



## TERMS OF REFERENCE

**Task Nr:** RMT.0186 (ETSO.008)  
**Issue:** 3  
**Date:** 8 February 2012  
**Regulatory reference:** CS-European Technical Standard Order (ETSO)<sup>1</sup>  
**Reference documents:** FAA Technical Standard Order (TSO)<sup>2</sup>

### 1. Subject:

Update of EASA ETSO and Systematic review and transposition of existing FAA TSO for parts and appliances into EASA CS-ETSO

### 2. Problem/statement of issue and justification; reason for regulatory evolution (regulatory tasks):

Approval of parts and appliances that meet the requirements of a TSO, but for which there is no equivalent ETSO, can only be approved when they are part of an (S)TC. This results in a disadvantage for European parts and appliance producers and installers of these parts and appliances.

When these TSO standards have been developed in participation with stakeholders, and are generally accepted, the technical content of these standards can be considered mature. It is for these TSO that the Agency will propose adoption using this ongoing rulemaking task.

The specific TSO recognised for transposition by this issue of this ToR are specified below.

### 3. Objective:

Incorporate new standards and updated FAA TSO standards into the EASA ETSO structure.

### 4. Specific tasks and interface issues (deliverables):

In executing the task particular attention will be given to assess if the proposed updates (or new) ETSOs affect or interact with former ETSOs issues (e.g. TSO-C196/-C129a) to check acceptability. Furthermore, the interface with existing EASA Guidance Material (AMC-20) will also be investigated.

The present 'routine' task ETSO.008 will be followed (planned start in 2012/Q1) by a similar routine task for the transposition of FAA TSOs issued in the meantime: ETSO.011.

<sup>1</sup> Decision No 2003/10/RM of the Executive Director of the Agency of 24 October 2003 on certification specifications, including airworthiness codes and acceptable means of compliance, for European Technical Standard Orders ('CS-ETSO'). Decision as last amended by Decision No 2010/010/R of the Executive Director of the Agency of 14 December 2010.

<sup>2</sup> FAA TSOs are available at <http://www.airweb.faa.gov>.

Industry stakeholders, when commenting on Issue 2 of this ToR, raised the question of Integrated Modular Avionics (IMA). The Agency regards the IMA issue as quite complex and therefore it cannot be accommodated in a 'routine' task such as RMT.0186 (ETSO.008). However, the Agency plans to propose the specific RMT.0456 for IMA, whose preliminary RIA is in preparation.

## 5. First NPA:

NPA 2011-12 was open for consultation from 18 June 2011 to 18 October 2011. It will be followed by a specific Comment-Response Document (CRD). The said NPA proposed to transpose the following FAA TSOs: Amendment of paragraph 2.1 (Environmental standards) of CS-ETSO Subpart A.

Updated	TSO-C55a	Fuel and Oil Quantity Instruments
Updated	TSO-C62e	Aircraft Tyres
Updated	TSO-C90d	Cargo Pallets, Nets and Containers (currently being finalised by FAA)
Updated	TSO-C95a	Mach Meters
Updated	TSO-C126a	406MHz Emergency Locator Transmitter
New	TSO-C154c	Universal Access Transceiver (UAT) Automatic Dependent Surveillance - Broadcast (ADS-B) Equipment Operating on the Frequency of 978 MHz
New	TSO-C157a	Aircraft Flight Information Services-Broadcast (FIS-B) Data Link Systems and Equipment
New	TSO-158	Aeronautical Mobile High Frequency Data Link (HF DL) Equipment
New	TSO-C159a	AVIONICS SUPPORTING NEXT GENERATION SATELLITE SYSTEMS (NGSS) = IRIDIUM PHONE
Update	TSO-C161a	Ground Based Augmentation System positioning and Navigation Equipment
New	TSO-C162a	Ground Based Augmentation System Very High Frequency Data Broadcast Equipment
Update	TSO-C166b	EXTENDED SQUITTER AUTOMATIC DEPENDENT SURVEILLANCE - BROADCAST (ADS-B) AND TRAFFIC INFORMATION SERVICE – BROADCAST (TIS-B) EQUIPMENT OPERATING ON THE RADIO FREQUENCY OF 1090 MEGAHERTZ (MHZ)
New	TSO-C170	High Frequency (HF) Radio Communications Transceiver Equipment Operating Within the Radio Frequency 1.5 to 30 Megahertz
New	TSO-C172	Cargo Restraint Strap Assemblies (currently being finalised by FAA)
New	TSO-C179a	Rechargeable Lithium Cells and Lithium Batteries
New	TSO-C184	Galley Equipment (currently being finalised by FAA)
New	TSO-C194	Helicopter Terrain Awareness and Warning System (HTAWS)
New	TSO-C195a	Avionics Supporting Automatic Dependent Surveillance - Broadcast (ADS-B) Aircraft Surveillance
New	TSO-C196a	Airborne Supplemental Navigation Sensors for Global Positioning System Equipment Using Aircraft-Based

		Augmentation
New	TSO-C197	Information Collection and Monitoring Systems
<b>6. Second NPA:</b>		
The second NPA for the present task will propose to transpose the following FAA TSOs: Amendment of paragraph 2.2 (Software standards) of CS-ETSO Subpart A.		
Update	TSO-C87a	Airborne Low-range Radio Altimeter
Update	TSO-C112d	Air Traffic Control Radar Beacon System/Mode Select (ATCRSB/Mode S) Airborne Equipment
New	TSO-C115c	Flight Management Systems (FMS) using Multi-Sensor Inputs
Update	TSO-C121b	Underwater Locating Device
Update	TSO-C155a	Recorder Independent Power Supply
New	TSO-C160a	VDL Mode 2 Communications equipment
New	TSO-C164	Night Vision Goggles (NVG)
New	TSO-C178	Single Phase 115 VAC, 400 Hz Arc Fault Circuit Breakers
New	TSO-C198	Automatic Flight Guidance and Control System (AFGCS) Equipment
<p>The main purpose of updating ETSO-C121b is to extend the life of the Underwater Device (or Beacon or ULB) to 90 days, following the accident of AF 447 on 1 June 2009. More in particular this extension responds to safety recommendation FRAN-2009-016 received by the Agency on 17 December 2009 and will align the EASA Specifications to Amendments to ICAO Annex 6 Part I proposed by State Letter SP 55/4-11/2 of 31 January 2011 as well as to updated SAE Aerospace Standard AS8045A of August 2011.</p> <p>ETSO C198 is expected to replace ETSOs C9c (Automatic Pilot) and C52b (Flight Directors). The deletion will not invalidate existing authorisations, but new applications would only be accepted on the basis of the new ETSO-C198.</p>		
<b>7. Working methods (in addition to the applicable Agency procedures):</b>		
Agency		
<b>8. Time scale, milestones:</b>		
The following deliverables are planned:		
a) First NPA 2011-12 for Task ETSO.008, covering all the FAA TSOs mentioned in paragraph 5 above, was published on 18 June 2011;		
b) Second NPA in 2012/Q2 covering all the TSOs mentioned in Paragraph 6 above;		
c) First CRD in 2012/Q1;		
d) Second CRD in 2013/Q1;		
e) First ED Decision in 2012/Q2 for publication of ETSOs as individual web files and not as part of a large 'Book' (i.e. ETSO.XXs, no longer part of a voluminous single CS-ETSO);		
f) Second ED Decision in 2013/Q2.		