

**Clearance Record**  
**DOCUMENT COMMENT LOG**

<b>Originating Office:</b>  AIR-130	<b>Document Description:</b> TSO-C196b/C206 Consolidated Public Comments	<b>Project Lead:</b>  Kevin Bridges	<b>Reviewing Office:</b>	<b>Date of Review:</b>
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<b>Comment Number</b>	<b>Page &amp; Paragraph</b>	<b>Comment</b>	<b>Rationale for Comment</b>	<b>Recommendation</b>	<b>Disposition</b>
1. Thales Avionics		We concur with this new approach of certifying sub assembly. Nevertheless as EU industrial, we are keen to have a harmonized approach between FAA and EASA on this topic in order to keep a level playing field.		FAA and EASA to harmonize their position on this subject.	<b>Accepted.</b> EASA is aware of these draft TSOs, but the FAA cannot guarantee EASA will adopt an ETSO version. However, the FAA has not received an indication that EASA disagrees with the proposal.  The FAA will continue discussions with EASA to resolve any harmonization issues.
2. Thales Avionics	TSO C206 §5, TSO C196b §5	To be consistent with TSO C145d, C146d, paragraph 5.i (instead of 5.e) should be excluded from the data submitted to the civil aviation authority.		Replace “5.e” by “5.i”	<b>Accepted.</b>
3. CMC	C196 / Page 3 / Para. 3.e.(1)	Requires compliance to DO-178C. However using DO-178B per AC 20-155C, the software will be declared as DO-178B compliant not DO-178C.	Note 2 implies that software must meet DO-178C and be declared as such which is not the guidance of the AC.	Update Note 2: Applicants should refer to AC 20-115C for other acceptable means of software development using legacy software or software development	<b>Partially Accepted.</b> The FAA is currently resolving the TSO template language for DO-178B versus revision ‘C’. The current policy is to reference

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		Such use of DO-178B must not require a deviation from the TSO.		methods.	revision 'B' until the template language issue is settled.  Note 2 has been deleted and all references to DO-178C are changed to revision 'B'.
4. CMC	C196 / Page 4 / Para. 5	Incorrect reference to 5.g	See text in 5.i.	Refer to 5.i.	<b>Accepted.</b>
5. CMC	C196 / Page 6 / Para. 5.a.(7)(b)	As written, a TSO-C144 active antenna appears excluded. Also use consistent wording with 5.a.(7)(a) as done in C206.	DO-316 Section 2.1.1.10 Note 1 and AC 20-138C Table 2-2 allow such an active antenna.	Include TSO-C144 active antenna in referenced TSO list. Replace "is installed" with "can satisfy the requirements of RTCA/DO-316".	<b>Not Accepted.</b> The language is the same as TSO-C196a except that the single paragraph is divided into two for easier reading. Nothing prevents an applicant from using a TSO-C144 active antenna as a manufacturer-specified antenna per 5.a(7)(a) and AC 20-138 (latest revision).
6. CMC	C206 / Page 2 / Para. 3.e.	Requires compliance to DO-178C. However using DO-178B per AC 20-155C, the software will be declared as DO-178B	Note 2 implies that software must meet DO-178C and be declared as such which is not the guidance of the AC.	Update Note 2: Applicants should refer to AC 20-115C for other acceptable means of software development using legacy software or	<b>Partially Accepted.</b> The FAA is currently resolving the TSO template language for DO-178B versus revision 'C'. The current

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		compliant not DO-178C. Such use of DO-178B must not require a deviation from the TSO.		software development methods.	policy is to reference revision 'B' until the template language issue is settled.  Note 2 was deleted and all references to DO-178C are changed to revision 'B'.
7. CMC	C206 / Page 2 / Para. 3.e.	Sentence states "... according to <u>either</u> ..." which implies an alternative when none is provided.	Implies alternative when none required; Note 2 covers the alternatives.	Delete "either".	<b>Accepted.</b>
8. CMC	C206 / Page 3 / Para. 5	Incorrect reference to 5.e)	See text in 5.i.	Refer to 5.i.	<b>Accepted.</b>
9. CMC	C206 / Page 4 / Para. 5.a.(6)(b)	As written, a TSO-C144 active antenna appears excluded. Also no equipment classes in DO-316.	D DO-316 Section 2.1.1.10 Note 1 and AC 20-138C Table 2-2 allow such an active antenna.	Include TSO-C144 active antenna in referenced TSO list. Delete Class 1 reference.	<b>Partially Accepted.</b> The class 1 reference is deleted.  TSO-C206 is consistent with TSO-C196a/b and nothing prevents an applicant from using a TSO-C144 active antenna as a manufacturer-specified antenna per 5.a(6)(a) and AC 20-138 (latest revision).

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10. CMC	C206 / Page 6 / Para. 5.h.	Missing item 5.h.(6) of TSO-C196	Consistency with TSO-C196a and C204	Use text from TSO-C196b para. 5.h.(6)	<b>Accepted.</b>
11. Garmin	TSO-C196b Page 1, par 2.a	Section 2.a allows only 18 months after the effective date of this new TSO revision for all products in development against the previous revision to be completed and receive approval against the previous revision.	18 months is a relatively short grace period for products where development cycles can easily exceed 2 years.	Products being developed against the previous TSO revision should be allowed 24 months from the new TSO revision release to finish all qualification and approvals against the previous TSO revision the product was designed and developed against. Garmin appreciates the recent TSO template change to allow 18 months over the previous 6 months, but we believe 24 months is more in line with industry standard development cycles of 2 to 3 years.	<b>Not Accepted.</b> This is the standard template language and time frame for TSOs.
12. Garmin	TSO-C196b Page 2, par. 3.b	Includes the statement:  (1) Failure of the function defined in paragraph 3.a causing misleading information is a <i>major</i> failure condition for	It is reasonable to clarify the wording to ensure aircraft level analysis is the driver for determining failure classifications. EASA has recognized this using the following wording in ED	We recommend that no failure classification/DAL requirement be included in the TSO as this requires an aircraft level system assessment. Or add the following general guidance:	<b>Not Accepted.</b> This is consistent with the TSO template language and all previous TSO-C196 revisions.

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		<p>oceanic/remote, en route and terminal navigation, and lateral navigation (LNAV) approaches.</p> <p>(2) Loss of the function defined in paragraph 3.a is a <i>minor</i> failure condition for oceanic/remote, en route and terminal navigation, and LNAV approaches.</p> <p>(3) Design the system to at least these failure condition classifications.</p> <p>Wording needs to change to recognize the fact that failure condition classification is ultimately determined by aircraft level analysis.</p>	<p>Decision 2010/010/R 14/12/2010 Annex I Subpart A – General 2.4 Failure condition classification:</p> <p>“Develop the system to, at least, the design assurance level equal to the failure condition classifications provided in the ETSO. Development to a lower Design Assurance Level may be justified for certain cases and accepted during the ETSO process but will lead to installation restrictions.”</p>	<p>“The design assurance for the functions defined in paragraph 3.b of this TSO must be commensurate with the failure conditions listed even if the installation assesses the equipment failure to have a lesser safety effect.”</p>	
13. Garmin	TSO-C196b Page 3, par 3.e	Section 3.e “Software Qualification” requires compliance with DO-178C.	<p>AC 20-115C allows DO-178B to be used to show compliance for the software aspects of airborne systems.</p> <p>The “Note 2” should be elevated to a requirement to explicitly allow DO-178B as allowed in AC 20-115C. Elevating this note to</p>	<p>An additional statement should be added to allow use of 178B or 178C as appropriate.</p> <p>Remove “Note 2”, keep item (1) under 3.e as is, and add an item (2) under 3.e: “Applicants with legacy software may use</p>	<b>Partially Accepted.</b> The FAA is currently resolving the TSO template language for DO-178B versus revision ‘C’. The current policy is to reference revision ‘B’ until the template language issue is settled.

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			<p>requirement would allow applicants to use standards other than DO-178C (as allowed by AC 20-115C) without the need to send deviations to the FAA. This change will reduce burden on both the FAA and the applicants in reviewing minimal DO-178B deviations as DO-178B could be used without need for a deviation, which aligns with the intent of “Note 2”.</p> <p>This would be particularly relevant for equipment that has been granted TSOA to a previous revision of TSO-C196.</p>	<p>RTCA/DO-178B rather than RTCA/DO-178C, if such use is in accordance with AC 20-115C .”</p>	<p>Note 2 was deleted and all references to DO-178C are changed to revision ‘B’.</p>
<p>14. Garmin</p>	<p>TSO-C196b Page 3, par 3.e.(2)</p>	<p>Paragraph 3.e.(2) states that applicants using a TSO-C206 CCA functional sensor can use TSO-C206 as substantiation for the software qualification.</p> <p>The wording of this section should change to state that software resident in the appliance needs to be</p>	<p>It is possible (perhaps likely) that the outputs from the TSO-C206 CCA are processed by software resident in the appliance but external to the CCA. The current wording of the TSO paragraph does not appear to require software resident in the appliance but external to the TSO-C206 CCA to be</p>	<p>Clarify text of paragraph 3.e.(2) to require that any appliance software that can potentially introduce failures or cause loss of function for any function defined in this TSO be developed in accordance with RTCA/DO-178C or RTCA/DO-178B.</p>	<p><b>Not Accepted.</b> There is no requirement to use a TSO-C206 CCA functional sensor. However, if an applicant does use one, then paragraph 3.e.(2) allows credit for the software development in the TSO-C206 <u>sensor</u>.</p> <p>The end-use applicant is</p>

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		developed in accordance with RTCA/DO-178C or RTCA/DO-178B if it can potentially introduce failures or cause loss of function for any function defined in this TSO.	developed in accordance with RTCA/DO-178.  If the appliance software can introduce failures or cause loss of function, then it also needs to be developed in accordance with RTCA/DO-178.		responsible for all other aspects of the TSO-C196b application not covered by virtue of the C206 TSOA.
15. Garmin	TSO-C196b Page 3, par 3. f	Section 3.f requires development according to DO-254 for all Design Assurance Levels.	AC 20-152 paragraph 1.b provides guidance that in all cases where the AEH DAL is Minor or lower DO-254 is not required.	Adjust the Electronic Hardware Qualification guidance as defined in AC 20-152 paragraph 1.b, which provides guidance that where the complex AEH DAL is Minor DO-254 compliance is not required.	<b>Not Accepted.</b> This is the standard template language and is consistent with previous TSO revisions.  AC guidance can be applied as appropriate.
16. Garmin	TSO-C196b Page 4, par 3.f.(2)	Paragraph 3.f.(2) states that applicants using a TSO-C206 CCA functional sensor can use TSO-C206 as substantiation for the complex custom airborne electronic hardware (AEH) qualification.  The wording of this section should change to state that complex custom AEH resident in the appliance	It is possible (perhaps likely) that the outputs from the TSO-C206 CCA are processed by complex custom AEH resident in the appliance but external to the CCA. The current wording of the TSO paragraph does not appear to require complex custom AEH resident in the appliance but external to the TSO-C206 CCA to be developed in	Clarify text of paragraph 3.f.(2) to require that any appliance complex custom AEH that can potentially introduce failures or cause loss of function for any function defined in this TSO be developed in accordance with RTCA/DO-254.	<b>Not Accepted.</b> There is no requirement to use a TSO-C206 CCA functional sensor. However, if an applicant does use one, then paragraph 3.e.(2) allows credit for the software development in the TSO-C206 <u>sensor</u> .  The end-use applicant is responsible for all other aspects of the TSO-C196b

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		needs to be developed in accordance with RTCA/DO-254 if it can potentially introduce failures or cause loss of function for any function defined in this TSO.	accordance with RTCA/DO-254.  If the appliance complex custom AEH can introduce failures or cause loss of function, then it also needs to be developed in accordance with RTCA/DO-254.		application not covered by virtue of the C206 TSOA.
17. Garmin	TSO-C196b Page 4, par 4.b.(2)	Paragraph 4.b.(2) states:  Each subassembly of the article that you determined may be interchangeable.  This language is confusing.	The language for this requirement is confusing. This could mean that a stuffed printed circuit board needs the TSO number.	Suggest removing the statement or if removing causes problems, work with industry to establish wording that is better understood.	<b>Not Accepted.</b> This is the standard template language.
18. Garmin	TSO-C196b Page 6, par 5.c.	A PSAC, SW configuration index (SCID), and SW accomplishment summary (SAS) should be required for any software resident in the appliance but external to the TSO-C206 CCA that can potentially introduce failures or cause loss of function for any function defined in this TSO. Such software should be developed in accordance RTCA/DO-178C or	As mentioned above, some software in the appliance but external to the TSO-C206 CCA may be needed to meet the TSO requirements. This software must be developed in accordance with RTCA/DO-178C or RTCA/DO-178B and a PSAC, SCID, and SAS should be provided for these software items.	Add text to paragraph 5.c. stating that a PSAC, SCID, and SAS are required for any software items in the appliance that need to be developed in accordance with RTCA/DO-178C or RTCA/DO-178B.	<b>Not Accepted.</b> This paragraph is for the applicant that <u>does not</u> choose to use a TSO-C206 CCA. Applicants that don't use C206 must develop a PSAC just as they normally would when making application for a sensor under TSO-C196b.  Applicants choosing to use a C206 CCA sensor get full software credit by virtue of

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		RTCA/DO-178B.			the C206 TSOA and only have to develop data not credited to C206 for their C196b application.
19. Garmin	TSO-C196b Page 6, par 5.d	A PHAC, hardware verification plan, top-level drawing, and hardware accomplishment summary should be required for any complex custom airborne electronic hardware (AEH) resident in the appliance but external to the TSO-C206 CCA that can potentially introduce failures or cause loss of function for any function defined in this TSO. Such complex custom AEH should be developed in accordance RTCA/DO-254.	As mentioned above, some complex custom AEH in the appliance but external to the TSO-C206 CCA may be needed to meet the TSO requirements. This hardware must be developed in accordance with RTCA/DO-254 and a PHAC, hardware verification plan, top-level drawing, and hardware accomplishment summary should be provided for these software items.	Add text to paragraph 5.d. stating that a PHAC, hardware verification plan, top-level drawing, and hardware accomplishment summary are required for any complex custom AEH in the appliance that needs to be developed in accordance with RTCA/DO-254.	<b>Not Accepted.</b> This paragraph is for the applicant that <u>does not</u> choose to use a TSO-C206 CCA. Applicants that don't use C206 must develop a PHAC just as they normally would when making application for a sensor under TSO-C196b.  Applicants choosing to use a C206 CCA sensor get full hardware credit by virtue of the C206 TSOA and only have to develop data not credited to C206 for their C196b application.
20. Garmin	TSO-C196b Page 7, par 5.h	TSO paragraph 5.h and its subparagraphs define required information to be supplied to the ACO for a non-TSO function. This guidance is inconsistent with Order 8110.4C CHG 4.	TSO paragraph 5.h indicates that "you must ... include the following information with your TSO application" but the TSO 5.h subparagraphs which specify the required information to be supplied to	Adjust the wording in the TSO (template) to be consistent with the 8110.4C CHG 4 intent.	<b>Not Accepted.</b> This is the template language for non-TSO functions.

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			<p>the ACO for a non-TSO function are inconsistent with the Order 8110.4C CHG 4 paragraph 6-9.b.(3) “Manufacturer Data Submittal” requirements. For example, TSO paragraphs 5.h.(5) and 5.h.(6) require submittal of “Results of test/analysis” while Order 8110.4C CHG 4 paragraph 6-9.b.(3) requires submittal of “proposed test procedures”; while both sets of guidance use the word “test”, otherwise there is no similarity.</p>		
21. Garmin	TSO-C196b Page 7, par 5.h	TSO paragraph 5.h and its subparagraphs include definition of non-TSO functions. This guidance is inconsistent with Order 8110.4C CHG 4.	<p>TSO paragraph 5.h states “Identify functionality or performance contained in the article not evaluated under paragraph 3 of this TSO (that is, non-TSO functions).” Use of the term “performance” in the definition of a non-TSO function is inconsistent with the Order 8110.4C CHG 4 paragraph 6-9.b.(1) and 6-9.b.(3)(a) guidance regarding how to define a non-TSO</p>	Adjust the wording in the TSO (template) to be consistent with the 8110.4C CHG 4 intent.	<p><b>Not Accepted.</b> This is the template language.</p> <p>We will explore better ways to explain the difference between performance better than what is required by the TSO, and a function completely unrelated to the TSO.</p>

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			<p>function. The issue is non-TSO should not be defined as “performance”. It will create difficulty if these criteria are used. For example, if a TSO requires a minimum 10 watt transmitter and a company makes equipment that is robust at 11 watts, the performance exceeding the TSO is not called out under the TSO; consequently, by the paragraph 5.h “performance” definition, the 11 watt transmitter has a non-TSO 1 watt capability. The distinction of a “function that can be accomplished outside the TSO box” as is specified in Order 8110.4C CHG 4 paragraph 6-9 is critical to making non-TSO function work long term.</p>		
22. Garmin	TSO-C196b Page 8, par 6.g	This requirement should also apply to software resident in the appliance but external to the TSO-C206 CCA that can potentially introduce failures or cause loss of function for any	As mentioned above, some software in the appliance but external to the TSO-C206 CCA may be needed to meet the TSO requirements. This software must be developed in accordance with	Modify paragraph 6.g to state that the appropriate RTCA/DO-178C or RTCA/DO-178B documentation should be available for all software in the appliance that is not	<b>Not Accepted.</b> This paragraph is for the applicant that <u>does not</u> choose to use a TSO-C206 CCA. Applicants that don’t use C206 must develop the software just as

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		function defined in this TSO.	RTCA/DO-178C or RTCA/DO-178B and the appropriate documentation should be available for review by the responsible ACO.	covered under TSO-C206.	<p>they normally would when making application for a sensor under TSO-C196b.</p> <p>Applicants choosing to use a C206 CCA sensor get full software credit by virtue of the C206 TSOA and only have to develop data not credited to C206 for their C196b application.</p>
23. Garmin	TSO-C196b Page 8, par 6.h	This requirement should also apply to complex custom airborne electronic hardware (AEH) resident in the appliance but external to the TSO-C206 CCA that can potentially introduce failures or cause loss of function for any function defined in this TSO.	As mentioned above, some complex custom AEH in the appliance but external to the TSO-C206 CCA may be needed to meet the TSO requirements. This complex custom AEH must be developed in accordance with RTCA/DO-254 and the appropriate documentation should be available for review by the responsible ACO.	Modify paragraph 6.h to state that the appropriate RTCA/DO-254 documentation should be available for all complex custom AEH in the appliance that is not covered under TSO-C206.	<p><b>Not Accepted.</b> This paragraph is for the applicant that <u>does not</u> choose to use a TSO-C206 CCA. Applicants that don't use C206 must develop the hardware just as they normally would when making application for a sensor under TSO-C196b.</p> <p>Applicants choosing to use a C206 CCA sensor get full hardware credit by virtue of the C206 TSOA and only have to develop data not credited to C206 for their C196b application.</p>

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24. Garmin	TSO-C196b Page 8, par 7.b	TSO paragraph 7.b contains wording that is inconsistent with Order 8110.4C CHG 4.	TSO paragraph 7.b includes additional guidance about what furnished data should be provided to an operator or repair station when the equipment includes a non-TSO function. The problematic guidance states “include one copy of the data in paragraphs 5.h.(1) through 5.h.(4).” This guidance is inconsistent with Order 8110.4C CHG 4. Order 8110.4C CHG 4 paragraph 6-9.b.(6) defines the FAA-industry agreed data that must be provided to an installer when equipment includes a non-TSO function.	Adjust the wording in the TSO (template) to be consistent with the 8110.4C CHG 4 intent.	<b>Not Accepted.</b> The additional items are necessary due to the unique nature of the TSO compared to what is generically envisioned by the template.
25. Garmin	TSO-C206 Page 2, par. 3.b	Includes the statement:  <b>(1)</b> Failure of the function defined in paragraph <b>3.a</b> causing misleading information is a <i>major</i> failure condition for oceanic/remote, en route and terminal navigation, and lateral navigation (LNAV) approaches.  <b>(2)</b> Loss of the	It is reasonable to clarify the wording to ensure aircraft level analysis is the driver for determining failure classifications. EASA has recognized this using the following wording in ED Decision 2010/010/R 14/12/2010 Annex I Subpart A – General 2.4 Failure condition classification:	We recommend that no failure classification/DAL requirement be included in the TSO as this requires an aircraft level system assessment. Or add the following general guidance:  “The design assurance for the functions defined in paragraph 3.b of this TSO must be commensurate with	<b>Not Accepted.</b> This is consistent with the TSO template language and TSO-C196b.

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		<p>function defined in paragraph 3.a is a <i>minor</i> failure condition for oceanic/remote, en route and terminal navigation, and LNAV approaches.</p> <p>(3) Design the system to at least these failure condition classifications.</p> <p>Wording needs to change to recognize the fact that failure condition classification is ultimately determined by aircraft level analysis.</p>	<p>“Develop the system to, at least, the design assurance level equal to the failure condition classifications provided in the ETSO. Development to a lower Design Assurance Level may be justified for certain cases and accepted during the ETSO process but will lead to installation restrictions.”</p>	<p>the failure conditions listed even if the installation assesses the equipment failure to have a lesser safety effect.”</p>	
26. Garmin	TSO-C206 Page 2, par 3.e	Section 3.e “Software Qualification” requires compliance with DO-178C.	<p>AC 20-115C allows DO-178B to be used to show compliance for the software aspects of airborne systems.</p> <p>The “Note 2” should be elevated to a requirement to explicitly allow DO-178B as allowed in AC 20-115C. Elevating this note to requirement would allow applicants to use standards other than DO-178C (as allowed by AC 20-115C) without the need to send</p>	<p>An additional statement should be added to allow use of 178B or 178C as appropriate.</p> <p>Remove “Note 2”, keep item (1) under 3.e as is, and add an item (2) under 3.e: “Applicants with legacy software may use RTCA/DO-178B rather than RTCA/DO-178C, if such use is in accordance with AC 20-115C .”</p>	<p><b>Partially Accepted.</b> The FAA is currently resolving the TSO template language for DO-178B versus revision ‘C’. The current policy is to reference revision ‘B’ until the template language issue is settled.</p> <p>Note 2 was deleted and all references to DO-178C are changed to revision ‘B’.</p>

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			deviations to the FAA. This change will reduce burden on both the FAA and the applicants in reviewing minimal DO-178B deviations as DO-178B could be used without need for a deviation, which aligns with the intent of “Note 2”.		
27. Garmin	TSO-C206 Page 2, par 3. f	Section 3.f requires development according to DO-254 for all Design Assurance Levels.	AC 20-152 paragraph 1.b provides guidance that in all cases where the AEH DAL is Minor or lower DO-254 is not required.	Adjust the Electronic Hardware Qualification guidance as defined in AC 20-152 paragraph 1.b, which provides guidance that where the complex AEH DAL is Minor DO-254 compliance is not required.	<b>Not Accepted.</b> This is the standard template language and is consistent with previous TSO revisions.  AC guidance can be applied as appropriate.
28. Garmin	TSO-C206 Page 3, par 4.b.(2)	Paragraph 4.b.(2) states:  Each subassembly of the article that you determined may be interchangeable.  This language is confusing.	The language for this requirement is confusing. This could mean that a stuffed printed circuit board needs the TSO number.	Suggest removing the statement or if removing causes problems, work with industry to establish wording that is better understood.	<b>Not Accepted.</b> This is the standard template language.
29. Garmin	TSO-C206 Page 5, par 5.h	TSO paragraph 5.h and its subparagraphs define required information to be supplied to the ACO for a non-TSO function. This	TSO paragraph 5.h indicates that “you must ... include the following information with your TSO application” but the TSO 5.h subparagraphs	Adjust the wording in the TSO (template) to be consistent with the 8110.4C CHG 4 intent.	<b>Not Accepted.</b> This is the template language for non-TSO functions.

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		guidance is inconsistent with Order 8110.4C CHG 4.	which specify the required information to be supplied to the ACO for a non-TSO function are inconsistent with the Order 8110.4C CHG 4 paragraph 6-9.b.(3) “Manufacturer Data Submittal” requirements. For example, TSO paragraph 5.h.(5) requires submittal of “Results of test/analysis” while Order 8110.4C CHG 4 paragraph 6-9.b.(3) requires submittal of “proposed test procedures”; while both sets of guidance use the word “test”, otherwise there is no similarity.		
30. Garmin	TSO-C206 Page 5, par 5.h	TSO-C206 paragraph 5.h excludes paragraph 5.f.(6) from the 8150.1C TSO template.	Excluding paragraph 5.f.(6) seems inconsistent with the need to verify the function and performance of the Non-TSO functions.	Add paragraph 5.f.(6) from the 8150.1C TSO template. However, adjust the wording in the TSO (template) to be consistent with the 8110.4C CHG 4 intent as noted in Garmin’s other TSO-C206 par 5.h comments.	<b>Accepted.</b>

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31. Garmin	TSO-C206 Page 5, par 5.h	TSO paragraph 5.h and its subparagraphs include definition of non-TSO functions. This guidance is inconsistent with Order 8110.4C CHG 4.	TSO paragraph 5.h states “Identify functionality or performance contained in the article not evaluated under paragraph 3 of this TSO (that is, non-TSO functions).” Use of the term “performance” in the definition of a non-TSO function is inconsistent with the Order 8110.4C CHG 4 paragraph 6-9.b.(1) and 6-9.b.(3)(a) guidance regarding how to define a non-TSO function. The issue is non-TSO should not be defined as “performance”. It will create difficulty if these criteria are used. For example, if a TSO requires a minimum 10 watt transmitter and a company makes equipment that is robust at 11 watts, the performance exceeding the TSO is not called out under the TSO; consequently, by the paragraph 5.h “performance” definition, the 11 watt transmitter has a non-TSO 1 watt capability. The	Adjust the wording in the TSO (template) to be consistent with the 8110.4C CHG 4 intent.	<b>Not Accepted.</b> This is the template language.  We will explore better ways to explain the difference between performance better than what is required by the TSO, and a function completely unrelated to the TSO.

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			distinction of a “function that can be accomplished outside the TSO box” as is specified in Order 8110.4C CHG 4 paragraph 6-9 is critical to making non-TSO function work long term.		
32. Garmin	TSO-C206 Page 7, par 7	TSO paragraph 7 requires furnishing data in paragraphs 5.a, 5.b and 5.f and 5.g to “one entity (such as an operator or repair station)”. This is inconsistent with the intent of TSO-C206 as stated in paragraph 1.	TSO-C206 states in paragraph 1. “TSO-C206 is intended as a means for end-use equipment manufacturers incorporating the GPS CCA to streamline their TSO-C196b application for a GPS position/velocity/time (PVT) sensor by using the TSO’d GPS CCA for partial certification credit.” As this TSO is intended as a means for “end-use equipment manufacturers” there is no need to require sending the data identified in paragraph 7 to “one entity (such as an operator or repair station)”.	Reword paragraph 7 to ensure consistency with the users identified in paragraph 1.	<b>Not Accepted.</b> This TSO is unique and all the items listed are necessary for the end-use manufacturer to apply for TSO-C196b.
33. Garmin	TSO-C206 Page 7, par 7	TSO-C206 paragraph 7excludes paragraph 7.b from the 8150.1C TSO template.	Excluding paragraph 7.b seems inconsistent with the need to submit the supporting Non-TSO data in paragraphs 5.h.(1) through 5.h.(4) to the FAA. If there	Add paragraph 7.b from the 8150.1C TSO template if paragraph 7 is re-scoped to only require furnishing data to “end-use equipment manufacturers”.	<b>Accepted.</b>

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			are Non-TSO functions, it seems like the “end-use equipment manufacturers” should receive the supporting Non-TSO data.		