

European Aviation Safety Agency

European Technical Standard Order (ETSO)

Subject: **UNDERWATER LOCATING DEVICES (ACOUSTIC) (SELF-POWERED)**

1 - Applicability

This ETSO gives the requirements that new models of underwater locating devices (acoustic) (self powered) that are manufactured on or after the date of this ETSO must meet in order to be identified with the applicable ETSO marking.

2 - Procedures

2.1. - General

Applicable procedures are detailed in CS-ETSO Subpart A.

2.2 - Specific

None

3 - Technical Conditions

3.1 - Basic

3.1.1 - Minimum Performance Standard

Standards set forth in the SAE Aerospace Standard (AS) document: AS8045 "*Minimum Performance Standard for Underwater Locating Devices (Acoustic) (Self-Powered)*", dated May 16, 1988, and from the American Society Testing Materials (ASTM) document D.1141-98 "*Standard Practice for the Preparation of Substitute Ocean Water*", dated September 2003.

3.1.2 - Environmental Standards

The equipment must be tested according to EUROCAE ED-14E (RTCA DO-160E) "*Environmental Conditions and Test Procedures for Airborne Equipment*" from March 2005.

3.1.3 - Computer Software

If the article includes a digital computer, the software must be developed according to EUROCAE ED-12B (RTCA DO-178B), *Software Considerations in Airborne Systems and Equipment Certification*, dated December 1, 1992.

3.1.4 - Electronic Hardware Qualification

If the article includes a complex custom micro-coded component, the component must be developed according to EUROCAE ED-80 (RTCA DO-254), *Design Assurance Guidance for Airborne Electronic Hardware*, from April 2000.

3.2 - Specific

The battery used in the underwater locating device authorised under this ETSO must be appropriate for the intended operational environment, not pose a hazard to the aircraft and meet the requirements of acceptable battery standards. If non rechargeable lithium batteries are used to power the underwater locating device, ETSO-C142a "*Lithium Batteries*" provides MPS for such lithium batteries.

4 - Marking

4.1 - General

Marking is detailed in CS-ETSO Subpart A paragraph 1.2.

4.2 - Specific

None

5 - Availability of Referenced Document

See CS-ETSO Subpart A paragraph 3