

Comment Response Document (CRD)

to Notice of Proposed Amendment (NPA) 14-2005

**for amending the Executive Director Decision No. 2003/10/RM
of 24 October 2003 on certification specifications, including airworthiness codes and
acceptable means of compliance, for European Technical Standard Orders
(« CS-ETSO »)**

Miscellaneous ETSO

Explanatory Note

I. General

1. The purpose of the Notice of Proposed Amendment (NPA) 14-2005, published 20 September 2005 was to propose an amendment to Decision N° 2003/10/R of the Executive Director of the Agency of 24 October 2003 on certification specifications, including airworthiness codes and acceptable means of compliance, for European Technical Standard Orders (« CS-ETSO »)

II. Consultation

2. By the closing date of 20 December 2005, the European Aviation Safety Agency (the Agency) had received 4 comments from 1 National Aviation Authority on the proposed ETSO-C151b "Terrain Awareness and Warning System (TAWS)".
3. No comments were received on the proposal ETSO-2C509 "Light Aviation Secondary Surveillance Transponders (LAST)".
4. 25 Comments have been received on the other ETSOs proposed in NPA 14-2005. Many of these comments were proposing significant changes to the proposed ETSOs. Moreover, after the publication of the EASA NPA, the Federal Aviation Administration (FAA) of the USA published new or updated TSOs for the same subjects as covered by the EASA NPA. Therefore the Agency has concluded that the proposed ETSOs could no longer be considered mature and that they could not form the basis for a final decision to amend CS-ETSO. A more detailed explanation is given for each ETSO in the table below.

ETSO proposed in NPA 14-2005	Remarks
ETSO-C145a Airborne Navigation Sensors using the Global Positioning System (GPS) Augmented by the Wide Area Augmentation System (WAAS)	A new proposal will be drafted considering harmonisation with the more recently published standards TSO-C145b and TSO-C146b. This will be proposed in the frame of the ongoing task ETSO.002 "Systematic review and transposition of existing FAA TSO standards for parts and appliances into EASA ETSO".
ETSO-C146a Stand-Alone Airborne Navigation Equipment using the Global Positioning System (GPS) Augmented by the Wide Area Augmentation System (WAAS)	
ETSO-2C123b Cockpit Voice Recorder Systems	At the time of the publication of this NPA, there were no similar FAA TSO developed, resulting in proposals for non-harmonised standards in index 2 of CS-ETSO. This position was criticised in comments received on these proposals. The Agency will reconsider the Recorder System proposals taking into account comments and the newly published FAA TSO standards for similar recorder systems. This will be proposed in the frame of the ongoing task ETSO.002 "Systematic review and transposition of existing FAA TSO standards for parts and appliances into EASA ETSO".
ETSO-2C124b Flight Data Recorder Systems	
ETSO-2C510 Crash Protected Airborne Recorder Systems - Image Recorder	
ETSO-2C511 Crash Protected Airborne Recorder Systems - CNS/ATM Recorder	

ETSO-2C507 Inflight Icing Detection System	In October 2006 the Ice protection Harmonisation Working Group (IPHWG) recommended to the FAA not to develop TSO for both the inflight and ground icing detection system. The Agency, just like the FAA, has decided to follow this recommendation. The Agency will therefore not issue these ETSO.
ETSO-2C508 Ground Icing Detection System	

In accordance with article 7(5) of the Rulemaking Procedure¹, the Executive Director of the Agency has therefore decided that a further consultation round is necessary for these ETSOs. This will be done in the form of a new NPA.

5. Due to the above decision this CRD is limited to ETSO-C151b "Terrain Awareness and Warning System (TAWS)". The Agency envisages publishing an amendment to CS-ETSO containing the amended ETSO-C151b and the new ETSO-2C509 no earlier than two months following the date of publication of this CRD.

III. Publication of the CRD

6. The comments received on the proposed ETSO-C151b "Terrain Awareness and Warning System (TAWS)" have been acknowledged and incorporated into this Comment Response Document (CRD) with the responses of the Agency.
7. In responding to comments, a standard terminology has been applied to attest the Agency's acceptance of the comment. This terminology is as follows:
 1. **Accepted** – The comment is agreed by the Agency and any proposed amendment is wholly transferred to the revised text.
 2. **Partially Accepted** – Either the comment is only agreed in part by the Agency, or the comment is agreed by the Agency but any proposed amendment is partially transferred to the revised text.
 3. **Noted** – The comment is acknowledged by the Agency but no change to the existing text is considered necessary.
 4. **Not Accepted** - The comment is not shared by the Agency

The Agency's Decision will be issued at least two months after the publication of this CRD to allow for any possible reactions of stakeholders regarding possible misunderstandings of the comments received and answers provided.

8. Such reactions should be received by EASA not later than 12 December 2007 and should be sent to the following link: CRD@easa.europa.eu.

¹ Management Board Decision concerning the procedure to be applied by the Agency for the issuing of opinions, certification specifications and guidance material ("Rulemaking Procedure"), EASA MB/08/2007, 13.6.2007.

IV. CRD table of comments, responses and resulting text

ETSO-C151b	NPA Page 18
Terrain Awareness and Warning System (TAWS)	

comment 1 comment by: UK CAA

ETSO C151b Paragraph 3.2.1 – failure condition classification

This change states that the presentation of hazardously misleading information should be considered a major failure. In system safety assessment terms that means that the probability of the failure should be shown to be Remote. However, if information is hazardously misleading, it is by definition hazardous. Therefore it is inappropriate to define such a failure as Major. It must be defined as Hazardous and be shown to be Extremely Remote

response *Not accepted*

The wording "hazardously" is part of the term "hazardously misleading information (HMI)" as defined in paragraph 2.8 of appendix 1 of this ETSO, and as such specific for this ETSO. It is not intended to be consistent with the safety assessment terminology at aircraft level.

Although the wording from ETSO-C151a was changed, the failure condition qualification is retained consistent with the current ETSO and TSO qualification.

comment 2 comment by: UK CAA

ETSO C151b, Appendices – all

Throughout the appendices the US terminology is used. It is suggested that for this ETSO this should be updated, e.g – FAA to read EASA, airplane to read aeroplane. In addition whenever RTCA is quoted the equivalent EUROCAE or other European standard should really be identified, e.g D0 161A. This is not applied consistently throughout the ETSO.

response *Partially accepted*

Appendices 1-3 were unintentionally replaced in the NPA by the FAA TSO appendices, while no changes were introduced to the current appendices of ETSO C151a. Only appendix 4 was newly added.

The Appendices 1-3 will therefore remain unchanged, and contain references to European or ICAO standards if available and applicable. The newly introduced Appendix 4 will be adapted consistent with Appendices 1-3.

comment 3 comment by: UK CAA

ETSO C151b, Appendix 1, paragraph 3

Required TAWS function makes reference to a United States standard for terminal Instrument Approach procedures (TERPS) and FAA handbook 8260.3B. Is this relevant to European operations or if so is there an equivalent European document?

response *Partially accepted*

Refer to the response to comment 2.

comment 4 comment by: UK CAA

ETSO C151b, Appendix 2

This is a reserved appendix for any possible future test procedures (against RTCA D0 160D – *EUROCAE ED14D should also be quoted*). Is it necessary to keep this – it says nothing?

response

Not accepted

The appendix 2 is unchanged and kept to show consistency with the FAA TSO appendices. The reference to ED14D is included in the current Appendix 2. Also refer to the response to comment No.2