

EASA policy on Certificates of Release to Service for aircraft maintenance and associated responsibilities of maintenance organisations and CAMOs

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The provisions contained in Regulation (EU) No 1321/2014 related to the release of maintenance, as well as those related to the functions and responsibilities of CAMOs and maintenance organisations, have very frequently raised questions and different interpretations.

These provisions are currently being reviewed as part of two rulemaking tasks:

- RMT.0217 (M.029) “CAMO and Part-145 responsibilities”.
- RMT.0097 (145.024) “Functions and responsibilities of B1 and B2 support staff”.

These tasks have led so far to the publication of NPA 2014-27 and NPA 2014-11 respectively, proposing certain changes to the rules and to the AMC/GM material, which still have to be further reviewed based on the feedback of the external consultation. Furthermore, even if eventually the Agency would issue an Opinion, the proposed changes would still be a long way from being applicable and could be even subject to change since the Opinion would have to go through the corresponding comitology process with the Member States before being adopted by the Commission.

The purpose of this paper is to summarise the applicable current requirements and describe the intent of those requirements as interpreted by the European Aviation Safety Agency (the Agency).

1. Continuing airworthiness responsibilities, including maintenance

The continuing airworthiness responsibilities are described in detail in Part-M, point M.A.201. This point introduces different provisions depending on the aircraft category (large and other than large aircraft) and type of operations (commercial air transport, other commercial operations and private operations)

However, all these provisions have two aspects in common:

- the owner/operator (or contracted CAMO, if existing) is responsible for all activities aimed to determine the airworthiness status of the aircraft and to appropriately plan and coordinate maintenance, and
- the contracted maintenance organisation or, when permitted by the rule, the independent certifying staff, are responsible for adequately performing and certifying the maintenance ordered by the owner/operator/CAMO.

In the particular case of aircraft involved in Commercial Air Transport, according to M.A.201(h), the operator is responsible for the continuing airworthiness of the aircraft it operates and shall be approved as a CAMO.

According to M.A.708(b), these responsibilities include, among other aspects, ensuring that all maintenance requirements (Airworthiness Directives, maintenance programme requirements, defect rectification, etc) are complied with and released by approved Part-145 maintenance organisations.

This means that the operator (CAMO) is responsible for planning and ordering all required maintenance and for verifying that all the ordered maintenance has been released to service by the approved Part-145 organisation.

However, the operator is not responsible for the actual performance of maintenance, which is the responsibility of the Part-145 organisation issuing the CRS (Certificate of Release to Service).

Important aspects to be considered are the following:

- The operator (CAMO) cannot issue Certificates of Release to Service (CRS) following maintenance. The CRS has to be issued always by certifying staff of the Part-145 organisation.
- When maintenance is performed and released by the Part-145 organisation, the operator must have procedures to verify that all the maintenance ordered to that organisation has been released to service by the approved Part-145 organisation. However, in order to perform this verification the operator (CAMO) is not required to use certifying staff.
- Since the CRS only certifies that the maintenance ordered by the operator (CAMO) has been performed and released in accordance with Part-145, it does not guarantee that all the continuing airworthiness requirements are met (there may be some missing maintenance that has not been ordered by the operator). This is the responsibility of the operator (CAMO).
- Consequently, the operator (CAMO) must have procedures to ensure that a flight does not take place unless all the continuing airworthiness requirements are met. This could be met, for example, by a procedure where the operator (CAMO) receives a communication from the maintenance organisation and the operator (CAMO) notifies to the commander that there is no other maintenance due. However, other procedures are possible, for example, delegating to the Part-145 the notification to the commander.
- The CRS issued by the Part-145 organisation has to go always on board the aircraft as part of the Technical Log System, together with all the information related to rectification of defects, deferral of maintenance actions, etc. This information has to be always available to the commander (refer to M.A.306 and AMC M.A.306(a)), who is the ultimate responsible for accepting the aircraft before a flight takes place.
- The Technical Log System must also contain a maintenance statement issued by the operator (CAMO) providing the status of which scheduled and out of phase maintenance is next due. However, this maintenance statement does not need to be on board if the operator (CAMO) has alternate procedures acceptable for the competent authority in order to control the next maintenance due [refer to M.A.306 and AMC M.A.306(a)].
- This maintenance statement, if placed on board the aircraft, does not supersede the obligation to have the Part-145 CRS on board and available to the commander.

2. Certification of maintenance

Point 145.A.50(a) states the following:

*“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**”*

In addition, point 145.A.50(b) states that:

*“A certificate of release to service shall be issued before flight at the completion of **any maintenance**”*

The wording of the requirements above has very often raised different interpretations. In the following paragraphs we are going to present the position of the Agency.

3. How many CRS can or should be issued

Point 145.A.50(b) requires a CRS to be issued before flight at the completion of “any maintenance”.

The position of the Agency is that the words “any maintenance” can be interpreted in different ways, such as:

- “any maintenance task”
- “any combination of maintenance tasks”
- “any maintenance event”

As a result of this, it is also the position of the Agency that the current regulation allows different systems of release to service, such as:

- Several certificates of release to service are issued, each one of them covering a single maintenance task.
- Several certificates of release to service are issued, each one of them covering a certain group of tasks.
- A single certificate of release to service is issued covering all the maintenance included in a maintenance event.

The Agency would also like to point out that regardless of which release system is used, the release to service procedure implemented by the maintenance organisation should be adequate to the type of organisation, complexity, scope of work, etc, and has to ensure compliance with 145.A.50. This means, among other aspects, that:

- A CRS must identify clearly the work performed and, if applicable, any incomplete work and the corresponding limitations.

- A CRS can only be issued by certifying staff holding certification privileges for all the maintenance tasks covered by the release statement.
- In the case of base maintenance the CRS must be issued by category C certifying staff.
- The release to service procedures must ensure that all the maintenance actions have been properly coordinated, and the release to service is issued within a reasonable timeframe after the actual performance of the tasks.

In addition, it is important to stress that a release to service, whether it is single or multiple, does not necessarily mean that the aircraft is airworthy and ready for flight. A release to service is just a release after the performance of maintenance and its issuance is the responsibility of the maintenance organisation. However, the responsibility for defining the airworthiness status of the aircraft is the responsibility of the CAMO/operator.

4. What does it mean that “there are no non-compliances which are known to endanger flight safety”

The intent of this requirement is to cover those cases where the maintenance organisation, during the performance of the maintenance ordered by the operator, discovers a non-compliance which endangers flight safety. However, it is not the intent to require the maintenance organisation to find or become responsible for hidden non-compliances which are not expected to be discovered during the ordered maintenance.

Certain questions have been raised as to whether this includes also those situations where, after performing the maintenance ordered by the operator, the aircraft is left in a non-airworthy configuration. This could be the case, for example, where the maintenance organisation removes an engine for preservation (without installing a new one), or where the organisation performs an NDT inspection and finds a crack outside limits. This has raised questions as to whether in these cases a CRS can be issued for the maintenance performed.

The position of the Agency is that all the cases mentioned above (including those of non-compliances affecting flight safety discovered during maintenance), can be properly addressed by using the provisions contained in 145.A.50(c) and (e). Based on those provisions, it is possible to release the maintenance performed, as long as the incomplete maintenance is properly identified and communicated to the operator (and possibly to the competent authority if a disagreement with the operator exists).

5. What does it mean “appropriately authorised certifying staff”

This means that in order to issue a CRS the certifying staff have to be formally authorised by the maintenance organisation to do so.

The word “appropriately” means that the person can only be authorised when the organisation has verified compliance with all the applicable qualification requirements, only for the scope of work applicable to that qualification (in the case of Part-145 organisations, please refer to 145.A.30,

145.A.35) and always within the privileges granted by the Part-66 licence held by the person (refer to 66.A.20)

This means that, for example, in the case of a line maintenance event which includes a daily check + some single running tasks + requested defect rectification entered in the Technical Log by the crew, if such event includes tasks within the scope of B1 and B2 privileges (mechanical tasks and avionic tasks), then a single release to service can only be issued if the person issuing it holds both the B1 and B2 licences. It is not possible for a B1 certifying staff (or for a B2 certifying staff) to issue a single release to service covering the full maintenance event. The other option is to have a B1 certifying staff issuing a release to service for the mechanical tasks and a B2 certifying staff issuing a release to service for the avionics tasks, which would become a multiple release system.

6. What does it mean “when it has been verified that all maintenance ordered has been properly carried out”

This doesn't necessarily mean that certifying staff have to perform or supervise the whole process of every task, but the necessity of assessing the complexity of each task, making sure that they have been assigned to personnel authorised to sign-off to the corresponding level, coordinating the different tasks, supporting that personnel in case of any mistakes or unexpected difficulties and verifying that the job has been completed and signed-off properly.

As a consequence, this is not just an administrative task which can be performed from a remote location or without having been involved at all. Certifying staff have the last call on the amount of involvement they would like to perform in order to be satisfied that the maintenance can be properly released, and this level of involvement cannot be predefined or limited by the organisation's procedures.

7. In the case of base maintenance, what are the functions and responsibilities of “support staff”

The qualification criteria for certifying staff and support staff are identical as both:

- must have a Part-66 licence with the corresponding type ratings;
- must have the same recent experience and continuation training;
- must have training in human factors and company procedures; and
- are subject to the same competence assessment;

The only difference is that in the base maintenance environment there is an additional function, the category C certifying staff. However, this function is more administrative due to the more complex environment.

Regarding the level of involvement of the support staff, 145.A.30(h) states that “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”.

This requirement is of a similar nature to the one contained in 145.A.50(a), where certifying staff are required to ensure that “it has been verified that all maintenance ordered has been properly carried out”. As a consequence, the level of involvement expected from the support staff follows the same principles as indicated in Section 6 above for certifying staff.

8. What is the function of personnel authorised to “sign-off”

AMC 145.A.65(B)(3)3 states that, in order to prevent omissions, every task or group of tasks should be signed-off by formally authorised personnel after its completion. It also states that a “sign-off” is different from a “release to service”.

Furthermore, this AMC states that work by “unauthorised personnel” (temporary staff, trainee..) should be checked by “authorised personnel” before they sign-off. “They” means “authorised personnel” (formally authorised to sign-off).

This concept of personnel authorised to sign-off is in line with the provisions related to the assessment of mechanics contained in AMC 145.A.30(e)(3). This assessment should guarantee that “mechanics shall be able to carry out tasks to any standard specified in the maintenance data, and will notify supervisors of mistakes requiring rectification to re-establish required maintenance standards”.

Nevertheless, holding a “sign off” authorisation doesn’t mean that the authorised person can sign-off all tasks. It means that he/she can sign-off tasks up to the authorised level, depending on the training and experience held, and in accordance with a procedure described in the MOE. Furthermore, even if this person is qualified and able to carry out the task to the required standard, this does not mean that certifying staff and support staff are not needed. The presence of certifying staff and support staff is an additional safety barrier and, as explained in Sections 6 and 7 above, has the function of coordinating the different tasks, supporting those mechanics in case of any mistakes or unexpected difficulties and verifying that the job has been completed and signed-off properly.