

# European Aviation Safety Agency

## European Technical Standard Order (ETSO)

Subject: **ENGINE DRIVEN DIRECT CURRENT GENERATORS / STARTER GENERATORS**

### 1 - Applicability

This ETSO gives the requirements which Engine-driven Direct Current generators/starter generators 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: AS8020, "*Engine Driven D.C. Generators/Starter-Generators and Associated Voltage Regulators*", dated January 1980 (and reaffirmed by SAE in August 1991).

##### 3.1.2 - Environmental Standard

EUROCAE ED-14E (RTCA DO160E) "*Environmental Conditions and Test Procedures for Airborne Equipment*" from March 2005.

##### 3.1.3 - Computer Software

If the Engine Driven Direct Current Generator / Starter Generator and the associated voltage regulators include a digital computer, the software must be developed according to EUROCAE ED-12B (RTCA DO-178B) "*Software Considerations in Airborne Systems and Equipment Certification*" from 1992.

#### 3.2 - Specific

None

## **4 - Marking**

### **4.1 - General**

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

### **4.2 – Specific**

In addition to the information specified in §4.1, the following information is required:

- (1) Means of indicating if the article is a D.C. generator or a D.C. starter-generator;
- (2) Nominal power output (electrical voltage and watts);
- (3) Mechanical power input requirements (pad requirements).

## **5 - Availability of Referenced Document**

See CS-ETSO Subpart A paragraph 3