



Deviations request #75 for an ETSO approval for CS-ETSO applicable to Fuel Flowmeters, Manifold Pressure Instruments, or Pressure Instruments – Fuel, Oil, and Hydraulic (ETSO-C44c, C45b, C47a) Consultation Paper

1. Introductory note

The hereby presented deviation request shall be subject to public consultation, in accordance with EASA Management Board Decision No 7-2004 as amended by EASA Management Board Decision No 12-2007¹ products certification procedure dated 11. September 2007, Article 3 (2.) of which states:

“Deviations from the applicable airworthiness codes, environmental protection certification specifications and/or acceptable means of compliance with Part 21, as well as important special conditions and equivalent safety findings, shall be submitted to the panel of experts and be subject to a public consultation of at least 3 weeks, except if they have been previously agreed and published in the Official Publication of the Agency. The final decision shall be published in the Official Publication of the Agency.”

2. ETSO-C44c#1 – Fuel Flowmeters

Deviate from ETSO-C44c 3.1.2 and allow the use of any environmental test standard referred by CS-ETSO subpart A paragraph 2.1 instead of only EUROCAE ED-14E/RTCA DO-160E and not perform specific SAE AS 407C or SAE AS 1055D testing for components not mounted in or near the fuel carrying aircraft components.

Requirement:

The Fuel Flowmeter must be tested in accordance with SAE AS 407C “Fuel Flowmeters” from July 1, 2001, unless otherwise specified by appendix 1 of this ETSO, SAE AS 1055D “Fire Testing of Flexible Hose, Tube Assemblies, Coils, Fittings, and Similar System Components” (sections 4 and 5) from June 1997, and EUROCAE ED-14E (RTCA DO-160E) “Environmental Conditions and Test Procedures for Airborne Equipment” from March 2005 unless otherwise specified by appendix 1 of this ETSO.

Industry:

For electronic system components not in contact with fuel and not mounted in the direct vicinity of the fuel tank the specific test procedures from SAE AS 407C and SAE AS 1055D are not applicable and the standard test procedures from EUROCAE ED-14E ()/RTCA DO-160E () are used as applicable for the anticipated installation environment. The equivalent level of safety is provided by the fact that such environmental testing is allowed for electronic components by CS-ETSO subpart A paragraph 2.1. The performance criteria to be monitored during the environmental testing will be derived from SAE AS 407C.

EASA:

We accept the deviation.

¹) <http://easa.europa.eu/management-board/meetings/2007/04/MB%20Decision%2012-2007%20amending%20the%20certification%20procedure.pdf>

3. ETSO-C45b#1 – Manifold Pressure Instruments

Deviate from ETSO-C45b 3.1.2 and allow the use of any environmental test standard referred by CS-ETSO subpart A paragraph 2.1 instead of only EUROCAE ED-14E/RTCA DO-160E and not consider the specific test conditions given by SAE AS 8042.

Requirement:

The Manifold Pressure Instruments must be tested according to Section 7 of SAE AS 8042 and EUROCAE ED-14E (RTCA DO-160E) “Environmental Conditions and Test Procedures for Airborne Equipment” from March 2005.

Industry:

For electronic system components, not mounted in the engine compartment, the specific test procedures and requirements from SAE AS 8042 are not applicable and the standard test procedures from EUROCAE ED-14()/RTCA DO-160() are used as applicable for the anticipated installation environment. The equivalent level of safety is provided by the fact that such environmental testing is allowed for electronic components by CS-ETSO subpart A paragraph 2.1. The performance criteria to be monitored during the environmental testing will be derived from SAE AS 8042.

EASA:

We accept the deviation.

4. ETSO-C47a#1 –Pressure Instruments – Fuel, Oil, and Hydraulic

Deviate from ETSO-C47a 3.1.2 and allow the use of any environmental test standard referred by CS-ETSO subpart A paragraph 2.1 instead of only EUROCAE ED-14E/RTCA DO-160E and not consider the specific test conditions given by SAE AS 408C.

Requirement:

Testing fuel, oil, and hydraulic pressure instruments must be in accordance with SAE AS 408C section 7 and EUROCAE ED-14E (RTCA DO-160E) “Environmental Conditions and Test Procedures for Airborne Equipment” from March 2005.

Industry:

For electronic system components, not mounted in the engine compartment, the specific test procedures and requirements from SAE AS 408C are not applicable and the standard test procedures from EUROCAE ED-14()/RTCA DO-160() are used as applicable for the anticipated installation environment. The equivalent level of safety is provided by the fact that such environmental testing is allowed for electronic components by CS-ETSO subpart A paragraph 2.1. The performance criteria to be monitored during the environmental testing will be derived from SAE AS 408C.

EASA:

We accept the deviation.