

Clearance Record
FIELD REVIEW DOCUMENT COMMENT LOG

Originating Office: AIR-130	Document Description: TSO-C160a	Project Lead: Thomas Mustach	Reviewing Office:	Date of Review:
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Company & Group	Page & Paragraph	Comment	Rationale for Comment	Recommendation	Disposition
AFS-360 gts	Pg 2. Par 3.f.	Does not have provision for alternate guidance	Previous version references ED-80 as alternate	Include provision for alternate as is done in Par 3.d.	Rejected Text in paragraph 3.f is per our template; hence, the comment is directed to the TSO template and not unique to TSO-C160A. Although the previous version TSO-C160 gave provisions for alternate compliance to EUROCAE ED-80, the current template does not support provisions for alternate means of compliance.
AFS-360 gts	Pg 3. Par 4.c.	Last sentence states "hardware and airborne electronic hardware" What is the distinction here? Elsewhere the terms are used interchangeably	Implies separate meanings	Define or remove "hardware"	Rejected An article can be comprised of hardware and airborne electronic hardware. The FAA permits TSO applicants with such articles to uniquely identify the hardware/airborne electronic hardware with separate part numbers. For example, electronic airborne hardware includes line replaceable units, circuit board assemblies, application specific integrated circuits, programmable logic devices, etc. Likewise, hardware could consist of the housing for the airborne electronic

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					hardware. The article part number scheme is similar to what FAA permits for articles having hardware and software (i.e. separate part numbers to uniquely identify software and hardware).
AFS-470 Robert Tegeder	All	If the operator upgrades from VDL Mode-0 to VDL Mode 2 using the original TSO dated prior to December 6, 2010 will they be exempt from the Recording rule?	Numbers of Legacy aircraft and the cost involved with Recording rule.	This should not create a requirement for the recording rule to be invoked.	No impact The recording rule applies to aircraft and not TSO articles. Our recording rule policy applies to operators of any aircraft independent of the TSO revision level of their VDR.
Nm106B	Page 1, Paragraph 3	The Minimal Operational Performance Standard (MOPS) for this TSO (RTCA DO-281B) is not available at this time and it is in draft form.	Per draft TSO, the final approval of the MOPS is anticipated in December ??, 2011 but as of January 3, 2012 the RTCA DO-281B is not available for reference/review.	To postpone review of this item until the MOPS is released and available.	Rejected. RTCA/DO-281B was SC-214/WG78 approved at Plenary #14 on Dec 7 th , 2011. It is anticipated that RTCA PMC will approve the document in March 2012 and should not impact any of text in TSO-C160a. In summary, no comments to TSO-C160a should be relevant other than inserting the actual date of the published MOPS in paragraph 3 of TSO-C160a prior to publishing the TSO.
Ray Mei ANM-130S	Page 2 Paragraph 3(a)	The exact frequency range for the operation of VDL mode 2 radio communications should have been 117.975 MHz to 136.975 MHz, not to 137 MHz as currently stated.	European Regulation allows 8.33 KHz spacing between channels. By including extra 25 KHz in the frequency range, 3 illegal channels of VDL mode 2 may be operating in Europe, and US may operate 1 illegal channel with 25 KHz spacing.	Accurately specify the operating range between 117.975 MHz and 136.975 MHz.	Rejected The tuning range and channel increment is specified in the MOPS (see 2.2.1.1.1 of DO-281A). This requirement is captured in the TSO via paragraph 3 and assured by the qualification test called out in paragraph 3.c. The

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					inclusion of the range 117.975-137.000 is to include spurious emission when tuned to 118.000 or 136.975.
NM130L	Pg 2 Par. 3 d.	“You may use a different standard environmental condition and test procedure than RTCA DO-160G, Environmental Conditions and Test Procedures for Airborne Equipment, provided the standard is appropriate for the VDL mode 2 communications equipment developed under this TSO.” Is ambiguous	This section could be interpreted that any Environmental is acceptable without a deviation.	RTCA DO-160G, Environmental Conditions and Test Procedures for Airborne Equipment is required.	Rejected. That is the intent of the text and is following text from the TSO template.
Rick Susee SEA-AEG	Page 4 Paragraph 5(a)(7)	Change first sentence of paragraph.	Follows other TSO statements with clarity. The way it is written, an applicant could only list the replacement components and not the original. Both should be listed if they allow for replacement components.	(7) List of components including replacements, by part number, that makes up the VDL mode 2 communications equipment.	Rejected. Paragraph 5(a)(i) identifies the requirement to define the entire design of the article. Paragraph 5(a)(7) is for the installer/user of the article, and does not need to identify components that are not replaceable.
ACE-119W, R. Souter	General comment	RTCA/DO-281B reference is inconsistent.	RTCA/DO-281B is referred to as: RTCA document DO-281B, DO-281B, RTCA/DO-281B	Standardize reference usage	Concur. For consistency “RTCA/DO-281B” will be used throughout the TSO.

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ACE-119W, R. Souter	Page 1, paragraphs 1 & 3.	Mode 2 reference is inconsistent.	In paragraph 1 &3, "Mode 2" is referenced as "mode 2".	Standardize reference usage	Concur. For consistency and standardized with the term in DO-281A, "VDL Mode 2" will be used. Revised the TSO in ten places to "VDL Mode 2" from "VDL mode 2"