maintenance. |   |
| response | <i>Noted</i>   |   |
|          | The PMO concept has been removed. Proposed changes to 145.A.70 have also been removed.   |   |
| comment  | 127  | comment by: CAA-Norway  |
|          | A.70(a)<br>Does it mean that the Part-145 MO now only have to list the operator to whom it   |   |

|          |   |
|----------|---|
|          | is the PMO.   |
|          | Currently all operators shall be listed to whom the MO carries out maintenance.             |
| response | <i>Noted</i>  |
|          | The PMO concept has been removed. Proposed changes to 145.A.70 have also been removed.      |
| comment  | 183 <span style="float: right;">comment by: CAA Finland, Communications</span>              |
|          | Does it mean that the Part-145 MO now only have to list the operator to whom it is the PMO. |
|          | Currently all operators shall be listed to whom the MO carries out maintenance.             |
| response | <i>Noted</i>  |
|          | The PMO concept has been removed. Proposed changes to 145.A.70 have also been removed.      |

**B. Draft Rules - I. Draft Opinion (EC) No 2042/2003 - B) Part-145 - 145.A.75(e)**

p. 33

|          |  |
|----------|--|
| comment  | 63 <span style="float: right;">comment by: SAMCO</span>  |
|          | <p>This NPA creates a conflict within the regulations<br/> The proposed text of 145.A.75(e) states that a Part 145 organization can issue certificates within the limitations of its approval.<br/> However the NPA allows line maintenance organizations (PMO) to issue a CRS after base maintenance based upon a BMRC. (ref. NPA2007-09 page 8)<br/> As base maintenance CRS is outside the scope of a line maintenance organization this is in conflict with the text of 145.A.75(e)<br/> This also applies when a Part1 45 organization as PMO is to issue a BMRC or CRS based on a MRC from another Part 145 organizations regarding maintenance outside the scope of approval of the PMO</p> |
| response | <i>Accepted</i>  |
|          | Paragraph 145.A.75(e) has been amended.  |

**B. Draft Rules - I. Draft Opinion (EC) No 2042/2003 - B) Part-145 - EASA Form 3 in Appendix III**

p. 33

|          |  |
|----------|--|
| comment  | 81 <span style="float: right;">comment by: ICAA</span> |
|          | Replace the word "issue" with e.g. "carry out".....    |
| response | <i>Not accepted</i>                                    |

The Agency believes that the proposed wording does not introduce any change to the meaning of the text.

comment

102

comment by: *Swedish Transport Agency, Civil Aviation Department (Transportstyrelsen, Luftfartsavdelningen)*

**Appendix III to Part-145**

Replace the word "issue" with e.g. "carry out".....

response

*Not accepted*

The Agency believes that the proposed wording does not introduce any change to the meaning of the text.

comment

128

comment by: *CAA-Norway*

Replace the word "issue" with e.g. "carry out".....

response

*Not accepted*

The Agency believes that the proposed wording does not introduce any change to the meaning of the text.

comment

184

comment by: *CAA Finland, Communications*

Replace the word "issue" with e.g. "carry out".....

response

*Not accepted*

The Agency believes that the proposed wording does not introduce any change to the meaning of the text.

**B. Draft Rules - I. Draft Opinion (EC) No 2042/2003 - C) Part-66**

p. 34

comment

147

comment by: *Association of Dutch Aviation Technicians NVLT*

Will in Part-66 all the related release to service items altered and added with the new feature MRC and BMRC?

response

*Noted*

The concept has been simplified (only CRS and Final CRS)

comment

205

comment by: *Walter Gessky*

Delete the proposed changes to Part 66.

response

*Not accepted*

Nevertheless, the system has been simplified.

comment

146

comment by: *Association of Dutch Aviation Technicians NVLT***Alteration Examples.****Before NPA 2007-09 66.A.20 Privileges**

(a) Subject to compliance with paragraph (b), the following privileges shall apply:

1. A category A aircraft maintenance licence permits the holder to issue certificates of release to service following minor scheduled line maintenance and simple defect rectification within the limits of tasks specifically endorsed on the authorisation. The certification privileges shall be restricted to work that the licence holder has personally performed in a Part-145 organisation.

2. A category B1 aircraft maintenance licence shall permit the holder to issue certificates of release to service following maintenance, including aircraft structure, powerplant and mechanical and electrical systems. Replacement of avionic line replaceable units, requiring simple tests to prove their serviceability, shall also be included in the privileges. Category B1 shall automatically include the appropriate A subcategory.

3. A category B2 aircraft maintenance licence shall permit the holder to issue certificates of release to service following maintenance on avionic and electrical systems.

4. A category C aircraft maintenance licence shall permit the holder to issue certificates of release to service following base maintenance on aircraft. The privileges apply to the aircraft in its entirety in a Part-145 organisation.

**After NPA 2007-09 66.A.20 Privileges**

(a) Subject to compliance with paragraph (b), the following privileges shall apply:

1. A category A aircraft maintenance licence permits the holder to issue certificates of release to service **and a maintenance release certificate** following minor scheduled line maintenance and simple defect rectification within the limits of tasks specifically endorsed on the authorisation. The certification privileges shall be restricted to work that the licence holder has personally performed in a Part-145 organisation.

2. A category B1 aircraft maintenance licence shall permit the holder to issue certificates of release to service **and a maintenance release certificate** following maintenance, including aircraft structure, powerplant and mechanical and electrical systems. Replacement of avionic line replaceable units, requiring simple tests to prove their serviceability, shall also be included in the privileges. Category B1 shall automatically include the appropriate A subcategory.

3. A category B2 aircraft maintenance licence shall permit the holder to issue

certificates of release to service and a maintenance release certificate following maintenance on avionic and electrical systems.

4. A category C aircraft maintenance licence shall permit the holder to issue certificates of release to service and base maintenance release certificates following base maintenance on aircraft. The privileges apply to the aircraft in its entirety in a Part-145 organisation.

response *Not accepted*

The change proposed by NVLT is not necessary since it is already covered by point 66.A.20(a)5.

**B. Draft Rules - I. Draft Opinion (EC) No 2042/2003 - C) Part-66 - 66.B.500**

p. 35

comment 82 comment by: ICAA

Replace the word "issuing" by, "performing"

response *Not accepted*

The Agency believes that the proposed wording does not introduce any change to the meaning of the text.

comment 103 comment by: Swedish Transport Agency, Civil Aviation Department  
(Transportstyrelsen, Luftfartsavdelningen)

**66.B500 6. / 7. / 8.**  
Replace the word "issuing" by, "performing"

response *Not accepted*

The Agency believes that the proposed wording does not introduce any change to the meaning of the text.

comment 129 comment by: CAA-Norway

6,7,8  
Replace the word "issuing" by, "performing"

response *Not accepted*

The Agency believes that the proposed wording does not introduce any change to the meaning of the text.

comment 148 comment by: Association of Dutch Aviation Technicians NVLT

**Alteration Examples.**

SUBPART F

*REVOCATION, SUSPENSION OR LIMITATION OF THE AIRCRAFT MAINTENANCE LICENCE***Before NPA 2007-09 66.B.500 Revocation, suspension or limitation of the aircraft maintenance licence**

The competent authority shall suspend, limit or revoke the aircraft maintenance licence where it has identified a safety issue or if it has clear evidence that the person has carried out or been involved in one or more of the following activities:

1. obtaining the aircraft maintenance licence and/or the certification privileges by falsification of submitted documentary evidence.
2. failing to carry out requested maintenance combined with failure to report such fact to the organisation or person who requested the maintenance.
3. failing to carry out required maintenance resulting from own inspection combined with failure to report such fact to the organisation or person for whom the maintenance was intended to be carried out.
4. negligent maintenance.
5. falsification of the maintenance record.
6. issuing a certificate of release to service knowing that the maintenance specified on the certificate of release to service has not been carried out or without verifying that such maintenance has been carried out.
7. carrying out maintenance or issuing a certificate of release to service when adversely affected by alcohol or drugs.
8. issuing certificate of release to service while not in compliance with this Part

**After NPA 2007-09 66.B.500 Revocation, suspension or limitation of the aircraft maintenance licence**

The competent authority shall suspend, limit or revoke the aircraft maintenance licence where it has identified a safety issue or if it has clear evidence that the person has carried out or been involved in one or more of the following activities:

1. obtaining the aircraft maintenance licence and/or the certification privileges by falsification of submitted documentary evidence.
2. failing to carry out requested maintenance combined with failure to report such fact to the organisation or person who requested the maintenance.
3. failing to carry out required maintenance resulting from own inspection combined with failure to report such fact to the organisation or person for whom the maintenance was intended to be carried out.
4. negligent maintenance.

5. falsification of the maintenance record.

6. issuing a certificate of release to service, a maintenance release certificate and or a base maintenance release certificate knowing that the maintenance specified on the certificate has not been carried out or without verifying that such maintenance has been carried out.

7. carrying out maintenance or issuing a certificate of release to service a maintenance release certificates and or a base maintenance release certificates when adversely affected by alcohol or drugs.

8. issuing certificate of release to service a maintenance release certificates and or a base maintenance release certificates while not in compliance with this Part

response *Not accepted*

The term "certification of maintenance" proposed in the NPA and the CRD already includes all the certificates. Please note that the title of point 145.A.50 is "Certification of maintenance".

comment 185 comment by: CAA Finland, Communications

Replace the word "issuing" by, "performing"

response *Not accepted*

The Agency believes that the proposed wording does not introduce any change to the meaning of the text

**B. Draft Rules - I. Draft Opinion (EC) No 2042/2003 - C) Part-66 - EASA Form 26 in Appendix V**

p. 35

comment 104 comment by: Swedish Transport Agency, Civil Aviation Department (Transportstyrelsen, Luftfartsavdelningen)

**Appendix V to Part-M**

On the EASA Form 26 change the word "issue" with "perform"

response *Not accepted*

The Agency believes that the proposed wording does not introduce any change to the meaning of the text

comment 130 comment by: CAA-Norway

On the EASA Form 26 change the word "issue" with "perform"

response *Not accepted*

The Agency believes that the proposed wording does not introduce any change to the meaning of the text

comment 186 comment by: CAA Finland, Communications

On the EASA Form 26 change the word "issue" with "perform"

response *Not accepted*

The Agency believes that the proposed wording does not introduce any change to the meaning of the text

### B. Draft Rules - II. Draft Decision AMC to Part-M

p. 36

comment 206 comment by: Walter Gessky

Delete the proposed Draft Decision AMC to Part M because the complicated bureaucratic concept is not acceptable.

response *Partially accepted*

The concept has been simplified.

### B. Draft Rules - II. Draft Decision AMC to Part-M - AMC M.A.306(a)

p. 36

comment 220 comment by: UK CAA

AMC M.A306 (a) Page 36

Delete the word "normally"

Justification:  
Clarity

response *Not accepted*

The point AMC M.A.306(a) has been reworded in order to take into account the simplification proposed in the CRD.

### B. Draft Rules - II. Draft Decision AMC to Part-M - Appendix V to AMC M.A.704

p. 37

comment 83 comment by: ICAA

On the EASA Form 26 change the word "issue" with "perform"

response *Not accepted*

The Agency believes that the proposed wording does not introduce any change to

the meaning of the text.

**B. Draft Rules - II. Draft Decision AMC to Part-M - AMC M.A.708(b)**

p. 37-38

comment 39 comment by: AEA

This paragraph shows that in order to make the system work, on top of the three level or release to service (MRC/BMRC/CRS), it is necessary to introduce several layers of PMO's (PMO's and super PMO?).

This is likely to be simply unmanageable.

response *Accepted*

The Agency has significantly simplified the proposal (only CRS and final CRS). Please refer to the Explanatory Note of the CRD.

In addition, it has been made fully clear that the responsibility for the airworthiness of the aircraft belongs to the CAMO (AMC M.A.306(a)3 and AMC 145.A.50(b)2).

The concept of Primary Maintenance Organisation has been removed, although it is the responsibility of the Operator to designate an organisation responsible for issuing the final CRS.

comment 221 comment by: UK CAA

AMC M.A. 708 (b) Page 37- 38

Making a simple process un-necessarily complex

The proposal states that an operator may nominate a single PMO for both base and line maintenance. This is accepted where the PMO has both base and line approval.

The proposal then states that there is potential to have several sequential PMOs. The justification for this cannot be understood. It is suggested to keep things simple there should only be one PMO for base maintenance and if un approved for line maintenance a second suitable approved line maintenance PMO to cover post base CRS activity. The concept of a separate base and line CRS should be retained.

response *Partially accepted*

The Agency has significantly simplified the proposal (only CRS and final CRS). Please refer to the Explanatory Note of the CRD.

In addition, it has been made fully clear that the responsibility for the airworthiness of the aircraft belongs to the CAMO (AMC M.A.306(a)3 and AMC 145.A.50(b)2).

The concept of Primary Maintenance Organisation has been removed, although it is the responsibility of the Operator to designate an organisation responsible for issuing the final CRS.

**B. Draft Rules - III. Draft Decision AMC to Part-145**

p. 39

|          |   |                           |
|----------|---|---------------------------|
| comment  | 86  | comment by: ICAA          |
|          | With many different contracted/subcontracted MO:s, it seems unlikely to meet the intent of this paragraph   |                           |
| response | <i>Noted</i>  |                           |
|          | The Agency has significantly simplified the proposal (only CRS and final CRS). Please refer to the Explanatory Note of the CRD.   |                           |
|          | In addition, it has been made fully clear that the responsibility for the airworthiness of the aircraft belongs to the CAMO (AMC M.A.306(a)3 and AMC 145.A.50(b)2).                     |                           |
|          | The concept of Primary Maintenance Organisation has been removed, although it is the responsibility of the Operator to designate an organisation responsible for issuing the final CRS. |                           |
| comment  | 207   | comment by: Walter Gessky |
|          | Delete the proposed Draft Decision AMC to Part 145 because the complicated bureaucratic concept is not acceptable.  |                           |
| response | <i>Partially accepted</i>   |                           |
|          | The concept has been simplified.  |                           |

**B. Draft Rules - III. Draft Decision AMC to Part-145 - AMC 145.A.30(g)**

p. 39

|          |  |   |
|----------|--|---|
| comment  | 84   | comment by: ICAA  |
|          | Replace the word "issuing" with "performing"   |   |
| response | <i>Not accepted</i>  |   |
|          | The Agency believes that the proposed wording does not introduce any change to the meaning of the text |   |
| comment  | 105  | comment by: Swedish Transport Agency, Civil Aviation Department<br>(Transportstyrelsen, Luftfartsavdelningen) |
|          | <b>AMC 145.A.30(g)</b><br>Replace the word "issuing" with "performing"                                 |   |

|          |   |  |
|----------|---|--|
| response | <i>Not accepted</i>   |  |
|          | The Agency believes that the proposed wording does not introduce any change to the meaning of the text. |  |

|         |  |                        |
|---------|--|------------------------|
| comment | 131  | comment by: CAA-Norway |
|         | Replace the word "issuing" with "performing" |                        |

|          |   |  |
|----------|---|--|
| response | <i>Not accepted</i>   |  |
|          | The Agency believes that the proposed wording does not introduce any change to the meaning of the text. |  |

|         |  |   |
|---------|--|---|
| comment | 187  | comment by: CAA Finland, Communications |
|         | Replace the word "issuing" with "performing" |   |

|          |   |  |
|----------|---|--|
| response | <i>Not accepted</i>   |  |
|          | The Agency believes that the proposed wording does not introduce any change to the meaning of the text. |  |

|   |
|---|
| <b>B. Draft Rules - III. Draft Decision AMC to Part-145 - AMC 145.A.30(i)</b> |
|---|

p. 39

|          |   |                    |
|----------|---|--------------------|
| comment  | 224   | comment by: UK CAA |
|          | AMC 145.A.30 (i) Page 39                                |                    |
|          | Replace the word "is" with "are" in the first sentence. |                    |
|          | Justification:<br>Clarity                               |                    |
| response | <i>Accepted</i>   |                    |

|   |
|---|
| <b>B. Draft Rules - III. Draft Decision AMC to Part-145 - AMC 145.A.50(b)</b> |
|---|

p. 40

|         |  |                 |
|---------|--|-----------------|
| comment | 40   | comment by: AEA |
|         | This AMC now introduces three levels of maintenance release statement.   |                 |
|         | How the implication of and the differences between those statement can be easily (therefore: safely) by certifying staff? It is by far too complex.  |                 |
|         | Furthermore, these statements do not cater for all cases as they do not cover cases where in the sequence of maintenance events, there is no MRC before a BMRC, or no BMRC before a CRS. For instance, how can we teach a Category A certifying staff that after a single maintenance event such as a wheel change, he |                 |

|          |  |  |
|----------|--|--|
|          | has to certify, according to paragraph 1c), that "all the work ordered except as otherwise specified was carried out, <u>as certified in the corresponding maintenance release certificate and base maintenance certificate, and was coordinated</u> in accordance with Pat 145, etc..."? where no such coordination MRC or BMRC was involved? |  |
| response | <i>Accepted</i>  |  |
|          | The Agency has significantly simplified the proposal (only CRS and final CRS). Please refer to the Explanatory Note of the CRD.  |  |
| comment  | 85   | comment by: ICAA   |
|          | The "certification of maintenance" is referred to as being a "single document" rather than a "process" as defined in 145.A.50.   |  |
| response | <i>Not accepted</i>  |  |
|          | The term "certification of maintenance" means both things, the process of issuing the corresponding certificates (CRS and final CRS) as well as the documents issued (CRS and final CRS).  |  |
| comment  | 107  | comment by: Swedish Transport Agency, Civil Aviation Department (Transportstyrelsen, Luftfartsavdelningen) |
|          | <b>AMC 145.A.50(b)5</b><br>The "certification of maintenance" is referred to as being a "single document" rather than a "process" as defined in 145.A.50.  |  |
| response | <i>Not accepted</i>  |  |
|          | The term "certification of maintenance" means both things, the process of issuing the corresponding certificates (CRS and final CRS) as well as the documents issued (CRS and final CRS).  |  |
| comment  | 132  | comment by: CAA-Norway   |
|          | 5.<br>The "certification of maintenance" is referred to as being a "single document" rather than a "process" as defined in 145.A.50.   |  |
| response | <i>Not accepted</i>  |  |
|          | The term "certification of maintenance" means both things, the process of issuing the corresponding certificates (CRS and final CRS) as well as the documents issued (CRS and final CRS).  |  |
| comment  | 189  | comment by: CAA Finland, Communications  |
|          | Paragraph 5  |  |

The "certification of maintenance" is referred to as being a "single document" rather than a "process" as defined in 145.A.50.

response *Not accepted*

The term "certification of maintenance" means both things, the process of issuing the corresponding certificates (CRS and final CRS) as well as the documents issued (CRS and final CRS).

comment

210

comment by: *EUROCOPTER*

Add the following item at the end of the **AMC 145.A.50(b)**

***6. A certificate of release to service is to be issued before flight as required by the maintenance instruction. This includes the control flight if required by the maintenance instruction.***

Justification:

A CRS is required before flight after completion of the maintenance. However, some maintenance operations require a control flight before final release of the aircraft. In this case, it is necessary to issue a CRS to certify that all ground operations have been completed according to the maintenance instructions.

response

*Not accepted*

With the new proposal in the CRD (CRS plus final CRS) the issue exposed by Eurocopter can be already covered by issuing all corresponding CRS with a statement that the flight test is pending. This certifies all the work except the flight test. When the flight test is performed and found satisfactory a CRS is issued for the flight test and the final CRS is issued.

**B. Draft Rules - III. Draft Decision AMC to Part-145 - AMC 145.A.50(b)(1)**

p. 41

comment

41

comment by: *AEA*

Concerning paragraph 1, the authors of the NPA should be aware that Part 145 does not cater for a Part 145 organisation working under the quality system of another Part 145 organisation.

Only non appropriately approved maintenance organisations may work under the quality system of a Part 145 organisation.

response

*Partially accepted*

A Part-145 organisation may work under the quality system of another Part-145 organisation when it is not approved for the particular task being performed/certified.

As a consequence, there is no need to change the proposed text.

comment

42

comment by: *AEA*

Paragraph 5 provides the possibility of issuing MRC's against tasks or groups of

|          |     |  |
|----------|-----|--|
|          |     | tasks, thereby allowing multiple signatures for a single work package. Isn't this contradictory to the "single release" concept?   |
| response |     | <i>Not accepted</i>  |
|          |     | This is not contradictory. The concept proposed is based on multiple certification of work with a final release before flight.   |
| comment  | 87  | comment by: ICAA   |
|          |     | What does "as agreed by the operator" mean? Does it mean a contract or a mutual agreement? Currently the operator is responsible of the contracts and the Part-145 MO:s are not allowed to contract maintenance on behalf of the operator.                               |
|          |     | It seems like line maintenance could be part of base maintenance, is this the intent? Inspections/checks etc. in the base maintenance might require different knowledge and experience, different procedures, training etc.  |
| response |     | <i>Noted</i>   |
|          |     | The Agency has significantly simplified the proposal (only CRS and final CRS). Please refer to the Explanatory Note of this CRD.   |
|          |     | The proposed paragraph in AMC 145.A.50(b)1 has been removed.   |
| comment  | 108 | comment by: Swedish Transport Agency, Civil Aviation Department<br>(Transportstyrelsen, Luftfartsavdelningen)  |
|          |     | <b>AMC 145.A.50(b)(1)2</b><br>What does "as agreed by the operator" mean? Does it mean a contract or a mutual agreement? Currently the operator is responsible of the contracts and the Part-145 MO:s are not allowed to contract maintenance on behalf of the operator. |
| response |     | <i>Noted</i>   |
|          |     | The Agency has significantly simplified the proposal (only CRS and final CRS). Please refer to the Explanatory Note of the CRD.  |
|          |     | The proposed paragraph in AMC 145.A.50(b)1 has been removed.   |
| comment  | 109 | comment by: Swedish Transport Agency, Civil Aviation Department<br>(Transportstyrelsen, Luftfartsavdelningen)  |
|          |     | <b>AMC 145.A.50(b)(1)4</b><br>It seems like line maintenance could be part of base maintenance, is this the intent? Inspections/checks etc. in the base maintenance might require different knowledge and experience, different procedures, training etc.                |
| response |     | <i>Noted</i>   |

The intent of this provision is to cover those cases where, during a base maintenance event, one of the organisations working is performing a job which could qualify as line maintenance (for example, an engine change). This organisation may not have in his approval the scope for base maintenance. However, the organisation can release the engine change under its line maintenance approval.

comment 133 comment by: CAA-Norway

2  
What does "as agreed by the operator" mean? Does it mean a contract or a mutual agreement? Currently the operator is responsible of the contracts and the Part-145 MO:s are not allowed to contract maintenance on behalf of the operator.

4  
It seems like line maintenance could be part of base maintenance, is this the intent? Inspections/checks etc. in the base maintenance might require different knowledge and experience, different procedures, training etc.

response Noted

The Agency has significantly simplified the proposal (only CRS and final CRS). Please refer to the Explanatory Note of this CRD.

The proposed paragraph in AMC 145.A.50(b)1 has been removed.

comment 158 comment by: Ludwig Hessler

The proposed system is too complex. The NPA proposes a new MRC for aircraft that leave the maintenance in a non approved configuration. This additional form is not necessary when the CAMO manages the maintenance properly. The certifying staff would need new privileges to deal with the new forms and technical logs.

For the industry this would lead to a lot of additional work. All involved parties would need training to understand the complex release system.

response Partially accepted

The concept has been simplified (CRS and final CRS). Nevertheless, it is possible to issue a CRS when the aircraft is left in a non approved configuration as long as it is notified to the CAMO and indicated in the CRS.

comment 190 comment by: CAA Finland, Communications

Paragraph 2  
What does "as agreed by the operator" mean? Does it mean a contract or a mutual agreement? Currently the operator is responsible of the contracts and the Part-145 MO:s are not allowed to contract maintenance on behalf of the operator.

|          |  |  |
|----------|--|--|
| response | <i>Noted</i>   |  |
|          | The Agency has significantly simplified the proposal (only CRS and final CRS). Please refer to the Explanatory Note of this CRD.   |  |
|          | The proposed paragraph in AMC 145.A.50(b)1 has been removed.   |  |
| comment  | 191  | comment by: <i>CAA Finland, Communications</i> |
|          | Paragraph 4<br>It seems like line maintenance could be part of base maintenance, is this the intent? Inspections/checks etc. in the base maintenance might require different knowledge and experience, different procedures, training etc.   |  |
| response | <i>Noted</i>   |  |
|          | The intent of this provision is to cover those cases where, during a base maintenance event, one of the organisations working is performing a job which could qualify as line maintenance (for example, an engine change). This organisation may not have in his approval the scope for base maintenance. However, the organisation can release the engine change under its line maintenance approval. |  |

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| <b>B. Draft Rules - III. Draft Decision AMC to Part-145 - AMC 145.A.50(b) (2)</b> |
|---|

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|          |  |   |
|----------|--|---|
| comment  | 57   | comment by: <i>Aircraft Engineers International (AEI)</i> |
|          | <b>AMC 145.A.50(b) (2) Certification of maintenance</b>  |   |
|          | 3. The sentence "it has <u>been</u> ensured that all activities were properly coordinated" includes, but is not limited to:                |   |
|          | Editorial comment:   |   |
|          | Add <u>green underlined</u> text   |   |
|          | Reason:  |   |
|          | Correct spelling   |   |
| response | <i>Not accepted</i>  |   |
|          | The concept has been simplified and this paragraph has been removed. The coordination procedures have been transferred to AMC M.A.708(b)7. |   |
| comment  | 60   | comment by: <i>Aircraft Engineers International (AEI)</i> |
|          | <b>AMC 145.A.50(b) (2) Certification of maintenance</b>  |   |
|          | 3. The sentence "it has ensured that all activities were properly coordinated"   |   |

includes, but is not limited to:

- ensuring proper scheduling and communication when different contractors are working

in the same area/system,

- ensuring that only personnel working for the contracted Part-145 organisations, as

notified by the operator, perform maintenance on the aircraft, which may be achieved by

receiving a list of the personnel that will be working in the aircraft,

- ensuring that the approved procedures imposed by the operator are fulfilled,

Comment:

Add the green underlined text

Reason:

These procedures are part of the Operators maintenance arrangement (Exposition), and this is approved by the NAA before they will issue an AOC. Therefore this text should reflect that the procedures are approved.

response

*Partially accepted*

The concept has been simplified and this paragraph has been removed. Nevertheless, the coordination procedures have been transferred to AMC M.A.708(b)7 and your proposal has been incorporated.

comment

71

comment by: *SITEMA – Sindicato dos Técnicos de Manutenção de Aeronaves*

**PROPOSED TEXT/ COMMENT:**

The sentence "it has been ensured that all activities were properly coordinated" includes, but is not limited to:

**JUSTIFICATION:**

Most importantly this NPA ensures a **high safety standard** by requiring that the different certificates are only issued by properly licensed, competent and qualified personnel. By **not** lowering the **SAFETY** standards, this NPA creates a certification system where it holds responsible for the work carried out, the person, and the organisation who is responsible for the work carried out. SITEMA is aware that before highering **SAFETY** standards, a common system must be achieved. Plus, it also clearly puts the responsibility to ensure that personnel who issue the different certificates have the required qualifications and authorisations with the organisation that is responsible for this personnel, and no responsibility

is taken whatsoever from the Operators. Furthermore it ensures that the whole process of issuing certificates by different Aircraft Maintenance Organisations is clearly defined and organised by introducing the concept of PMO. At the same time this is achieved in the most economic way to all stakeholders. Also, this NPA has positive influence on Human Factors because a standardized system contributes to reduce human error risk. SITEMA is very happy to see that **EASA** is contributing to **SAFETY** and **STANDARDIZATION**, and rising **SAFETY** standards by **harmonizing** rules is the way to go. Well done!

response *Noted*

The Agency welcomes the comment.

comment

159

comment by: *Ludwig Hessler*

The proposed system is too complex. The NPA proposes a new BMRC for aircraft that leave the base maintenance.

This additional form is not necessary when the CAMO manages the maintenance properly.

The certifying staff would need new privileges to deal with the new forms and technical logs.

For the industry this would lead to a lot of additional work. All involved parties would need training to understand the complex release system.

response *Accepted*

The concept has been simplified (CRS and final CRS).

comment

166 ❖

comment by: *Airbus*

**1. PARAGRAPH / SECTION OUR COMMENT IS RELATED TO:**

Article 2 "definitions"

Part-M paragraph M.A.708 Continuing airworthiness management

Part-145 paragraph 145.A.50 Certification of Maintenance

Part-145 paragraph 145.A.55 Maintenance records

AMC145.A.50(b)(2) certification of maintenance

AMC145.A.50(b)(3) certification of maintenance

**2. PROPOSED TEXT / COMMENT:**

The 5 following proposed statements are unclear:

## M.A.708 Continuing airworthiness management

*"nominate a primary maintenance organisation (PMO)"*

*"the Operator shall inform the PMO of any maintenance ordered to any other contractors".*

## 145.A.55 Maintenance records

*"when working under the lead of a primary maintenance organisation (PMO)"*

*" the PMO shall provide the Operator with a copy of any document received from those organisations being coordinated"*

## AMC145.A.50(b)(2) certification of maintenance

*"However, the PMO issuing the CRS is not responsible for the appropriate performance of the work certified by each MRC or for the use of appropriate maintenance personnel or certifying staff during such work"*

The underlined statements introduce ambiguity and do not clarify the responsibility of the Operator versus the PMO to "ensure that all work ordered by the Operator has been properly accomplished or deferred" as identified in background information given in the NPA section A-9 for multiple releases issues.

## 145.A.50 Certification of Maintenance

We agree that the proposed concept of MRC is a valuable clarification that a Part-145 organisation is not certifying that an aircraft is ready for service. To the purpose of clarification, we think that the MRC could replace the CRS under 145.A.50. Under such assumption that the privilege of a Part-145 organisation becomes limited to issue a MRC, the privilege to issue a CRS shall consequently be transferred to the Operator under M.A.708.

We think that the Operator ordering the Maintenance to several Part-145 organisations by **SIGNED CONTRACT** is the unique entity **CAPABLE** *"to ensure that all maintenance ordered by the Operator has been completed or properly deferred and it has been ensured that all activities were properly coordinated."*

## Conclusion:

- a) We think the proposed amendments do not remove the inconsistencies identified in background information given in the NPA section A-9.
- b) We think the proposed amendments of M.A.708 and 145.A.50 (and impact on other paragraphs) shall be reworked for compliance with the existing M.A.201 & appendix 1 and appendix XI to AMC to M.A.708 (c)

## M.A.201 Responsibilities

**(a) The owner is responsible for the continuing**

**airworthiness of an aircraft and shall ensure that no flight takes place unless:**

- the aircraft is maintained in an airworthy condition, and;
- any operational and emergency equipment fitted is correctly installed and serviceable or clearly identified as unserviceable, and;
- the maintenance of the aircraft is performed in accordance with the approved maintenance programme as specified in M.A.302.

(h) In the case of commercial air transport the operator is responsible for the continuing airworthiness of the aircraft it operates and shall:

- be approved in accordance with Part-145 or contract such an organisation; and
- ensure that paragraph (a) is satisfied.

#### Appendix 1

##### 5.1. Obligations of the continuing airworthiness management approved organisation:

...

- organise for all maintenance to be carried out by an approved maintenance organisation
- organise for all applicable airworthiness directives to be applied,
  - organise for all defects discovered during scheduled maintenance or reported by the owner to be corrected by an approved maintenance organisation,
  - coordinate scheduled maintenance, the application of airworthiness directives, the replacement of life limited parts, and component inspection requirements,

appendix XI to AMC to M.A.708 (c)

#### 2.3. Subcontracting

The maintenance contract should specify under which conditions the Part-145 approved organisation may subcontract tasks to a third party (whether this third party is Part-145 approved or not)..

##### 2.21. Exchange of information.

Each time exchange of information between the operator and the Part-145 approved organisation is necessary, the contract should specify what information should be provided and when (i.e. on what occasion or at what frequency), how,

by whom and to whom it has to be transmitted.

## 2.22. Meetings.

In order that the competent authority may be satisfied that a good communication system exists between the Operator and the Part-145 approved organisation, the terms of the maintenance contract should include the provision for a certain number of meetings to be held between both parties.

Contract review.

Workscope planning meeting.

Technical meeting.

Quality meeting.

c) Finally, to remove inconsistencies linked to the multiple releases issues identified in background information given in the NPA section A-9, we think that additional rework might be needed on:

- Article 2 “Definitions” to be reviewed in order to define what is “maintenance coordination” between an Operator and several contracted Part-145 organisations.
- Part-M paragraph M.A.201 (h) also to be reviewed to define “maintenance coordination requirement” for the Operator who contracts several Part-145 organisations.
- Part-M paragraph M.A.708 (c), AMC to M.A.708 (c) and associated Appendix XI, Part-145 paragraph 145.A.75 (b) and 145.A.70 (a), AMC to 145.A.75 (b) and 145.A.70 (b) to be reviewed in order to define “sub-contracting work packages to several third parties” for a Part-145 approved organisation contracting and coordinating several Part-145 approved organizations.

### 3. RATIONALE / REASON / JUSTIFICATION:

#### 1) Industrial and legal approach

The NPA propose a new concept of PMO “Primary Maintenance Organisation”. Such PMO is supposed to “properly coordinate” works to be performed by several Part-145 organisations without signed contract between these Part-145 organisations and the PMO.

**In such condition, we think that the PMO has no CAPABILITY to ensure proper coordination of other Part-145 organisations without mutual agreements on:**

- **each individual Part-145 organisation deliverables and interface with others Part-145 organisations and sub-tiers: work package contents & planning especially for component re-assembly, aircraft**

zone closure and tests

- the PMO Quality requirement (audits, inspections, defect reporting, rework, sub-tier qualification)
- the condition for work final acceptance
- PMO resources needed to continuously/finally ensure that all work ordered by an Operator has been properly accomplished e.g specialized services, engines specialists, qualified inspectors.

We think this is not acceptable with regards to the risk management in place in the Aeronautic Maintenance industry where a **SIGNED CONTRACT** is the unique document that can ensure unambiguous relationship between several entities to deliver safe product or services. With the foreseen NPA, no direct contract will exist between the PMO and the various organizations; therefore, the PMO has no relationship and empowerment towards them.

We see a risk that "nominating" a PMO, the Operator is transferring his Continuing Airworthiness Management responsibilities defined in M.A.201 and appendix 1 to a PMO under an "administrative process" (e.g documentary review to check that MRC documents are stamped without physical inspection of the work performed, checking lists of personnel without assessment of qualifications, ..etc):

- this will increase maintenance administration costs to the detriment of business, and
- this will not decrease safety issues linked to multiple releases identified in background information given in the NPA section A-9.

We think that "proper coordination" is already defined in the M.A.201(h) and associated AMC: **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.

We think that "proper coordination" shall remain the responsibility of the Operator or the contracted CAMO. Such coordination shall be ensured through signed contractual arrangement where Continued Airworthiness Management responsibilities (M.A.201 and appendix 1) are agreed between all involved parties: the Operator ordering and coordinating maintenance and Part-145 organisations & contracted third parties performing the work.

2) Regulatory approach: International harmonization

As the Maintenance Business takes place in International environment, we also think that our approach remains consistent with International harmonization efforts and especially supports the bilateral agreement with FAA rules as exposed in:

CFR title 14 § 43.9 Content, form, and disposition of maintenance, preventive maintenance, rebuilding, and alteration records

(a) *Maintenance record entries.* Except as provided in paragraphs (b) and (c) of this section, each person who maintains, performs preventive maintenance, rebuilds, or alters an aircraft, airframe, aircraft engine, propeller, appliance, or component part shall make an entry in the maintenance record of that equipment containing the following information:

(4) If the work performed on the aircraft, airframe, aircraft engine, propeller, appliance, or component part has been performed satisfactorily, the signature, certificate number, and kind of certificate held by the person approving the work. **The signature constitutes the approval for return to service only for the work performed.**

CFR Title 14 § 121.709 Airworthiness release or aircraft log entry.

(b) The airworthiness release or log entry required by paragraph (a) of this section must—

(2) Include a certification that—

(ii) All items required to be inspected were **inspected by an authorized person who determined that the work was satisfactorily completed;**

(iv) **So far as the work performed is concerned, the aircraft is in condition for safe operation;** and

(3) Be signed by an authorized certificated mechanic or repairman except that a certificated repairman may **sign the release or entry only for the work for which he is employed and certificated.**

response

*Partially accepted*

The proposed concept has been simplified (only CRS and final CRS). However, it is still based in the concept of maintenance certification by each organisation involved (CRS), plus issuance of a Final CRS to certify (and tell the pilot) that all the maintenance ordered had been completed.

This does not mean the the aircraft is airworthy, since the responsibility for the airworthiness of the aircraft belongs to the CAMO and goes beyond the maintenance ordered. This has been made fully clear in AMC M.A.306(a)3 and AMC 145.A.50(b)2.

The concept of Primary Maintenance Organisation has been removed, although it is the responsibility of the Operator to designate an organisation responsible for issuing the final CRS.

Please refer to the new Regulatory Impact Assessment contained in the Explanatory Note of this CRD.

comment

229

comment by: *SNMSAC Syndicat National des Mécaniciens Sol de l'Aviation Civile*

**Insert new AMC 145.A.50(b)(2) Certification of maintenance:**

**3** The sentence "it has ensured that all activities were properly coordinated" includes, but is not limited to:

|          |  |
|----------|--|
|          | -<br>-<br>- ensuring that the <b>APPROVED</b> procedures imposed by the operator are fulfilled,  |
| response | <i>Partially accepted</i>  |
|          | The concept has been simplified and this paragraph has been removed. Nevertheless, the coordination procedures have been transferred to AMC M.A.708(b)7 and your proposal has been incorporated. |

**B. Draft Rules - III. Draft Decision AMC to Part-145 - AMC 145.A.50(b)(3)**

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|          |  |   |
|----------|--|---|
| comment  | 58   | comment by: <i>Aircraft Engineers International (AEI)</i> |
|          | <b>AMC145.A.50(b)(3) Certification of maintenance</b>  |   |
|          | 2. The sentence "it has <u>been</u> ensured that all activities were properly coordinated" includes, but is not limited to:                |   |
|          | Editorial comment:   |   |
|          | Add <u>green underlined</u> text   |   |
|          | Reason:  |   |
|          | Correct spelling   |   |
| response | <i>Not accepted</i>  |   |
|          | The concept has been simplified and this paragraph has been removed. The coordination procedures have been transferred to AMC M.A.708(b)7. |   |

|         |   |   |
|---------|---|---|
| comment | 59  | comment by: <i>Aircraft Engineers International (AEI)</i> |
|         | <b>AMC145.A.50(b)(3) Certification of maintenance</b>   |   |
|         | 2. The sentence "it has ensured that all activities were properly coordinated" includes, but is not limited to: |   |
|         | - ensuring proper scheduling and communication when different contractors are working                           |   |
|         | in the same area/system,  |   |
|         | - ensuring that only personnel working for the contracted Part-145 organisations, as                            |   |

notified by the operator, perform maintenance on the aircraft, which may be achieved by

receiving a list of the personnel that will be working in the aircraft,

- ensuring that the approved procedures imposed by the operator are fulfilled,

Comment:

Add the green underlined text

Reason:

These procedures are part of the Operators maintenance arrangement (Exposition), and this is approved by the NAA before they will issue an AOC. Therefore this text should reflect that the procedures are approved.

response *Partially accepted*

The concept has been simplified and this paragraph has been removed. Nevertheless, the coordination procedures have been transferred to AMC M.A.708(b)7 and your proposal has been incorporated.

comment

69

comment by: *SITEMA – Sindicato dos Técnicos de Manutenção de Aeronaves*

**2. PROPOSED TEXT/ COMMENT:**

2. The sentence "it has ensured that all activities were properly coordinated" includes, but is not limited to:

- ensuring proper scheduling and communication when different contractors are working in the same area/system,

- ensuring that only personnel working for the contracted Part-145 organisations, as notified by the operator, perform maintenance on the aircraft, which may be achieved by receiving a list of the personnel that will be working in the aircraft,

- ensuring that the approved procedures imposed by the operator are fulfilled,

**3. JUSTIFICATION:**

These procedures are part of the Operators maintenance arrangement (Exposition), and this is approved by the NAA before they will issue an AOC. Therefore this text should reflect that the procedures are approved.

response *Partially accepted*

The concept has been simplified and this paragraph has been removed. Nevertheless, the coordination procedures have been transferred to AMC M.A.708(b)7 and your proposal has been incorporated.

|         |    |   |
|---------|----|---|
| comment | 72 | comment by: <i>SITEMA – Sindicato dos Técnicos de Manutenção de Aeronaves</i> |
|---------|----|---|

**PROPOSED TEXT:**

The sentence "it has **been** ensured that all activities were properly coordinated" includes, but is not limited to:

**JUSTIFICATION:**

Most importantly this NPA ensures a **high safety standard** by requiring that the different certificates are only issued by properly licensed, competent and qualified personnel. By **not** lowering the **SAFETY** standards, this NPA creates a certification system where it holds responsible for the work carried out, the person, and the organisation who is responsible for the work carried out. SITEMA is aware that before highering **SAFETY** standards, a common system must be achieved. Plus, it also clearly puts the responsibility to ensure that personnel who issue the different certificates have the required qualifications and authorisations with the organisation that is responsible for this personnel, and no responsibility is taken whatsoever from the Operators. Furthermore it ensures that the whole process of issuing certificates by different Aircraft Maintenance Organisations is clearly defined and organised by introducing the concept of PMO. At the same time this is achieved in the most economic way to all stakeholders. Also, this NPA has positive influence on Human Factors because a standardized system contributes to reduce human error risk. SITEMA is very happy to see that **EASA** is contributing to **SAFETY** and **STANDARDIZATION**, and rising **SAFETY** standards by **harmonizing** rules is the way to go. Well done!

|          |  |              |
|----------|--|--------------|
| response |  | <i>Noted</i> |
|----------|--|--------------|

|  |  |                                  |
|--|--|----------------------------------|
|  |  | The Agency welcomes the comment. |
|--|--|----------------------------------|

|         |    |                         |
|---------|----|-------------------------|
| comment | 88 | comment by: <i>ICAA</i> |
|---------|----|-------------------------|

The sentence "...and the certifying staff issuing the certificate is properly identified."

How is the identification supposed to be carried out? Does it relate to the CA (certification authorisation), is a photo necessary, Part-66 license number or what does apply?

The statement, "ensuring that the procedures imposed by the operator are fulfilled", this is contradictory to the text above where it is stated, "...the PMO is not responsible for the appropriate performance of the work certified by each MRC and BMRC....."

When a CRS has been issued and there is a need to perform additional maintenance, which of course requires a new CRS, than it is the operator's responsibility to ensure that the organisation issuing the new CRS receive the applicable guidelines and information.

Also when a CRS has been issued, this means that all maintenance has been carried out accordingly. Should any maintenance be required after the final CRS, than the operator has to nominate a PMO being responsible for any further

|          |  |
|----------|--|
|          | <p>maintenance i.e. the process will start again.</p> <p>It may not be necessary with the current text since it may confuse the situation.</p>   |
| response | <i>Partially accepted</i>  |
|          | <p>The Agency has significantly simplified the proposal (only CRS and final CRS). Please refer to the Explanatory Note of the CRD.</p> <p>In addition, it has been made fully clear that the responsibility for the airworthiness of the aircraft belongs to the CAMO (AMC M.A.306(a)3 and AMC 145.A.50(b)2).</p> <p>The concept of Primary Maintenance Organisation has been removed, although it is the responsibility of the Operator to designate an organisation responsible for issuing the final CRS.</p> |

|          |     |  |
|----------|-----|--|
| comment  | 110 | comment by: <i>Swedish Transport Agency, Civil Aviation Department (Transportstyrelsen, Luftfartsavdelningen)</i>  |
|          |     | <p><b>AMC 145.A.50(b)(3) 1.</b><br/>The sentence "...and the certifying staff issuing the certificate is properly identified."</p> <p>How is the identification supposed to be carried out? Does it relate to the CA (certification authorisation), is a photo necessary, Part-66 license number or what does apply?</p>   |
| response |     | <i>Partially accepted</i>  |
|          |     | <p>The Agency has significantly simplified the proposal (only CRS and final CRS). Please refer to the Explanatory Note of the CRD.</p> <p>In addition, it has been made fully clear that the responsibility for the airworthiness of the aircraft belongs to the CAMO (AMC M.A.306(a)3 and AMC 145.A.50(b)2).</p> <p>The concept of Primary Maintenance Organisation has been removed, although it is the responsibility of the Operator to designate an organisation responsible for issuing the final CRS.</p> |

|          |     |  |
|----------|-----|--|
| comment  | 111 | comment by: <i>Swedish Transport Agency, Civil Aviation Department (Transportstyrelsen, Luftfartsavdelningen)</i>  |
|          |     | <p><b>AMC 145.A.50(b)(3) 2.</b><br/>The statement, "ensuring that the procedures imposed by the operator are fulfilled", this is contradictory to the text above where it is stated, "...the PMO is not responsible for the appropriate performance of the work certified by each MRC and BMRC....."</p> |
| response |     | <i>Partially accepted</i>  |

The Agency has significantly simplified the proposal (only CRS and final CRS). Please refer to the Explanatory Note of the CRD.

In addition, it has been made fully clear that the responsibility for the airworthiness of the aircraft belongs to the CAMO (AMC M.A.306(a)3 and AMC 145.A.50(b)2).

The concept of Primary Maintenance Organisation has been removed, although it is the responsibility of the Operator to designate an organisation responsible for issuing the final CRS.

comment

112

comment by: *Swedish Transport Agency, Civil Aviation Department (Transportstyrelsen, Luftfartsavdelningen)*

**AMC 145.A.50(b)(3)3**

When a CRS has been issued and there is a need to perform additional maintenance, which of course requires a new CRS, than it is the operator's responsibility to ensure that the organisation issuing the new CRS receive the applicable guidelines and information.

Also when a CRS has been issued, this means that all maintenance has been carried out accordingly. Should any maintenance be required after the final CRS, than the operator has to nominate a PMO being responsible for any further maintenance i.e. the process will start again.

It may not be necessary with the current text since it may confuse the situation.

response

*Partially accepted*

The Agency has significantly simplified the proposal (only CRS and final CRS). Please refer to the Explanatory Note of the CRD.

In addition, it has been made fully clear that the responsibility for the airworthiness of the aircraft belongs to the CAMO (AMC M.A.306(a)3 and AMC 145.A.50(b)2).

The concept of Primary Maintenance Organisation has been removed, although it is the responsibility of the Operator to designate an organisation responsible for issuing the final CRS.

comment

134

comment by: *CAA-Norway*

1

The sentence "...and the certifying staff issuing the certificate is properly identified."

How is the identification supposed to be carried out? Does it relate to the CA (certification authorisation), is a photo necessary, Part-66 license number or what does apply?

2.

The statement, "ensuring that the procedures imposed by the operator are

fulfilled”, this is contradictory to the text above where it is stated, “..the PMO is not responsible for the appropriate performance of the work certified by each MRC and BMRC.....”

3

When a CRS has been issued and there is a need to perform additional maintenance, which of course requires a new CRS, than it is the operator's responsibility to ensure that the organisation issuing the new CRS receive the applicable guidelines and information.

Also when a CRS has been issued, this means that all maintenance has been carried out accordingly. Should any maintenance be required after the final CRS, than the operator has to nominate a PMO being responsible for any further maintenance i.e. the process will start again.

It may not be necessary with the current text since it may confuse the situation.

response *Partially accepted*

The Agency has significantly simplified the proposal (only CRS and final CRS). Please refer to the Explanatory Note of the CRD.

In addition, it has been made fully clear that the responsibility for the airworthiness of the aircraft belongs to the CAMO (AMC M.A.306(a)3 and AMC 145.A.50(b)2).

The concept of Primary Maintenance Organisation has been removed, although it is the responsibility of the Operator to designate an organisation responsible for issuing the final CRS.

comment 166 ❖

comment by: *Airbus*

**1. PARAGRAPH / SECTION OUR COMMENT IS RELATED TO:**

Article 2 “definitions”

Part-M paragraph M.A.708 Continuing airworthiness management

Part-145 paragraph 145.A.50 Certification of Maintenance

Part-145 paragraph 145.A.55 Maintenance records

AMC145.A.50(b)(2) certification of maintenance

AMC145.A.50(b)(3) certification of maintenance

**2. PROPOSED TEXT / COMMENT:**

The 5 following proposed statements are unclear:

## M.A.708 Continuing airworthiness management

*"nominate a primary maintenance organisation (PMO)"*

*"the Operator shall inform the PMO of any maintenance ordered to any other contractors".*

## 145.A.55 Maintenance records

*"when working under the lead of a primary maintenance organisation (PMO)"*

*" the PMO shall provide the Operator with a copy of any document received from those organisations being coordinated"*

## AMC145.A.50(b)(2) certification of maintenance

*"However, the PMO issuing the CRS is not responsible for the appropriate performance of the work certified by each MRC or for the use of appropriate maintenance personnel or certifying staff during such work"*

The underlined statements introduce ambiguity and do not clarify the responsibility of the Operator versus the PMO to "ensure that all work ordered by the Operator has been properly accomplished or deferred" as identified in background information given in the NPA section A-9 for multiple releases issues.

## 145.A.50 Certification of Maintenance

We agree that the proposed concept of MRC is a valuable clarification that a Part-145 organisation is not certifying that an aircraft is ready for service. To the purpose of clarification, we think that the MRC could replace the CRS under 145.A.50. Under such assumption that the privilege of a Part-145 organisation becomes limited to issue a MRC, the privilege to issue a CRS shall consequently be transferred to the Operator under M.A.708.

We think that the Operator ordering the Maintenance to several Part-145 organisations by **SIGNED CONTRACT** is the unique entity **CAPABLE** *"to ensure that all maintenance ordered by the Operator has been completed or properly deferred and it has been ensured that all activities were properly coordinated."*

## Conclusion:

- a) We think the proposed amendments do not remove the inconsistencies identified in background information given in the NPA section A-9.
- b) We think the proposed amendments of M.A.708 and 145.A.50 (and impact on other paragraphs) shall be reworked for compliance with the existing M.A.201 & appendix 1 and appendix XI to AMC to M.A.708 (c)

## M.A.201 Responsibilities

**(a) The owner is responsible for the continuing airworthiness of an aircraft and**

**shall ensure that no flight takes place unless:**

- the aircraft is maintained in an airworthy condition, and;
  - any operational and emergency equipment fitted is correctly installed and serviceable or clearly identified as unserviceable, and;
  - the maintenance of the aircraft is performed in accordance with the approved maintenance programme as specified in M.A.302.
- (h) In the case of commercial air transport the operator is responsible for the continuing airworthiness of the aircraft it operates and shall:
- be approved in accordance with Part-145 or contract such an organisation; and
  - ensure that paragraph (a) is satisfied.

## Appendix 1

## 5.1. Obligations of the continuing airworthiness management approved organisation:

...

- organise for all maintenance to be carried out by an approved maintenance organisation
- organise for all applicable airworthiness directives to be applied,
  - organise for all defects discovered during scheduled maintenance or reported by the owner to be corrected by an approved maintenance organisation,
- coordinate scheduled maintenance, the application of airworthiness directives, the replacement of life limited parts, and component inspection requirements,

appendix XI to AMC to M.A.708 (c)

## 2.3. Subcontracting

The maintenance contract should specify under which conditions the Part-145 approved organisation may subcontract tasks to a third party (whether this third party is Part-145 approved or not)..

## 2.21. Exchange of information.

Each time exchange of information between the operator and the Part-145 approved organisation is necessary, the contract should specify what information should be provided and when (i.e. on what occasion or at what frequency), how, by whom and to whom it has to be transmitted.

## 2.22. Meetings.

In order that the competent authority may be satisfied that a good communication system exists between the Operator and the Part-145 approved organisation, the terms of the maintenance contract should include the provision for a certain number of meetings to be held between both parties.

Contract review.

Workscope planning meeting.

Technical meeting.

Quality meeting.

c) Finally, to remove inconsistencies linked to the multiple releases issues identified in background information given in the NPA section A-9, we think that additional rework might be needed on:

- Article 2 “Definitions” to be reviewed in order to define what is “maintenance coordination” between an Operator and several contracted Part-145 organisations.
- Part-M paragraph M.A.201 (h) also to be reviewed to define “maintenance coordination requirement” for the Operator who contracts several Part-145 organisations.
- Part-M paragraph M.A.708 (c), AMC to M.A.708 (c) and associated Appendix XI, Part-145 paragraph 145.A.75 (b) and 145.A.70 (a), AMC to 145.A.75 (b) and 145.A.70 (b) to be reviewed in order to define “sub-contracting work packages to several third parties” for a Part-145 approved organisation contracting and coordinating several Part-145 approved organizations.

## 3. RATIONALE / REASON / JUSTIFICATION:

### 1) Industrial and legal approach:

The NPA propose a new concept of PMO “Primary Maintenance Organisation”. Such PMO is supposed to “properly coordinate” works to be performed by several Part-145 organisations without signed contract between these Part-145 organisations and the PMO.

In such condition, we think that the PMO has no **CAPABILITY** to ensure proper coordination of other Part-145 organisations without mutual agreements on:

- each individual Part-145 organisation deliverables and interface with others Part-145 organisations and sub-tiers: work package contents & planning especially for component re-assembly, aircraft zone closure and tests
- the PMO Quality requirement (audits, inspections, defect reporting, rework, sub-tier qualification)

- the condition for work final acceptance
- PMO resources needed to continuously/finally ensure that all work ordered by an Operator has been properly accomplished e.g specialized services, engines specialists, qualified inspectors

We think this is not acceptable with regards to the risk management in place in the Aeronautic Maintenance industry where a **SIGNED CONTRACT** is the unique document that can ensure unambiguous relationship between several entities to deliver safe product or services. With the foreseen NPA, no direct contract will exist between the PMO and the various organizations; therefore, the PMO has no relationship and empowerment towards them.

We see a risk that "nominating" a PMO, the Operator is transferring his Continuing Airworthiness Management responsibilities defined in M.A.201 and appendix 1 to a PMO under an "administrative process" (e.g documentary review to check that MRC documents are stamped without physical inspection of the work performed, checking lists of personnel without assessment of qualifications, ..etc):

- this will increase maintenance administration costs to the detriment of business, and
- this will not decrease safety issues linked to multiple releases identified in background information given in the NPA section A-9

We think that "proper coordination" is already defined in the M.A.201(h) and associated AMC: **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.

We think that "proper coordination" shall remain the responsibility of the Operator or the contracted CAMO. Such coordination shall be ensured through signed contractual arrangement where Continued Airworthiness Management responsibilities (M.A.201 and appendix 1) are agreed between all involved parties: the Operator ordering and coordinating maintenance and Part-145 organisations & contracted third parties performing the work.

## 2) Regulatory approach: International harmonization

As the Maintenance Business takes place in International environment, we also think that our approach remains consistent with International harmonization efforts and especially supports the bilateral agreement with FAA rules as exposed in:

CFR title 14 § 43.9 Content, form, and disposition of maintenance, preventive maintenance, rebuilding, and alteration records

(a) *Maintenance record entries.* Except as provided in paragraphs (b) and (c) of this section, each person who maintains, performs preventive maintenance, rebuilds, or alters an aircraft, airframe, aircraft engine, propeller, appliance, or component part shall make an entry in the maintenance record of that equipment containing the following information:

(4) If the work performed on the aircraft, airframe, aircraft engine, propeller, appliance, or component part has been performed satisfactorily, the signature, certificate number, and kind of certificate held by the person approving the work. **The signature constitutes the approval for return to service only for the work performed.**

CFR Title 14 § 121.709 Airworthiness release or aircraft log entry.

(b) The airworthiness release or log entry required by paragraph (a) of this section must—

(2) Include a certification that—

(ii) All items required to be inspected were **inspected by an authorized person who determined that the work was satisfactorily completed;**

(iv) **So far as the work performed is concerned, the aircraft is in condition for safe operation;** and

(3) Be signed by an authorized certificated mechanic or repairman except that a certificated repairman may **sign the release or entry only for the work for which he is employed and certificated.**

response *Partially accepted*

The proposed concept has been simplified (only CRS and final CRS). However, it is still based in the concept of maintenance certification by each organisation involved (CRS), plus issuance of a Final CRS to certify (an tell the pilot) that all the maintenance ordered had been completed.

This does not mean the the aircraft is airworthy, since the responsibility for the airworthiness of the aircraft belongs to the CAMO and goes beyond the maintenance ordered. This has been made fully clear in AMC M.A.306(a)3 and AMC 145.A.50(b)2.

The concept of Primary Maintenance Organisation has been removed, although it is the responsibility of the Operator to designate an organisation responsible for issuing the final CRS.

Please refer to the new Regulatory Impact Assessment contained in the Explanatory Note of this CRD.

comment 192

comment by: CAA Finland, Communications

Paragraph 1

The sentence "...and the certifying staff issuing the certificate is properly identified."

How is the identification supposed to be carried out? Does it relate to the CA (certification authorisation), is a photo necessary, Part-66 license number or what does apply?

response *Noted*

This paragraph has been removed because of the more simplified concept.

comment 193 comment by: CAA Finland, Communications

Paragraph 2

The statement, "ensuring that the procedures imposed by the operator are fulfilled", this is contradictory to the text above where it is stated, "..the PMO is not responsible for the appropriate performance of the work certified by each MRC and BMRC....."

response Partially accepted

The Agency has significantly simplified the proposal (only CRS and final CRS). Please refer to the Explanatory Note of the CRD.

In addition, it has been made fully clear that the responsibility for the airworthiness of the aircraft belongs to the CAMO (AMC M.A.306(a)3 and AMC 145.A.50(b)2).

The concept of Primary Maintenance Organisation has been removed, although it is the responsibility of the Operator to designate an organisation responsible for issuing the final CRS.

comment 194 comment by: CAA Finland, Communications

Paragraph 3

When a CRS has been issued and there is a need to perform additional maintenance, which of course requires a new CRS, than it is the operator's responsibility to ensure that the organisation issuing the new CRS receive the applicable guidelines and information.

Also when a CRS has been issued, this means that all maintenance has been carried out accordingly. Should any maintenance be required after the final CRS, than the operator has to nominate a PMO being responsible for any further maintenance i.e. the process will start again.

It may not be necessary with the current text since it may confuse the situation.

response Partially accepted

The Agency has significantly simplified the proposal (only CRS and final CRS). Please refer to the Explanatory Note of the CRD.

In addition, it has been made fully clear that the responsibility for the airworthiness of the aircraft belongs to the CAMO (AMC M.A.306(a)3 and AMC 145.A.50(b)2).

The concept of Primary Maintenance Organisation has been removed, although it is the responsibility of the Operator to designate an organisation responsible for issuing the final CRS.

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| comment  | 230  | comment by: <i>SNMSAC Syndicat National des Mécaniciens Sol de l'Aviation Civile</i> |
|          | <p><b>Insert new AMC 145.A.50(b)(3) Certification of maintenance:</b><br/> <b>2</b> The sentence "it has ensured that all activities were properly coordinated" includes, but is not limited to:</p> <ul style="list-style-type: none"> <li>-</li> <li>-</li> <li>- ensuring that the <b>APPROVED</b> procedures imposed by the operator are fulfilled,</li> </ul> |  |
| response | <i>Partially accepted</i>  |  |
|          | <p>The concept has been simplified and this paragraph has been removed. Nevertheless, the coordination procedures have been transferred to AMC M.A.708(b)7 and your proposal has been incorporated.</p>  |  |

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| <b>B. Draft Rules - III. Draft Decision AMC to Part-145 - AMC 145.A.65(b)(3)</b> |
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p. 44

|          |  |  |
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| comment  | 188  | comment by: <i>CAA Finland, Communications</i> |
|          | <p>With many different contracted/subcontracted MO:s, it seems unlikely to meet the intent of this paragraph.</p>  |  |
| response | <i>Noted</i>   |  |
|          | <p>The Agency agrees with the comment. Certainly, when different organisations are involved, proper coordination takes utmost importance. That is the reason for the changes proposed in this task 145.012.<br/> 145.A.65(b)3 requires the appropriate procedures to be in place. Nevertheless, the AMC 145.A.65(b)3 has been kept as in the current regulation.</p> |  |

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| <b>B. Draft Rules - III. Draft Decision AMC to Part-145 - AMC 145.A.65(c)(1)</b> |
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p. 44

|          |   |                         |
|----------|---|-------------------------|
| comment  | 89  | comment by: <i>ICAA</i> |
|          | <p>Additional guidelines are required e.g. when the maintenance is contracted to other organisations. Also with the new concept of PMO:s and MRC, BMRC etc. It may be necessary to explain that audits have to be conducted even at the contracted organisations. Since it now seems possible for one maintenance organisation to contract other organisations, there must be clarified how and by whom the audits should be conducted.</p> <p>Replace the word "issue" with the words "performing"....</p> |                         |
| response | <i>Partially accepted</i>   |                         |
|          | <p>The Agency has significantly simplified the proposal (only CRS and final CRS). Please refer to the Explanatory Note of the CRD.</p> <p>In addition, it has been made fully clear that the responsibility for the airworthiness of the aircraft belongs to the CAMO (AMC M.A.306(a)3 and AMC</p>  |                         |

145.A.50(b)2).

The concept of Primary Maintenance Organisation has been removed, although it is the responsibility of the Operator to designate an organisation responsible for issuing the final CRS.

Regarding the words "issue" and "performing" the Agency believes that the proposed wording does not introduce any change to the meaning of the text.

comment

113

comment by: *Swedish Transport Agency, Civil Aviation Department (Transportstyrelsen, Luftfartsavdelningen)*

**AMC 145.A.65(c)(1)3.**

Additional guidelines are required e.g. when the maintenance is contracted to other organisations. Also with the new concept of PMO:s and MRC, BMRC etc. It may be necessary to explain that audits have to be conducted even at the contracted organisations. Since it now seems possible for one maintenance organisation to contract other organisations, there must be clarified how and by whom the audits should be conducted.

Replace the word "issue" with the words "performing"....

response

*Partially accepted*

The Agency has significantly simplified the proposal (only CRS and final CRS). Please refer to the Explanatory Note of the CRD.

In addition, it has been made fully clear that the responsibility for the airworthiness of the aircraft belongs to the CAMO (AMC M.A.306(a)3 and AMC 145.A.50(b)2).

The concept of Primary Maintenance Organisation has been removed, although it is the responsibility of the Operator to designate an organisation responsible for issuing the final CRS.

Regarding the words "issue" and "performing" the Agency believes that the proposed wording does not introduce any change to the meaning of the text.

comment

135

comment by: *CAA-Norway*

3

Additional guidelines are required e.g. when the maintenance is contracted to other organisations. Also with the new concept of PMO:s and MRC, BMRC etc. It may be necessary to explain that audits have to be conducted even at the contracted organisations. Since it now seems possible for one maintenance organisation to contract other organisations, there must be clarified how and by whom the audits should be conducted.

Replace the word "issue" with the words "performing"....

response

*Partially accepted*

The Agency has significantly simplified the proposal (only CRS and final CRS). Please refer to the Explanatory Note of the CRD.

In addition, it has been made fully clear that the responsibility for the airworthiness of the aircraft belongs to the CAMO (AMC M.A.306(a)3 and AMC 145.A.50(b)2).

The concept of Primary Maintenance Organisation has been removed, although it is the responsibility of the Operator to designate an organisation responsible for issuing the final CRS.

Regarding the words "issue" and "performing" the Agency believes that the proposed wording does not introduce any change to the meaning of the text.

comment

195

comment by: *CAA Finland, Communications*

Additional guidelines are required e.g. when the maintenance is contracted to other organisations. Also with the new concept of PMO:s and MRC, BMRC etc. It may be necessary to explain that audits have to be conducted even at the contracted organisations. Since it now seems possible for one maintenance organisation to contract other organisations, there must be clarified how and by whom the audits should be conducted.

Replace the word "issue" with the words "performing"....

response

*Partially accepted*

The Agency has significantly simplified the proposal (only CRS and final CRS). Please refer to the Explanatory Note of the CRD.

In addition, it has been made fully clear that the responsibility for the airworthiness of the aircraft belongs to the CAMO (AMC M.A.306(a)3 and AMC 145.A.50(b)2).

The concept of Primary Maintenance Organisation has been removed, although it is the responsibility of the Operator to designate an organisation responsible for issuing the final CRS.

Regarding the words "issue" and "performing" the Agency believes that the proposed wording does not introduce any change to the meaning of the text.

**B. Draft Rules - III. Draft Decision AMC to Part-145 - AMC 145.A.75(b)**

p. 45

comment

90

comment by: *ICAA*

Replace the word "issue" with "performed" or "carried out"..

response

*Not accepted*

The Agency believes that the proposed wording does not introduce any change to the meaning of the text. As a matter of fact, the term "certification of maintenance" means both things, the process of issuing the corresponding certificates (CRS and final CRS) as well as the documents issued (CRS and final CRS).

comment 114 comment by: *Swedish Transport Agency, Civil Aviation Department (Transportstyrelsen, Luftfartsavdelningen)*

**AMC 145.A.75(b)4.4**

Replace the word "issue" with "performed" or "carried out"..

response *Not accepted*

The Agency believes that the proposed wording does not introduce any change to the meaning of the text. As a matter of fact, the term "certification of maintenance" means both things, the process of issuing the corresponding certificates (CRS and final CRS) as well as the documents issued (CRS and final CRS).

comment 136 comment by: *CAA-Norway*

4.4

Replace the word "issue" with "performed" or "carried out"..

response *Not accepted*

The Agency believes that the proposed wording does not introduce any change to the meaning of the text. As a matter of fact, the term "certification of maintenance" means both things, the process of issuing the corresponding certificates (CRS and final CRS) as well as the documents issued (CRS and final CRS).

comment 196 comment by: *CAA Finland, Communications*

Paragraph 4.4

Replace the word "issue" with "performed" or "carried out"..

response *Not accepted*

The Agency believes that the proposed wording does not introduce any change to the meaning of the text. As a matter of fact, the term "certification of maintenance" means both things, the process of issuing the corresponding certificates (CRS and final CRS) as well as the documents issued (CRS and final CRS).

**B. Draft Rules - IV. Draft Decision GM to Part-145**

p. 46

comment 165 comment by: *European Regions Airline Association*

ERA's earlier general comments requesting the cancellation of this NPA on the grounds of the complexity of the proposed "solution" is further supported by the Guidance Material section of this NPA.

It is ERA's opinion that any rule that requires 14 pages of new Guidance Material to be issued must, by default be complex.

It is for this and all other reasons stated in ERA's submission on this matter that this NPA must be withdrawn and a less complex solution be found, if indeed a problem exists that requires a solution, a fact not yet demonstrated.

response *Partially accepted*

The Agency has significantly simplified the proposal (only CRS and final CRS). Please refer to the Explanatory Note of the CRD.

In addition, it has been made fully clear that the responsibility for the airworthiness of the aircraft belongs to the CAMO (AMC M.A.306(a)3 and AMC 145.A.50(b)2).

The concept of Primary Maintenance Organisation has been removed, although it is the responsibility of the Operator to designate an organisation responsible for issuing the final CRS.

comment

208

comment by: *Walter Gessky*

Delete the proposed Draft Decision GM to Part 145 because the complicated bureaucratic concept is not acceptable.

response *Partially accepted*

The Agency has significantly simplified the proposal (only CRS and final CRS). Please refer to the Explanatory Note of the CRD.

In addition, it has been made fully clear that the responsibility for the airworthiness of the aircraft belongs to the CAMO (AMC M.A.306(a)3 and AMC 145.A.50(b)2).

The concept of Primary Maintenance Organisation has been removed, although it is the responsibility of the Operator to designate an organisation responsible for issuing the final CRS.

**B. Draft Rules - IV. Draft Decision GM to Part-145 - GM 145.A.10**

comment

91

comment by: *ICAA*

Replace the words "issue" with "perform" and "performs" accordingly.

response *Not accepted*

The Agency believes that the proposed wording does not introduce any change to the meaning of the text. As a matter of fact, the term "certification of maintenance" means both things, the process of issuing the corresponding certificates (CRS and final CRS) as well as the documents issued (CRS and final CRS).

comment

115

comment by: *Swedish Transport Agency, Civil Aviation Department (Transportstyrelsen, Luftfartsavdelningen)***GM 145.A.10 5 & 6.1**

Replace the words "issue" with "perform" and "performs" accordingly.

response

*Not accepted*

The Agency believes that the proposed wording does not introduce any change to the meaning of the text. As a matter of fact, the term "certification of maintenance" means both things, the process of issuing the corresponding certificates (CRS and final CRS) as well as the documents issued (CRS and final CRS).

comment

137

comment by: *CAA-Norway*

5/6.1

Replace the words "issue" with "perform" and "performs" accordingly.

response

*Not accepted*

The Agency believes that the proposed wording does not introduce any change to the meaning of the text. As a matter of fact, the term "certification of maintenance" means both things, the process of issuing the corresponding certificates (CRS and final CRS) as well as the documents issued (CRS and final CRS).

comment

197

comment by: *CAA Finland, Communications*

Replace the words "issue" with "perform" and "performs" accordingly.

response

*Not accepted*

The Agency believes that the proposed wording does not introduce any change to the meaning of the text. As a matter of fact, the term "certification of maintenance" means both things, the process of issuing the corresponding certificates (CRS and final CRS) as well as the documents issued (CRS and final CRS).

**B. Draft Rules - IV. Draft Decision GM to Part-145 - GM 145.A.50**

p. 46-58

comment

37 ❖

comment by: *AEA*

|          |  |
|----------|--|
| response | <p>The extreme length and complexity of this text is a self demonstration that the new release to service concept is by far too complex, hard to understand, difficult to transcribe into company procedures, and likely to be misunderstood by maintenance personnel, thereby possibly decreasing the level of safety.</p>  |
|          | <p><i>Partially accepted</i></p>   |
|          | <p>The Agency has significantly simplified the proposal (only CRS and final CRS). Please refer to the Explanatory Note of the CRD.</p> <p>In addition, it has been made fully clear that the responsibility for the airworthiness of the aircraft belongs to the CAMO (AMC M.A.306(a)3 and AMC 145.A.50(b)2).</p> <p>The concept of Primary Maintenance Organisation has been removed, although it is the responsibility of the Operator to designate an organisation responsible for issuing the final CRS.</p> |

|          |  |                 |
|----------|--|-----------------|
| comment  | 43   | comment by: AEA |
|          | <p>The 8 page explanation on the new release to service concept is a clear demonstration that the proposed system is by far too complex and is likely to be misunderstood by maintenance personnel, thereby having a potential negative impact on safety</p>   |                 |
| response | <p><i>Partially accepted</i></p>   |                 |
|          | <p>The Agency has significantly simplified the proposal (only CRS and final CRS). Please refer to the Explanatory Note of the CRD.</p> <p>In addition, it has been made fully clear that the responsibility for the airworthiness of the aircraft belongs to the CAMO (AMC M.A.306(a)3 and AMC 145.A.50(b)2).</p> <p>The concept of Primary Maintenance Organisation has been removed, although it is the responsibility of the Operator to designate an organisation responsible for issuing the final CRS.</p> |                 |

|          |  |                 |
|----------|--|-----------------|
| comment  | 47   | comment by: AEA |
|          | <p>The Technical Log example is placed in a Part 145 Guidance Material; however, the Tech Log system is a Part M responsibility.</p> <p>Besides the fact that the GM is put in the wrong regulation, it is questionable that the drafting group could adequately assess the consequences of modifying the Tech Log without knowing to which regulation it pertains.</p> <p>Failure to properly assess those consequences, added to the fact that modification of the Part M Technical Log was not in the Terms of Reference of the Drafting Group shows once again that the whole NPA should be withdrawn.</p> |                 |
| response | <p><i>Partially accepted</i></p>   |                 |
|          | <p>The examples of Technical Log have been introduced both in Part-M for the</p>   |                 |

operator (AMC M.A.306(a)) but also in Part-145 (AMC 145.A.50) to help the Part-145 organisation in completing the Technical Log of the operator.

comment

116

comment by: *Swedish Transport Agency, Civil Aviation Department (Transportstyrelsen, Luftfartsavdelningen)*

**GM 145.A.50 Diagram "Flow Chart"**

This kind of process would not happen in the Nordic countries.

The process explained on this diagram seems to be much too complex. It would be very difficult to monitor and ensure that all contracted maintenance has been performed according to stipulated contracts, information, guidelines etc. The burden on the operator will increase since the ultimate responsibility rests with him.

response

*Partially accepted*

The Agency has significantly simplified the proposal (only CRS and final CRS). Please refer to the Explanatory Note of this CRD.

comment

138

comment by: *CAA-Norway*

**Diagram**

This kind of process would not happen in the Nordic countries.

The process explained on this diagram seems to be much too complex. It would be very difficult to monitor and ensure that all contracted maintenance has been performed according to stipulated contracts, information, guidelines etc. The burden on the operator will increase since the ultimate responsibility rests with him.

response

*Partially accepted*

The Agency has significantly simplified the proposal (only CRS and final CRS). Please refer to the Explanatory Note of this CRD.

comment

157

comment by: *Ludwig Hessler*

The proposed system is too complex. To explain the system 8 pages are necessary in the NPA. The NPA proposes new forms and technical logs (4 pages). The certifying staff would need new privileges.

For the industry this would lead to a lot of additional work. All involved parties would need training to understand the complex release system.

The Line Maintenance organisation would have to sign for the release of the base maintenance although it was not involved directly in the base maintenance activities. This should be the responsibility of the CAMO and the involved base maintenance organisations. Otherwise the Part-145 organisation needs additional personal for the management of different maintenance activities in different Part-145 organisations - which is under the current system the task of the CAMO.

|          |  |
|----------|--|
| response | <i>Partially accepted</i>  |
|          | <p>The Agency has significantly simplified the proposal (only CRS and final CRS). Please refer to the Explanatory Note of the CRD.</p> <p>In addition, it has been made fully clear that the responsibility for the airworthiness of the aircraft belongs to the CAMO (AMC M.A.306(a)3 and AMC 145.A.50(b)2).</p> <p>The concept of Primary Maintenance Organisation has been removed, although it is the responsibility of the Operator to designate an organisation responsible for issuing the final CRS.</p> |

|          |   |  |
|----------|---|--|
| comment  | 198   | comment by: <i>CAA Finland, Communications</i> |
|          | <p>Diagram<br/>This kind of process would not happen in the Nordic countries.</p> <p>The process explained on this diagram seems to be much too complex. It would be very difficult to monitor and ensure that all contracted maintenance has been performed according to stipulated contracts, information, guidelines etc. The burden on the operator will increase since the ultimate responsibility rests with him.</p> |  |
| response | <i>Partially accepted</i>   |  |
|          | <p>The Agency has significantly simplified the proposal (only CRS and final CRS). Please refer to the Explanatory Note of this CRD.</p>   |  |

|   |
|---|
| <b>B. Draft Rules - V. Draft Decision GM to Part-66 - GM 66.A.20(a)</b> |
|---|

|       |
|-------|
| p. 59 |
|-------|

|          |   |                                  |
|----------|---|----------------------------------|
| comment  | 209   | comment by: <i>Walter Gessky</i> |
|          | <p>Delete the proposed Draft Decision GM to Part 66 because the complicated bureaucratic concept is not acceptable.</p>                 |                                  |
| response | <i>Partially accepted</i>   |                                  |
|          | <p>The Agency has significantly simplified the proposal (only CRS and final CRS). Please refer to the Explanatory Note of this CRD.</p> |                                  |

**Appendix A**

**RESULTING TEXT AFTER THE CRD**

**I. DRAFT OPINION (EC) NO 2042/2003**

**A) COVER REGULATION**

**Entry into force**

This Regulation shall enter into force one year after its publication in the Official Journal of the European Union.

**B) PART-M****Point M.A.306(a)2 is amended as follows:****M.A.306 Operator's technical log system**

(a) 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 containing the following information for each aircraft:

...

2. the current aircraft certificates of release to service and the current final certificate of release to service, and;

...

(b) ...

(c) ...

**Point M.A.708(b)7 is amended as follows:****M.A.708 Continuing airworthiness management**

(a) ...

(b) For every aircraft managed, the approved continuing airworthiness management organisation shall:

...

7. ensure that the aircraft is taken to an appropriately approved maintenance organisations whenever necessary, that maintenance activities are properly coordinated and that, when maintenance is performed by Part-145 organisations, a Part-145 maintenance organisation is designated to issue the final certificate of release to service.

...

(c) ...

**C) PART-145****Point 145.A.30(i) is amended as follows:****145.A.30 Personnel requirements**

...

- (i) ~~Component certifying staff shall comply with Part-66.~~ Any organisation holding a B, C or D1 rating shall have appropriate certifying staff, as applicable, qualified as follows:

1. ~~Component certifying staff shall be qualified in accordance with Part-66 and 145.A.35;~~
2. ~~Non-destructive testing certifying staff shall be qualified in accordance with 145.A.30(f) and 145.A.35, except for the need to comply with Part-66.~~

...

**Point 145.A.35(a) is amended as follows:****145.A.35 Certifying staff and category B1 and B2 support staff**

- (a) In addition to the appropriate requirements of 145.A.30(g) and (h), the organisation shall ensure that certifying staff and category B1 and B2 support staff have an adequate understanding of the relevant aircraft and/or components to be maintained together with the associated organisation procedures. In the case of certifying staff, this must be accomplished before the issue or re-issue of the certification authorisation.

'Category B1 and B2 support staff' means those category B1 and B2 staff in the base maintenance environment who do not hold necessarily certification privileges. 'Relevant aircraft and/or components', means those aircraft or components specified in the particular certification authorisation. 'Certification authorisation' means the authorisation issued to certifying staff by the organisation and which specifies the fact that they may ~~certify maintenance in accordance with point 145.A.50 sign certificates of release to service~~ within the limitations stated in such authorisation on behalf of the approved organisation.

...

**Point 145.A.50 is amended as follows:****145.A.50 Certification of maintenance**

- ~~(a) A certificate of release to service shall be issued by appropriately authorised certifying staff on behalf of the organisation when it has been verified that all maintenance ordered has been properly carried out by the organisation in accordance with the procedures specified in point 145.A.70, taking into account the availability and use of the maintenance data specified in~~

~~point 145.A.45 and that there are no non-compliances which are known to endanger flight safety.~~

(a) For the purpose of this Part, the certification of maintenance on aircraft shall include:

1. certificate(s) of release to service, and
2. a final certificate of release to service.

The issuance of the certificates of release to service does not imply that the aircraft is ready for service. A final certificate of release to service must be issued before flight.

Only one daily check or equivalent may be performed after the issuance of the final certificate of release to service. If other additional maintenance is required before flight, a new final certificate of release to service must be issued, which will supersede the previous one. In such a case, both final certificates of release to service must be kept in records.

~~(b) A certificate of release to service shall be issued before flight at the completion of any maintenance.~~

(b) The certification of maintenance on aircraft shall be carried out as follows:

1. A certificate of release to service shall be issued by appropriately authorised certifying staff on behalf of each Part-145 organisation when it has been verified that all the maintenance ordered to that organisation has been properly carried out or properly deferred in accordance with the procedures specified in 145.A.70, taking into account the availability and use of the maintenance data specified in 145.A.45.
  - i. For base maintenance, a certificate of release to service shall be issued by each Part-145 organisation using appropriately authorised certifying staff per 145.A.30(h), except that organisations working in a base maintenance event under a line maintenance approval may issue a certificate of release to service using certifying staff qualified in accordance with 145.A.50(b)(1)(ii).
  - ii. For line maintenance, at least one certificate of release to service shall be issued by each Part-145 organisation using the following appropriately authorised certifying staff:
    - 145.A.30(g) certifying staff corresponding to the scope of the tasks covered by the certificate of release to service, or
    - 145.A.30(i)(2) certifying staff in the case of a D1 rated organisation.

Each certificate of release to service must clearly identify the task or group of tasks it refers to.

2. A final certificate of release to service shall be issued by appropriately authorised certifying staff on behalf of the Part-145 organisation designated by the Part-M<sub>7</sub> Subpart G organisation, when:
  - i. all required certificates of release to service have been issued, and
  - ii. all maintenance ordered by the operator has been completed or properly deferred, and

iii. it has been ensured that there are no non-compliances which are known to endanger flight safety.

The final certificate of release to service shall be issued by appropriately authorised certifying staff of the following categories, or equivalent as permitted by 145.A.30(j):

- Category B1 or B2 or C with the appropriate type/group rating, independently of the scope of tasks covered by each certificate of release to service, or
- Category A, when no base maintenance has been performed and all the line maintenance has been performed by the person issuing the certificate of release to service.

(c) ...

(d) ...

(e) By derogation to paragraph (a) (b), when an organisation is unable to complete all maintenance ordered, it may issue a certificate of release to service may be issued within the approved aircraft limitations. The organisation shall enter such fact in the aircraft certificate of release to service before the issue of such certificate.

(f) By derogation from the paragraph (a) (d) and 145.A.42, when an aircraft is grounded at a location other than the main line station or main maintenance base due to the non-availability of a component with the appropriate release certificate, it is permissible to temporarily fit a component without the appropriate release certificate for a maximum of 30 flight hours or until the aircraft first returns to the main line station or main maintenance base, whichever is the sooner, subject to the aircraft operator agreement and the said component having a suitable release certificate but otherwise in compliance with all applicable maintenance and operational requirements. Such components shall be removed by the above prescribed time limit unless an appropriate release certificate has been obtained in the meantime under paragraph (a) (d) and 145.A.42.

**Point 145.A.55(a) is amended as follows:**

**145.A.55 Maintenance records**

(a) The organisation shall record all details of maintenance work carried out. As a minimum, the organisation shall retain records necessary to prove that all requirements have been met for the certification of maintenance required by point 145.A.50 ~~issuance of the certificate of release to service~~, including subcontractor's release documents.

...

**Point 145.A.75(e) is amended as follows:**

**145.A.75 Privileges of the organisation**

In accordance with the exposition, the organisation shall be entitled to carry out the following tasks:

...

- (e) ~~Issue certificates of release to service in respect of completion of maintenance in accordance with 145.A.50.~~ Issue certificates in accordance with 145.A.50, within the limitations of its approval, in respect of completion of maintenance.

Appendix II (Organisations approval class and rating system), item 8, is amended as follows:

...

8. Category A class ratings are subdivided into "Base" or "Line" maintenance. A Part-145 approved maintenance organisation may be approved for either "Base" or "Line" maintenance or both. It should be noted that a "Line" facility located at a main base facility requires a "Line" maintenance approval.

A "Line" maintenance approval permits, for those aircraft types included in the approval:

- the issuance of certificates of release to service (145.A.50(b)1) covering the performance of line maintenance, and
- the issuance of final certificates of release to service (145.A.50(b)2) covering the performance of line and base maintenance.

A "Base" maintenance approval permits, for those aircraft types included in the approval:

- the issuance of certificates of release to service (145.A.50(b)1) covering the performance of base maintenance, and
- the issuance of final certificates of release to service (145.A.50(b)2) covering the performance of line and base maintenance.

...

**The EASA Form 3 shown in Appendix III is amended as follows:**

### **Appendix III to Part-145**

The sentence just below the [Company Name and Address] is changed to read:

"as a maintenance organisation in compliance with Section A of Annex II (Part-145) of Regulation (EC) No 2042/2003, approved to maintain products, parts and appliances listed in the attached approval schedule and issue related ~~certificates of release to service~~ certification of maintenance using the above references".

**D) PART-66:****Point 66.A.20 is amended as follows:****66.A.20 Privileges**

(a) Subject to compliance with paragraph (b), the following privileges shall apply:

1. A category A aircraft maintenance licence shall permit the holder to issue certificates of release to service and final certificates of release to service following minor scheduled line maintenance and simple defect rectification within the limits of tasks specifically endorsed on the authorisation. The certification privileges shall be restricted to work that the licence holder has personally performed in a Part-145 organisation.
2. A category B1 aircraft maintenance licence shall permit the holder to issue certificates of release to service following maintenance, including aircraft structure, powerplant and mechanical and electrical systems. Replacement of avionic line replaceable units, requiring simple tests to prove their serviceability, shall also be included in the privileges. Category B1 shall automatically include the appropriate A subcategory.
3. A category B2 aircraft maintenance licence shall permit the holder to issue certificates of release to service following maintenance on avionic and electrical systems.
4. A category C aircraft maintenance licence shall permit the holder to issue certificates of release to service following base maintenance on aircraft. The privileges apply to the aircraft in its entirety in a Part-145 organisation.
5. Category B1, B2 and C aircraft maintenance licences, with the appropriate type/group ratings, shall permit the holder to issue final certificates of release to service within a Part-145 organisation, independently of the scope of the tasks certified.

(b) The holder of an aircraft maintenance licence may not exercise certification privileges unless:

1. in compliance with the applicable requirements of Part-M and/or Part-145.
2. in the preceding two-year period he/she has, either had six months of maintenance experience in accordance with the privileges granted by the aircraft maintenance licence or, met the provision for the issue of the appropriate privileges.
3. he/she is able to read, write and communicate to an understandable level in the language(s) in which the technical documentation and procedures necessary to support the ~~issue of the certificate of release to service~~ certification of maintenance are written.

**Point 66.B.500 is amended as follows:****66.B.500 Revocation, suspension or limitation of the aircraft maintenance licence**

The competent authority shall suspend, limit or revoke the aircraft maintenance licence where it has identified a safety issue or if it has clear evidence that the person has carried out or been involved in one or more of the following activities:

...

6. issuing a certification of maintenance ~~a certificate of release to service~~ knowing that the maintenance specified on such certificate ~~the certificate of release to service~~ has not been carried out or without verifying that such maintenance has been carried out.
7. carrying out maintenance or issuing a certification of maintenance ~~a certificate of release to service~~ when adversely affected by alcohol or drugs.
8. issuing a certification of maintenance ~~a certificate of release to service~~ while not in compliance with this Part.

**The EASA Form 26 shown in Appendix VI is amended as follows:**

The second paragraph of the "Conditions" shown on the third page of the Part-66 licence is changed to read:

"Endorsement of any (sub)categories on the page(s) entitled Part-66 (SUB)CATEGORIES only, does not permit the holder to issue certification of maintenance ~~a certificate of release to service~~ for an aircraft"

## II. DRAFT DECISION AMC TO PART-M

### Point AMC M.A.306(a) is amended as follows:

#### **AMC M.A.306(a) Operators technical log system**

...

**Section 3** should contain details of all information considered necessary to ensure continued flight safety. Such information includes:

...

v. details of any failure, defect or malfunction to the aircraft affecting ...

vi. the current final certificate of release to service.

vii the quantity of fuel and oil uplifted and the quantity ...

viii the pre-flight inspection signature....

...

**Section 4** should contain details of all deferred defects that affect ...

**Section 5** should contain any necessary maintenance support information that the aircraft commander needs to know. Such information would include data on how to contact maintenance engineering if problems arise whilst operating the routes, etc.

The following are examples on the particular format that may take a technical log adapted to the aircraft maintenance certification requirements described in 145.A.50. Nevertheless, all the other aspects covered by this AMC need to be taken also into account.

**NOTE:** Acceptable methods on how to fill in these forms are provided in AMC 145.A.50.

**EXAMPLE 1 – MULTIPLE CRS + FINAL CRS:** A certificate of release to service (CRS) is issued for each maintenance action and a final certificate of release to service is issued before flight. There is a provision for an additional Daily Check after the Final CRS.

| <b>TECHNICAL LOG BOOK</b>                                 |  |
|---|--|
| <b>PIREP/MAREP 1</b>                                      | <b>ACTION 1</b>                            |
|   | <b>CRS Statement, Signature &amp; Date</b> |
| <b>PIREP/MAREP 2</b>                                      | <b>ACTION 2</b>                            |
|   | <b>CRS Statement, Signature &amp; Date</b> |
| <b>PIREP/MAREP 3</b>                                      | <b>ACTION 3</b>                            |
|   | <b>CRS Statement, Signature &amp; Date</b> |
| <b>PIREP/MAREP 4</b>                                      | <b>ACTION 4</b>                            |
|   | <b>CRS Statement, Signature &amp; Date</b> |
| <b>FINAL CRS Statement, Signature &amp; Date</b>          |  |
| <b>Daily check (if performed after Final CRS): YES/NO</b> |  |
| <b>Daily check CRS Statement, Signature &amp; Date</b>    |  |

**PIREP/MAREP means Pilot Report / Maintenance report.**

**EXAMPLE 2 – ACTION SIGN OFF + CRS + FINAL CRS:** A sign-off is issued for each action by appropriately authorised sign-off personnel, with a certificate of release to service (CRS) issued to cover those sign-offs (may need more than one signature if the full scope of tasks cannot be covered by a single licence holder). A final CRS is issued before flight. There is a provision for an additional Daily Check after the Final CRS.

| <b>TECHNICAL LOG BOOK</b>                                  |                                      |
|--|--------------------------------------|
| <b>PIREP/MAREP 1</b>                                       | <b>ACTION 1</b>                      |
|  | <b>Sign-off signature &amp; Date</b> |
| <b>PIREP/MAREP 2</b>                                       | <b>ACTION 2</b>                      |
|  | <b>Sign-off signature &amp; Date</b> |
| <b>PIREP/MAREP 3</b>                                       | <b>ACTION 3</b>                      |
|  | <b>Sign-off signature &amp; Date</b> |
| <b>PIREP/MAREP 4</b>                                       | <b>ACTION 4</b>                      |
|  | <b>Sign-off signature &amp; Date</b> |
| <b>CRS Statement, Signature &amp; Date</b>                 |                                      |
| Signature 1  |                                      |
| Other signatures (if needed because of the scope of tasks) |                                      |
| <b>FINAL CRS Statement, Signature &amp; Date</b>           |                                      |
| <b>Daily check (if performed after Final CRS): YES/NO</b>  |                                      |
| <b>Daily check CRS Statement, Signature &amp; Date</b>     |                                      |

**PIREP/MAREP means Pilot Report / Maintenance report.**

If the operator chooses the option to include in the technical log a specific field to release an additional daily check or equivalent after the final certificate of release to service, as allowed by 145.A.50(a), then the operator should establish procedures to ensure that the flight crew knows, before a flight takes place, when the last daily check or equivalent has been performed or when the next one is due. The intent of this is to ensure that the flight crew knows when to expect the additional field to be completed or not in addition to the final certificate of release to service.

**A new point AMC M.A.306(a)3 is added as follows:**

**AMC M.A.306(a)3 Operator's technical log system**

The issuance by a Part-145 organisation of a final certificate of release to service certifies that all maintenance ordered by the Part-M Subpart G organisation has been performed or properly deferred, while the coordination of such maintenance activities is guaranteed by the procedures established by the Part-M Subpart G organisation following point M.A.708(b)7. However, this does not necessarily mean that the aircraft is airworthy at that moment. The Part-M Subpart G organisation is still responsible for the airworthiness of the aircraft and for ensuring that all the continuing airworthiness requirements are met before a flight takes place. This is the purpose of the maintenance statement required by point M.A.306(a)3. The Part-M Subpart G organisation may delegate, under appropriate procedures, the issuance of this maintenance statement to the Part-145 organisation which has been designated for the issuance of the final certificate of release to service.

**A new point AMC M.A.708(b)7 is added as follows:**

**AMC M.A.708(b)7 Continuing Airworthiness Management**

Part-M Subpart G organisations should establish procedures to ensure that maintenance activities performed by Part-145 organisations are properly coordinated. These procedures should define, among other aspects, the following:

- the communication system established in order to ensure appropriate coordination between the Part-M Subpart G organisation and the contracted Part-145 organisations, with particular attention to those cases where different contractors are working in the same area/system, and
- how it is ensured that no conflict exists between the tasks performed by different Part-145 organisations, and if such conflict arises, it is properly managed in accordance with the applicable maintenance or operator approved procedures (for example, ETOPS operator's procedures), and
- which Part-145 organisation is responsible for the issuance of the final certificate of release to service required by 145.A.50(b)(2), and
- the communication system established between the Part-M Subpart G organisation and the organisation issuing the final certificate of release to service in order to ensure that all discrepancies have been properly addressed or properly deferred before the final certificate of release to service is issued, and
- under which conditions this Part-145 organisation may issue the final certificate of release to service. In particular, whether there is a need to receive a final authorisation from the Part-M Subpart G organisation or whether the Part-145 organisation may issue it without

contacting the Part-M Subpart G organisation. This should be addressed by the contract, regardless of whether it is a long term contract or an individual work order.

In addition, these procedures should identify, in those cases where several Part-145 organisations are working simultaneously, which Part-145 is responsible for applying the procedure established in AMC 145.A.70(a), MOE chapter 3.12 "Control of manufacturer's and other maintenance working teams". The purpose is to ensure that the production aspects of the maintenance event are appropriately coordinated.

**Appendix V to AMC M.A.704 "Continuing airworthiness management organisation exposition" is amended by adding a new chapter 1.14 as follows:**

**Appendix V to AMC M.A.704 Continuing airworthiness management organisation exposition**

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**Part 0 General organisation**

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**Part 1 Continuing airworthiness management procedures**

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1.13. Check flight procedures.

1.14. Coordination procedures during maintenance performed by Part-145 organisations.

**Part 2 Quality system**

...

**Part 3 Contracted maintenance**

...

**Part 4 Airworthiness review procedures**

...

**Part 5 Appendices**

...

...

**PART 1 CONTINUING AIRWORTHINESS MANAGEMENT PROCEDURES**

...

**1.13 Check flights procedures**

...

**1.14 Coordination procedures during maintenance performed by Part-145 organisations**

*(This paragraph should develop the procedures established by the continuing airworthiness management organisation to comply with point M.A. 708(b)7)*

...

**Appendix XI to AMC M.A.708(c) "Contracted Maintenance" is amended by adding a new chapter 1.14 as follows:**

...

2.20. Release to service documentation

The contract should specify whether the Part-145 organisation has been designated, under M.A.708(b)7, responsible for issuing the final certificate of release to service.

The release to service has to be performed by the Part-145 approved organisation in accordance with its MOE procedures. The contract should, however, specify which support forms have to be used (Operator's technical log, Part-145 approved organisation's maintenance visit file, etc.) and the documentation the Part-145 approved organisation should provide to the operator upon delivery of the aircraft. This may include, but may not be limited to:

- certificate(s) of release to service – mandatory;
- final certificate of release to service;
- flight test report;
- list of modifications embodied;
- list of repairs;
- list of Ads incorporated;
- maintenance visit report;
- test bench report.

...

2.22. Exchange of information

Each time exchange of information between the operator and the Part-145 approved organisation is necessary, the contract should specify what information should be provided and when (i.e. on what occasion or at what frequency), how, by whom and to whom it has to be transmitted.

In particular, the contract should specify the procedures necessary to ensure that maintenance activities performed by Part-145 organisations are properly coordinated (refer to AMC M.A.708(b)7).

...

### **III. DRAFT DECISION AMC TO PART-145**

#### **Point AMC 145.A.30(g) is amended as follows:**

##### **AMC 145.A.30 (g) Personnel requirements**

...

2. Typical tasks permitted after appropriate task training to be carried out by the category A for the purpose of the category A issuing an aircraft certification of maintenance ~~certificate of release to service~~ as specified in 145.A.50 as part of minor scheduled line maintenance or simple defect rectification are contained in the following list:

...

#### **A new point AMC 145.A.30(i) is added as follows:**

##### **AMC 145.A.30 (i) Personnel requirements**

Component certifying staff are only required for B and C rated organisations. When these organisations need to carry out non-destructive testing (NDT) as part of component maintenance, the NDT should be carried out by personnel qualified in accordance with 145.A.30(f). These personnel do not need to be certifying staff. The component maintenance, including the NDT, should be released by appropriately approved component certifying staff.

The need for non-destructive testing certifying staff is only required for D1 rated organisations. The approval held by these organisations refers only to particular NDT methods, and may not be limited to a specific aircraft or component.

#### **A new point AMC 145.A.50 is added as follows:**

##### **AMC 145.A.50 Certification of maintenance**

The following examples provide acceptable methods on how to fill in the technical log examples provided in AMC M.A.306(a):

**EXAMPLE 1 – LINE MAINTENANCE (MULTIPLE CRS + FINAL CRS): A certificate of release to service is issued for each maintenance action and a final certificate of release to service is issued before flight. There is a provision for an additional Daily Check after the Final CRS.**

**TECHNICAL LOG BOOK**

|  |  |
|--|--|
| <b>PIREP/MAREP 1</b><br><br>L/H elevator damaged   | <b>ACTION 1</b><br><br>L/H elevator replaced in accordance with AMM chapter xx-xx-xx.<br><br><b>CRS Statement, Signature &amp; Date</b><br>(This task is signed by a category B1)                          |
| <b>PIREP/MAREP 2</b><br><br>Dent on R/H over-wing emergency exit   | <b>ACTION 2</b><br><br>Dent repaired in accordance with SRM chapter xx-xx-xx.<br><br><b>CRS Statement, Signature &amp; Date</b><br>(This task is signed by a category B1)                                  |
| <b>PIREP/MAREP 3</b><br><br>Weather radar system provides wrong indication   | <b>ACTION 3</b><br><br>Troubleshooting performed. Connector number XXX found damaged and has been replaced.<br><br><b>CRS Statement, Signature &amp; Date</b><br>(This task is signed by a category B2)    |
| <b>PIREP/MAREP 4</b><br><br>Automatic landing system not working properly  | <b>ACTION 4</b><br><br>Troubleshooting performed. Yaw damper replaced in accordance with AMM chapter xx-xx-xx.<br><br><b>CRS Statement, Signature &amp; Date</b><br>(This task is signed by a category B2) |
| <b>FINAL CRS Statement, Signature &amp; Date</b><br>(Signed either by a category B1, B2 or C)  |  |
| <b>Daily check (if performed after Final CRS): YES/NO</b><br><br><b>Daily check CRS Statement, Signature &amp; Date</b><br>(This task is signed by a category A or B1) |  |

**PIREP/MAREP means Pilot Report / Maintenance report.**

**EXAMPLE 2 – LINE MAINTENANCE (ACTION SIGN OFF + CRS + FINAL CRS):** A sign-off is issued for each action by appropriately authorised sign-off personnel, with a certificate of release to service issued to cover those sign-offs (may need signature from both B1 and B2). A final certificate of release to service is issued before flight. There is a provision for an additional Daily Check after the Final CRS.

**TECHNICAL LOG BOOK**

|  |  |
|--|--|
| <p><b>PIREP/MAREP 1</b></p> <p>L/H elevator damaged</p>  | <p><b>ACTION 1</b></p> <p>L/H elevator replaced in accordance with AMM chapter xx-xx-xx.</p> <p><b>Sign-off signature &amp; Date</b><br/>(This task is signed by authorised sign-off personnel)</p>                          |
| <p><b>PIREP/MAREP 2</b></p> <p>Dent on R/H over-wing emergency exit</p>  | <p><b>ACTION 2</b></p> <p>Dent repaired in accordance with SRM chapter xx-xx-xx.</p> <p><b>Sign-off signature &amp; Date</b><br/>(This task is signed by authorised sign-off personnel)</p>                                  |
| <p><b>PIREP/MAREP 3</b></p> <p>Weather radar system provides wrong indication</p>  | <p><b>ACTION 3</b></p> <p>Troubleshooting performed. Connector number XXX found damaged and has been replaced.</p> <p><b>Sign-off signature &amp; Date</b><br/>(This task is signed by authorised sign-off personnel)</p>    |
| <p><b>PIREP/MAREP 4</b></p> <p>Automatic landing system not working properly</p>   | <p><b>ACTION 4</b></p> <p>Troubleshooting performed. Yaw damper replaced in accordance with AMM chapter xx-xx-xx.</p> <p><b>Sign-off signature &amp; Date</b><br/>(This task is signed by authorised sign-off personnel)</p> |
| <p><b>CRS Statement, Signature &amp; Date</b><br/>Signature 1 (a category B1 signs for ACTIONS 1 and 2)<br/>Signature 2 (a category B2 signs ACTIONS 3 and 4)</p>              |  |
| <p><b>FINAL CRS Statement, Signature &amp; Date</b><br/>(Signed either by a category B1, B2 or C)</p>  |  |
| <p><b>Daily check (if performed after Final CRS): YES/NO</b></p> <p><b>Daily check CRS Statement, Signature &amp; Date</b><br/>(This task is signed by a category A or B1)</p> |  |

**PIREP/MAREP means Pilot Report / Maintenance report.**

**EXAMPLE 3 – BASE MAINTENANCE + LINE MAINTENANCE (MULTIPLE CRS + FINAL CRS):** A certificate of release to service is issued by each Part-145 organisation performing base maintenance or line maintenance. A final certificate of release to service is issued before flight. There is a provision for an additional Daily Check after the Final CRS.

| <b>TECHNICAL LOG BOOK</b>   |   |
|---|---|
| <b>PIREP/MAREP 1</b><br><br>Front L/H windshield cracked after bird strike                            | <b>LINE MAINTENANCE EVENT (Organisation 1)</b><br><br>Front L/H windshield replaced in accordance with AMM chapter xx-xx-xx<br><br><b>CRS Statement, Signature &amp; Date</b><br>(This task is signed by a category B1) |
| <b>PIREP/MAREP 2</b><br><br>Engine No 1 damaged after bird strike                                     | <b>LINE MAINTENANCE EVENT (Organisation 2)</b><br><br>Engine No 1 replaced in accordance with AMM chapter xx-xx-xx<br><br><b>CRS Statement, Signature &amp; Date</b><br>(This task is signed by a category B1)          |
| <b>PIREP/MAREP 3</b><br><br>MLG damaged after hard landing  | <b>BASE MAINTENANCE EVENT (Organisation 3)</b><br><br>MLG replaced in accordance with AMM chapter xx-xx-xx<br><br><b>CRS Statement, Signature &amp; Date</b><br>(This task is signed by a category C)                   |
| <b>PIREP/MAREP 4</b><br><br>NIL   | <b>BASE MAINTENANCE EVENT (Organisation 4)</b><br><br>"C-check" performed. Refer to Work Package xxxxx<br><br><b>CRS Statement, Signature &amp; Date</b><br>(This task is signed by a category C)                       |
| <b>FINAL CRS Statement, Signature &amp; Date</b><br>(Signed either by a category B1, B2 or C)         |   |
| <b>Daily check (if performed after Final CRS): YES/NO</b>   |   |
| <b>Daily check CRS Statement, Signature &amp; Date</b><br>(This task is signed by a category A or B1) |   |

**PIREP/MAREP means Pilot Report / Maintenance report.**

**Point AMC 145.A.50(a) is amended as follows:****AMC145.A.50(a) Certification of maintenance**

~~“Endangers the flight safety” means any instances where safe operation could not be assured or which could lead to an unsafe condition. It typically includes, but is not limited to, significant cracking, deformation, corrosion or failure of primary structure, any evidence of burning, electrical arcing, significant hydraulic fluid or fuel leakage and any emergency system or total system failure. An airworthiness directive overdue for compliance is also considered a hazard to flight safety.~~

1. According to 145.A.50(a), only one daily check or equivalent may be performed after the issuance of the final certificate of release to service. This additional maintenance may be accepted by the pilot if it has been properly released in the technical log. The term “or equivalent” contained in the sentence “daily check or equivalent” means any scheduled service maintenance check contained in the approved maintenance programme that cannot be performed at a frequency higher than 48 hours.
2. For other additional maintenance performed after the issuance of the final certificate of release to service (including rectification of defects arising from the daily check), a new final certificate of release to service is required to be issued. In such a case, the organisation issuing the new final certificate of release to service may need to have information and guidelines from the Part-M Subpart G organisation regarding the possible impact of the previous activities with the new activities. This should be covered by the contract and the procedures established by the Part-M Subpart G organisation and the Part-145 organisation.

**Point AMC 145.A.50(b) is amended as follows:****AMC145.A.50(b) Certification of maintenance**

1. The certification of maintenance (certificate(s) of release to service and final certificate of release to service) should contain the following statement:

“Certifies that the work specified except as otherwise specified was carried out in accordance with Part-145 and in respect to that work the aircraft/~~aircraft component~~ is considered ready for release to service”.

Reference should also be made to the EASA Part-145 approval number.

The words “except as otherwise specified” contained in the statement cover the following situations:

- those cases where a part of the maintenance ordered by the owner/operator has not been completed and has been deferred. In this case, the release may still make reference to the Work Order provided by the owner/operator but clearly referring to the work that has not been completed and has been deferred.
  - those cases where, after performing the work, the aircraft is left in a non-airworthy condition, as described in the paragraph 2 of AMC 145.A.50(b)(1).
2. It is acceptable to use an alternate abbreviated certificate of release to service consisting of the following statement ‘Part-145 release to service’ instead of the full certification statement

specified in paragraph 1. When the alternate abbreviated certificate of release to service is used, the introductory section of the technical log should include an example of the full certification statement from paragraph 1.

3. The ~~certificate of release to service~~ certification of maintenance should relate to the task specified in the (S)TC holder's or operator's instruction or the aircraft maintenance program which itself may cross-refer to maintenance data.
4. The date such maintenance was carried out should include when the maintenance took place relative to any life or overhaul limitation in terms of date/flying hours/cycles/landings etc., as appropriate.
5. When extensive maintenance has been carried out, it is acceptable for the ~~certificate of release to service~~ certification of maintenance to summarise the maintenance as long as there is a unique cross-reference to the work package containing full details of maintenance carried out. Dimensional information should be retained in the work-pack record.

**A new point AMC 145.A.50(b)(1) is added as follows:**

**AMC 145.A.50(b)(1) Certification of maintenance**

1. Certificates of release to service are issued by all Part-145 approved organisations participating in the maintenance event, except when a Part-145 approved organisation is working under the quality system of another Part-145 approved organisation in accordance with 145.A.75 (b).
2. A certificate of release to service may be issued also when non-compliances are found, for example, as a result of an inspection, as long as these non-compliances have been properly recorded in the certificate of release to service and notified to the Part-M Subpart G organisation. This is the typical case of non-destructive testing ordered to a D1 rated organisation, where defects are found but cannot be rectified by the D1 rated organisation.

A certificate of release to service may be issued also in the case where the maintenance ordered leaves the aircraft in a non-approved configuration, such as in the case of an engine/component removal.

Nevertheless, all these non-compliances or non-approved configurations will need to be eventually rectified or properly deferred, with the corresponding certificate of release to service.

3. 145.A.50(b)(1)(i) makes reference to the case of "an organisation working in a base maintenance event under a line maintenance approval". This could be the case, for example, of an organisation performing interior refurbishing during a C-check (while the C-check is performed by another organisation). In this case, the approval held by the organisation performing interior refurbishing may only cover "line maintenance" and as a consequence, they may not have category C certifying staff. As a consequence, 145.A.50(b)(1)(i) allows this organisation to release the interior refurbishing with B1 or B2 certifying staff, as applicable, even if this is done in a base maintenance environment.

Nevertheless, it may be necessary to have the certificate signed by both B1 and B2 certifying staff clearly identifying which tasks are signed by each person. This is the case where the tasks performed do not fall under the privileges of a single licence category.

4. In 145.A.50(b)(1)(ii), the requirement "at least one certificate of release to service shall be issued by each Part-145 organisation", may be satisfied by, but not limited to, either of the following:

- a. Certificates of release to service issued against each maintenance entry by the appropriate certifying staff (category A, B1, B2 or, in the case of D1 organisations, NDT certifying staff);
- b. Certificates of release to service issued against groups of tasks (which have been previously signed-off). Each group of tasks is certified by certifying staff of the appropriate category, meaning that it may be necessary to use both B1 and B2 certifying staff clearly identifying which tasks are certified by each person. This is the case where the tasks performed do not fall under the privileges of a single licence category.

This certification may be issued by a category A certifying staff only when he/she is the person who has performed all the tasks of the group.

**A new point AMC 145.A.50(b)(2) is added as follows:**

**AMC 145.A.50(b)(2) Certification of maintenance**

When the Part-145 maintenance organisation responsible for issuing the final certificate of release to service verifies that all required certificates of release to service have been issued, it should verify that these certificates contain all the applicable information, such as:

- the reference to all the work ordered to the corresponding Part-145 organisation,
- the reference to any applicable deferred actions,
- proper identification of the certifying staff issuing the certificate.

However, the organisation issuing the final CRS is not responsible for the appropriate performance of the work or any applicable deferred actions certified by each certificate of release to service or for the use of appropriate maintenance personnel or certifying staff during such work. This is the responsibility of the organisation issuing the corresponding certificate of release to service.

Furthermore, the organisation issuing the final certificate of release to service is not responsible for work not ordered by the Part-M Subpart G organisation and which may be mandatory (an Airworthiness Directive recently issued, an expired Hard Time Item, etc.). This means that the Part-M Subpart G organisation is still the final responsible for the airworthiness of the aircraft and for ensuring that all the continuing airworthiness requirements are met before a flight takes place.

The words 'endanger flight safety' means any instances where safe operation could not be assured or which could lead to an unsafe condition. It typically includes, but is not limited to, significant cracking, deformation, corrosion or failure of primary structure, any evidence of burning, electrical arcing, significant hydraulic fluid or fuel leakage and any emergency system or total system failure. An airworthiness directive overdue for compliance is also considered a hazard to flight safety.

The words "independently of the scope of tasks covered by each certificate of release to service", contained in 145.A.50(b)(2), mean that either a category B1 or B2 or C certifying staff can issue the final certificate of release to service, even if the tasks covered by such release are not typical of their licence category. The reason is that such tasks have already been certified by appropriate

certifying staff as required by 145.A.50(b)(1). Nevertheless, the appropriate type/group ratings are still required.

The provision that allows category A certifying staff to issue a final certificate of release to service (final CRS) only in those cases where there was no base maintenance and all the line maintenance was performed by this person is also applicable when a final CRS has to be issued superseding a previous final CRS (as per 145.A.50(a)). This means that category A certifying staff can only issue a new final CRS when the previous maintenance (including that covered by the previous final CRS) does not include base maintenance and all line maintenance has been performed and certified by this person.

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

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

1. A component which has been maintained off the aircraft needs the issuance of a certificate of release to service for such maintenance and ~~another certificate of release to service~~ the appropriate certification of maintenance in regard to being installed properly on the aircraft when such action occurs.

...

**Point AMC 145.A.50(e) is amended as follows:**

**AMC 145.A.50(e) Certification of maintenance**

1. Being unable to establish full compliance with sub-paragraph Part-145.A.50~~(a)(b)~~ means that the maintenance required by the aircraft operator could not be completed due either to running out of available aircraft maintenance downtime for the scheduled check or by virtue of the condition of the aircraft requiring additional maintenance downtime.
2. The aircraft operator is responsible for ensuring that all required maintenance has been carried out before flight and therefore 145.A.50(e) requires such operator to be informed in the case where full compliance with 145.A.50~~(a)(b)~~ cannot be achieved within the operators limitations. If the operator agrees to the deferment of full compliance, then the certificate of release to service may be issued subject to details of the deferment, including the operator's authority, being endorsed on the certificate.

NOTE: Whether or not the aircraft operator does have the authority to defer maintenance is an issue between the aircraft operator and the competent authority of the State of Registry or State of operator, as applicable. In case of doubt concerning such a decision of the operator, the approved maintenance organisation should inform its competent authority of such doubt, before issuing the certificate of release to service. This will allow this competent authority to investigate the matter with the competent authority of the State of Registry or the State of the operator as appropriate.

3. The procedure should draw attention to the fact that 145.A.50~~(a)(b)~~ does not normally permit the issue of a certificate of release to service in the case of non-compliance and should state what action the mechanic, supervisor and certifying staff should take to bring the matter to the attention of the relevant department or person responsible for technical ~~co-ordination~~ coordination with the aircraft operator so that the issue may be discussed and resolved with

the aircraft operator. In addition, the appropriate person(s) as specified in 145.A.30(b) should be kept informed in writing of such possible non-compliance situations and this should be included in the procedure.

**Point AMC 145.A.65(b)(3) is amended as follows:**

**AMC 145.A.65(b)(3) Safety and quality policy, maintenance procedures and quality system**

...

3. ...

Note: A "sign-off" is a statement by the competent person performing or supervising the work, that the task or group of tasks has been correctly performed. A sign-off relates to one step in the maintenance process and is therefore different to the release to service of the aircraft. "Authorised personnel" means personnel formally authorised by the maintenance organisation approved under Part-145 to sign-off tasks.

"Authorised personnel" are not necessarily "certifying staff".

A "sign off" does not replace the obligation to certify such maintenance as required by 145.A.50.

**Point AMC 145.A.65(c)(1) is amended as follows:**

**AMC 145.A.65 (c)(1) Safety and quality policy, maintenance procedures and quality system.**

...

3. The independent audit is an objective process of routine sample checks of all aspects of the organisation's ability to carry out all maintenance to the required standards and includes some product sampling as this is the end result of the maintenance process. It represents an objective overview of the complete maintenance related activities and is intended to complement the 145.A.50(a) requirement for certifying staff to be satisfied that all required maintenance has been properly carried out before issue of the certification of maintenance ~~certificate of release to service~~. Independent audits should include a percentage of random audits carried out on a sample basis when maintenance is being carried out. This means some audits during the night for those organisations that work at night.

...

**Point AMC 145.A.75(b) is amended as follows:**

**AMC 145.A.75(b) Privileges of the organisation**

...

3.4 The organisation may find it necessary to include several specialist subcontractors to enable it to be approved to completely certify the ~~release to service~~ maintenance of a particular product. Examples could be specialist welding, electro-plating, painting, etc. To authorise the use of such subcontractors, the competent authority will need to be satisfied that the organisation has the necessary expertise and procedures to control such ~~sub-contractors~~ subcontractors.

...

4.4 The certification of maintenance ~~certificate of release to service~~ may be issued either at the ~~sub-contractors~~ subcontractors or at the organisation facility by staff issued a certification authorisation in accordance with -145.A.30 as appropriate, by the organisation approved under Part-145. Such staff would normally come from the organisation approved under Part-145 but may otherwise be a person from the ~~sub-contractors~~ subcontractors who meets the approved maintenance organisation certifying staff standard which itself is approved by the competent authority via the maintenance organisation exposition. The certificates of release to service, ~~final certificate of release to service~~ and the EASA Form 1 will always be issued under the maintenance organisation approval reference.

...

**IV. DRAFT DECISION GM TO PART-145**

Decision No 2003/19/RM Annex III (GM to Part-145) is hereby amended as follows:

**Point GM 145.A.10 is amended as follows:****GM 145.A.10 Scope**

...

5. 145.A.30(b): The minimum requirement is for one ~~full-time~~ full-time person who meets the Part-66 requirements for certifying staff and holds the position of "accountable manager, maintenance engineer and is also certifying staff". No other person may issue a ~~certificate of release to service~~ certification of maintenance as shown in 145.A.50 and therefore if absent, no maintenance may be released during such absence.

...

6. Recommended operating procedure for a Part-145 approved maintenance organisation based upon up to 10 persons involved in maintenance.

6.1. 145.A.30(b): The normal minimum requirement is for the employment on a full-time basis of two persons who meet the competent authorities requirements for certifying staff, whereby one holds the position of "maintenance engineer" and the other holds the position of "quality audit engineer".

Either person can assume the responsibilities of the accountable manager providing that they can comply in full with the applicable elements of 145.A.30(a), but the "maintenance engineer" should be the certifying person to retain the independence of the "quality audit engineer" to carry out audits. Nothing prevents either engineer from undertaking maintenance tasks providing that the "maintenance engineer" issues the ~~certificate of release to service~~ certification of maintenance.

...

**V. DRAFT DECISION AMC TO PART-66**

Decision No 2003/19/RM Annex IV (AMC to Part-66) is hereby amended as follows:

**A new point AMC 66.A.20(a)5 is added as follows:****AMC 66.A.20(a)5 Privileges**

The words "independently of the scope of the tasks certified", contained in 66.A.20(a)5, mean that either a category B1 or B2 or C certifying staff can issue the final certificate of release to service, even if the tasks covered by such release are not typical of their licence category. The reason is that such tasks have already been certified by appropriate certifying staff as required by 145.A.50(b)(1). Nevertheless, the appropriate type/group ratings are still required.

**VI. DRAFT DECISION GM TO PART-66**

Decision No 2003/19/RM Annex V (GM to Part-66) is hereby amended as follows:

**Point GM 66.A.20(a) is amended as follows:****GM 66.A.20(a)Privileges**

...

4. The category C certification authorisation permits certification of scheduled base maintenance by the issue of a single certificate of release to service and/or final certificate of release to service, as specified in 145.A.50, ~~for the complete aircraft~~ after the completion of all such maintenance. The basis for this certification is that the maintenance has been carried out by competent mechanics and both category B1 and B2 staff have signed for the maintenance under their respective specialisation. The principal function of the category C certifying staff is to ensure that all required maintenance has been called up and signed off by the category B1 and B2 staff before issue of the ~~corresponding certification of maintenance certificate of release to service~~. Category C personnel who also hold category B1 or B2 qualifications may perform both roles in base maintenance.

**Appendix B**

**Attachments**

 [NPA 2007-09 Commentaires.pdf](#)  
Attachment #1 to comment [#225](#)

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 [Aircraft Electronics Assosication AEA.pdf](#)  
Attachment #2 to comment [#238](#)