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[4910-13]

DEPARTMENT OF TRANSPORTATION

FEDERAL AVIATION ADMINISTRATION

Proposed Technical Standard Order (TSO) –C151c, Terrain Awareness and Warning System (TAWS)

ACTION: Notice of availability and request for public comment.

SUMMARY: This notice announces the availability of, and request for public comments on a second draft of Technical Standard Order (TSO) -C151c, *Terrain Awareness and Warning System*. Comments received from the initial June 2011 release, resulted in changes to the proposed document significant enough to require this public comment offering.

DATES: Comments must be received on or before *[insert date that is 30 days after date of publication in the FEDERAL REGISTER.]*

ADDRESS: Send all comments on the proposed technical standard order to: Federal Aviation Administration (FAA), Aircraft Certification Service, Aircraft Engineering Division, Avionics Systems Branch (AIR-130), 470 L'Enfant Plaza, Suite 4102, Washington, DC 20024. ATTN. Ms. Charisse Green. Or you may hand deliver comments to 470 L'Enfant Plaza, Suite 4102, Washington, DC 20024.

FOR FURTHER INFORMATION CONTACT: Ms. Charisse Green, AIR-130, Federal Aviation Administration, 470 L'Enfant Plaza, Suite 4102, Washington, DC 20024.

Telephone (202) 385-4637, fax (202) 385-4651, e-mail to: Charisse.Green@faa.gov.

SUPPLEMENTARY INFORMATION:

COMMENTS INVITED

You are invited to comment on the proposed revised TSO by submitting written data, views, or arguments to the above address. Comments received may be examined, both before and after the closing date at the above address, weekdays except federal holidays, between 8:30 a.m. and 4:30 p.m. The Director, Aircraft Certification Service, will consider all comments received on or before the closing date.

BACKGROUND

The initial public offering of the draft TSO-C151c offered the following changes:

- a.** Clarification of the 500 foot altitude call out requirement for Class A TAWS equipment.
- b.** Addition of Localizer Performance with Vertical guidance (LPV) and Global Navigation Satellite System (GNSS) Landing System (GLS) glidepath alerting to the Ground Proximity Warning System (GPWS) Mode 5 glideslope alert.
- c.** Elimination of the provision to adjust or modify the GPWS envelopes to minimize nuisance alerts based on Forward-Looking Terrain Avoidance (FLTA) and Premature Descent Alert (PDA) functionality without a deviation.
- d.** Allowances for eliminating GPWS nuisance alerts (Appendix 1, paragraph 3.4).
- e.** Requirement for the primary horizontal position source to be GPS, to ensure utilization of the most accurate and consistent horizontal position data.

f. Addition of velocity and vertical GPS reporting requirement to inhibit alerting when GPS position is invalid, unless a backup position source is in use.

The FAA received numerous comments on: **(1)** The 500 foot altitude call out; **(2)** The elimination of the GPWS envelope modification allowance; **(3)** The GPS horizontal position source requirement; and **(4)** The position source requirements. A summary of those public comments and the FAA's resolution are included with the second draft of TSO-C151c.

This announcement requesting comments to the revised proposed TSO-C151c, contains the following significant changes:

- a.** Alert suppression for Required Navigation Performance (RNP) requirements are added to Appendix 1, Paragraph 3.1.4.
- b.** The allowance in TSO-C151b to adjust or modify the GPWS alerting thresholds is restored in the current version of TSO-C151c. (We provide clarifying language that deviations need to be accomplished in accordance with Title 14 of the Code of Federal Regulations (14 CFR) § 21.618.)
- c.** The requirement in the initial proposal of TSO-C151c, requiring the Class A 500 ft voice call out on all approaches is changed to the TSO-C151b requirement, for the Class A 500 ft voice call out on non-precision approaches only.
- d.** TSO-C151b and the first offering of the proposed TSO-C151c, both allowed for the 500 ft callout to be made based on radar altimeter height

above terrain, or by a comparison of current altitude (barometric or GNSS) above the runway threshold height. This revised proposed TSO-C151c allows the 500 ft voice call out to be the current altitude (barometric or GNSS) above the runway threshold height. Note that in the current proposal, the allowance to make the voice callout based solely on a radio altimeter height above terrain is removed. The rationale is that all TAWS equipped aircraft will annunciate the altitude call referenced to the runway threshold height, allowing for consistency in the altitude call out.

e. Clarification of TAWS position requirements (See Proposed Paragraphs 5.0 through 5.6).

f. All GPS requirements are unchanged from the TSO-C151b requirement.

How to Obtain Copies

A copy of the proposed TSO-C151c may be obtained via the information contained in the section titled “**For Further Information Contact**”, or from the FAA Internet website at:

http://www.faa.gov/aircraft/draft_docs/.

Issued in Washington, DC, on January 31, 2012.

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Aircraft Certification Service

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