European Union Aviation Safety Agency

Comment-Response Document (CRD) 2024-03 (A)

RELATED NPA: 2024-03 (A) 'Explanatory Note' — RELATED ED DECISION: 2025/017/R — RMT.0457

'Regular update of CS-ETSO — CS-ETSO Amendment 18'

8.9.2025

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1. Summary of the outcome of the consultation

During the public consultation of NPA 2024-03, EASA received 183 comments from industry (equipment manufacturers, aircraft manufacturers and industry associations), national competent authorities (NCAs) and foreign aviation authorities (bilateral partners):

— 69 comments on the explanatory note (document ref. NPA 2024-03 (A)); and

— 114 comments on the proposed changes to CS-ETSO (document ref. NPA 2024-03 (B)).

The comments have been submitted by 24 commentators:

Organisation / Association / Aviation Authority	No of comments
Airbus	8
Airbus Helicopters	3
Amsafe	2
Biardo Survival Suits B.V.	22
Collins Aerospace Avionics	1
DE-LBA	1
DGAC FR	2
Diamond Aircraft Industries GmbH	1
EHA	7
European Sailplane Manufacturers	6
FOCA (Switzerland)	2
Garmin	17
Garrecht Avionik	4
General Aviation Manufacturers Association (GAMA)	9
Hansen Protection	22
Safran	9
Survitec / HeliPPE	22
Survival-One Ltd.	19
Swedish Transport Agency, Civil Aviation Department (Transportstyrelsen, Luftfartsavdelningen)	2
THALES AVS	8
The Boeing Company	2
US Federal Aviation Administration	12
Vertical Aerospace	1
VRR M van Barreveld	1

Table 1: Number of comments received per commentator

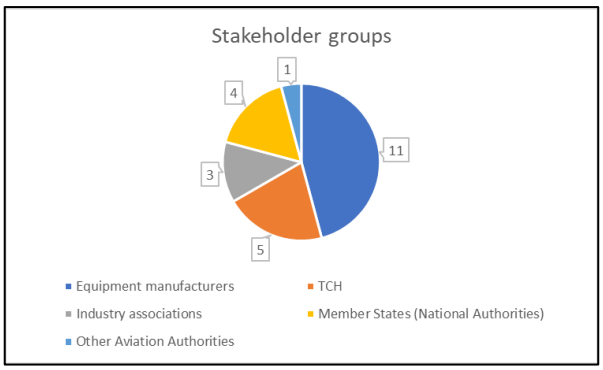

Figure 1: Stakeholder groups

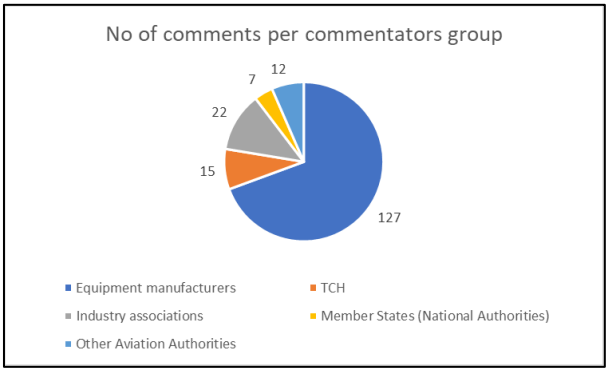

Figure 2: No of comments per commentator group

The distribution of comments per main CS-ETSO change proposals (main subjects) is presented in Table 2 below. Two subjects have triggered the highest number of comments: the proposed changes to Subpart A for the means of compliance for the development assurance process (41 comments) and the proposed changes to survival equipment standards* (ETSO-2C50X) for the reference of the latest ASD-STAN applicable standards (EN4863:2023; EN4856:2023; EN4886:2024) (86 comments).

* These comments have been grouped in one subject because their content is similar and repeated for each of the individual ETSOs.

Main subject	No of comments
CS-ETSO Subpart A (Development Assurance process)	41
ETSO-C30d A1 Aircraft Position Lights	1
ETSO-C90e Cargo Pallets, Nets and Containers (Unit Load Devices)	8
ETSO-C96c A1 Anticollision Light Systems	4
ETSO-C112f Secondary Surveillance Radar Mode S Transponder	6
ETSO-C132b Geosynchronous Orbit Aeronautical Mobile Satellite Services Aircraft Earth Station Equipment	2
ETSO-C159e Next Generation Satellite Systems (NGSS) Equipment	11
ETSO-C164a Night Vision Googles	0
ETSO-C166c Extended Squitter Automatic Dependent Surveillance-Broadcast (ADS-B) and Traffic Information Service-Broadcast (TIS-B) Equipment Operating on the Radio Frequency of 1090 Megahertz (MHz)	2
ETSO-C220 GNSS-Aided Inertial System	3
ETSO-2C169b VHF Radio Communications Transceiver Equipment Operating within the Radio Frequency Range 117.975 to 137 Megahertz	2
Comments made on explanatory note of the NPA (document ref. NPA 2024-03 (A)) and general comments made on the document ref. NPA 2024-03 (b) but linked to the proposed changes in ETSO-2C502/503/504	65

ETSO-2C502a Rotorcraft Integrated Immersion Suits	7
ETSO-2C503a Rotorcraft Immersion Suits for Operations to or from Helidecks Located in a Hostile Sea Area	7
ETSO-2C504a Rotorcraft Constant-Wear Life Jackets for Operations to or from Helidecks Located in a Hostile Sea Area	7
ETSO-2C505a Rotorcraft Life Rafts for Operations to or from Helidecks Located in a Hostile Sea Area	2
ETSO-2C519a Emergency Breathing Systems (EBSs)	0
ETSO-2C521 A1 Electronic Flight Bag (EFB) Software Applications Approval	4

Table 2: No of comments per main CS-ETSO change proposals

Following the review of the comments received, EASA has noted 59 comments, has accepted or partially accepted 63 comments and has not accepted 61 comments.

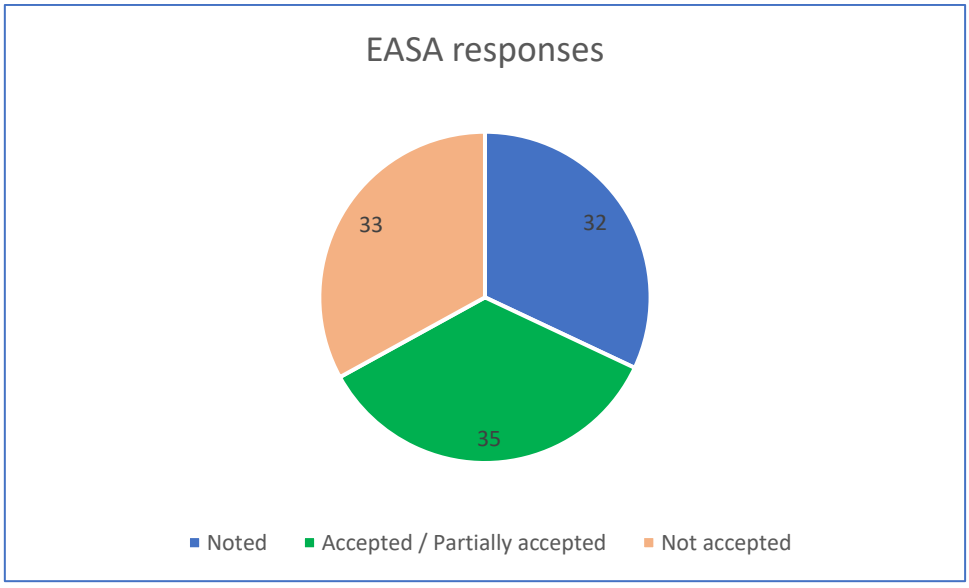

Figure 3: Percentage of EASA responses

On the main two subjects commented, EASA has provided the following feedback.

Regarding the comments on the proposed Subpart A changes, EASA has responded positively acknowledging the need to harmonise the applicable standards and to ensure the mutual recognition of ETSO authorisations between partner authorities. Also, EASA has recognised the need to ensure a level playing field for the European manufacturers with their non-European competitors. For these reasons, the wording of CS-ETSO Subpart A has been completely revised considering many of the inputs received:

— Paragraph 2.4.1 Failure Conditions Classification: reverted to the Amdt 17 wording with updated / restored references to applicable standard revisions.

— Paragraph 2.4.2 ETSO Article Development Assurance Process: reworded current proposal by allowing optional applicability of ED-79B process and removing the strong requirement about deviation.

— Applicant Development Assurance Process: this section is removed and will be moved to an AMC to Part 21 (to be published in the next Part 21 regular update).

Regarding the comments related to the recognition of the latest ASD-STAN standards for the survival equipment, the equipment manufacturers expressed their concerns regarding the increased scope and complexity of the conformance standards. The industry also commented that ASD-STAN standards (i.e. EN4863 and EN4886) have not been harmonised with the equivalent current commercial personnel protection equipment standards (i.e. ISO 15027 and ISO 12402).

EASA has not accepted these comments. These standards have been developed by a standards developing organisation (ASD-STAN). The working group drafting the EN standards within the ASD-STAN, Domain 12 'Cabin', WG02 Ditching Equipment, includes the vast majority of equipment manufacturer representatives. The proposed standards' content was developed jointly and reached consensus within the working group and consolidated through the normal standardisation process leading to prEN standards. EASA also noted the following:

— The updated standards (ETSO-2C502/2C503/2C504/2C505) support a wider rulemaking exercise on ditching survivability aiming for a general update to the relevant certification specifications based on past experiences and safety recommendations. These standards will also support compliance with relevant operational rules requiring this equipment to be approved for airworthiness.

— The updated standards introduce the following improvements:

  — easily readable document structure;

  — clear definitions of terminology used;

  — self-contained documents in terms of requirements and testing procedure, without cross-references to obsolete/outdated industry standards (including the testing procedure in the standard promotes standardisation of test execution and a level playing field; testing procedures were written jointly with the industry and with test houses conducting these tests, with a wide consensus reached among the working group participants).

However, these improvements resulted in an increase in the contents compared with the previous ETSOs. Nevertheless, no specific extra requirements or extremely more demanding requirements have been included compared with previous ones.

— These updated standards are also intended to address certain safety gaps and to introduce more proportionate conditions, including with regard to:

  — cross-referencing requirements for equipment compatibility — previous standards for life jackets/suits do not mention compatibility with other equipment like emergency breathing systems (EBSs) or with accessories like personal locator beacons (PLBs);

  — protection suit standards — a technical update will accommodate the need for having a thermal protection (categorisation) more proportional to the environmental conditions the suit where will be used;

— life raft standards — the main technical update will enhance puncture resistance in the event of contact with debris/wreckage after a ditching event following observations based on several accident investigations.

In conclusion, it is EASA's understanding that certification costs will remain comparable to the current ones, as requirements have been kept consistent with the previous ones. The updated standards will facilitate the ETSO authorisation process and ensure a level playing field for the applicants. At the same time, these standards introduce safety improvements and proportionality.

2. Individual comments and responses

(General Comments)	-

comment	*2* comment by: *Swedish Transport Agency, Civil Aviation Department (Transportstyrelsen, Luftfartsavdelningen)* **General** Dear Madam/Sir, The Swedish Transport Agency appreciate the opportunity to comment on NPA 2024-03. We support this proposed change with no further comments.
response	Noted Thank you for your support.

comment	*4* comment by: *FOCA (Switzerland)* Thank you for the opportunity to comment, we have no remarks on this document.
response	Noted Thank you for your feedback.

comment	*30* comment by: *Hansen Protection* **General** **comment** Other stakeholders are also affected: helicopter operators, end-users/customers, offshore survival training providers, and maintenance organizations. It is of highest importance that the entry into force is made clear with regards to EASA Air OPS STA.HOFO.
response	Noted The aim of this rulemaking task (RMT.0457 and NPA 2024-03) for the regular update of CS-ETSO, as explained in the NPA, related to ETSO-2C502/3/4/5 and ETSO-2C519, is to consider the latest industry standards, specifically, affecting ETSO equipment manufacturers. The use of the revised ETSO standards is possible as of the applicability date of the related EASA Executive Director Decision. It is to be noted that the existing ETSO authorisations remain valid.

comment	*45* comment by: *Biardo Survival Suits B.V.* **General** **comment** Other stakeholders are also affected: helicopter operators, end-users/customers, offshore survival training providers, and maintenance organizations. It is of highest importance that the entry into force is made clear with regards to EASA Air OPS STA.HOFO.
response	Noted See the response to comment No 30.

comment	*48* comment by: *Survitec / HeliPPE* **General** **comment** Other stakeholders are also affected: helicopter operators, end-users/customers, offshore survival training providers, and maintenance organizations. It is of highest importance that the entry into force is made clear with regards to EASA Air OPS STA.HOFO.
response	Noted See the response to comment No 30.

comment	*63* comment by: *Survival-One Ltd.* Other stakeholders are also affected: helicopter operators, end-users/customers, offshore survival training providers, and maintenance organizations. It is of highest importance that the entry into force is made clear with regards to EASA Air OPS STA.HOFO.
response	Noted See the response to comment No 30.

2.2.1. Recognition of the latest industry standards p. 5

comment	*1* comment by: *Garrecht Avionik* You rightfully identify that ED-73**E** / DO-181**E** is superseded by ED-73**F** / DO-181**F** with Change 1. Similarly, ED-102**A** / DO-260**B** is superseded by ED-102**B** / DO-260**C** with Change 1. These latest revisions to industry standards also affect an additional ETSO that is not yet covered by the NPA. ETSO-C199 A1 (Traffic Awareness Beacon Systems) still references the legacy versions of these MOPS.
response	Noted ETSO-C199 will be updated in coordination with the FAA in a future amendment of CS-ETSO.

comment	*6* comment by: *Survival-One Ltd.* Issues 3 to 7 make incorrect assumptions. Industry is not using the EN standards composed by ASD-STAN, as not all referenced standards are not in force. While industry welcomes the revision of outdated conformance standards to remain relevant, there are concerns about the significantly increased scope and complexity to the conformance standards which are disproportionate.

Comparing current with proposed standards, typical content has expanded from 7 to 58 pages: a significant increase in scope & complexity.

The ASD-STAN working group tasked with reviewing the existing ETSO 2C502, ETSO-2C-503, ETSO-2C504 standards have completely rewritten the standards. Concerns from Industry in formulating these Standards were dismissed.

There has been little attempt to harmonize with equivalent current commercial PPE standards, i.e. ISO 15027 (suits) or ISO 12402 (lifejackets).

response

Noted

EASA acknowledges that the statement regarding the fact that industry already started to use these standards is not fully supported by evidence.

In addition, the harmonisation with commercial standards should also be pursued through the ASD-STAN working group.

For the other aspects included in your comment, please refer to the EASA response to comment No 5.

comment *17* comment by: *Hansen Protection*

2.2.1 Recognition of the latest industry standards.

Issues 3 to 7 make incorrect assumptions.

Industry is not using the EN standards composed by ASD-STAN, as not all referenced standards are not in force.
While industry welcomes the revision of outdated conformance standards to remain relevant, there are concerns about the significantly increased scope and complexity to the conformance standards which are disproportionate.

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The ASD-STAN working group tasked with reviewing the existing ETSO 2C502, ETSO-2C-503, ETSO-2C504 have completely rewritten the standards. Concerns from Industry in formulating these Standards were dismissed or ignored.
There has been little attempt to harmonize with equivalent current commercial PPE standards, i.e. ISO 15027 (suits) or ISO 12402 (lifejackets).
Agreed items during working group meetings were not implemented, or subsequently edited before final publication.

response

Noted
See the response to comment No 6.

comment *34* comment by: *Biardo Survival Suits B.V.*

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There has been little attempt to harmonize with equivalent current commercial PPE standards, i.e. ISO 15027 (suits) or ISO 12402 (lifejackets).
Agreed items during working group meetings were not implemented, or subsequently edited before final publication.

response

Noted
See the response to comment No 6.

comment

50 comment by: *Survitec / HeliPPE*

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There has been little attempt to harmonize with equivalent current commercial PPE standards, i.e. ISO 15027 (suits) or ISO 12402 (lifejackets).
Agreed items during working group meetings were not implemented, or subsequently edited before final publication.

response

Noted
See the response to comment No 6.

2.1. Why we need to act - issue/rationale p. 5

comment	*5* comment by: *Survival-One Ltd.* Relevant ETSOs have not made significant technical or scientific progress, only incremental improvements. The primary need for ETSO revision was to improve human factors, balancing operational comfort with a more flexible approach to thermal protection throughout the year according to sea temperature. Regarding the ETSO-2C50(x)-series, there are no equivalent FAA TSOs to align or harmonize with. Due to increased scope and complexity, Industry considers the new standards to adversely affect readiness and competitiveness.
response	Noted Generally, the standards outline the airworthiness requirements based on current and foreseen technologies. Nevertheless, requirements could be tailored to proposed novel designs by means of the deviation process and equivalent level of safety determination in accordance with Part 21, Subpart O, point 21.A.610. The NPA text remains unchanged. The harmonisation purpose of the NPA is to refer to those standards that have an equivalent in the FAA system. This is not the case for ETSO-2C5XX that exist only in the EASA framework. The NPA text remains unchanged. The working group drafting the prEN standards within the ASD-STAN Domain 12 'Cabin', WG02 Ditching Equipment, includes the vast majority of equipment manufacturer representatives. The proposed standards' content was developed jointly and reached consensus within the working group and consolidated through the normal standardisation process leading to prEN then EN standards. Therefore, the technical content is considered agreed and well known. Future updates of the content could be added through the ASD-STAN Working Group and endorsed in future versions of the consolidated EN standards. Therefore, the NPA text remains unchanged. Rather than addressing eventual minor inconsistencies in a 're-writing' of an existing industry standard in the context of an ETSO, these can be addressed by the applicant specifically trough the certification programme and agreed with EASA at project level. Therefore, the NPA text remains unchanged. Furthermore, EASA remarks the following regarding the contents of the mentioned ASD-STAN standards: — the updated standards (ETSO-2C502/2C503/2C504/2C505) support a wider rulemaking exercise on ditching survivability aiming for a general update to the relevant certification specifications based on past experiences and safety recommendations. These standards will also support compliance with relevant operational rules requiring for this equipment to be approved for airworthiness. — the updated standards introduce the following improvements: o easily readable document structure; o clear definitions of terminology used; o self-contained documents in terms of requirements and testing procedure, without cross-references to obsolete/outdated industry

standards (including the testing procedure in the standard promotes standardisation of test execution and a level playing field; testing procedures were written jointly with the industry and with test houses conducting these tests, with a wide consensus reached among the working group participants).

However, these improvements resulted in an increase in the contents compared with the previous ETSOs. Nevertheless, no specific extra requirements or extremely more demanding requirements have been included compared with previous ones.

— these updated standards are also intended to address certain safety gaps and to introduce more proportionate conditions, including with regard to:
  — cross-referencing requirements for equipment compatibility — previous standards for life jackets/suits do not mention compatibility with other equipment like emergency breathing systems (EBS) or with accessories like personal locator beacons (PLB);
  — protection suit standards — a technical update to accommodate the need for thermal protection (categorisation) more proportional to the environment conditions where the suit will be used;
  — life raft standard — the main technical update will enhance puncture resistance in the event of contact with debris/wreckage after a ditching event following observations based on several accident investigations.

In conclusion, it is EASA's understanding that certification costs will remain comparable to the current ones, as requirements have been kept consistent with the previous ones. The updated standards will facilitate the ETSO authorisation process and ensure a level playing field for the applicants. At the same time, these standards introduce safety improvements and proportionality. Therefore, the NPA text remains unchanged.

comment *16* comment by: *Hansen Protection*

2.1 Why we need to act – issue / rationale.

Relevant ETSOs have not made significant technical or scientific progress, only incremental improvements. The primary reason for ETSO revision to improve ergonomics / human factors, balancing operational comfort with a more nuanced approach to immersed thermal protection throughout the year according to sea temperature.

There are no equivalent FAA TSOs to align or harmonize with.
This industry considers the new standards to adversely affect readiness and competitiveness.

response Noted
See the response to comment No 5.

comment *33* comment by: *Biardo Survival Suits B.V.*

2.1 Why we need to act – issue / rationale.

Relevant ETSOs have not made significant technical or scientific progress, only incremental improvements. The primary reason for ETSO revision to improve ergonomics / human factors, balancing operational comfort with a more nuanced approach to immersed thermal protection throughout the year according to sea temperature.

There are no equivalent FAA TSOs to align or harmonize with.
This industry considers the new standards to adversely affect readiness and competitiveness.

response
Noted
See the response to comment No 5.

comment *49* comment by: *Survitec / HeliPPE*

2.1 Why we need to act – issue / rationale.

Relevant ETSOs have not made significant technical or scientific progress, only incremental improvements. The primary reason for ETSO revision to improve ergonomics / human factors, balancing operational comfort with a more nuanced approach to immersed thermal protection throughout the year according to sea temperature.

There are no equivalent FAA TSOs to align or harmonize with.
This industry considers the new standards to adversely affect readiness and competitiveness.

response
Noted
See the response to comment No 5.

2.2.2. Harmonisation with FAA TSOs p. 6

comment *7* comment by: *Survival-One Ltd.*

No equivalent FAA TSOs for ETSO-2C50(x)-series to harmonize with.

response
Noted
The harmonisation purpose of the NPA is to refer to those standards that have an equivalent in the FAA system.

This is not relevant for ETSO-2C5XX that exist only in the EASA framework.

comment *18* comment by: *Hansen Protection*

2.2.2 Harmonization with FAA TSOs.

	Not applicable – no equivalent FAA TSOs for ETSO-2C50X-series to harmonize with.
response	Noted See the response to comment No 7.

comment	*35* comment by: *Biardo Survival Suits B.V.* *2.2.2 Harmonization with FAA TSOs.* Not applicable – no equivalent FAA TSOs for ETSO-2C50X-series to harmonize with.
response	Noted See the response to comment No 7.

comment	*51* comment by: *Survitec / HeliPPE* *2.2.2 Harmonization with FAA TSOs.* Not applicable – no equivalent FAA TSOs for ETSO-2C50X-series to harmonize with.
response	Noted See the response to comment No 7.

2.2.4. Amendments of existing ETSOs p. 7

comment	*8* comment by: *Survival-One Ltd.* 2.2.1 Items 3 to 6 should be in this section - ETSO 2C502, ETSO-2C-503, ETSO-2C504 & ETSO-2C505 already exist.
response	Not accepted The grouping of proposals in four categories was intended to help the reader and connect with the stated objectives of the NPA. EASA considered that amendment proposals for ETSO-2C502, ETSO-2C503, ETSO-2C504, ETSO-2C505 and ETSO-2C519 better fit in the category '2.2.1 Recognition of the latest industry standards'.

comment	*19* comment by: *Hansen Protection* *2.2.4 Amendments to existing ETSOs.* 2.2.1 Items 3 to 6 should be in this section - ETSO 2C502, ETSO-2C-503, ETSO-2C504 & ETSO-2C505 exist.
response	Not accepted See the response to comment No 8.

comment	*36* comment by: *Biardo Survival Suits B.V.* *2.2.4 Amendments to existing ETSOs.* 2.2.1 Items 3 to 6 should be in this section - ETSO 2C502, ETSO-2C-503, ETSO-2C504 & ETSO-2C505 exist.
response	Not accepted See the response to comment No 8.

comment	*52* comment by: *Survitec / HeliPPE* *2.2.4 Amendments to existing ETSOs.* 2.2.1 Items 3 to 6 should be in this section - ETSO 2C502, ETSO-2C-503, ETSO-2C504 & ETSO-2C505 exist.
response	Not accepted See the response to comment No 8.

2.3. Who is affected by these issues p. 7

comment	*20* comment by: *Hansen Protection* *2.3 Who is affected by these issues.* Other stakeholders are also affected: helicopter operators, end-users/customers, offshore survival training providers, and maintenance organizations. It is of highest importance that the entry into force is made clear with regards to EASA Air OPS STA.HOFO.
response	Noted See the response to comment No 30.

comment	*37* comment by: *Biardo Survival Suits B.V.* *2.3 Who is affected by these issues.* Other stakeholders are also affected: helicopter operators, end-users/customers, offshore survival training providers, and maintenance organizations. It is of highest importance that the entry into force is made clear with regards to EASA Air OPS STA.HOFO.
response	Noted See the response to comment No 20.

comment	*53* comment by: *Survitec / HeliPPE* *2.3 Who is affected by these issues.*

	Other stakeholders are also affected: helicopter operators, end-users/customers, offshore survival training providers, and maintenance organizations. It is of highest importance that the entry into force is made clear with regards to EASA Air OPS STA.HOFO.
response	Noted See the response to comment No 20.

comment	*65* comment by: *Survival-One Ltd.* Other stakeholders are also affected: helicopter operators, end-users/customers, offshore survival training providers, and maintenance organizations. It is of highest importance that the entry into force is made clear with regards to EASA Air OPS STA.HOFO.
response	Noted See the response to comment No 20.

2.4. How could the issue evolve p. 7

comment	*21* comment by: *Hansen Protection* *2.4 How could the issue evolve.* This statement is incorrect regarding ETSO 2C502, ETSO-2C-503, ETSO-2C504, & ETSO 2C519, as these are used under specific criteria, there are no US / FAA equivalent terms of reference to compete with.
response	Accepted We acknowledge that the statement in Section 2.4 of the NPA is not relevant for specific ETSO-2C5XX, as these have no US / FAA equivalent.

comment	*38* comment by: *Biardo Survival Suits B.V.* *2.4 How could the issue evolve.* This statement is incorrect regarding ETSO 2C502, ETSO-2C-503, ETSO-2C504, & ETSO 2C519, as these are used under specific criteria, there are no US / FAA equivalent terms of reference to compete with.
response	Accepted See the response to comment No 21.

comment	*54* comment by: *Survitec / HeliPPE* *2.4 How could the issue evolve.*

	This statement is incorrect regarding ETSO 2C502, ETSO-2C-503, ETSO-2C504, & ETSO 2C519, as these are used under specific criteria, there are no US / FAA equivalent terms of reference to compete with.
response	Accepted See the response to comment No 21.

comment	*64* comment by: *Survival-One Ltd.* This statement is incorrect regarding ETSO 2C502, ETSO 2C-503, ETSO-2C504, & ETSO 2C519, as these are used under specific criteria: there are no US / FAA equivalent terms of reference to compete with.
response	Accepted See the response to comment No 21.

2.2.5. Introduction of new guidance material for Subpart A p. 7

comment	*67* comment by: *European Sailplane Manufacturers* As also commented in NPA 2024-03(B) we, the European Sailplane Manufacturers, do not agree with the proposed introduction of new guidance material for Subpart A. It might be true, that currently, there are references to outdated standards and acceptable means of compliance applicable to software and airborne electronic hardware design. But the proposed change in Subpart A does not clarify that the proposed amendments, including the development assurance process required for ETSO articles are now introduced for ETSO articles aiming toward "software and airborne electronic hardware design" alone. To the contrary, the proposed wording would imply that now all ETSO articles (and the regarding applicants) would need to comply with the new added proposed standards. Namely the introduction of ED-135/ARP 4761A, 'Guidelines for Conducting the Safety Assessment Process on Civil Aircraft, Systems, and Equipment' and of ED-79B/ARP 4754B, 'Guidelines for Development of Civil Aircraft and Systems' are too onerous for developers of simple, mechanical systems or even some electronic devices limited to use on small aircraft (e.g. as defined under ELA 2 category). We strongly suggest to make here a clearer distinction between rules aimed toward ETSO articles as used on large aircraft aimed for commercial air transport and those limited to be used in smaller aircraft (e.g. ELA 2). This would also be in the spirit of the EASA GA roadmap which followed this "simpler rules for simpler aircraft" logic.

With no such distinction, we fear that developers and producers of such simpler ETSO articles could leave the market due to the associated financial and personnel contraints as demanded by the proposed minimum standards. Examples of such articles would be

- seat belts (ETSO-C22g)
- parachutes (ETSO-C23f)
- aircraft wheels and wheel-brake assemblies for CS-23 aircraft (ETSO-C26d)
- tyres (ETSO-C62e)
- glider/towplane tow release assemblies (ETSO-2C513)
- and mechanical instruments (ETSO-C2d, ETSO-C10c, ETSO-C8e, ...)

Additionally we propose to add a "grandfathering statement", i.e. that ETSO articles already certified and under production shall have the possibility to stay in production. Otherwise the new wording could be interpreted that e.g. production shall not be possible before introduction of the new development assurance processes has ben performed.

And last but not least - if such new processes are introduced, there should be a transition period defined as it is totally unrealistic to expect that applicants / developers have such new processes implemented as soon as the new CS-ETSO becomes applicable (just as it is done with amendments for Part-21 and other EU regulations....).
The proposed 6 months after the date of entry into force of the respective EASA Decision is much too tight as perhaps some processes in a DOA manual needs to be updated, which EASA and DO typically cannot do "in just a few months".

response

Partially accepted.

Due to the high number of comments received on this subject and considering the need to ease the mutual recognition of ETSO authorisations between partner authorities, the harmonisation shall be pursued to the maximum extent. For these reasons, the wording of CS-ETSO Subpart A has been completely revised considering many of the inputs received:

- Paragraph 2.4.1 Failure Conditions Classification: reverted to the Amdt 17 wording with updated / restored references to applicable standard revisions.
- Paragraph 2.4.2 Development Assurance Process of the ETSO Article: reworded current proposal by allowing optional applicability of the ED-79B process and removing the strong requirement about deviation.
- Applicant Development Assurance Process: this section has been removed from CS-ETSO, Subpart A, and will be moved to an AMC to Part 21, point 21.A.602B(b)(2) (to be published in the next Part 21 regular update).

Please also be aware that the new CS-ETSO requirements do not affect existing ETSO authorised equipment that can continue to be manufactured until the certificate is

revoked or surrendered. The grace period of six months is only applicable to applications for new authorisations.

2.5. Conclusion on the need for rulemaking p. 8

comment	*9* comment by: *Survival-One Ltd.* Our view is that some of the assumptions described in Chapter 3 are incorrect.
response	Noted See the response to comment No 22.

comment	*22* comment by: *Hansen Protection* *2.5 Conclusion on the need for rulemaking.* Our view is that assumptions made in Chapter 3 are incorrect. It was supposed to only have a review of the standard, but it went from 7 to 58 pages. Instead of reviewing test standards many new tests were added. There has been little attempt to harmonize with equivalent current commercial PPE standards, i.e. ISO 15027 (suits) or ISO 12402 (lifejackets).
response	Noted See the responses to comments Nos 5 and 6.

comment	*39* comment by: *Biardo Survival Suits B.V.* *2.5 Conclusion on the need for rulemaking.* Our view is that assumptions made in Chapter 3 are incorrect. It was supposed to only have a review of the standard, but it went from 7 to 58 pages. Instead of reviewing test standards many new tests were added. There has been little attempt to harmonize with equivalent current commercial PPE standards, i.e. ISO 15027 (suits) or ISO 12402 (lifejackets).
response	Noted See the response to comment No 22.

comment	*55* comment by: *Survitec / HeliPPE* *2.5 Conclusion on the need for rulemaking.* Our view is that assumptions made in Chapter 3 are incorrect.

	It was supposed to only have a review of the standard, but it went from 7 to 58 pages. Instead of reviewing test standards many new tests were added. There has been little attempt to harmonize with equivalent current commercial PPE standards, i.e. ISO 15027 (suits) or ISO 12402 (lifejackets).
response	Noted See the response to comment No 22.

2.7. How we want to achieve it - overview of the proposed amendments p. 8

comment	*10* comment by: *Survival-One Ltd.* Issues 3, 4, 5, & 7: Industry is aware of the latest ASD-STAN standards but do not currently use them, as they are not legally in force, and due to concerns about the scope and complexity. The same document structure was the intention, however it is cumbersome and needs further editorial review before adopted by EASA. Recommend considering referring to the standard only, not the publication year. The complex process amending EASA regulations will impact the validity due to publication year. Meaning new publications of the standard will trigger amendments to the ETSO. When publications are not mentioned, it's always according to the latest published.
response	Not accepted. Even if not explicitly mentioned or correlated with specific ETSOs, the proposed changes for 2C50X series are intended to increase the overall safety of the ETSO articles by incorporating the latest technical standards (the third item in the objectives list in Section 2.6 of the NPA).

comment	*24* comment by: *Hansen Protection* *2.7 How we want to achieve it – overview of the proposed amendments.* Issues 3, 4, 5, & 7. EASA recognize the latest standard. Industry is aware of the latest ASD-STAN standards but do not currently use these standard due to concerns about the scope and complexity. The same document structure was the intended, however cumbersome and needs further editorial review before adopted by EASA. Recommend considering referring to the standard only, not the publication year. The complex process amending EASA regulations will impact the validity due to publication year. Meaning new publications of the standard will trigger amendments to the ETSO. When publications are not mentioned, it's always according to the latest published.
response	Not accepted See the response to comment No 10.

comment	*41* comment by: *Biardo Survival Suits B.V.* *2.7 How we want to achieve it – overview of the proposed amendments.* Issues 3, 4, 5, & 7. EASA recognize the latest standard. Industry is aware of the latest ASD-STAN standards but do not currently use these standard due to concerns about the scope and complexity. The same document structure was the intended, however cumbersome and needs further editorial review before adopted by EASA. Recommend considering referring to the standard only, not the publication year. The complex process amending EASA regulations will impact the validity due to publication year. Meaning new publications of the standard will trigger amendments to the ETSO. When publications are not mentioned, it's always according to the latest published.
response	Not accepted See the response to comment No 10.

comment	*57* comment by: *Survitec / HeliPPE* *2.7 How we want to achieve it – overview of the proposed amendments.* Issues 3, 4, 5, & 7. EASA recognize the latest standard. Industry is aware of the latest ASD-STAN standards but do not currently use these standard due to concerns about the scope and complexity. The same document structure was the intended, however cumbersome and needs further editorial review before adopted by EASA. Recommend considering referring to the standard only, not the publication year. The complex process amending EASA regulations will impact the validity due to publication year. Meaning new publications of the standard will trigger amendments to the ETSO. When publications are not mentioned, it's always according to the latest published.
response	Not accepted See the response to comment No 10.

comment	*68* comment by: *European Sailplane Manufacturers* See our comments to "Issue 17: CS-ETSO Subpart A" which we gave under chapter 2.2.5 of this NPA 2024-03 (A). These proposed amendments are not following the EASA principle of the General aviation roadmap, i.e. SIMPLER, BETTER AND CHEAPER RULES FOR GENERAL AVIATION. And additionally, even for ETSO articles aimed to be used in large, complex aircraft aimed for commercial air transport, they do not have grandfathering provisions and/or a realistic transition period.

	All in all, the proposed new wording will in this regard probably create undue burden to European ETSO developers and manufacturers.
response	Not accepted. CS-ETSO is not specific to general aviation only. Also, see the response to comment No 67.

2.6. What we want to achieve - objectives p. 8

comment	*23* comment by: *Hansen Protection* *2.6 What we want to achieve – objectives.* The objectives are laudable, but the latest industry standards proposed have issues, and the standards applicable for ETSO 2C-50X series are not mentioned
response	Not accepted. Even if not explicitly mentioned or correlated with specific ETSOs, the proposed changes for 2C50X series are intended to increase the overall safety of the ETSO articles by incorporating the latest technical standards (the third item in the objectives list in Section 2.6 of the NPA).

comment	*40* comment by: *Biardo Survival Suits B.V.* *2.6 What we want to achieve – objectives.* The objectives are laudable, but the latest industry standards proposed have issues, and the standards applicable for ETSO 2C-50X series are not mentioned
response	Not accepted See the response to comment No 23.

comment	*56* comment by: *Survitec / HeliPPE* *2.6 What we want to achieve – objectives.* The objectives are laudable, but the latest industry standards proposed have issues, and the standards applicable for ETSO 2C-50X series are not mentioned
response	Not accepted See the response to comment No 23.

comment	*66* comment by: *Survival-One Ltd.* The objectives are laudable, but the latest industry standards proposed have issues, and the standards applicable for ETSO 2C-50X series are not mentioned
response	Not accepted See the response to comment No 23.

2.8. Targeted applicability of the regulatory material p. 11

comment	*11* comment by: *Survival-One Ltd.* It is of great importance that the interpretation of this applicability is entry into force (become applicable by the end of 2024) for the regulation, however a "grandfather right" is essential for continued production of mature product with exitsing approvals continue until new CS-ETSO approvals are granted.
response	Noted Please note that the new CS-ETSO requirements do not affect existing ETSO authorised equipment that can continue to be manufactured until the certificate is revoked or surrendered. Normally, when the EASA Executive Director Decision adopting a CS-ETSO amendment is issued, a 'grace period' of six months (i.e. the amendment becomes applicable in six months) is provided. This grace period is applicable to applications for new authorisations.

comment	*25* comment by: *Hansen Protection* *2.8 Targeted applicability of the regulatory material.* It is of great importance that the interpretation of this applicability is entry into force (become applicable by the end of 2024) for the regulation, however a "grandfather right" is essential for continued production until new CS-ETSO approvals are granted. In other words an ultimate end date for applicability e.g. 2 years. Upon adoption of the next amendment. Clarification upon adoption of the next amendment of CS-ETSO to introduce updated revisions of certain standards (ETSO-2C502a, ETSO-2C503a and ETSO-2C504a), the existing ETSO approvals remain legally valid.
response	Noted See the response to comment No 11.

comment	*46* comment by: *Biardo Survival Suits B.V.* *2.8 Targeted applicability of the regulatory material.* It is of great importance that the interpretation of this applicability is entry into force (become applicable by the end of 2024) for the regulation, however a "grandfather right" is essential for continued production until new CS-ETSO approvals are granted. In other words an ultimate end date for applicability e.g. 2 years. Upon adoption of the next amendment. Clarification upon adoption of the next amendment of CS-ETSO to introduce updated revisions of certain standards (ETSO-2C502a, ETSO-2C503a and ETSO-2C504a), the existing ETSO approvals remain legally valid.
response	Noted See the response to comment No 11.

comment	*58* comment by: *Survitec / HeliPPE* *2.8 Targeted applicability of the regulatory material.* It is of great importance that the interpretation of this applicability is entry into force (become applicable by the end of 2024) for the regulation, however a "grandfather right" is essential for continued production until new CS-ETSO approvals are granted. In other words an ultimate end date for applicability e.g. 2 years. Upon adoption of the next amendment. Clarification upon adoption of the next amendment of CS-ETSO to introduce updated revisions of certain standards (ETSO-2C502a, ETSO-2C503a and ETSO-2C504a), the existing ETSO approvals remain legally valid.
response	Noted See the response to comment No 11.

comment	*69* comment by: *European Sailplane Manufacturers* The proposed targeted applicability of the regulatory material might be OK and usual for amendmends within the different ETSO standards. But for the reasons we have outlined in our other comments we do not consider this period to be sufficient for the Issue 17: CS-ETSO Subpart A - here the transition period should be longer (at least one year).
response	Not accepted See the response to comment No 67.

2.9. Legal basis p. 11

comment	*12* comment by: *Survival-One Ltd.* The legal basis for amending CS-ETSO must be seen in relation to EASA Air OPS STA.HOFO to ensure a holistic implementation of the regulation for continued compliance to operation.
response	Noted RMT.0457, delivering this NPA 2024-03, is complementary to RMT.0120 'Ditching occupant survivability' (for more details, consult NPA 2016-01 and the related impact assessment) and RMT.0392 'Regular update of the air operations rules' (for more details, consult NPA 2022-11 and the related impact assessment). The purpose of adopting the latest standards in CS-ETSO is to support these mentioned rulemaking tasks and the related airworthiness codes and regulations. As these comments are more pertinent to RMT.0392 and the related NPA 2022-011 (which was publicly consulted from 20 December 2022 till 21 March 2023), they have been brought to the attention of the EASA team working on the air operations rules task (RMT.0392 and NPA 2022-11). The Agency intends to propose to the Commission adequate transition times for the applicability of the amended operational requirements.

comment	*26* comment by: *Hansen Protection* *2.9 Legal basis.* The legal basis for amending CS-ETSO must be seen in relation to EASA Air OPS STA.HOFO to ensure a holistic implementation of the regulation for continued compliance to operation.
response	Noted See the response to comment No 12.

comment	*47* comment by: *Biardo Survival Suits B.V.* *2.9 Legal basis.* The legal basis for amending CS-ETSO must be seen in relation to EASA Air OPS STA.HOFO to ensure a holistic implementation of the regulation for continued compliance to operation.
response	Noted See the response to comment No 12.

comment	*59* comment by: *Survitec / HeliPPE* *2.9 Legal basis.* The legal basis for amending CS-ETSO must be seen in relation to EASA Air OPS STA.HOFO to ensure a holistic implementation of the regulation for continued compliance to operation.
response	Noted See the response to comment No 12.

2.10. What are the stakeholders' views p. 11

comment	*13* comment by: *Survival-One Ltd.* Regarding regulatory harmonization, there is already divergence in Standards, with the UK CAA requiring different lifejacket performance requirements as a foreword in the equivalent BS EN Standards. The subset of ETSO-2C502, ETSO-2C503, ETSO 2C504, and ETSO 2C519 do update references to conformance standard test methods, however there is no simplification or increase in cost-effectiveness, quite the opposite. These changes significantly increase qualification complexity with limited benefit. Other stakeholders are also affected: helicopter operators, end-users/customers, offshore survival training providers, and maintenance organizations. It is of highest

	importance that the entry into force is made clear with regards to EASA Air OPS STA.HOFO.
response	Noted The harmonisation of the content of the standards is one of the objectives of the CS-ETSO regular update. Nevertheless, this is not always achievable. Bilateral agreements include provisions to handle non-harmonised standards. For 'the subset of …', see the response to comment No 6. For 'other stakeholders are affected', see the response to comment No 30. For 'It is of highest...', see the response to comment No 12.

comment	*27* comment by: *Hansen Protection* *2.10 What are the stakeholders' views.* There are no equivalent FAA TSOs to align or harmonize with. Regarding regulatory harmonization, there is already divergence in Standards, with the UK CAA requiring different lifejacket performance requirements as a foreword in the equivalent BS EN Standards. The subset of ETSO-2C502, ETSO-2C503, ETSO 2C504, and ETSO 2C519 do update references to conformance standard test methods, however there is no simplification or increase in cost-effectiveness, quite the opposite. These changes significantly increase qualification complexity with limited benefit.
response	Noted For 'There are no equivalent FAA…', see the response to comment No 5. For 'Regarding regulatory harmonization …', see the response to comment No 13. For 'the subset of ETSO-2C502, …' see the response to comment No 30.

comment	*42* comment by: *Biardo Survival Suits B.V.* *2.10 What are the stakeholders' views.* There are no equivalent FAA TSOs to align or harmonize with. Regarding regulatory harmonization, there is already divergence in Standards, with the UK CAA requiring different lifejacket performance requirements as a foreword in the equivalent BS EN Standards. The subset of ETSO-2C502, ETSO-2C503, ETSO 2C504, and ETSO 2C519 do update references to conformance standard test methods, however there is no simplification or increase in cost-effectiveness, quite the opposite. These changes significantly increase qualification complexity with limited benefit.
response	Noted See the response to comment No 27.

comment	*60* comment by: *Survitec / HeliPPE* *2.10 What are the stakeholders' views.* There are no equivalent FAA TSOs to align or harmonize with. Regarding regulatory harmonization, there is already divergence in Standards, with the UK CAA requiring different lifejacket performance requirements as a foreword in the equivalent BS EN Standards. The subset of ETSO-2C502, ETSO-2C503, ETSO 2C504, and ETSO 2C519 do update references to conformance standard test methods, however there is no simplification or increase in cost-effectiveness, quite the opposite. These changes significantly increase qualification complexity with limited benefit.
response	Noted See the response to comment No 27.

comment	*70* comment by: *European Sailplane Manufacturers* This chapter "2.10. What are the stakeholders' views" does only contain a generalizing remark (i.e. that the European industry welcomes the harmonisation and the alignment between FAA and EASA standards) and then just adds some remarks about ETSO-C90e. It is a bit strange that those should be all the stakeholders views? Especially the proposed changes to Issue 17: CS-ETSO Subpart A might certainly trigger some more views from stakeholders...? If proposed changes and amendments have not yet been commented by stakeholders, this should be clearly indicated in such a chapter and it should be not worded in a way which implies that "everything has been discussed and the stakeholders are all happy....". (Admittedly, this is perhaps only our point of view.....)
response	Noted In Section 2.10 of the NPA, EASA does not state that all proposed amendments have been discussed with all stakeholders. Most of the times, this is not possible outside the normal public consultation process. The purpose of the public consultation period is to receive feedback from all relevant stakeholders. The specific considerations about the proposed changes to ETSO-C90e have been introduced due to formal feedback provided to EASA by the EU manufacturing industry regarding this standard.

3. Expected benefits and drawbacks of the proposed regulatory material p. 13

comment	*28* comment by: *Hansen Protection*

	3. Expected benefits and drawbacks of the proposed regulatory material Regarding the subset of ETSO-2C502, ETSO-2C503, ETSO 2C504, and ETSO 2C519, there are no equivalent FAA TSOs to align or harmonize with. While improvements to industry standards and test procedures are welcomed, there have been no fundamental changes to technology. Improvements to ergonomics, human factors, and operational considerations are of more benefit. Some tests referenced are either unique (i.e. EN 4862 6.15 lifejacket torque test equipment), or not widely available (e.g. EN 4863 6.10.22 cold water human subject testing). Cold-water human subject testing is inconsistent, unreliable, and unethical for commercial product validation, when unmanned thermal conductivity testing could have been used. There is inconsistent test clothing (EN 4863 6.10.3) for the thermal protection test (EN 4863 6.10.22), an extra jumper & socks is permitted, which skews the results. Some EN 4863 tests are repetitive and unnecessary, such as three different flammability tests: two different fabric tests in 5.4.3, and an unrealistic flame pan test in 6.7, lifted from IMO/SOLAS testing. The system-based ergonomic testing within multiple aircraft is impractical, requiring goodwill to access to commercial aircraft of limited availability. There will be a significantly increased burden in the scope of testing. Collectively they impose a dramatically higher cost of compliance, requiring significant investment. Such investment costs act as an uncompetitive barrier to entry. Given the nature of the mature market, which is forecast to diminish in size, such implementation will stifle product development and innovation. There are significant commercial & operational implications. The offshore industry business model seems to not be fully understood by the Regulator. Survival equipment is in general not purchased: it is leased. Capex costs are borne by the OEMs, who maintain significant lease hire fleets of equipment. Such capex ROI need to be recovered over time, as a business proposition. No obvious Grandfather rights - commercial implications to existing rental fleets. Significant qualification costs may be amortised by passenger use, but not by helicopter crews. Different helicopter operators often demand bespoke solutions, use a variety of accessory equipment, in much smaller volume: these factors make recovery of qualification costs difficult.
response	Not accepted

The Working group drafting the EN standards within the ASD-STAN, Domain 12 “Cabin”, WG02 Ditching Equipment, includes the vast majority of equipment manufacturer representatives. The proposed standards’ content was developed jointly and reached consensus within the working group and consolidated through the normal standardisation process leading to prEN then EN standards. Therefore, the technical content is considered agreed and well known. Future updates of the content could be added through the ASD-STAN Working Group and endorsed in future versions of the consolidated EN standards.

comment *31* comment by: *Survival-One Ltd.*

While improvements to industry standards and test procedures are welcomed, there have been no fundamental changes to technology. Improvements to ergonomics, human factors, and operational considerations are of more benefit.

Some tests referenced are either unique (i.e. EN 4862 6.15 lifejacket torque test equipment), or not widely available (e.g. EN 4863 6.10.22 cold water human subject testing).

Cold-water human subject testing is inconsistent, unreliable, and unethical for commercial product validation, when unmanned thermal conductivity testing could have been used. There is inconsistent test clothing (EN 4863 6.10.3) for the thermal protection test (EN 4863 6.10.22), an extra jumper & socks is permitted, which skews the results.

Some EN 4863 tests are repetitive and unnecessary, such as three different flammability tests: two different fabric tests in 5.4.3, and an unrealistic flame pan test in 6.7, originating from marine IMO/SOLAS testing.

The system-based ergonomic testing within multiple aircraft is impractical, requiring goodwill to access to commercial aircraft of limited availability.

There will be a significantly increased burden in the scope of testing.
Collectively they impose a dramatically higher cost of compliance, requiring significant investment. Such investment costs act as an uncompetitive barrier to entry.

Given the nature of the mature market, which is forecast to diminish in size, such implementation will stifle product development and innovation.

There are significant commercial & operational implications.
The offshore industry business model seems to not be fully understood by the Regulator.
Survival equipment is in general not purchased: it is leased.

Capex costs are borne by the OEMs, who maintain significant lease hire fleets of equipment. Such capex ROI need to be recovered over time, as a business proposition. Without 'Grandfather rights' there are significant commercial implications affecting existing rental fleets, putting market supply and offshore operations at risk.

Significant qualification costs may be amortised by passenger use, but not by helicopter crews. Different helicopter operators often demand bespoke solutions, use a variety of accessory equipment, in much smaller volume: these factors make recovery of qualification costs difficult.

response

Not accepted
See the response to comment No 28.

comment

43 comment by: *Biardo Survival Suits B.V.*

3. Expected benefits and drawbacks of the proposed regulatory material

Regarding the subset of ETSO-2C502, ETSO-2C503, ETSO 2C504, and ETSO 2C519, there are no equivalent FAA TSOs to align or harmonize with.

While improvements to industry standards and test procedures are welcomed, there have been no fundamental changes to technology. Improvements to ergonomics, human factors, and operational considerations are of more benefit.

Some tests referenced are either unique (i.e. EN 4862 6.15 lifejacket torque test equipment), or not widely available (e.g. EN 4863 6.10.22 cold water human subject testing).

Cold-water human subject testing is inconsistent, unreliable, and unethical for commercial product validation, when unmanned thermal conductivity testing could have been used. There is inconsistent test clothing (EN 4863 6.10.3) for the thermal protection test (EN 4863 6.10.22), an extra jumper & socks is permitted, which skews the results.

Some EN 4863 tests are repetitive and unnecessary, such as three different flammability tests: two different fabric tests in 5.4.3, and an unrealistic flame pan test in 6.7, lifted from IMO/SOLAS testing.

The system-based ergonomic testing within multiple aircraft is impractical, requiring goodwill to access to commercial aircraft of limited availability.

There will be a significantly increased burden in the scope of testing.
Collectively they impose a dramatically higher cost of compliance, requiring significant investment. Such investment costs act as an uncompetitive barrier to entry.

Given the nature of the mature market, which is forecast to diminish in size, such implementation will stifle product development and innovation.

There are significant commercial & operational implications.
The offshore industry business model seems to not be fully understood by the Regulator.
Survival equipment is in general not purchased: it is leased.

Capex costs are borne by the OEMs, who maintain significant lease hire fleets of equipment.
Such capex ROI need to be recovered over time, as a business proposition.
No obvious Grandfather rights - commercial implications to existing rental fleets.

Significant qualification costs may be amortised by passenger use, but not by helicopter crews. Different helicopter operators often demand bespoke solutions, use a variety of accessory equipment, in much smaller volume: these factors make recovery of qualification costs difficult.

response

Not accepted
See the response to comment No 28.

comment

61 comment by: *Survitec / HeliPPE*

3. Expected benefits and drawbacks of the proposed regulatory material

Regarding the subset of ETSO-2C502, ETSO-2C503, ETSO 2C504, and ETSO 2C519, there are no equivalent FAA TSOs to align or harmonize with.

While improvements to industry standards and test procedures are welcomed, there have been no fundamental changes to technology. Improvements to ergonomics, human factors, and operational considerations are of more benefit.

Some tests referenced are either unique (i.e. EN 4862 6.15 lifejacket torque test equipment), or not widely available (e.g. EN 4863 6.10.22 cold water human subject testing).

Cold-water human subject testing is inconsistent, unreliable, and unethical for commercial product validation, when unmanned thermal conductivity testing could have been used. There is inconsistent test clothing (EN 4863 6.10.3) for the thermal protection test (EN 4863 6.10.22), an extra jumper & socks is permitted, which skews the results.

Some EN 4863 tests are repetitive and unnecessary, such as three different flammability tests: two different fabric tests in 5.4.3, and an unrealistic flame pan test in 6.7, lifted from IMO/SOLAS testing.

The system-based ergonomic testing within multiple aircraft is impractical, requiring goodwill to access to commercial aircraft of limited availability.

There will be a significantly increased burden in the scope of testing.
Collectively they impose a dramatically higher cost of compliance, requiring significant investment. Such investment costs act as an uncompetitive barrier to entry.

Given the nature of the mature market, which is forecast to diminish in size, such implementation will stifle product development and innovation.

There are significant commercial & operational implications.

The offshore industry business model seems to not be fully understood by the Regulator.
Survival equipment is in general not purchased: it is leased.

Capex costs are borne by the OEMs, who maintain significant lease hire fleets of equipment.
Such capex ROI need to be recovered over time, as a business proposition.
No obvious Grandfather rights - commercial implications to existing rental fleets.

Significant qualification costs may be amortised by passenger use, but not by helicopter crews. Different helicopter operators often demand bespoke solutions, use a variety of accessory equipment, in much smaller volume: these factors make recovery of qualification costs difficult.

response Not accepted
See the response to comment No 28.

comment *71* comment by: *European Sailplane Manufacturers*

The last sentence, "Following an assessment of the impacts of the proposed regulatory material, no drawbacks are identified." does indicate a win-win-situation for everyone.

We are fully in favour of such a win-win-situation for everyone, but as indicated in our other comments addressing Issue 17: CS-ETSO Subpart A, we fear that not everybody will be faced with a win-win-situation based on the proposed changes within this NPA.

Therefore such a general remark should be at least justified, otherwise there might be later the question whether really all aspects have been considered...

response Noted
Thank you for your comment.

Indeed, we acknowledge that a better justified position should have been provided regarding possible drawbacks of the proposed regulatory material.

4. Proposed regulatory material p. 14

comment *29* comment by: *Hansen Protection*

EASA NPA 2-24-03 (B)

ETSO-2C502a, ETSO-2C503a and ETSO-2C504a

1. Applicability

This ETSO-2C502a is not having the same operational requirements as ETSO-2C503a & ETSO-2C504a.
The text: *"to or from helidecks located in a hostile sea area (as defined in Annex I (Definitions for terms used in Annexes II to V) to Commission Regulation (EU) No 965/2012)"* is missing.

Note: No965/2012 is currently being amended.

3. Technical Conditions
Industry is not using the EN standards composed by ASD-STAN, as not all referenced standards are not in force.
While industry welcomes the revision of outdated conformance standards to remain relevant, there are concerns about the significantly increased scope and complexity to the conformance standards which are disproportionate.

Comparing current with proposed standards, typical content has expanded from 7 to 58 pages. There has been little attempt to harmonize with equivalent current commercial PPE standards, i.e. ISO 15027 (suits) or ISO 12402 (lifejackets).
Recommend considering referring to the standard only, not the publication year. The complex process amending EASA regulations will impact the validity due to publication year. Meaning new publications of the standard will trigger amendments to the ETSO. When publications are not mentioned, it's always according to the latest published.
4. Marking

4.1 General
This section is referring to Subpart A – General paragraph 1.2, however this paragraph is not existing in this amendment of CS-ETSO.

4.2 Specific
Recommend considering referring to the standard only, not the publication year. The complex process amending EASA regulations will impact the validity due to publication year. Meaning new publications of the standard will trigger amendments to the ETSO. When publications are not mentioned, it's always according to the latest published.

5. Availability of referenced Document
The reference to CS-ETSO Subpart A paragraph 3. Additional Information is not containing any details except for the various Amdt ETSOs. Hence this reference is not sufficient for the purpose.

response | Not accepted
See in CRD 2024-03 (B), the response to comment No 68.

comment | *32* | comment by: *Survival-One Ltd.*

ETSO 2C502 has an inconsistent title when compared with ETSO 2C503, ETSO 2C504, & ETSO-2C505, missing the phrase '… for operations to or from helidecks located in a hostile sea area'.

The subset of ETSO-2C502, ETSO-2C503, ETSO 2C504, and ETSO 2C519 section 1. '… that are manufactured on or after that date of this ETSO, must meet in order to be identified with the applicable ETSO marking.'

Please clarify: all suits, regardless of Type Approval date, or only those certified to the new Standards? Open to interpretation, as there being no grandfather rights for mature products approved to previous standards?

response

Not accepted
For the proposed ETSO-2C502a, the wording was kept consistent with the original issue as not explicitly required by air operations rules.

In accordance with Commission Regulation (EU) No 748/2012, Annex I (Part 21), point 21.A.619 'Duration and continued validity', existing ETSO authorisations remain legally valid unless surrendered by the holder or revoked by the Agency. Therefore, currently authorised equipment can be manufactured in accordance with authorised designs. The latest CS-ETSO amendment applies only for applications received after the applicability date of the EASA Executive Director Decision adopting the respective amendment.

comment

44 comment by: *Biardo Survival Suits B.V.*

4 Proposed regulatory material
EASA NPA 2-24-03 (B)

ETSO-2C502a
ETSO-2C503a
ETSO-2C504a

1. Applicability

This ETSO-2C502a is not having the same operational requirements as ETSO-2C503a & ETSO-2C504a. The text: *"to or from helidecks located in a hostile sea area (as defined in Annex I (Definitions for terms used in Annexes II to V) to Commission Regulation (EU) No 965/2012)"* is missing.

Note: No965/2012 is currently being amended.

3. Technical Conditions
Industry is not using the EN standards composed by ASD-STAN, as not all referenced standards are not in force.
While industry welcomes the revision of outdated conformance standards to remain relevant, there are concerns about the significantly increased scope and complexity to the conformance standards which are disproportionate.

Comparing current with proposed standards, typical content has expanded from 7 to 58 pages. There has been little attempt to harmonize with equivalent current commercial PPE standards, i.e. ISO 15027 (suits) or ISO 12402 (lifejackets).
Recommend considering referring to the standard only, not the publication year. The complex process amending EASA regulations will impact the validity due to publication year. Meaning new publications of the standard will trigger amendments to the ETSO. When publications are not mentioned, it's always according to the latest published.

4. Marking

4.1 General

This section is referring to Subpart A – General paragraph 1.2, however this paragraph is not existing in this amendment of CS-ETSO.

4.2 Specific

Recommend considering referring to the standard only, not the publication year. The complex process amending EASA regulations will impact the validity due to publication year. Meaning new publications of the standard will trigger amendments to the ETSO. When publications are not mentioned, it's always according to the latest published.

5. Availability of referenced Document

The reference to CS-ETSO Subpart A paragraph 3. Additional Information is not containing any details except for the various Amdt ETSOs. Hence this reference is not sufficient for the purpose.

response

Noted
See the response to comment No 29.

comment

62 comment by: *Survitec / HeliPPE*

4. Proposed regulatory material

EASA NPA 2-24-03 (B)

ETSO-2C502a
ETSO-2C503a
ETSO-2C504a,

1. Applicability

This ETSO-2C502a is not having the same operational requirements as ETSO-2C503a & ETSO-2C504a. The text: *"to or from helidecks located in a hostile sea area (as defined in Annex I (Definitions for terms used in Annexes II to V) to Commission Regulation (EU) No 965/2012)"* is missing.
Note: No965/2012 is currently being amended.

3. Technical Conditions

Industry is not using the EN standards composed by ASD-STAN, as not all referenced standards are not in force.

	While industry welcomes the revision of outdated conformance standards to remain relevant, there are concerns about the significantly increased scope and complexity to the conformance standards which are disproportionate. Comparing current with proposed standards, typical content has expanded from 7 to 58 pages. There has been little attempt to harmonize with equivalent current commercial PPE standards, i.e. ISO 15027 (suits) or ISO 12402 (lifejackets). Recommend considering referring to the standard only, not the publication year. The complex process amending EASA regulations will impact the validity due to publication year. Meaning new publications of the standard will trigger amendments to the ETSO. When publications are not mentioned, it's always according to the latest published. ***4. Marking*** 4.1 General This section is referring to Subpart A – General paragraph 1.2, however this paragraph is not existing in this amendment of CS-ETSO. 4.2 Specific Recommend considering referring to the standard only, not the publication year. The complex process amending EASA regulations will impact the validity due to publication year. Meaning new publications of the standard will trigger amendments to the ETSO. When publications are not mentioned, it's always according to the latest published. ***5. Availability of referenced Document*** The reference to CS-ETSO Subpart A paragraph 3. Additional Information is not containing any details except for the various Amdt ETSOs. Hence this reference is not sufficient for the purpose.
response	Noted See the response to comment No 29.