

NPA 2015-17 Airworthiness review process

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Your safety is our mission.



- **Background and issues to be addressed**
- Overview of proposed amendments



Background and issues to be addressed

- The airworthiness review process, which current requirements entered into force in September 2008, introduced significant changes to former national requirements:
 - a new role for NAA,
 - new privileges for CAMOs,
 - specific requirements for personnel involved in this review, description of the process itself, and
 - an airworthiness review certificate (ARC)



Background and issues to be addressed

- The Agency shall assess implementation impact of regulations (article 24(3) of Regulation (EC) No 216/2008)
- Received feedback led the Agency to decide that the airworthiness review process needed to be reviewed
- Survey in September 2012
- ToR May 2013



Background and issues to be addressed

- Aspects considered in ToR
- Structure of the requirements
- Need for and definition of controlled environment
- Recommendations
- Performance of a supervised AR before granting an authorisation for the ARS
- Independence from the AR and from the maintenance release of the aircraft
- “Inconclusive” airworthiness review
- Content of AR and sampling of documents during AR



Background and issues to be addressed

- Aspects considered in ToR
- Open findings when issuing an ARC
- Control of the AR process and prospective effects if more than 1 person is involved
- Validity period of an ARC. Issue of an ARC by the NAA valid for less than one year
- Validity of an ARC and prospective actions to be taken when transferring an aircraft between MS
- CofA issue at the time of transfer between MS
- NAA record-keeping requirements.



- Background and issues to be addressed
- **Overview of proposed amendments**



Overview proposed amendments

- NPA 2015-17 published on 5 Nov 2015
- New structure in Subpart I with clearer requirements and revision of requirements without safety benefit.
- The Airworthiness Review can be performed by:
 - CAMOs holding the appropriate privilege.
 - Maintenance Organisations (Subpart F or Part-145) together with the annual inspection
(only for ELA1 non-commercial aircraft)
 - Independent certifying staff accepted by NAA of the State of registry (only for ELA1 non-commercial aircraft).



Overview proposed amendments

- The NAA **shall** perform the Airworthiness Review:
 - When the aircraft is managed by a non-EU CAMO.
 - When the owner requests it for ELA2 aircraft.
CURRENT, IT IS FOR AIRCRAFT BELOW 2730Kg AND BALLOONS
(IF AGREED BY THE NAA)
 - When circumstances reveal the existence of a potential safety threat.



Overview proposed amendments

- An approved organisation or certifying staff will issue an ARC after performing an AR based on their respective privileges (no more classification of aircraft above or below 2730 kg maximum take-off mass (MTOM)).
- A recommendation is only needed for imports of used aircraft.



Overview proposed amendments

- Main proposed changes in extension of the ARC:
 - No controlled environment.
 - The aircraft has been managed **by a CAMO** (or several CAMOs) since the last issue or extension of the ARC.
 - **The CAMO (the one extending the ARC) has notified the NAA of the State of registry that they are in full control of the continuing airworthiness of the aircraft (the aircraft can be considered as being in a controlled environment).**



Overview proposed amendments

- AMC/GM: The **supervision goals** and **how to assess the competences** of ARS.
- AR process: the AMC details the workflow after the documented review and the physical survey, **how** to address the findings and **who** is responsible for these findings.



Overview proposed amendments

➤ ARS

➤ Documented review and
Physical survey

➤ Informing the
owner/CAMO of any
findings

➤ Assessing information

➤ Issuing
ARC/recommendation

➤ CAMO/owner (M.A.201)

➤ Taking action findings

➤ Inform NAA



Overview proposed amendments

➤ ARS

➤ Documented review and Physical survey

➤ Informing the owner/CAMO of any findings

➤ Assessing information

➤ Issuing ARC/recommendation

➤ CAMO/owner (M.A.201)

➤ Taking action findings

➤ Inform NAA



Overview proposed amendments

➤ ARS

➤ Documented review and

Physical survey

- ❑ *Content (in coming slides)*
- ❑ *90 days in advance to maintain airworthiness pattern*
- ❑ *Time limit between the documented review and the physical survey not to exceed 60 calendar days*



Overview proposed amendments

➤ ARS

➤ Documented review and physical survey

- ❑ *ARS may be assisted by qualified support staff (ARSS) (CAMO)*
- ❑ *The ARS itself will perform the review and its role can never be only signing the ARC/recommendation*
- ❑ *A maximum of two ARSS should participate in the process*



Overview proposed amendments

➤ ARS

➤ Documented review

➤ Physical survey

➤ Informing the
owner/CAMO of any
findings

➤ Assessing information

➤ Issuing
ARC/recommendation

➤ CAMO/owner (M.A.201)

➤ Taking action findings

➤ Inform NAA



Overview proposed amendments

➤ ARS

➤ Informing the owner/CAMO of any findings

- ❑ *Any findings raised during the AR should be **listed and handed over to the owner or CAMO** managing the continuing airworthiness of the aircraft*



Overview proposed amendments

➤ ARS

- Documented review
- Physical survey
- Informing the owner/CAMO of any findings
- Assessing information
- Issuing ARC/recommendation

➤ CAMO/owner (M.A.201)

➤ Taking action findings

➤ Inform NAA



Overview proposed amendments

➤ CAMO/owner (M.A.201)

➤ Taking action findings

- ❑ *The owner or CAMO is **responsible** for taking action to **correct or appropriately defer the findings**.*
- ❑ ***Written feedback** with the actions taken per finding and signed by the owner or CAMO should be given to the ARS.*



Overview proposed amendments

➤ ARS

- Documented review
- Physical survey
- Informing the owner/CAMO of any findings

➤ **Assessing information**

- Issuing ARC/recommendation

➤ CAMO/owner (M.A.201)

- Taking action findings

- Inform NAA



Overview proposed amendments

➤ ARS

- Documented review
- Physical survey
- Informing the owner/CAMO of any findings
- Assessing information
- Issuing ARC/recommendation

➤ CAMO/owner (M.A.201)

- Taking action findings

- Inform NAA



Overview proposed amendments

➤ ARS

➤ Issuing ARC/recommendation

- ❑ *The **ARS** will issue the **ARC/recommendation when satisfied with the actions** (an open entry in the technical log system is considered acceptable)*



Overview proposed amendments

➤ ARS

- Documented review
- Physical survey
- Informing the owner/CAMO of any findings
- Assessing information
- Issuing ARC/recommendation

➤ CAMO/owner (M.A.201)

- Taking action findings
- Inform NAA



Overview proposed amendments

► CAMO/owner (M.A.201)

► Inform NAA

- ❑ *A **copy of the ARC** issued or extended for an aircraft shall be sent to the Member State of registry in **10 days**.*
- ❑ *The **recommendation** should be sent by the owner or CAMO*



Overview proposed amendments

➤ ARS

➤ Documented review

➤ Physical survey

➤ Informing the owner/CAMO of any findings

➤ Assessing information

➤ Issuing ARC/recommendation

➤ CAMO/owner (M.A.201)

➤ Taking action findings

➤ Inform NAA



Overview proposed amendments

➤ ARS

➤ Documented review

➤ Physical survey

- ❑ *The IRs **do not change significantly** compared to the current regulation (delete “full” documented review and “all” in each item)*
- ❑ *AMC/GM provide **more guidance on how to use samples***
- ❑ *Procedures: **minimum sample** for each section to be reviewed and be **proportional** to the number of items to be sampled*



Overview proposed amendments

- M.A.903 Airworthiness review process
- (b) The documented review of the aircraft records shall be carried out to be satisfied that:
 - 1. airframe, engine and propeller flight hours and associated flight cycles have been properly recorded;
 - 2. the flight manual is applicable to the aircraft configuration and reflects the latest revision status;
 - 3. the maintenance due on the aircraft according to the approved maintenance programme has been carried out;
 - 4. known defects have been corrected or, when applicable, carried forward in a controlled manner;
 - 5. applicable airworthiness directives and the measures mandated by the competent authority have been complied with and properly registered;
 - (...)



Overview proposed amendments

- (...)
- 6. modifications and repairs applied to the aircraft have been registered and are in compliance with Annex I (Part-21) to Regulation (EU) No 748/2012;
- 7. service life limited components installed on the aircraft are properly identified, registered and have not exceeded their approved service life limit;
- 8. maintenance has been released in accordance with Annex I (Part-M) to this Regulation;
- 9. the current mass and balance statement reflects the configuration of the aircraft and is valid;
- 10. the aircraft complies with the latest revision of its type design approved by the Agency; and
- 11. if required, the aircraft holds a noise certificate corresponding to the current configuration of the aircraft in compliance with Subpart I of Annex I (Part-21) to Regulation (EU) No 748/2012.



Overview proposed amendments

- M.A.903 Airworthiness review process
- (c) The physical survey of the aircraft shall ensure that:
 - 1. required markings and placards are properly installed;
 - 2. the aircraft complies with its approved flight manual;
 - 3. the aircraft configuration complies with the approved documentation;
 - 4. no evident defect can be found that has not been addressed according to M.A.403; and
 - 5. no inconsistencies can be found between the aircraft and the documented review of its records.



Overview proposed amendments

- M.A.903 Airworthiness review process
- (b) The documented review of the aircraft records shall be carried out to be satisfied that:
 - 1. airframe, engine and propeller flight hours and associated flight cycles have been properly recorded;
 - 2. the flight manual is applicable to the aircraft configuration and reflects the latest revision status;
 - **3. the maintenance due on the aircraft according to the approved maintenance programme has been carried out;**
 - 4. known defects have been corrected or, when applicable, carried forward in a controlled manner;
 - 5. applicable airworthiness directives and the measures mandated by the competent authority have been complied with and properly registered;
 - (...)



Overview proposed amendments

- AMC - Airworthiness review process
- (a) The documented review of the aircraft records and the physical survey of the aircraft **should be based on samples and should cover the following:**
 - (1) **Technical log system/Aircraft logbook:** flight hours and flight cycles for airframe, engine and propeller, as appropriate, are verified and have been properly recorded; and aircraft, engine, and propeller maintenance entries are up to date and correct.
 - (...)
 - (4) **Aircraft maintenance programme (AMP):**
 - applicable maintenance as required by the maintenance programme has been carried out or carried forward in a controlled manner; and
 - the aircraft maintenance programme includes all mandatory continuing-airworthiness requirements.
 - (5) **Status of service life-limited components:**
 - no service life-limited component is overdue.
 - (...)



Overview proposed amendments

- AMC - Airworthiness review process
- (a) The documented review of the aircraft records and the physical survey of the aircraft should be based on samples and should cover the following:
 - (1) Technical log system/Aircraft logbook: flight hours and flight cycles for airframe, engine and propeller, as appropriate, are verified and have been properly recorded; and aircraft, engine, and propeller maintenance entries are up to date and correct.
 - (...)
 - **(4) Aircraft maintenance programme (AMP):**
 - applicable maintenance as required by the maintenance programme has been carried out or carried forward in a controlled manner; and
 - the aircraft maintenance programme includes all mandatory continuing airworthiness requirements.
 - (5) Status of service life-limited components:
 - no service life-limited component is overdue.
 - (...)



Overview proposed amendments

- GM - examples of inspections
- It could assist to create the appropriate check list to perform the AR (requires further adaptation)
 - Technical Log System/Aircraft Logbook
 - Aircraft Flight Manual
 - Aircraft Maintenance Programme
 - Aircraft Defect & rectification
 - ADs
 - Modifications and repairs
 - Mass and Balance
 - Type Design
 - Aircraft Certificates
 - Operational Requirements
 - Complaints of the last airworthiness review
 - Marking and Placards & Area inspection



Overview proposed amendments

AMP

NOTE: AMP is the starting point, it is not the intent to check compliance with the maintenance planning document (MPD).

- Verify approval/declaration, amendments and revision status reference.
- Verify compliance with mandatory instructions such as repetitive airworthiness directives (ADs), the airworthiness limitation section (ALS) of the instructions for continued airworthiness (ICA) or specific maintenance requirements contained in the type certificate data sheet.
- The maintenance due on the aircraft according to the maintenance programme has been carried out and properly released or, if applicable, carried forward in a controlled manner.
- Check that the repetitive inspections requirement coming from a repair/modification is in the AMP. (...)



Overview proposed amendments

AMP	<ul style="list-style-type: none">– Check the summary status of the maintenance task(s) to track the date and time when the required action was last performed and when it is next due.– Check for any additional scheduled maintenance measures required due to the use of aircraft and the operational environment.– If applicable, check for pilot-owner maintenance tasks.– Check components with a specific maintenance action (verify physically some of these components).
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Overview proposed amendments

- The processes of issuing a CofA and an ARC when transferring aircraft between MSs are aligned:
 - Owner **notify former MS in which MS will be registered**
 - Owner **submit application for a new CofA**
 - **Validation** of valid ARC (new AMP needed before)
 - **Statement before validation**
- **NAA should evaluate the statement** to be satisfied that the transfer process takes place in a controlled manner, the aircraft is under control, and the owner/CAMO is aware of their responsibilities.
- Amended Part 21: deleted *“This may include inspections by the NAA of the MS of registry”*



Overview proposed amendments

- Standards applicable for industry and NAA (AR content, ARS supervision goals, ARS qualification).
- **Oversight role NAA is reinforced:**
 - **Continuation of approval** (M.B.604 – M.B.704 – 145.B.30)
The performance of an airworthiness review shall be audited.
 - **Monitoring of aircraft recently transferred** is increased by introducing it into the ACAM programme and/or product survey of the approved organisation.



EASA
European Aviation Safety Agency

Questions?

Thank you

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