





INDUSTRY
COMMUNICATION
AGENCY
CERTIFICATION NEWS
TECHNICAL INFORMATION
EXPERT TIPS

5th edition MARCH 2025 Welcome to our latest EASA Design & Certification Newsletter, the fifth issue since the start of this initiative, all of which we hope helped to keep you updated on our latest certification news.

In this issue you will find some articles related to technical subjects as well as updates coming from recent certification events.

I would like to thank particularly Nicolas DUPREZ, Fernando MENENDEZ RODRIGUEZ, Grégory LIÈVRE, John FRANKLIN, Xavier VERGUEZ and Marcella MIANO for their time and contribution to the articles in this edition.

We welcome your comments and suggestions.

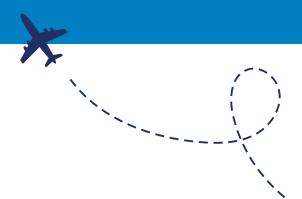
Should you have further questions, please contact your PCM or DOA Team Leader.

Yours faithfully,

Rachel DAESCHLER

IMPORTANT!!!

If you wish to receive this bi-annual newsletter in the future you need to register via our website and click on news feed





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	and major impacts on OSD CCD
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Determination of minor and major impacts on OSD CCD





OSD CCD as basis for cabin crew training.

Have you ever experienced this?

You are presenting your design change project to the EASA team and while you assumed there was no impact on Operational Suitability Data (OSD), it is mentioned by an EASA expert, that your configuration has a minor or major impact on the OSD CCD.

Design Organisations must ensure that they can identify whether, or not, their projects impact OSD elements.

Find out how to assess if your project impacts or not the OSD CCD, in two steps.

First step: know the aircraft type TCDS

Some older aircraft types (e.g. Fokker 100; B737Classic; B757; B767; etc), which were no longer <u>in production</u> at the time the OSD (including the CCD) became mandatory, in Feb. 2014, do not have an approved initial CCD.

For potential changes to such configurations, the "old way of doing business" applies, i.e. a CCOM-Supplement can be generated for the benefit of the end-user, without the CCOM-S being part of a CCD approval process. In this case, no impact on CCD exists, because an initially approved CCD does not exist, in the first place.

For some aircraft with a TCDS that includes CC training elements older than CS-CCD, (such as the A320 Classic; A330/-340; A380),



there are specific elements included in a CRI-SC-CCD, which are listed in the TCDS. These specific elements are represented by the training requirements contained at the time, in the JAR-OPS 1, Subpart O-Cabin Crew. They are, largely, the same elements as the ones listed by the CS CCD, only less detailed. They derive from the CC evaluations conducted under the (Joint) Operational Evaluation Board and were Grandfathered as the initial OSD-CCD for those a/c types.

For the majority of aircraft types, however, the TCDS references the CS-CCD as the certification basis for the OSD CCD. In these two cases (where the CCD certification bases are represented by the CRI-SC-CCD, or, by the CS CCD), the impact of the aircraft design changes on the initially approved CCD must be considered, for the purpose of the TC Approval.

Second step: check guidance for the determination of impact on OSD CCD.

For the aircraft with a modern certification basis (i.e. CS-CCD), a complete assessment of the impact of a design change on CCD, includes assessing the impact on the elements listed by:

 CS CCD.205/Appendix 1 to CS CCD.200(b)(1)-ADT/CS CCD.305(a)/ Appendix 1 to CS CCD.310/CS CCD.400-CASE

When classifying the impact of a design change on CCD, remember that, per AMC/GM to Part 21.A.91(3.5)(c)-Complementary Guidance on the classification of changes to OSD-Cabin Crew Data:

- any change that affects the operation of an element listed by the Aircraft Difference Table-ADT-(App.1 to CS CCD.200(b)(1)), generates a major impact on CCD;
- any change that leads to establishing instructions for Cabin Aspects of Special Emphasis-CASE- (CS CCD.400), generates a major impact on CCD;
- any change to the elements listed by Appendix 1 to CS
 CCD.310 and by CS CCD.305(a) other than the ones listed in the ADT and CASE, generates a minor impact on CCD.

For aircraft with the certification basis using CC training elements older than CS-CCD (i.e. using CRI-SC-CCD), there is no list to detail the broader categories of CC training elements included therein, but it is good practice to use Appendix 1 to CS-CCD.310, for assessing the impact of the design change on CCD.



A case study:

Your customer has asked you to replace the business class seats in the already certified cabin layout of a B737-800, with another seat part number:

- the new seats are an upgrade compared to the original ones, since they enable electrical positioning.
- the overall cabin layout does not change.

First step: The EASA TCDS IM.A.120 mentions that the applicable OSD CCD certification basis is CS CCD at initial issue.

Second step: Appendix 1 to CS CCD.310 section (f)(6) mentions "passenger seat (electrical operation; seat power outlet)".

Your change is thus constitutive of an impact on OSD CCD. In accordance with the AMC/GM to Part 21.A.91(3.5)(c)- this would be a minor impact on CCD:

as a consequence, a CDI (Compliance Demonstration Item) needs to be introduced in the Level of Involvement section of the project's Certification Programme for the Panel 17 "OSD CCD" expert involvement. Given the limited impact, the outcome could be a Risk Class 1 with expert's involvement limited to the review of the Certification Programme.

For the sake of completeness, please, note that <u>Issue 2</u> of the CS CCD is applicable as of the 1st March 2021. Compared to the CS CCD, Issue 1, the changes introduced by Issue 2 consist of:

- a new subparagraph (b) in CS CCD.215-Determination of a variant, and an associated GM1 CCD.215(b), which introduce and detail the status of "same aircraft", in addition to "new type" and "variant".
- a GM1 CCD.305(b)(2) -Supplementary data provided at the request of the applicant, which describes Training Levels.

Be mindful of your privileges.

Please remember that not all organisations are granted the privileges to work on OSD elements.

The Design Organisation's Terms of Approval document sums up the scope and the associated privileges. Your EASA DOA Team Leader can clarify in case there is any uncertainty.



Should you have any question about this topic, please contact us via technical.questions@easa.europa.eu

EASA updated policy on non-rechargeable Lithium batteries



Photo courtesy of FAA

Built-in Lithium battery experiencing a thermal runaway



Damage to aircraft skin and fuselage resulting from an internal battery fire

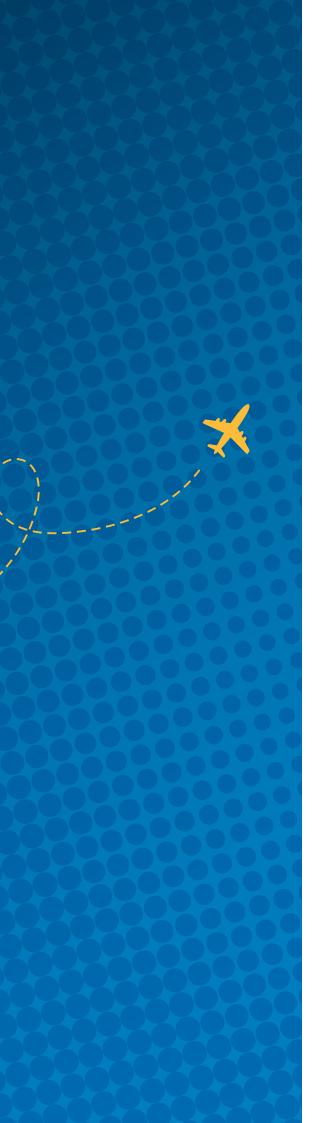
Past experience has shown that non-rechargeable lithium batteries' and battery systems' failure can in some cases cause an on-board fire. The impressive flames and large amount of smoke generated by even a small battery experiencing a thermal runaway have shown how critical the proper installation and qualification of non-rechargeable lithium batteries are.

ADDITIONAL REQUIREMENTS

The applicable Certification Specifications in the aircraft certification basis do not explicitly address the installation of non-rechargeable lithium batteries.

A Certification Review Item (CRI) is therefore needed to introduce special conditions and associated means of compliance by which known or anticipated hazards associated with non-rechargeable lithium batteries and battery systems can be adequately addressed.

The applicability of these special conditions was until recently limited to CS-25 ("Large Aeroplanes") and CS-29 ("Large Rotorcraft") aircraft. The certification basis specified in the TCDS of most CS-25 aircraft types already includes the special conditions in question.



Its applicability extends now to CS-23 level 4 through 23.2525 ("Normal, Utility, Aerobatic and Commuter Aeroplanes") and CS-27 ("Small Rotorcraft"):

- "NRLB": Non-rechargeable lithium batteries Special Conditions "SC"
 - CS-23 level 4: EASA is seeking to have a similar ASTM standard to cope with non-rechargeable batteries as ASTM F3235-22. In the absence of this material, a Certification review Item "CRI" MoC for CS 23.2525 will be raised.
 - CS-27 Cat A would request the usage of a dedicated CRI SC's.
- "RLB": Rechargeable Lithium batteries SC or requirements are now explicitly applicable to all rechargeable Lithium batteries.
 - CS-23 level 4: ASTM F3235-22 is an acceptable MoC with 23.2525 and will be introduced in the next CS-23 Amendment. No CRI SC's would be needed. ASTM F3235-22 will need to be quoted in the CP.
 - CS-27 Cat A would request the usage of a dedicated CRI SC.
 - For RLB & NRLB: CS-23 level 3, 2, 1 and CS 27 Non-Cat A EASA will evaluate the need for using the same approach on a case-by-case basis, based on the risk that the installation could pose to aircraft safety.
 - When validation with foreign authorities would be envisaged for CS-23 level 3, 2 and 1 and CS-27 Non CAT A, EASA recommends checking potential means of compliance discrepancies related to Lithium batteries.

PROJECT CLASSIFICATION: PAST PRACTICE

When a design change affects a non-rechargeable lithium battery installation, the associated certification project is most likely to earn a "major" classification. Most design changes so far are considered to have an appreciable impact on airworthiness. The classification of the worst-case failure mode of the battery as well as the effort needed to demonstrate compliance with the special conditions are not considered compatible with a "minor change" classification.

So far only specific cases have been considered eligible to a reclassification to "minor change". However, based on GM 21.A.91, a systematic assessment of such cases by EASA experts has been necessary. The administrative burden and time necessary for the EASA team to complete the documentation review are drawbacks associated with this process.

This process was presented to the public in several occasions, in particular during the STC Workshop 2019 for which the video is still available online (https://www.youtube.com/watch?v=sT-ukCc77lw&list=PLTfS24aKkJn7dlqdpNpV4OogPSYdA70b&index=12).





PROJECT CLASSIFICATION: NEW POLICY

The new policy on classification of design changes affecting the installation of non-rechargeable lithium batteries is based on the experience accumulated since 2015 and on the availability of new ETSO C142b equipment on the market.

The agency published updated Special Conditions reference SC-F25.1353-01 (https://www.easa.europa.eu/document-library/product-certification-consultations/final-special-condition-ref-sc-f251353-01-non).

The new EASA policy allows the direct classification to "Minor Change" by the DOA organisations (i.e. no need to systematically consult EASA) for the following cases:

A. Battery with Capacity up to 100Wh AND installed in the cabin in a fully enclosed area where the occupants can visually localize it in case of fumes or fire AND no oxygen lines/equipment, water, fuel or any other flammable substances in the same enclosure AND battery qualified at least to ETSO-C142b.

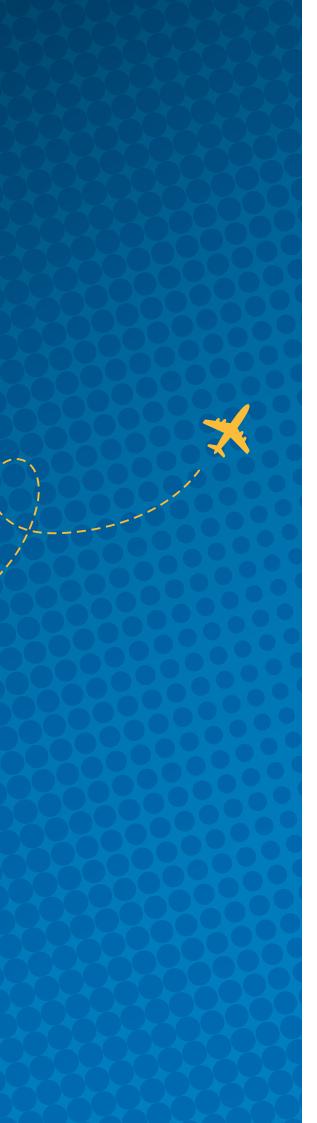
B. Modifications involving the installation of a Li battery within an equipment with a capacity up to 5Wh AND ETSO 142b AND no other reasons to classify the change as Major.

C. Relocation of equipment containing a battery with ETSO C142b authorisation and with no impact in the original Safety Assessment AND conditions of installation not worse than the original ones (in terms of separation to oxygen lines/equipment, water, fuel, other flammable substances, heat points)

D. Project requesting exemptions to SC as per Note 2 (see below) on SC's version published in EASA website on 7th April 2021 (see below), limited to cosmetic changes. Please note that changes expected to demonstrate substantial fire safety improvement as per note 2 are considered as MAJOR.

Other installations will be classified as major and will require an application for a "Major Change" or "STC" approval.





EXAMPLES

Below are some examples of changes that should be classified as "Major":

- A. installation not subject to SC-F25.1353-01 (SC version published in EASA website on 7th April 2021), when a substantial fire safety improvement is demonstrated based on Note 2 of the special conditions.
- B. **exposed installation**, even if the battery meets ETSO-C142b (e.g. ELT installed on a bulkhead in the passenger cabin)
- C. Cockpit installations, even if the battery meets ETSO-C142b.
- D. installation in an <u>inaccessible area*</u>, even if the battery meets ETSO-C142b. An inaccessible area is an area that can be accessed only after the removal of panels or is not readily reachable by a person with the contents of a hand-held fire extinguisher. These areas tend to be behind interior panels (such as sidewalls or ceilings), or areas below the passenger floor.

DO NOT FORGET THE "NOTE 2"!

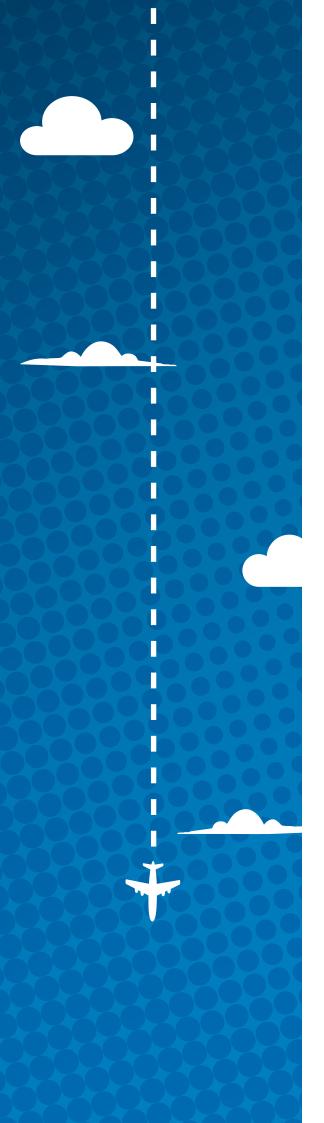
The recently published update to the Special Conditions contains some exemptions relevant for the Minor/Major classification. A very important part that helps the DOA staff to make the decision as to whether or not a design change can be classified "minor".

This so-called "Note 2" is shown below:

Note 2:

These special conditions apply in lieu of 25.1353(c)(1) through (c) (4) to non-rechargeable lithium battery installations as follows:

- To all changed installation (new battery part number or new environment) except if the design change can be considered cosmetic. A cosmetic change is a change in appearance only and does not change any function or safety characteristic of the battery installation.
- To all relocated lithium batteries, except if the relocation is demonstrated to improve the safety of the aeroplane and of the occupants, leading to a change that provides a **substantial fire safety improvement**.



• To all existing non-rechargeable lithium battery installations affected by a design change, even if the battery or battery installation itself does not change (e.g. change in ambient temperature or pressure environment in which the battery operates, change on the electrical load on a battery). Except if the design change improves the safety of the non-rechargeable lithium battery installation.

Applicants, who intend to justify that this Special Condition is not applicable, shall generate the evidence that the proposed design meets the above criteria in this note 2. This evidence shall include a detailed assessment of the battery installation on the baseline aircraft and the improvement due to the proposed change considering a battery thermal runaway failure for both installations.

The assessment should:

- Consider the battery thermal runaway effects of heat, explosive energy, projecting debris and toxic gases.
- Address the proximity of the battery to occupants, critical systems and equipment, structure, and any other installations that could be a hazard if exposed to a battery thermal runaway (e.g., oxygen bottles/lines, fuel lines). The above exceptions are limited to changes/relocations to baseline aircraft installations approved for certification projects for which the special condition was not applicable.

The above exceptions are limited to changes/relocations to baseline aircraft installations approved for

certification projects for which the special condition was not applicable.

TARGET DATE FOR EXCLUSIVE USE OF ETSO C142b/DO-227A or later amendment

EASA intends that every single non/rechargeable lithium battery (NRLB) installation shall be compliant with ETSO C142b or that any installation has to assure qualification level according to MOPS DO-227A or later standards for any project with a date of application after 30 June 2025.

The entry into force date is based on the safety gain resulting from the installation of NRLBs meeting this MOPS DO-227A standard and the availability of ETSO C142b/DO-227A equipment. EASA highlighted this in March 2022.



2024 edition of the EASA Part21 Workshop and Certification Conference





This event allowed fruitful exchanges between the industry and EASA staff.

On 26 November 2024 the Part 21 Workshop took place at the European Union Aviation Safety Agency (EASA) headquarters, and on 27 November 2024 the Certification Conference was held at Cologne's Botanical Garden ("Flora").

An EASA-Industry gathering

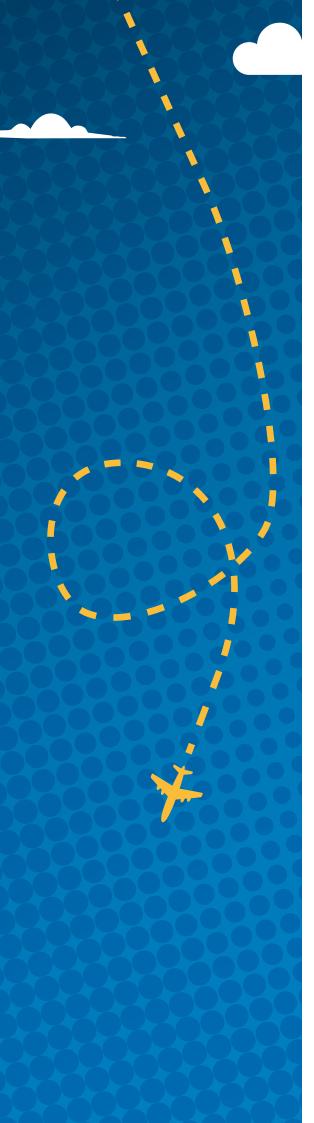
This two-day event brought together industry staff, authorities' representatives, as well as EASA experts and managers, to discuss updates in EASA's product certification activities.

Participants came from 30 Countries (including USA, Australia, Malaysia, China, Thailand, Vietnam) to exchange on different ongoing challenges around aviation safety and security.

The event provided a great opportunity particularly for many Supplemental Type Certificate (STC) holders, operators, aircraft and engine manufacturers as well as other certification authorities to meet, collaborate and work together for the benefit of the whole industry.

An interactive and hybrid event

As already done in previous years, the event format included plenary sessions with on-stage presentations. As well as those present in the room, the hybrid format enabled people unable to travel to Cologne the chance to also following the presentations and discussions.



Moreover, interactive sessions were organised: these "Side Meetings" allowed participants the chance to deep dive into specific topics in smaller groups. Additionally, the "Coffee with Experts" session allowed any participant to ask specific questions to EASA's experts

The topics

The topics discussed during the event included:

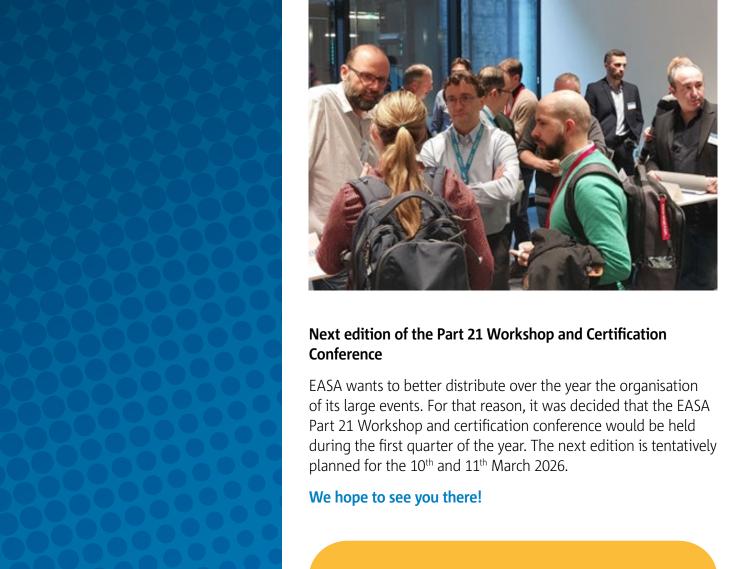
- Part21 Workshop
 - Plenary session: Safety Management System (SMS) implementation, Portable Electronic Devices in the cockpit, Management of non-affected area in changes leading to new models, Certification Memoranda, "ECCAIRS2" Occurrence Reporting tool
 - Side Meetings: DOA Competence Management, "Level of Involvement" implementation, Design Organisation Approvals (DOA) suppliers control, Additive Manufacturing Certification Memorandum, Operational Suitability Data for Cabin Crew Data, Cybersecurity and Supplemental Type Certificate (STC) projects, Artificial Intelligence and DOA, Composites Materials handbook
- Certification Conference: Working with EASA, Agility project, Part21 updates, international developments, the digitalisation challenge

The exchanges between the audience and the EASA staff brought up valuable insights on the industry's challenges and the Agency's positions on selected topics.

Published materials and videos

The presentations files can be found on our event page (<u>EASA</u> 2024 Part 21 Workshop and Certification Conference - Hybrid event (partially online and partially on-site) | EASA).

The Videos of the Plenary Sessions can be found on our Youtube channel (EASA 2024 Part 21 Workshop and Certification Conference - YouTube).





If you have any question about this topic, please contact us via certification-doa workshop@easa. europa.eu .



4 Part-26 Amendment



EN L series

2024/2954

2.12.2024

COMMISSION IMPLEMENTING REGULATION (EU) 2024/2954

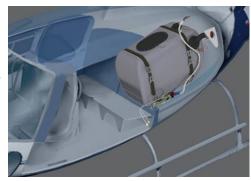
of 29 November 2024

amending Regulation (EU) 2015/640 as regards the introduction of new additional airworthiness requirements

Commission Implementing
Regulation (EU) 2024/2954
was published in the
Official Journal on 02
December. This Regulation
became applicable on 22
December 2024

It amends <u>Regulation (EU) 2015/640</u> (including its Annex I - **Part-26**) on additional airworthiness specifications for a given type of operations to:

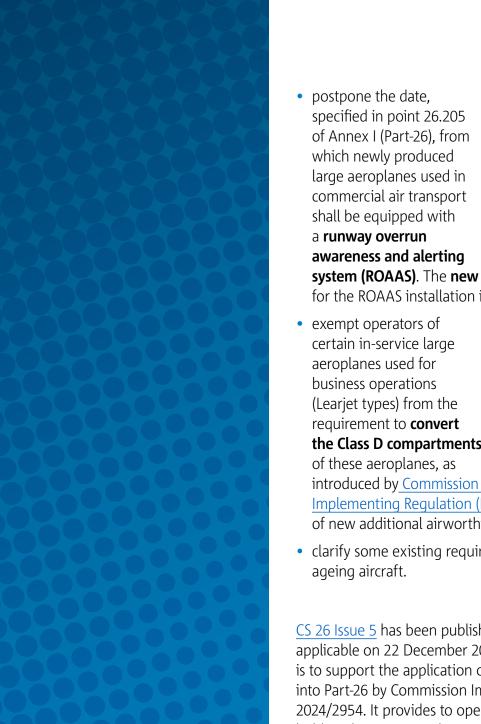
 mandate the installation of a crash-resistant fuel system (CRFS) onto some existing helicopter designs that are still in production and the retrofit of some in-service helicopters.



 require design approval holders to make available information on aeroplanes and helicopters cargo compartment fire protection capabilities as certified to operators. This requirement applies to type-certificate and restricted type-



certificate holders, to supplemental type-certificate and design change approval holders, when the change affects the cargo compartment fire protection design elements. This proposal transposes the related new ICAO Standards and Recommended Practices (SARPs) in Amendment 109 to Annex 8 'Airworthiness of Aircraft'.



specified in point 26.205 of Annex I (Part-26), from large aeroplanes used in commercial air transport awareness and alerting



the Class D compartments



Implementing Regulation (EU) 2020/1159 on the introduction of new additional airworthiness requirements.

• clarify some existing requirements, in particular related to

CS 26 Issue 5 has been published on **09 December** and became applicable on 22 December 2024. The objective of this Decision is to support the application of the amendments introduced into Part-26 by Commission Implementing Regulation (EU) 2024/2954. It provides to operators and design approval holders the means to show compliance with the new Part-26 requirements related to the **installation of CRFS** and to the information on cargo compartment fire protection **capabilities**. In addition, it amends some existing certification specifications and guidance material for consistency with the amended existing requirements on ageing aeroplane structures.

For background information on these amendments, please refer to Opinion No 05/2024 Helicopter crash-resistant fuel systems | Information on cargo compartment fire protection capabilities | Runway overrun awareness and alerting systems | Conversion of Class D compartments.

5

INITIAL AIRWORTHINESS REGULATORY DIGEST 2024

APRIL

5 APR

CS-ETSO

NPA

On **05 April** EASA published <u>NPA 2024-04</u> on **Regular update of CS-ETSO**.

This NPA proposed to introduce new or updated standards for parts, taking into account the principles of efficiency and harmonisation.

The proposed regulatory material is expected to offer more possibilities for EU applicants to obtain ETSO authorisations and to align CS-ETSO with the state of the art and with European operational requirements.



The **public consultation closed on 03 July 2024** and EASA received in total 173 comments. Two of the NPA subjects attracted most of the comments: the proposed changes to Subpart A for the applicable Development Assurance standards and process, and the proposed changes in ETSO-2C50X related to survival equipment for helicopter off-shore operations.

The publication of the ED Decision is expected in February 2025.

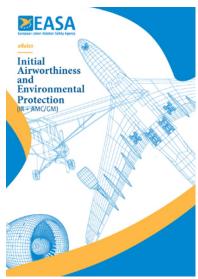
30 APR

Regular update of Regulation (EU) No 748/2012 (incl. Part 21) and AMC/GM

NPA

On 30 April EASA published NPA 2023-04 on Regular update of Commission Regulation (EU) No 748/2012 and the associated acceptable means of compliance and guidance material (RMT.0031 Subtask 3).

This NPA proposed to amend <u>Commission</u> <u>Regulation (EU) No 748/2012</u> and the associated AMC and GM. The objective is to ensure that the Initial Airworthiness Regulation and the associated AMC and GM are fit for purpose, cost-effective, aligned with the current industry practices and can be implemented. The consultation closed on **30 July** and EASA received around 250 comments.



EASA is analysis these comments and an **EASA Opinion is expected in Q3/2025**. This Opinion should be combined with the output of the NPA on non-installed equipment (RMT.0727 Subtask 3).

INITIAL AIRWORTHINESS REGULATORY DIGEST 2024

MAY

28 MAY

Part 21

EU REG

On **28 May** EASA published <u>Opinion No 02/2024</u> **Implementation of** the latest CAEP amendments to ICAO Annex **16 Volumes I, II and III.**

This Opinion proposed to update the applicable environmental protection requirements for the certification of products in Regulations (EU) 2018/1139 and (EU) No 748/2012 for the implementation of Amendments 14, 11 and 2 to Volumes I, II and III respectively of ICAO Annex 16 that arise from the recommendations of the 12th meeting of the Committee on Aviation Environmental Protection (CAEP/12).

The objective is to maintain a high uniform level of environmental protection and to contribute to European policies on climate change, air quality and noise reduction, while providing a level playing field for all stakeholders in the aviation market and proposes some editorial corrections.





DECEMBER

2&9 **DEC**

Regulation (EU) 2015/640 (incl. Part-26) and CS-26

EU REG & EDD

Commission Implementing Regulation (EU) 2024/2954 amending regulation (EU) 2015/640 was published in the Official Journal on **02 December**. This Regulation became applicable on 22 December 2024.

CS 26 Issue 5 has been published on **09 December**.

Please refer to <u>'Part-26 Amendment'</u> above for more information.

INITIAL AIRWORTHINESS REGULATORY DIGEST 2024

9 DEC

CS-29

EDD

<u>CS-29 Amendment 12</u> on Reduction in accidents caused by failures of critical rotor and rotor drive components through improved vibration health monitoring (VHM) systems was published on 09 December



The regulatory material issued with this Decision identifies ways to certify VHM systems so that they can be a more integral part of the continuing airworthiness process of the rotorcraft and to provide better and updated guidance on the design and operation of these systems, as well as on their effective in-service use. This will result in VHM systems supporting the optimisation of the continuing airworthiness of the rotor and rotor drive systems, thus, reducing the risk of maintenance errors and, potentially, increasing the likelihood of early fault detection

16 DEC

Termination of RMT.0726

EDD



<u>ED Decision 2024/011/R</u> on **Rotorcraft occupant safety in the event of a bird strike** was published on 16 December to terminate the related rulemaking task (RMT.0726).

RMT.0726 Subtask 2 related to the retroactive application of the currently applicable bird strike certification specifications contained in CS 27 and CS 29 to both newly produced and in service rotorcraft.

EASA, based on the Aviation Rulemaking Advisory Committee Rotorcraft Bird Strike Working Group (ARAC RBSWG) recommendations and a complementary technical assessment, has performed a qualitative assessment of the regulatory impact of Subtask 2 on the affected stakeholders.

Based on the following considerations:

- significant economic impact of the retroactive application of the related requirements on industry;
- unpracticable technical solutions to retrofit some rotorcraft; and
- reduction of the risk for, and mitigation of the consequences of, a bird strike through the issue of Safety Information Bulletin (SIB) 2021-07 on Bird Strike Risk Mitigation in Rotorcraft Operations,

EASA has concluded that rulemaking activity RMT.0726 Subtask 2 is disproportionate due to the negative impacts it would create for aviation industry.

aviation community. They have been developed over a period of two years, which included a focused consultation.

INITIAL AIRWORTHINESS REGULATORY DIGEST 2023

17 DEC

CS-MMEL and CS-GEN MMEL

NPA

On **17 December**, NPA 2024-07 - Regular update of CS-MMEL and CS-GEN-MMEL was published for consultation **(open until 17 March 2025)**. The objectives are:

- Introduction of items covered by Federal Aviation Administration (FAA) Policy Letters that are not yet included in CS-MMEL/CS-GEN-MMEL, such as cabin/galley storage
- Harmonisation of the airborne collision avoidance system (ACAS) rectification interval in accordance with the related FAA Policy Letter and in line with the recommendation of the EASA working group in the field.
- Alignment with the FAA MMEL Policy Letter for relief of items following its latest update in the field of long-range communications.

The proposed regulatory material is expected to facilitate the applicants' compliance with the operational suitability data (OSD) requirements for MMEL and increase efficiency by rendering the evaluation process of applications more comprehensible. Overall, the proposed changes are expected to have a moderate safety benefit and no social or environmental impact, while some economic benefits are expected by streamlining the certification process.







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