

**Clearance Record
DOCUMENT COMMENT LOG**

Originating Office: AIR-120	Document Description: TSO C-127 B	Project Lead:	Reviewing Office: ANM-100	Date of Review: 5/16/12
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#	Company & Group	Page & Paragraph	Comment	Rationale for Comment	Recommendation	Disposition
1	R. Kaufman, ANM-150S	Pg. 4, 5.(5)	Replace this single line by going back to the detailed explanation in TSO-C127a, Section 5.(6).	The previous section highlighted and detailed the requirements for parts of the seat that the operators seek to repair/replace most often, the cushions and belts. The new section is too brief and high level which could lead to these areas not being maintained, repaired, or replaced properly. We get questions on this regularly – make the TSO as detailed as possible in this area.	Go back to the explanation of the requirements in TSO-C127a for this paragraph.	Concur with adding back information from TSO-C127a section 5.(6), however that information is more applicable to section 5.b. Section 5.b has been updated accordingly.
2	K. Sujishi ANM-100B	Page 7, Section 1 and Table 1	This section and table is intended to use referenced SAE AS8049B recommendations to be changed with requirements and along with substituting some of the SAE recommendations with unique requirements. It would be better to have a stand alone, minimum performance requirement.	Having a stand alone requirement in the TSO will eliminate confusion and potential encountering human error. Also, the SAE document could potentially be revised to a higher revision level and configuration control could become difficult.		Non-concur. For copyright purposes we can not copy the SAE AS8049B document into the TSO. We are able to reference the document and outline exceptions to the document within the TSO standard. When SAE revises AS8049 to Rev C, use of the latest AS8049C revision for a TSO-C127b approval is not allowed unless a deviation

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						is requested and granted.
3	R. Kaufman, ANM-150S	Pg 8, 3.4.1 and 3.4.2	You should delete the sentences that suggest similarity for showing flammability compliance. But if you do add it you should point to policy for using similarity for flammability. We regularly see TC and STC applicants having trouble with similarity as evidenced by their using unapproved MOCs.	Similarity MOCs that do not have FAA approval have been a problem for awhile. When you combine this with problems we have had with applicants regarding proper application of seat back flammability for large exposed non-metallic parts (which is proposed to be added to this TSO vs. it being an installer activity under FAA type cert. procedures) you will have a lot of problems at installation with having proper showings of compliance for flammability. See comment below on Pg 20. (Appendix 2) for this issue.	Delete the line that suggests to TSO applicants that they should do flammability similarity analysis.	<p>Concur. Will replace with: <i>3.4.1 Test the materials in Type A and Type B Transport Rotorcraft seating systems, ensuring they meet the fire protection properties specified in 14 CFR part 25, Appendix F, Part I, paragraph (a)(1) (per Amendment 25-111). You may also demonstrate the material's fire protection properties using the methods provided in the FAA policy statement, PS-ANM-25.853-01, Flammability Testing of Interior Materials, which may permit substantiation based on previously tested materials. The definition and use of parts that are considered small parts that would not contribute significantly to the propagation of a fire must be approved in advance by the manager of the FAA aircraft certification office (ACO) to which this TSO data is to be submitted.</i></p> <p>3.4.2 Type A and Type B Transport Rotorcraft - passenger, flight attendant, and observer seat cushion systems shall be tested to</p>

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						<p>and shall meet the fire protection provisions of 14 CFR part 25 Appendix F, Part II (effective March 25, 1998). You may also demonstrate the material's fire protection by following AC 25.853-1, Flammability Requirements for Aircraft Seat Cushions, and, where applicable, ANM-115-07-002, Policy Statement on certification for flammability of lightweight seat cushions.</p>
4	R. Kaufman, ANM-150S	Pg. 14, 5.3.5.1, 7 th paragraph	This suggests that failures of an item of mass that affects the dynamic performance of the seat are ok to fix without a dynamic retest. If by definition it affected the dynamic performance you should do a dynamic retest not just 24 g static.	The 24 g static retest will only prove out the item of mass not the seat as a whole.	Change this to call for a dynamic retest when dynamic performance of the seat is affected. If you don't require this, the 7 th and 8 th paragraphs seems to be saying you do the same thing (24 g static test) regardless of the effect of the item of mass failure on the dynamic performance – you could just use one paragraph to cover both.	<p>Concur: Deleted paragraph that states</p> <p><i>If an item of mass that affects the dynamic performance of the seat fails during a test that is otherwise acceptable, then you may validate a redesign by a 24g static test if you take the effect of the dynamic structural deformation into account. Apply the load for the 24g test in the same direction as the load vector in the dynamic test where the failure occurred.</i></p>

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5	R. Kaufman, ANM-150S	Same as above.	This also suggests that the 24 g test validates the redesign "...if you take the effect of the dynamic structural deformation into account." How you do that is not clear.	Not sure what this is suggesting that the tester should do.	Make the intent of this clearer.	SAA
6	R. Kaufman, ANM-150S	Pg.15, 5.3.9.9, last paragraph.	Delete the line, "Extensive seat testing has shown that the femur loading criterion is not usually exceeded."	This is redundant as it is already stated in the first line.	Delete the sentence.	Concur and removed redundancy
7	R. Kaufman, ANM-150S	Pg. 20, Appendix 2, e.	This suggests adding flammability of large exposed non-metallic parts to the TSO as an optional data collection activity. This should be deleted.	The requirement for this is driven by several sets of special conditions by airplane model. The policy for how to apply the requirement has been changing and there is current activity to further define it. There have been many questions by TC, ATC, and STC applicants about how to meet the Special Conditions. This installer specific FAA type certification activity is not appropriate to put under the TSO which is intended for component self certification activity only. This proposal is far beyond the simple component MPS. As currently proposed this section will lead	Delete this section.	Non-Concur. There has been much discussion between AIR-100 and members of TAD standards staff for an appropriate way to handle heat release and smoke emission data. As you mentioned there are a number of special conditions and ongoing rulemaking activity to define the requirements for seat HR and SE. This section of the TSO points to the standard test procedure in Appendix F, Parts IV and V, and allows for collection of data that can be approved under the TSO for the article, but does not convey

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				to a lot of problems with proper data showings of compliance at the time of seat installation approval. This tendency to ever expand the TSO to include installation specific requirements should be stopped as they are not part of the component MPS and are not appropriate for approval under TSO procedures.		installation approval. What this section does not do is set aircraft level requirements as that is managed through special conditions and in the future through new rulemaking. This section does shift the responsibility of the HR&SE data to the TSO holder, however, the acceptability of a particular installation is still the responsibility of the TC/STC holder.
8	LAACO ANM-150L	page 2 para d	Add in amendment and date	Due to out of sync SAE references, FAA AC, policy memorandums, and ever changing CFR. Would prefer, choose one, a reference section, a statement that amendment level will be mentioned once much like acronyms or amendments with each reference		Partially concur. However, this language is required by the TSO template in Order 8150.1C. Propose this request to be forwarded for inclusion of future revisions to template.
9	LAACO ANM-150L	Page 2 Para 4 a.	Same As Above (SAA)	SAA		SAA

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10	LAACO ANM-150L	Page 3 Para 4 a. (3)	Has a TSO ever not accepted in total an FAA Advisory Circular (AC)?	To reduce the possibility of staleness and reduce out of sync documents would it be feasible to accept a later revision of an FAA Advisory Circular?		Partially agree, but not adopting. Although a newer version of an AC would likely offer an equivalent level of safety, the sections may change. This TSO paragraph calls out a particular appendix that may change in an updated AC. Therefore, it would be best to handle this potential future situation either by a deviation and/or updating the TSO.
11	LAACO ANM-150L	Page 4 Para 5	Same as Previous (SAP)	SAP		Partially agree, but not adopting for same rational in comment 10 as the structure of Appendix F may be changed from current rule making activity.
12	LAACO ANM-150L	Page 5 Para 5 e.	SAA	SAA		SAA
13	LAACO ANM-150L	Page 7 Do the following 3.2.16	Definition of 'normal passenger movement' (NPM)	In the vein anything that is not major is minor. It would be acceptable to have a starting point for NPM defined. Or what NPM is not. The ACO has come across instances		Partially agree. Although better definition of NPM may be beneficial, the current language is consistent with other FAA AC's defining this

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				where a combination of movements rather than a single movement during rapid egress is considered NPM by an applicant. In terms of an armtray deployment NPM is the singular action of ones arm pushing the tray up. Complex non NPM is the act of lathing it or using the other arm for a secondary action. In terms of the arm cap the a single motion is passenger to rotate armrest cap in one fluid motion along an arc (too technical..).		movement.
14	LAACO ANM-150L	Page 8 Do the following 3.2.19	SRP measurement choice also applicable to Family of Seat concept	Consistent method of SRP measurement is required not only for the seats in a particular seat model/part number list but also for those in the family.		Concur, however the current language in the TSO does adequately address this comment.
15	LAACO ANM-150L	Page16 Para 5.3.9.9	CAMI report not listed in list of references Page 6 Para 8	Where does one find CAMI report on Test number A91031?		Concur – reference to CAMI report has been removed as it is not an officially published report.
16	LAACO ANM-150L	Page 19 Do the following 3.12.2	NASA Standard 3000 Section 6.3.3 in parentheses is redundant.	See comment		Concur. Changed to <i>NASA Standard 3000 Volume I (NASA-STD-3000 Vol I), Man-Systems Integration Standards, Revision B, July</i>

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						<i>1995, Section 6.3.3</i>
17	LAACO ANM-150L	Page 19 Do the following 3.12.2	Date of publication: NASA & UL	Is publication date critical for UL 1439? NASA publication date in previous recommendation		Concur – changed to: <i>UL 1439, Standard for Tests for Sharpness of Edges on Equipment, Edition 4, February 26, 1998, with revisions through 6/1/2004</i> NASA publication date is addressed in previous comment
18	LAACO ANM-150L	Page 19 Do the following 3.12.2	Add to list of references Page 6 Para 8	Where do I get these		Non-concur. The documents referenced by SAE ARP5526c are listed in section 2 of the ARP 5526c.
19	LAACO ANM-150L	No page	No reference is made to Policy PS-AIR100-9/8/2003/127	Although the PS would need to be reviewed and re-stated this is an excellent guidance material for the standardization of the Instruction for Installation and Limitation (IIL). The IIL is neither referenced nor identified in the TSO and yet numerous requirements are made to installation		Partially Concur. This policy memo is guidance and is not a hard requirement.. However, the TSO has been modified as follows to suggest some of the items defined in great detail the policy memo. Paragraph 5.a.(3) has been revised as follows: Installation procedures and limitations sufficient to ensure

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				limitations		that the aircraft seating system, when installed according to the installation or operational procedures, still meets this TSO's requirements. Limitations must identify any unique aspects of the installation (<i>e.g. seat pitch, aircraft attachments, orientation angle, maximum seat weight, permanent deformation, etc.</i>). The limitations must include a note with the following statement:
20	John Lee ACE-119A	Page 1, Para 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."		Non-concur. This TSO is not for emergency locator equipment. ELT's are TSO-C126
21	ACE111:LT	TSO, Page 2 Para 3.a	Type C applies to acrobatic and commuter categories as well as normal and utility. This includes 23.785, 23.561 and 23.562 as of the latest amendment, 23-62.	Amendment 23-62 and the rules always included acrobatic airplanes.	Change Type C to "Type C – 14 CFR, Part 23 Airplanes."	Partially Concur – Changed to "Small Airplane"

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22	John Lee ACE-119A	Page 2, Para 3.e.	Should there be a corresponding paragraph for Airborne Electronic Hardware.	Consistency and completeness		Although the TSO seat may include electronic components the approval of those parts is limited to their ability to affect meeting the TSO MPS (i.e. structural, occupant injury and flammability). Aspects that fall outside of the TSO MPS need to be evaluated at installation.
23	ACE111:LT	TSO, Page 2 Para 3.c(1)	Lists Section 3.4 and 5. Should be Section 3, Section 4 and Section 5	Correction	Change to “Sections 3, 4, and 5...”	Non-concur. The TSO is written within the framework of the TSO Template defined in 8150.1c. Therefore the section numbers are fixed.
24	ACE111:LT	TSO, Page 2 Para 4.a	Last sentence says must include the serial number. Seats have model and part numbers, but not serial numbers.	Correction	Change sentence to “The marking must include the model and part numbers, and:”	Non-Concur. The TSO is written within the framework of the TSO Template defined in 8150.1c. Paragraph 4.a specifically requires a serial number. AIR-100 believes that there is a benefit in requiring individual markings for each manufactured article.

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25	ACE111:LT	TSO, Page 3 Para 4.a(1)(a)	Type C applies to acrobatic and commuter categories as well as normal and utility. This includes 23.785, 23.561 and 23.562 as of the latest amendment, 23-62.	Amendment 23-62 and the rules always included acrobatic airplanes.	Change Type C to “Type C – 14 CFR, Part 23 Airplanes.”	Partially Concur – Changed to “Small Airplane”
26	John Lee ACE-119A	Page 4, Para 5.c.	Should there be a corresponding paragraph for Airborne Electronic Hardware.	Consistency and completeness		See disposition to comment # 22
27	John Lee ACE-119A	Page 4, Para 5.e.(1)	Also mention Airborne Electronic Hardware.	Consistency and completeness		See disposition to comment # 22
28	John Lee ACE-119A	Page 5, Para 6.g	Should there be a corresponding paragraph for Airborne Electronic Hardware.	Consistency and completeness		See disposition to comment # 22
29	ACE-118Wa	Page 7, 3.2.16	I think the first sentence needs to be reworded to make the requirement that the caps along an aisle closes if it is contacted by someone during normal movement along the aisle. And the term passenger is used, is this requirement only limited to	Requirement of the first sentence requires the caps to close as a result of normal passenger movement along the aisle but doesn’t state if passengers actually have to contact the caps, so as long as a passenger is moving anywhere along the aisle all	Reword to make the requirement for caps to close if it is contacted by any person moving along the aisle, similar to how the second sentence is worded “when contacted by a	Concur – reworded to read as: <i>All hinged armrest caps installed along an aisle must close as a result of normal movement along the aisle. Caps must not snag clothing or present any other impediment to egress when contacted by a person moving in either direction along the aisle.</i>

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			passenger movement or does it also apply to other persons who may be moving along the aisle such as crew members.	the caps along the aisle has to automatically close. The term passenger may be too specific.	person moving in either direction along the aisle.”	
30	ACE111:LT	Appendix 1, Page 8	Need to add a deviation to AS8049B, Table 4. The table lists the sideward g level as 3g but 23.561(b)(2) lists sideward as 1.5g.	Correction	Change 3.0 to 1.5.	Non-Concur. This TSO utilizes an industry standard for many of the performance requirements. In this case the industry standard is more stringent than the minimum requirement by the regulations. Therefore the TSO will utilize the industry standard that envelopes the regulatory requirement.
31	ACE111:LT	Appendix 1, Page 8	Need to add a deviation to AS8049B, Table 4. The table lists the upward g level as 3g but 23.561(b)(2) lists 4.5g for acrobatic airplanes.	Correction	Change upward g level for Part 23 as “3g (4.5g for acrobatic category)”	Concur: Changed note (4) to include Acrobatic Category. Added note (8): Page 16, add a reference to note (8) to be applicable to the <i>Upward</i> load direction for <i>Type C Seat</i> in Table 4. Add note (8) to Table 4 to read as follows: <i>For Acrobatic Category Seats, use a factor of 4.5.</i>

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32	ACE-118Wa	Page 8, 3.2.17	I think this requirement for metal-to-metal latching device is too specific and limiting the design, it would prohibit using any other material even if it may be better than metal. Also the requirement is not clear on whether or not coating other material with metal coating meets the requirement or if the material has to be entirely metal throughout.	Requirement is specifying metal-to-metal latching device instead of design and/or test requirements. Also, it is not clear if this could be interpreted to mean that if you coat some other material with a metal coating, then that would technically meet the requirement for metal-to-metal.	Perhaps change to a design and/or test requirement instead of specifying metal-to-metal.	Non-Concur. Although there is merit to allowing non-metal to metal latching devices, the current MPS may not adequately address some additional considerations that should be required if a non metal to metal latch is utilized. In addition, this requirement is also part of the certification basis for some installations. Therefore, the requirement will stay as is, however the FAA will consider deviations to the TSO if an equivalent level of safety is established.
33	ACE-118Wa	Page 8, 3.2.18	This requirement should be expanded to also include the stowage compartments.	Currently the requirement only specifies that the contents be prevented from becoming hazard and does not include any part of the compartment itself from becoming a hazard.	Reword to have the requirements also apply to the stowage compartments.	Partially concur: This additional clarification although warranted is not required to be added to this section as it is already covered by another section of the MPS. The requirement to have the seat stowage compartment not become a hazard is covered under section 3.2.2 of AS 8049B "3.2.2 Seat elements shall

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						be designed so that, when evaluated under the test conditions of this document, they do not generate hazardous projections that could significantly contribute to injury to occupants that are seated or moving about the airplane or that could impede rapid evacuation.”
34	ACE-118Wa	Page 8, 3.2.19	The wording “all variations of the seat” may be too broad and not clear on the definition of variation.	Without defining what variation means, the requirement may be too broad.	Define what “all variations” mean, perhaps use definition of family of seats as in AC25.562, or require using the same method for seats in the same TSOA.	Concur – added phrase to clarify that this would be applicable within a given TSOA seat model. 3.2.19 now reads as: “The seat reference point (SRP) must be determined using only one of the methods described in Figure 1B. The selected method should be documented, and must be used consistently when evaluating all variations of the seat TSOA model or future changes to the seat TSOA model design.”

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35	ACE111:LT	Appendix 1, Page 8 , Para 3.4.1, 2 nd paragraph	Lists Type C seats as flame resistant. This is correct except for commuter category which must be self-extinguishing.	Correction	Change first sentence to : “Materials in normal, utility and acrobatic category Type C seating systems...” Add sentence: “Commuter category Type C seating systems must meet the self-extinguishing requirements in 14 CFR part 23, Appendix F, Part 1 (per Amendment 23-62).”	Concur and changed
36	ACE111:LT	Appendix 1, Page 9 , Para 3.4.1, last paragraph	Lists Appendix F of Part 23 as Amendment 23-49. Last amendment of Appendix F is 23-62.	Correction	Change 23-49 to 23-62.	Concur and changed as noted
37	ACE111:LT	Appendix 1, Page 9 , Para 3.4.2, last paragraph	This conflicts with 3.4.1	Clarification	Delete last paragraph. Type C seat cushion systems shall be self extinguishing when tested to meet the fire protection provisions of Appendix F of 14	Concur

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					CFR part 23 effective March 11, 1996. You may also demonstrate the material's fire protection properties by analysis (similarity) to provide equivalent protection.	
38	ACE111:LT	Appendix 1, Page 10, Para 4, Table 4 Note 2	Says must mark increased load factors on the TSO placard and references Appendix 2 which says may mark increased load factors on the TSO placard.	Clarification	Mark both as must or may.	Concur – changed to use the word “must” and rephrased Appendix 2, paragraph C to: “ <u>Testing to Higher Static Loads:</u> To substantiate the seat to load factors higher than those specified in Table 4 of AS8049B or to combined load factors, you must report the higher load factors along with paragraph 5.h requirements. You must mark the higher load factors on the TSO placard.”
39	ACE111:LT	Appendix 1, Page 10, Para 4, Table 4 Note 7	Says to delete the note as an airplane requirement. A TSO manufacturer that uses the lower seat factors would not be eligible for a plane that uses 23.807(d)(4).	Believe the note is useful for a TSO manufacturer.	Delete the change to the ARP.	Non-concur. This note was removed as it is not the TSO holder's responsibility for ascertaining a seats suitability for 23.807(d)(4). However, the TSO has a provision to test and qualify a seat to higher static loads as necessary for a particular

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						installation.
40	ACE111:LT	Appendix 1, Page 12, Para 5.3.3.6c	Last sentence lists 16g longitudinal test which is a Part 25 level.	Clarification	Change last sentence to “ head path data in the longitudinal test per the applicable dynamic seat test.”	Concur that it should not single out 16g seats. Changed paragraph “5.3.3.6.c” to read as: <i>“Test 2 (Figures 6, 7A, & 7B) conducted solely to collect head/knee path data should be conducted with 0° yaw and without floor deformation. The test must be conducted on the seat with the greatest overhang among the seats selected for the applicable forward longitudinal dynamic structural test. It is acceptable to use the opposite-hand part for this seat. The occupancy used in the applicable forward longitudinal dynamic structural test must be used for this test. For consistency, a floor should be used for tests used to gather head path data. It is acceptable to collect ATD head path data in the applicable forward longitudinal dynamic structural test.”</i>

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41	ACE-118Wa	Page 17, Par 2.0	The revision year should be 2011 instead of 2004.	Correct the year of revision date of ARP5526C.	Change year from 2004 to 2011.	Concur and changed accordingly.
42	ACE-118Wa	Page 20, Appendix 2	Wording of “elective MPS” in the title of appendix 2 and the first paragraph should be reworded to state that the MPS in appendix 2 is required if the seat has the elective features and would be in addition to appendix 1. (Item (c) I think should be moved to appendix 1 as part of addition AS8049B or deleted entirely since it seems redundant to page 10 note (2) in appendix 1).	Although items a-e does state “For seats...”, the way the title and first paragraph is worded makes it seem that compliance to the MPS in appendix 2 is entirely “elective”, that applicants can elect to not comply even if the seats have the features, when it should be required if the seat has the features. The features are the elective and the MPS are required if it applies, not that compliance to the MPS is elective.	Reword to make it clear that the MPS is required if the seat has the features and it would be in addition to applicable requirements in appendix 1.	Non-concur. Appendix 2 was created to accommodate specific gaps between the TSO and specific installation requirements that are easily tested and controlled by the TSOA holder. Many of these requirements are highly dependent on the aircraft into which it is intended to be installed rather than features intrinsic to the article itself. Therefore, Appendix 2 was created to clearly document and approve specific performance requirements that may be applicable for an intended installation.
43	ANE150	Page 2, para 3(b)	There are instructions to document failure condition classifications but does not provide details on the classifications that	How each applicant determines the failure condition classification should be consistent, at least among same seat types.	Add that the applicants are to use the failure condition classifications as discussed in the	Partially concur. The current language in document the does not provide details for the classifications that applicants are to make.

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			applicants are to make.		appropriate AC 23.1309, 25.1309, 27.602 or 29.602.	<p>However, for cabin safety TSO articles no failure condition classification is required at the TSO article level. Therefore the TSO is rewritten as:</p> <p>There is no standard minimum failure condition classification for this TSO. The failure condition classification appropriate for the equipment will depend on the intended use of the equipment in a specific aircraft. Document the loss of function and malfunction failure condition classification for which the equipment is designed</p>
44	ANE150	Page 2, para 4(a)	Marking requirement is not consistent with 14 CFR 45.15(b)	Regulation indicates to mark article with serial number, date of manufacture, or both.	Revise to indicate marking must include, "serial number or date of manufacture, or both... and:" Need to match 45.15(b) requirements.	Non-Concur. This language is as specified in Order 8150.1c
45	ANE150	Page 3, para 4(a)(3)	This requirement for identifying approved seat pitch should be expanded to other seat types as it now includes the requirement for seat pitch due to head injury criteria (HIC), which applies to all seat types depending on aircraft certification basis.	Previous TSO C127a did not indicate identifying the approved seat pitch due to HIC, only those necessary for egress. Part 23, 27 and 29 also includes requirements for HIC. Therefore, this requirement should be for all seat types and not just for Type A.	Apply this requirement for all seat types. If this is only for multiple row seating in transports, then this should be revised to include Type B Transport.	Partially agree. Since the referenced AC is for Part 25 installation requirements, it may not be appropriate to expand for Type B seats. Therefore, the wording is returned to the same as in TSO-C127a. Examples of aspects that could affect the TSO (such as occupant

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						injury criteria) are referred to in section 5.a.3
46	ANE150	Page 3, para 4(a)(5)	Type B Transport flammability requirements based on the date of 14 CFR 29.853 amdt 29-23, should continue to be marked as described in TSO C127a.	Due to the date of amendment 29-23, effective 11/26/84, having a marking later than that date wouldn't be appropriate.	Add marking requirement for Type B Transport Meets provisions of 14 CFR Part 25, Appendix F, Part II, effective November 26, 1984..”	Non-conur. This revision of the TSO is emphasizing performance requirements and not referencing airworthiness regulations. With that said the TSO does aim to align with the applicable airworthiness regulations. 29.853 states what parts need to be tested and what the failure criteria is, then points to the standard in Appendix F for the test setup and procedures. The latest revision of Appendix F cited in the TSO effectively envelopes the 29.853 requirements applicable to seats by stating what parts need to be tested, and to what test standard/criteria the parts are required to be tested.

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47	ANE150	Page 8, Table 1, AS8049B, 3.4.1	Type B Transport flammability requirements based on the date of 14 CFR 29.853 amdt 29-23, links to only Part 25 Appendix F at amdt 25-59	This difference was also a reason for the different marking requirements between Type A and Type B flammability markings in TSO C127a.	Revise to indicate that Type B seats meet the requirements of part 25, Appendix F, Part I, amendment 25-59.	See disposition to comment # 46
48	ANE150	Page 8, Table 1, AS8049B, 3.4.1	What is the process for the small part approval for LODAs?	As TSOA applicants need FAA evaluation, LODA applicants should have a similar acceptance by their CAA.	For LODAs, documentation of the CAAs concurrence of the small parts classification should be provided.	Non-concur. It is the CAA's responsibility to concur and attest to conformance to the FAA TSO requirements before forwarding the LODA application to the FAA for approval.
49	AIR-220	Page 3, Paragraph a(1)	Grammatical error.	Self-explanatory.	Rewrite to read: "...with a dash, "-."	Concur – However, removed symbol in quotations and just included the word <i>dash</i> . This in conjunction with the example should be sufficient for clarity.
50	AIR-220	Page 3, Paragraph a(1)	Grammatical error.	Self-explanatory.	Rewrite to read: "Type A-1-FF-ac."	Concur & revised as noted.

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51	AIR-220	Page 3, Paragraph 1(a)	Grammatical error.	Self-explanatory.	Place a period after the end of the sentence.	Concur. Revised as noted.
52	AIR-220	Page 8, Paragraph 8(b)	The instructions provided to obtain online copies of 14 CFR part 21 appear to be incorrect.	Unable to obtain the referenced online information by following the link provided in this TSO.	Rewrite this section as follows: To order online, visit the U.S. Government Online Bookstore at http://bookstore.gpo.gov and select the search function.	Non-concur. The link goes to the GPO website where FDsys can be accessed and CFR's can be looked up.
53	AIR-220	Page 7, Paragraph 1.0, Table 1-SAE AS8049B	For consistency purposes, delete the period after the second "Disregard."	Self-explanatory.	For consistency purposes, delete the period after the second "Disregard."	Concur. Revised as noted.
54	AIR-220	Page 8, Paragraph 1.0, Table 1-SAE AS8049B, section 3, continued	Grammatical error.	Self-explanatory.	Place a period after the end of the first sentence that reads: "Page 6, add..."	Partially Concur. Added colon to be consistent with other sections.

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55	AIR-220	Page 9, Paragraph 1.0, Table 1-SAE AS8049B, section 3, continued	Grammatical error.	Self-explanatory.	Place a period after the end of the third sentence that reads: "...as defined per Amendment..."	Concur. Revised as noted.
56	AIR-220	Page 17, Paragraph 2.0, Table 1-SAE AS8049B	For consistency purposes, delete the period after the second "Disregard."	Self-explanatory.	For consistency purposes, delete the period after the second "Disregard."	Concur
57	AIR-220	Page 17, Paragraph 2.0, Table 1-SAE AS8049B, section 3.3.2.(b)	Grammatical error.	Self-explanatory.	Delete the extra period after "etc."	Non-concur. Grammar is correct as is.
58	AIR-220	Page 19, Paragraph 2.0, Table 1-SAE AS8049B, Appendix B	Grammatical error.	Self-explanatory.	Place a period after the end of the sentence that reads: "...per ARP 5526C."	Concur – Created new sentence: "Evaluate per ARP 5526C subsection 3.2.2."
59	ANE- 171	Page 2, section 4	The AIR policy memo "Application of TSO-C127a Marking Requirements" dated Feb 15,2000 is the current policy that	Changes to TSO article is not addressed and there is no reference to this memo in this draft TSO.		Non-Concur. The current marking requirements in section 4 of the TSO is consistent with the intent of the cited policy memo.

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			supplements the TSO-C127a. None of the information included in this memo was incorporated in draft TSO-127b.			There are some additional items not mentioned in the policy, and there are some items that were specifically removed in the latest TSO revision. Other sections of the policy are more guidance rather than hard requirements and are not included in the TSO. AIR-100 is also in the process of revising pertinent policy for TSO-C127().
60	ASW-190	Page 5 5.e.	It is not clear whether the exception "(Not required for LODA applicants.)" applies to the entirety of c., or only the last sentence.	Do LODA applicants need to submit a quality system description?	If the exception is for the entirety of e., then move the exception to the beginning of that paragraph. If the exception is just for the second sentence, rephrase the exception.	Non-concur. LODA is for design approval only. The issuance of the production approval and oversight is the responsibility of the applicable CAA. However, this proposal will be forwarded to the TSO template policy holder.
61	ASW-190	Page 19 Appendix I ARP5526 C Section 3 3.12.2	It is not clear whether potential sharp edges need to meet <u>either</u> or <u>both</u> of the criteria (NASA 3000 and/or UL 1439).	The last sentence of the first paragraph is an 'or' statement in negative ("... are <u>not</u> acceptable"), which can be interpreted that failure to meet either spec is unacceptable. I think the intent is that the design is acceptable if either spec is met.	Clearly state that either following the NASA 3000 criteria or passing the UL 1439 test is sufficient, and it is not necessary to meet both requirements. OR	Concur. Rephrased as: Definition and Criteria: Edges that could cut skin during normal use should be eliminated and for maintenance should be minimized. <i>Edges that are accessible (as defined in section 3.11.2.1) during normal use shall</i>

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					State that the UL 1439 test should only be conducted if the NASA 3000 criteria are not followed.	<p><i>meet:</i></p> <ol style="list-style-type: none"> 1. <i>NASA Standard 3000 Volume I (NASA-STD-3000 Vol I), Man-Systems Integration Standards, Revision B, July 1995, Section 6.3.3, or</i> 2. <i>UL 1439, Standard for Tests for Sharpness of Edges on Equipment, Edition 4, February 26, 1998, with revisions through 6/1/2004.</i>