



European Union Aviation Safety Agency

Airworthiness Directive Reading Exercise

November, 25th – 26th 2019

Note: More than one answer can be correct

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EASA AD Reading Exercise

Part 4, presented by:
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AD Effective dates (1)

Operator case: The initial issue of an AD has an effective date of 14 days after the issue date and a revised AD has an effective date of 7 days after the issue date. In many cases this is sufficient to process the AD (receipt, distribution, assessment, planning, etc.).

However, when having to deal with long and complex ADs (e.g. 2017-0237, 2019-0173 and 2019-0067R1), that are followed by multiple SBs, this time becomes insufficient. In all these ADs, time was insufficient due to the amount of paragraphs and [aircraft] configurations requiring up-issue and duplicate inspections prior to release.

Additionally, we have encountered recently ADs (e.g. 2018-0259R1, 2018-0264R1) whose effective date coincides with the issue date.

AD Effective dates (2)

We would like to discuss on mitigating this as for large operators it is not realistically possible to complete the AD process (assessment, release, planning, etc.) in such short notice.

Question 36 (opinion poll): Do you have a similar experience?

- a. Yes.
- b. No.

Please be prepared to elaborate your answer – share your experience.

AD Effective dates (3)

EASA position:

- For most ADs, we publish a Proposed AD for consultation, particularly the 'complex' ADs. Only VERY few PADs do not result in a Final AD.
- PAD consultation allows operators time to assess the impact on their fleet and start planning (or even taking) action(s), as well as submitting comments and questions, which may affect the Final AD.

A REVISED EASA AD CANNOT:

- ***INTRODUCE NEW REQUIREMENTS,***
- ***EXPAND APPLICABILITY,***
- ***REDUCE COMPLIANCE TIME(S)***



Reading of AD 2019-0099

Subject: This AD applies to Rolls-Royce Trent 1000 engines, requires repetitive inspections of certain high pressure turbine (HPT) blades and imposes de-pairing limitations.

Operator case: Paragraph (6) states that "during any inspection as required by § (1) or (3) of this AD, any crack indication is found [], remove the engine from service". Our understanding is that the words "any crack indication" refers only to axial cracks, since Section 3.C of the NMSB is an inspection instruction only for axial cracking.

[AD 2019-0099](#)

Reading of AD 2019-0099

Question 37: Is the operator's understanding correct?

a. Open to interpretation.

b. Yes.

c. No.

Reading of AD 2019-0099

Explanation:

- EASA confirms that the purpose of the inspections is to detect axial cracks.
- However, in case any other type of crack is found in an affected part – not expected and not addressed by the AMM (when found on-wing) or Engine Manual (when found in-shop) – the corrective actions required by the AD for the engine remain the same.

ANY DEFECT FOUND DURING AN AD-REQUIRED INSPECTION SHOULD BE TAKEN INTO CONSIDERATION



Reading of AD 2019-0099R1

Subject: This AD applies to Rolls-Royce Trent 1000 engines, requires repetitive inspections of certain HPT blades and imposes de-pairing limitations. The AD was revised to delete certain inspection requirements.

Operator case: According to original AD we do the inspection with interval 25 FC for engines exceeded 725 FC (in case of no cracks found).

[AD 2019-0099R1](#)

Reading of AD 2019-0099R1

Question 38: Can the operator comply with the requirements of the revised AD (R1) issued 18 July 2019 (repeat interval 50 FC) from that date onwards?

- a. Open to interpretation.
- b. No, only from the effective date.
- c. Yes.

Reading of AD 2019-0099R1

Explanation:

- The 7 days between revised AD issue date and effective date is mainly to allow operators to review and assess the impact of the revision (if any) for their fleet.
- All technical aspects (i.e. changes) addressed by the revised AD are approved, so these can be implemented before the effective date.
- Formally, consent of the competent authority for the aircraft on which the affected engine is (intended to be) installed is necessary to do so, assuming the revised EASA AD is adopted by the State of Registry.

(REVISED) AD ACTIONS ARE ALLOWED BEFORE EFFECTIVE DATE

Reading of AD 2019-0099R2

Subject: This AD applies to Rolls-Royce Trent 1000 engines, requires repetitive inspections of certain HPT blades and imposes de-pairing limitations. The AD was revised to correct an error – only ‘new’ blades are allowed to be installed as replacement.

Operator case: Compliance with EASA AD 2019-0099 or EASA AD 2019-0099R1 may not ensure compliance with the requirement of EASA AD 2019-0099R2 which requires only new (not previously installed HPT blade) to be installed. This should have been a new (superseding) AD.

[AD 2019-0099R2](#)

Reading of AD 2019-0099R2

Question 39: Is the operator's conclusion correct?

a. No.

b. Open to interpretation.

c. Yes.

Reading of AD 2019-0099R2

Explanation:

- As confirmed by Rolls-Royce, no used blades could have been installed in-shop, since that option is not contained in Rolls-Royce instructions.
- Despite the apparent (i.e. incorrect) reference to used blades in the 'Definitions' section of the original AD and its R1, to comply with this AD (at any revision), new blades were required to be (i.e. have been) installed.
- If this apparent discrepancy / contradiction had been spotted during PAD consultation, this would have been corrected in the Final AD and explained in the CRD.

Reading of AD 2019-0106

Subject: This AD applies to specific MSN Airbus A319, A320 and A321 aeroplanes and requires modification of affected galleys by replacement of certain end-stop bumpers.

Operator case: On my a/c, which MSN is listed in the Airbus SB, galley P/N 1001 (fictitious) is installed, which was initially manufactured by company ALFA as P/N 1000, then re-identified in service after embodiment of a mod designed by another company (BETA). P/N 1000 is listed in the Airbus SB; P/N 1001 is not listed in the Airbus SB, since this P/N is unknown to Airbus (and to ALFA). P/N 1001 does not include the mod which is required by the AD.

[AD 2019-0106](#)

Reading of AD 2019-0106

Question 40: Does the AD apply to my aeroplane?

- a. Yes; as the mod required by the AD is not embodied.
- b. No.
- c. Yes; the P/N may not be in the SB, but the AD prevails over the SB.
- d. Yes.

Reading of AD 2019-0106

Explanation:

- The AD applies, because the MSN is listed in the SB.
- If P/N 1001 (or any other P/N not listed in the SB) is found to be installed, **no action is required** on the aeroplane, **provided** the mod that introduced the 'other' P/N on the aeroplane is approved as AMOC (equivalent safety finding) to the AD for that aeroplane.

AD APPLIES ≠ ACTION REQUIRED



Reading of AD 2019-0184

Subject: This AD applies to Airbus AS365, SA365, AS350, AS355, EC130 and EC155 helicopters and requires a one-time inspection of certain main rotor servo actuators.

Operator case: The ASB requests to “Comply with paragraph 3 except paragraph 3.B.2.b within 55 flight hours”. Paragraph 3.B.2.b requests to check for alignment of the red mark after 150 FH, not within 55 FH. Paragraph (1) of the AD should state “inspect each affected part in accordance with the instructions of paragraph 3.B except paragraph 3.B.2.b of the applicable ASB”.

AD 2019-0184

Reading of AD 2019-0184

Question 41: Is the operator suggestion appropriate?

- a. Yes.
- b. Open to interpretation.

c. No.

Reading of AD 2019-0184

Explanation:

- The commenter correctly understands that the inspection of the parts needs to be done within 55 FH and the slip mark check should be done after 165 FH after from the first inspection.
- By reading the AD in conjunction with the SB it is quite clear that two separate inspections are to be done, and at different times.
- Paragraph (4) of the AD adequately addresses the commenter's concern about the slip mark check/inspection.

READING AN AD: DO NOT TAKE ONLY ONE PARAGRAPH IN ISOLATION



Reading of AD 2019-0195

Subject: This AD applies to Airbus AS322 and SA330 helicopters and requires repetitive inspections of certain tail rotor hub assembly components and introduces life limits for certain components.

Operator case: Paragraph (4) states that group 1 and 2 helicopters, determined by §(2) or (3) (low torque cycles - TC) are to be inspected at intervals not to exceed 50FH, while §(6) for helicopters operating in High TC, there is no mention of repetitive 50FH inspections. EASA appears to say that low TC are to be inspected at regular intervals (50 FH) whereas High TC can go straight through to the 250/300FH replacement limit.

[AD 2019-0195](#)

Reading of AD 2019-0195

Question 42: Is the operator's reading / interpretation of the AD correct?

a. No.

b. Yes.

c. Unclear.

Reading of AD 2019-0195

Explanation:

- For helicopters performing high torque cycles (group at highest risk) the AD requires (§6) replacement of all flapping hinge components within 50 FH and only thereafter, for AS 332, replacement every 250 FH.
- For helicopters performing low torque cycles (group at less risk) the AD requires spindle bolt inspection at 50 FH intervals until the first application of ASB AS332-05.01.10, where the AD (§5) requires repetitive replacement of all flapping hinge components.

READING AN AD: DO NOT TAKE ONLY ONE PARAGRAPH IN ISOLATION



FAA ADs for BD-700 Aeroplanes

Received from a European operator:

2018-20-20	2018-22-08
2018-21-03	2018-25-07

Question 43: Why are the FAA ADs listed above (for BD-700 aeroplanes) not adopted by EASA?

- a. EASA disagrees with these ADs.
- b. Type not validated.
- c. Different ADs apply.

Note: FAA ADs can be found on the [RGL website](#).

FAA ADs for BD-700 Aeroplanes

Explanation:

- EASA can only adopt 'State of Design' ADs, which depends on the Applicability of the AD, and the authority that issues (or issued) the AD, representing – at the time of AD issuance – the State of the Design of the product(s), part(s) or appliance(s), STC, or Repair, to which the AD applies.
- The Bombardier BD-700 is a Canadian type design; Transport Canada ADs applicable to that design are routinely adopted by EASA.
- Each listed FAA AD is actually an 'adoption' of a Transport Canada AD (as identified in each AD), which EASA typically adopts shortly after issuance.

2018-20-20 = CF-2017-32	2018-22-08 = CF-2018-08R1
2018-21-03 = CF-2017-31	2018-25-07 = CF-2018-14

PAD / CRD process (1)

Subject: PAD > comments received (CRD) > Final AD

Operator case: The CRD process does not work well!

- EASA issue a PAD and operators comment on the PAD.
- EASA release Final AD, the content may have changed [compared] to that of the proposed AD (unknown to operators).
- Operators have no visibility of the changes until it has been released as an AD.
- Upon viewing the AD, if changes have been made, operators now must contact EASA to request clarification.

PAD / CRD process (2)

Question 44 (opinion poll): Based on your experience on the EASA PAD/CRD process, what is your opinion?

- a. Positive – keep as is.
- b. Negative – needs improvement.
- c. Neutral – do not know.

Please be prepared to elaborate your answer – share your experience.

PAD / CRD process (3)

EASA position/view:

- We are committed to a transparent (as much as practically feasible) AD publication process.
- The CAP indicates that, in case changes to the AD become necessary after PAD release, which would increase the burden to operators (e.g. reduced compliance time(s), additional requirement(s), expanded Applicability), that PAD must be revised and published for further consultation.
- For Final ADs ‘with request for comments’ (no PAD issued), we plan to introduce CRD as well, making post-Final-AD exchanges public, if submitted within a given consultation period.

Document for AD Compliance

Subject: An EASA AD requires the use of a specific issue of a referenced document (e.g. SB).

The action is already scheduled (not yet done), but now a revision of the SB has been issued.

Document for AD Compliance

Question 45: Am I required to use the 'current' revision of the SB to comply with the AD?

a. Yes.

b. No.

c. Do not know.

Document for AD Compliance

Explanation (1):

- When an SB (for which an AD exists) is revised, the AD allows the use of that revised SB, it is not required. However, it does make common sense at any time to use the latest revision voluntarily, as this may contain improved (or corrected) instructions.
- For operators under EU regulation, Part M requires the use of the latest approved maintenance data, but this requirement is unrelated to AD compliance demonstration.

Document for AD Compliance

Explanation (2):

- EASA [PR.CAP.0001](#) (procedure for CA) specifies EASA action(s) to be taken when a TC holder introduces changes into an EASA AD-related SB revision, concerning:
 - Applicability (expanding or reducing affected fleet);
 - Compliance Time; or
 - Accomplishment instructions (the nature of required actions).
- In those cases, it is (nearly) certain that EASA AD action (revision, supersedure, as applicable) will follow, sooner or later.

AD Compliance Demonstration (case 1)

CAMO experience: During airworthiness review of an A320 aircraft, our airworthiness review staff complained that we did not make (i.e. record) an applicability judgement, nor showed compliance to some appliances (i.e. equipment) AD's, (e.g.) 2016-0210, 2015-0093, 2014-0279, 2014-0125 and 2014-0095, all of which apply to components installed ONLY on helicopters.

The phrase in the AD applicability section “**known to be installed, but not limited to.....**” forces CAMO's, managing the continuing airworthiness of complex motor powered fixed wing aircraft for CAT (typical CS25 certificated), to show compliance to ref. AD's.

AD Compliance Demonstration (case 1)

Question 46 (opinion poll): Is your view/experience the same as this CAMO?

a. Yes.

b. No.

Please be prepared to elaborate your answer – share your experience.

AD Compliance Demonstration (case 1)

EASA position/answers:

As published, the Applicability of each AD indicates that:

- AD 2016-0210 applies to seats installed only on helicopters.
- AD 2015-0093 applies to AHRS that could be installed on any aircraft.
- AD 2014-0279 applies to restraint systems installed only on helicopters.
- AD 2014-0125 and AD 2014-0095(R1) apply to CPI Systems that could be installed on any aircraft.

Whether (and if so, how) an operator records these ADs into its system must be in agreement with the competent authority.

AD Compliance Demonstration (case 2)

Operator case: AD 2018-0276R1 issued 11/1/2019, effective 13/1/2019!

This short time period, especially for AD revisions, is extremely problematic. Several national requirements force us to have active control of all ADs (incl. revisions) as soon as they are effective. It does not matter how minor the changes are, or if they are “only” editorial in nature. We have a compliance problem as soon as the effective date is reached, and compliance is not actively tracked against the revision, regardless if a compliance time is not yet reached or not changed.

Please provide other means for operators to show compliance, e.g. complying with AD original issue satisfies R1. Solving one problem for one operator who needs the AD revision is creating new problems for other operators.

AD Compliance Demonstration (case 2)

Question 47 (opinion poll): Is your view/experience the same as this CAMO?

- a. Yes.
- b. No.

Please be prepared to elaborate your answer – share your experience.

AD Compliance Demonstration (case 2)

EASA position/answer:

- The competent authority should not expect or demand “compliance” demonstration for an AD upon its effective date, obviously including revised ADs. Having an AD recorded and therefore in ‘control’ (AD assessed, action(s) planned, etc.) is not AD compliance demonstration.
- A revised EASA AD cannot: add new requirements, expand Applicability, reduce compliance time(s). Because of that, for an aircraft already compliant with an EASA AD, no further compliance demonstration is necessary when that AD is revised.
- Changing past compliance (maintenance) records is unnecessary.

IF EASA AD COMPLIED WITH: NO NEED TO DEMONSTRATE COMPLIANCE AGAIN WHEN THAT EASA AD IS REVISED – NOT VALID FOR CANADIAN OR BRAZILIAN ADs!

AD CF-2017-21R1 Compliance Time

Operator case: TCCA AD CF-2017- 21R1 “ENGINE IGNITION”, addresses a condition which, if not corrected, may lead to #2 engine uncommanded in-flight shut down. The AD requires to inspect and rectify the beta lockout system auto relight function within 6000 hours or 36 months, whichever occurs first from the effective date of the AD.

Commenter states *“I can understand that time for a rectification is given a high figure (6000fhrs) for a potential crack. But for this case, there is a fault or not a fault, which should be in everybody's interest to determine and eventually rectify immediately”*.

[AD CF-2017-21R1](#)

AD CF-2017-21R1 Compliance Time

Question 48: Is your view on this AD (or experience with similar ADs) the same as this commenter?

a. Yes.

b. No.

Please be prepared to elaborate your answer – share your experience.

AD CF-2017-21R1 Compliance Time

EASA position:

- Most ADs are published to 'manage' risk, requiring corrective action(s) within a reasonable time period, proportional to the risk.
- This avoids unnecessary aircraft-on-ground (AOG) situations.
- In case of increased failure probability, an AD would require actions within a short time period; for a high probability, EASA would issue an Emergency AD, typically requiring action(s) before next flight, or within 25 FC, 25 FH or 30 days, or less.

AD COMPLIANCE TIME IS A REFLECTION OF THE RISK, NOT AN INVITATION TO DELAY CORRECTIVE ACTION UNTIL THE END OF THE COMPLIANCE TIME



IMPORTANT: Commenting on (P)ADs

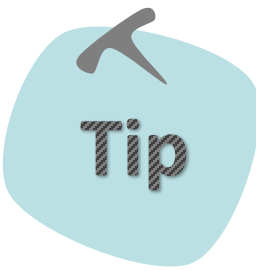
EASA always appreciate your comment(s), but we would prefer to receive them during the public consultation phase of the PAD which precedes the Final AD.

Feedback received during PAD consultation allows us to avoid errors and improve the readability of our ADs.

We publish answers to PAD comments and queries in a CRD, which may assist other operators in understanding our ADs.

Note that on our [website](#), you can subscribe to e-mail notification of all new PADs (see [User Guide](#)).

Comments and Questions



Before sending any ‘continued airworthiness’ question to EASA, please review our [AD Homepage](#) and our [AD FAQ](#).

For submitting your comments on a Proposed AD, click on  “send comment” just below the subject/description.

For specific or general continued airworthiness (AD, SIB, etc.) questions, contact the EASA Programming and Continued Airworthiness Information (PCAI) Section at ads@easa.europa.eu.

Thank you for your participation!

For any (further) questions,
please provide these during the Q&A session at the end of the AD Workshop,
or submit these in Slido during the Workshop.

If there is insufficient time during the Q&A for all questions,
EASA will provide a written answer after the AD Workshop.

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