

Clearance Record

DOCUMENT COMMENT LOG

Originating Office: AIR-130	Document Description: TSO-126b	Project Lead: Charisse Green	Reviewing Office: ANM-100	Date of Review: May 18, 2012
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Company & Group	Page & Paragraph	Comment	Rationale for Comment	Recommendation	Disposition
John Lee ACE-119A	Page 1, Paragraph 2.b.	This paragraph seems to be inconsistent with the FAA Memorandum titled "PS-XXX, Emergency Locator Equipment Mounting with Hook and Loop Style Fasteners"	This revised TSO seems to allow ELT manufacturing under the provisions of its original approval. The FAA Memorandum says "holders who do not take these actions are subject to the withdrawal of their TSO authorization under the provisions of 14 CFR 21.613."		Not Accepted: The actions to revise TSO-C126a and the action to withdraw individual TSO authorizations are separate efforts in this case. We typically only reference the withdrawal of the TSO authorizations if it's a blanket withdrawal, where all authorizations are being withdrawn as part of the action of updating the TSO. Because all TSO authorization holders will not be affected, this is not a blanket withdrawal, and we don't want to include TSOA holders who hold a TSO-C126a approval for an ELT which is not installed with hook and loop fasteners.
Dean Thompson ANM130S SACO	Page 1, Paragraph 3,	Delete 'Additionally, the use of hook and loop fasteners is not an acceptable means of attachment in complying with the Crash Safety requirements of section 2.2.5 of RTCA/DO-204A'.	The requirements for attachment are in 2.2.5 which in turn points to 2.4.2.4. This sentence only list one means not to do and does not cover all other means of not to do which sets up a bad precedent.	Delete noted sentence.	Not Accepted: Paragraph 2.2.5 is the main paragraph that discusses crash safety and the requirements for proper attachment of the ELT in order for the ELT to meet the test requirements specified in paragraph

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					2.6.3.2. The complete intent of this TSO revision is to specifically preclude use of hook and loop style fasteners.
Ray Mei ANM130S SACO	Page 1, Paragraph 3	The statement "The 406 MHz ELT must include a 121.5 MHz homing beacon." is new to the Revision B. Since FAA is moving away from 121.5 MHz and no new TSOA for 121.5 MHz will be granted, there may not be any good reason to encourage 121.5 MHz usage.	All newly launched GPS satellites are not equipped with 121.5 MHz receivers and will not pick up any ELT signal with 121.5 MHz transmitters.	Rewrite or delete the statement.	Not Accepted: The requirement for the 406 MHz ELT to include a 121.5 MHz homing beacon is not new, it's just more clearly stated in this revision. The FAA has canceled TSO-C91a for 121.5 stand alone ELTs; however cancelation of TSO-C91a does not change the TSO-C126a/126b requirement to also transmit a 121.5 MHz homing beacon. The 406 MHz frequency is used by the COSPAS-SARSAT satellites for precise pinpointing and identification of the aircraft in distress, where as the 121.5 MHz homing device is mainly used for homing in during the final stages of the rescue operations by local authorities.

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ANM-108P, Phoenix MIDO	Page 1 (Cover) Paragraph 3.b. (2)	This paragraph indicates that loss of the function identified in paragraph 3.a. is a minor failure condition. This failure condition should be identified as a major failure condition.	If the ELT does have to function (at all) as identified in this TSO (via paragraph 3.a) why are we writing/requiring this? Loss of complete function as identified in 3.a. should be identified as a major failure condition.	Revise 3.b. (2) to indicate Loss of function defined in paragraph 3.a. is a major failure condition.	Not Accepted: The loss of function of ELT equipment continues to be listed as a minor failure condition because loss of its function will not have a significant reduction on safety of flight.
Thuan Nguyen ANM130S SACO	Page 2, Paragraph 3	Page 3 and paragraph 3 requires identify airborne electronic hardware configuration. There is no airborne electronic hardware qualification in page 2 paragraph 3.	To be consistent within the TSO.	Add airborne electronic hardware qualification.	Not Accepted: The FAA does not require use of RTCA DO-254 for complex custom airborne electronic hardware in TSO articles when the failure condition classification is minor. Additionally, the FAA does not require a PHAC or documentation of the hardware lifecycle data for the TSO article if the failure condition classification is minor. Thus, paragraphs 3.f., 5.d., and 6.h. in Order 8150.1C are removed when the failure condition classification is defined by the TSO as minor, as it is with TSO-C126b.

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ANM-130L (N. Phan-Tran)	Page 2, Paragraph 3.d Environmental Qualification	Current TSO C-126a required compliance to RTCA/DO-160F. This draft TSO C-126b indicates to DO-160E revision.	TSO C-126b should state the same revision F of DO-160 and allow the use of other revisions or apply deviation process as required.	Suggest changing to DO-160F.	Not Accepted: The current TSO policy on environmental qualification is reflected in Order 8150.1C and TSO-C126b. The policy reflects: 1. Any appropriate environmental standard is acceptable. 2. Older versions of DO-160 (DO-160D Change 2 and previous) may be acceptable, but must be approved via deviation. 3. Clarifies that even though RTCA DO-204A requires use of DO-160E, that the FAA will accept any appropriate environmental standard.
ANM-108S Seattle MIDO	Page 2, Paragraph 3.d.	Last sentence - states: You may use a different standard environmental condition and test procedure than RTCA/DO-160E, provided the standard is appropriate for the 406 MHz ELT.	Confusing statement. Nowhere, prior to this sentence, does it state to use RTCA/DO-160E for environmental testing. Is the intent to recommend or prefer the use of RTCA/DO-160E for environmental testing?	Change sentence to: The use of RTCA/DO-160E, Environmental Conditions and Test Procedures for Airborne Equipment is preferred. However, You may use a different standard, provided the standard is appropriate for the 406 MHz ELT.	Accepted: The TSO references sections 2.3 of RTCA/DO-204A which requires the use of RTCA/DO-160E for environmental testing. Because RTCA/DO-160E was referenced in the MOPS, the TSO clarifies that any appropriate environmental standard can be used.

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ANM-108S Seattle MIDO	Page 2, Paragraph 3.d. Note:	Note: The use of RTCA/DO-160D (with Changes 1 and 2 only, incorporated) or earlier versions is generally not considered appropriate and will require substantiation via the deviation process as discussed in paragraph 3.g of this TSO.	Confusing. Note is referencing a lower level version of the RTCA/DO-160 after already stating in the main paragraph it is acceptable to use a different standard.	Change Note to: Use of any other standard or earlier version of the RTCA/DO-160 for environmental conditions and testing is generally not considered appropriate and will require substantiation via the deviation process discussed in paragraph 3.g.	Not Accepted: The language and policy detailed is per FAA Order 8150.1C. and represents the FAA's current policy.
John Lee ACE-119A	Page 2, Paragraph 3.e.	Should there be a corresponding paragraph for Airborne Electronic Hardware.	Consistency and completeness		Not Accepted: Per the current policy it is not a requirement to include airborne electronic hardware qualifications if the failure condition classification is minor.
ANM-130L (N. Phan-Tran)	Page 2, Paragraph 3.e Software Qualification	RTCA/DO-178B may be revoked by DO-178C.	We should use the latest policy.	Suggest verifying with AIR-120 for latest software policy.	Not accepted: The FAA is carefully considering use of DO-178C. At this time, DO-178B remains the software requirement for TSOs. If a manufacturer would prefer to use RTCA/DO-178C a deviation request can be submitted for review to the ACO.
ANE-150 Tony Pigott	Paragraph 4	Existing paragraphs 4.d. and 4.e. are missing in this revision		Why are they deleted?	Acknowledged: Paragraphs 4.d and 4.e. were removed based on the language and policy detailed per FAA Order 8150.1C. and represents the FAA's current policy.

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John Lee ACE-119A	Page 4, Paragraph 5.c.	Should there be a corresponding paragraph for Airborne Electronic Hardware.	Consistency and completeness		Not Accepted: Per the current policy it is not a requirement to include airborne electronic hardware qualifications if the failure condition classification is minor.
ANM-108S Seattle MIDO	Page 3, Paragraph 5.(5)	Last sentence: For example, a form as described in RTCA/DO -160G, Environmental Conditions and Test Procedures for Airborne Equipment, Appendix A.	Confusing. How many revision levels or versions of RTCA/DO-160 will be called out in this TSO? If Revision/version G is the current rev., all references to the RTCA/DO-160 should be G.	Leave this sentence alone and change the last sentence of Page 2, Para d. to Revision/version G instead of calling out E.	Not Accepted: The FAA allows any appropriate environmental standard. However we reference the most current DO-160 revision when we provide the example of the appropriate environmental qual form.
John Lee ACE-119A	Page 4, Paragraph 5.e.(1)	Also mention Airborne Electronic Hardware.	Consistency and completeness		Not Accepted: Per the current policy it is not a requirement to include airborne electronic hardware qualifications if the failure condition classification is minor.
John Lee ACE-119A	Page 5, Paragraph 6.g	Should there be a corresponding paragraph for Airborne Electronic Hardware.	Consistency and completeness		Not Accepted: Per the current policy it is not a requirement to include airborne electronic hardware qualifications if the failure condition classification is minor.

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ANM-100D	Page 5, Paragraph 8.b.	Wrong URL used.	The website changed and the instructions are no longer valid. The www.access.gpo.gov portal is difficult to navigate & is not the most direct access to the Bookstore. P. 5 ¶ 8. a. & c. do not provide navigation on the referenced web pages.	Replace "You can also order copies online ..." with "You can also order copies online from www.bookstore.gpo.gov ." Delete the last two sentences (page navigation).	Not Accepted: The language and policy detailed is per FAA Order 8150.1C.