

AMP (Aircraft Maintenance Programme)

What are the main principles governing the development of the AMP under Part-ML?

Answer

For aircraft complying with Part-ML (refer to Article 3(2) of Regulation (EU) No 1321/2014, the AMP should be based either on the applicable ICA or on the Minimum Inspection Programme (MIP) defined in ML.A.302(d).

The owner, when she/he has not contracted the continuing airworthiness management to a CAMO or CAO [see ML.A.201(f)], should 'declare' the AMP assuming responsibility for its content. Such declared AMP does not need to be sent to the competent authority. Except for the mandatory requirements (see also remark below) the owner may decide, under his/her full responsibility, to deviate from the applicable scheduled maintenance recommendations (including ICA if the AMP is not based on the MIP) without the need to justify such deviation(s) **(see GM1 ML.A.302)**.

If the aircraft is managed by a CAMO or CAO, such organisation should 'approve' the AMP. Deviations from the applicable scheduled maintenance recommendations (including ICA if the AMP is not based on the MIP) should be justified and properly recorded.

In both scenarios though (AMP declared by owner or approved by CAMO/CAO), when the AMP is not based on the MIP, the deviations to the applicable ICA **shall not result in a less restrictive** task than the corresponding MIP task. A clear overview of the different options for the development (including the source of information and potential customisation) and approval of such an AMP is provided by 'GM1 ML.A.201', 'GM2 ML.A.302'.

In addition, the AMP shall be reviewed annually. For declared AMP, this review should be done by the person who performs the airworthiness review during its accomplishment (see AMC1 ML.A.302(c)(9)). For approved AMP, the review can be done either by the Airworthiness Review Staff (ARS) during the airworthiness review or by the CAMO itself.

If during the airworthiness review it is observed that there are discrepancies on the aircraft linked to deficiencies in the content of the aircraft maintenance programme, the AMP must be amended. The competent authority shall be informed in the case where the ARS does not agree with the measures taken to amend the AMP.

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Remarks:

In accordance with ML.A.302 and in particular ML.A.302(c)(4), the AMP, declared or approved, shall in all cases include all the mandatory maintenance/continuing airworthiness requirements, such as repetitive Airworthiness Directives or the Airworthiness Limitation Section (ALS).

References:

Please refer also to 'AMC2 ML.A.302' (EASA Form AMP), 'GM1 ML.A.302' and 'AMC1 ML.A.302(d)' (content of MIP).

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When does the calendar interval for the next aircraft or component maintenance task start?

Answer

In a normal scenario :

- The date of signing the certificate of release to service (CRS) should be considered to be the date of the accomplishment.
- The next due date should be calculated using this date.

However, there may be different considerations that render the normal scenario no longer applicable. For example:

Case 1: The interval of the maintenance task has been previously subject to a one-time extension using an approved procedure included in the aircraft maintenance programme (refer to Appendix I to AMC M.A.302 point 4) normally called 'permitted variation' or 'tolerance'. In this case the next due date should be calculated using the previous due date (as opposed to accomplishment date) or as agreed by the competent authority.

For aircraft regulated by Part-ML the situation is different when applying the tolerance of 1 month foreseen in ML.A.302(d), the next interval shall be calculated from the accomplishment date (refer to ML.A.302(d)(1) and AMC1 ML.A.302(d)).

Case 2: The maintenance task refers to a component maintenance task, for example the landing gear overhaul. In this case the start of the interval would be the date of the release to service after the overhaul of the landing gear or in some particular cases when specified in the maintenance data the interval may start from the date of installation on aircraft.

Case 3: The task is released as part of a maintenance check/visit, where the duration of the check/visit is significant compared to the interval of the task. In this case, there may be significant difference between date of accomplishment and date of release. For example, a check/visit that lasts for 2 months and an inspection that has an interval of 3 months. In this case, either the task is carried out on the last days of the maintenance check/visit and the next due date is calculated from the CRS, or the task is carried out at the beginning of the visit and the next due date should be calculated from the date of accomplishment.

There may be other examples, but the key principle is to use sound engineering judgment and the guidance provided in the Instructions for Continuing Airworthiness to calculate the next due date.

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When should I revise my Aircraft Maintenance Programme (AMP)?

Answer

Part-M:

In accordance with M.A.302(h), the Aircraft Maintenance Programme (AMP) shall be subject to 'periodic reviews' and amended accordingly when necessary.

This means that the owner/operator/CA(M)O should review at a regular interval:

- new/modified maintenance instructions by the TC holder,
- modifications and repairs embodied in the particular a/c, which may require compliance to additional maintenance instructions (by Design Approval Holder),
- in-service experience collected for the particular a/c or for the fleet and
- changes in the type and specificity of operations.

Such a review allows to determine if an AMP revision is necessary to still comply with the obligations of M.A.302(h), and ensure that the AMP continues to be valid in light of the operating experience. As a minimum, point (3) of AMC M.A.302 states it should be at least annually.

However, this should not prevent amending the AMP outside of this formal periodic review, when a specific need arises. This may depend for example on in-service experience (e.g. adverse trend), nature of instruction revisions (e.g. significant reduction of TBO (time between overhaul)), the extent of instruction revisions (amount of affected tasks) as well as source of

instruction revisions (e.g. MRBR, ALS, etc.)

When a revision of the ALS (Airworthiness Limitation Section) introduces a new or more restrictive task, EASA has the policy to issue an AD (Airworthiness Directive). Such an AD would typically mandate on one side the revised task accomplishment and on the other side the revision of the AMP itself, together with a compliance time for these two actions.

However, in accordance with point (3) of AMC M.A.302, EASA recommends to review the AMP as soon as possible in this case to avoid a disconnection between accomplished maintenance task(s) and maintenance task(s) listed in the AMP.

If the aircraft's continuing airworthiness is being managed by a CA(M)O, the CA(M)E (Continuing Airworthiness Management Exposition/Combined Airworthiness Exposition) should describe the AMP revision policy (including 'periodic review') under point 1.2 [Appendix V to AMC M.A.704], point 1.2 [AMC1 CAMO.A.300] or point D.3 [AMC1 CAO.A.025].

Remark: In the case where the source documents are amended without having an effect on the AMP content, it is acceptable to use an indirect approval procedure (if granted by the competent authority in accordance with M.A.302(c)) to amend the relevant source document references in the AMP.

Part-ML:

ML.A.302(c)(9) requires an annual review of the AMP.

For aircraft regulated by Part-ML the review of the AMP may be carried out with the airworthiness review (AR) of the aircraft by the person who performs such AR.

Such a review allows to determine if an AMP revision is necessary to still comply with the obligations of ML.A.302(c) or ML.A.302(d) and ensure that the AMP or MIP continues to be valid in light of the operating experience. As a minimum, ML.A.302(c)(9) states it should be at least annually.

However, this should not prevent amending the AMP outside of this formal periodic review, when a specific need arises. This may depend for example on in-service experience (e.g. adverse trend), nature of instruction revisions (e.g. significant reduction of TBO (time between overhaul)), the extent of instruction revisions (amount of affected tasks) as well as source of instruction revisions (e.g. MRBR, ALS, etc.)

However, in accordance with ML.A.302(c)(9), EASA recommends to review the AMP as soon as possible in this case to avoid a disconnection between accomplished maintenance task(s) and maintenance task(s) listed in the AMP.

If the aircraft's continuing airworthiness is being managed by a CA(M)O, the CA(M)E (Continuing Airworthiness Management Exposition/Combined Airworthiness Exposition) should describe the AMP revision policy (including 'periodic review') under point 1.2 [Appendix V to

AMC M.A.704], point 1.2 [AMC1 CAMO.A.300] or point D.3 [AMC1 CAO.A.025].

Remark:

AMP regulated by Part-ML are declared by the owner or approved by the CAMO or CAO (ML.A.302(b)).

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Can a competent authority require the owner/CAMO/CAO to include national requirements in the Aircraft Maintenance Programme (AMP), based on M.A.302(d)(1)?

Answer

Although the Member State's competent authorities are responsible for approving the AMP, the intention of the rule is that they should not impose aeronautical instructions (such as national requirements) in addition to the instructions for continuing airworthiness (ICA) issued by the design approval holder during the certification process with the Agency. The Agency is, on behalf of the Member States, the competent authority for initial airworthiness as per Article 77(1) of <u>Regulation (EU) 2018/1139</u> (the EASA 'Basic Regulation'). Following M.A.302(d)(2), those ICA shall be the basis to develop an AMP.

Nevertheless, competent authorities may issue alternate instructions to ICA when such instructions aim to offer flexibility to the operator [AMC M.A.302(d) point (2)].

Additionally, the mentioned AMC facilitates the rare case, where there has been no ICA issued by the design approval holder for a particular aircraft, modification, repair or STC (Supplemental Type Certificate): competent authorities may issue relevant instructions for the AMP in this case.

Remarks:

- The airworthiness (initial and continuing) of the aircraft for which the Basic Regulation is not applicable, has to comply solely with the national rules of the state of registry; and
- There is no equivalent of US CFR Title 14 Part-43 Appendix E/Part-91 (§91.411) or Part-43 Appendix F/Part-91 (§91.413) in the EU system.

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How is it possible to escalate AMP task intervals?

Answer

Part-M

General:

Some general expectations for escalation initiatives are described in the following paragraph:

a) It should be ensured that the AMP continues to be valid in light of the operating experience [M.A.302(h) – see FAQ n.47406].

b) It should form part of the analysis of the effectiveness of the AMP (if required by M.A.301(e)),

c) The AMP should include a procedure to manage the escalation of established intervals [AMC M.A.302 point (4) and point (2) of AMC M.B.301(c)].

Supported by a formal reliability programme if required by M.A.302(g) or voluntarily implemented [AMC M.A.302(d) point (6)] or collection and analysis of in-service experience.

'Appendix I to AMC M.A.302 and AMC M.B.301(b)' provides detailed guidelines for the integration of this information into the AMP.

d) If there is a CA(M)O involved, those points also have to be emphasised within the CA(M)E, as specified in Appendix V to AMC1 M.A.704, AMC1 CAMO.A.300 or AMC1 CAO.A.025.

Two different cases:

The escalation of AMP task intervals falls into the alternative instructions proposed by the owner/CA(M)O [M.A.302(e)] and distinguishes in the following cases:

Case 1:

Escalation of safety-related task intervals, which consist of all mandatory tasks (Airworthiness Limitation Section) as well as certain non-mandatory tasks issued by the DAH (Design Approval Holder) such as various MRBR (Maintenance Review Board Report) tasks [see note below], tasks related to emergency equipment, critical components...

Case 2:

Escalation of non-safety-related task (e.g. non-safety related MRBR task or a task recommended by a Service Letter) intervals

Note:

In cases, where the aircraft type has been subjected to the MRB process, the following MRBR tasks should be considered safety-related:

- Failure Effect Category (FEC) '5' (evident safety) and '8' (hidden safety) tasks (systems and powerplant)
- SSI (Structural Significant Item) tasks
- L/HIRF (Lightning / High Intensity Radiated Field) tasks (as applicable)
- Stand-alone EWIS tasks (EZAP procedure)

Escalation approval:

The approval of a task escalations is addressed separately for each case:

Regarding case 1:

1.1 Escalation of mandatory tasks represents a change of the initial type design and therefore must be discussed and agreed between the DAH and the Agency*.

1.2 The AMP revision proposal and the information used to substantiate the escalation of nonmandatory tasks [AMC M.B.301(b)(6)] have to be evaluated by the competent authority [AMC M.B.301(b) point (2)]. Following a positive evaluation, a direct approval of the AMP revision will be issued by the competent authority, as stated in M.A.302(e).

Regarding case 2:

An **indirect approval** of the AMP through a CA(M)O is possible and described in more detail in FAQ n.19061.

* Exception may exist under certain condition for Two Star CMR (Certification Maintenance Requirement) (see AMC 25-19).

Remarks:

- In all cases, task de-escalation may need to be considered based on the supporting data [AMC M.A.302(g) point (4)].
- Escalation should not be confused with 'permitted variations' to AMP intervals, which applies to a unique aircraft for a unique occasion ['Appendix I to AMC M.A.302 point (4)].

Part-ML

General:

Some general expectations for escalation initiatives are described in the following paragraph:

a) It should be ensured that the AMP continues to be valid in light of the operating experience [[ML.A.302(c)(9) - see FAQ n.47406]].

b) The effectives of the AMP should be assessed at least by an annual review [ML.A.302(c) (9)].

c) The AMP may include additional maintenance actions [ML.A.302(c)(3)] supported by collection and analysis of in-service experience.

'GM1 ML.A.302(c)(3)' provides detailed guidelines for the integration of this information into the AMP.

d) If there is a CA(M)O involved, those points also have to be emphasised within the CA(M)E, as specified in Appendix V to AMC M.A.704, AMC1 CAMO.A.300 or AMC1 CAO.A.025.

Two different cases:

The escalation of AMP task intervals falls into the alternative instructions proposed by the owner/CA(M)O [GM1 ML.A.302(c)(2)(b)] and distinguishes in the following cases:

Case 1:

Escalation of safety-related task intervals, which consist of all mandatory tasks (Airworthiness Limitation Section) as well as certain non-mandatory tasks issued by the DAH (Design Approval Holder), tasks related to emergency equipment, critical components...

Case 2:

Escalation of non-safety-related task (e.g. task recommended by a Service Letter) intervals

Escalation approval:

The approval of the escalation is carried out by the CAMO or CAO [ML.A.302(b)(2)]. For declared AMP no approval is needed [ML.A.302(b)(1)].

Remarks:

- In all cases, task de-escalation may need to be considered based on the supporting data.
- Escalation should not be confused with 'permitted variations' to AMP intervals, which applies to a unique aircraft for a unique occasion [GM1 ML.A.302(c)(3)].

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What kind of alternative (other than escalation) or additional instructions can be introduced in the AMP?

Answer

For guidance on the escalation of AMP task intervals, please refer to FAQ no.48248.

Examples of alternative/additional instructions to the Design Approval Holder's (DAH) Instructions for Continuing Airworthiness (ICA) are listed below [see point (7) of AMC M.A.302(d):

1. De-escalation of task intervals (i.e. 'more restrictive intervals'). Regardless of the source of the task, this may be eligible to indirect approval [see FAQ n.19061].

2. Additional scheduled maintenance tasks selected by the operator on voluntary basis (e.g. operator policy for interiors), or manufacturer recommendations outside ICA (e.g. Service Letter) linked to product improvements or maintenance practices... Depending on their nature, those tasks may be added, changed and deleted through the indirect approval [see FAQ n.19061].

Remark:

Additional and de-escalated tasks may originate from the reliability programme as indicated in point (4) of AMC M.A.302(g).

3. Concerning changes in task type (e.g. from General Visual Inspection to Detailed Inspection, or from Operational Check to Functional Check), by analogy with the escalation [see FAQ no.48248] EASA recommends that for safety-related tasks such changes are directly approved by the competent authority. For non-safety related tasks, the competent authority may accept an indirect approval.

For Part-ML aircraft, the principles of the AMP development are described in FAQ n.43423.

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