

# DRAFT AMENDMENT ISO 12511:1997/DAM 1

ISO/TC 127/SC 3

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## Earth-moving machinery — Hour meters

### AMENDMENT 1

*Engins de terrassement — Enregistreurs horaires*

AMENDEMENT 1

ICS: 53.100; 39.040.99

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This document was prepared by Technical Committee ISO/TC 127, *Earth-moving machinery*, Subcommittee SC 3, *Machine characteristics, electrical and electronic systems, operation and maintenance*.

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### *Normative references*

Replace the introductory wording with the following:

The following documents are referred to in the text in such a way that some or all of their content constitute requirements of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

Replace the reference to ISO 6165:1997, *Earth-moving machinery — Basic types — Vocabulary* with the following:

ISO 6165, *Earth-moving machinery -- Basic types -- Identification and terms and definitions*

Add the following

ISO 13766-1, *Earth-moving and building construction machinery -- Electromagnetic compatibility (EMC) of machines with internal electrical power supply -- Part 1: General EMC requirements under typical electromagnetic environmental conditions*

IEC 60529:1989 +A2:2013 as corrected in 2019, *Degrees of protection provided by enclosures (IP Code)*

### *3, Terms and definitions*

Replace the clause title and introductory wording with the following:

#### **3 Terms and definitions**

For the purposes of this document, the terms and definitions given in ISO 6165 and the following apply.

ISO and IEC maintain terminological databases for use in standardization at the following addresses:

- IEC Electropedia: available at <http://www.electropedia.org/>
- ISO Online browsing platform: available at <https://www.iso.org/obp>.

#### **3.1 Hour meters**

Replace the definition with the following (Keeping the note):

system used to measure the total amount of time an earth-moving machine has been in use

##### *4.1, first paragraph*

Replace the paragraph with the following:

The hour meter shall be actuated when the engine is started or the machine is performing work by consuming stored energy and continue to remain actuated until the engine or machine performance is stopped.

4.2, *Replace the second sentence with the following:*

It shall not give any weighting to the speed at which the engine is rotating or the rate at which the stored energy is being consumed.

4.6, *Add the second sentence*

The read-out of the hour meter may be incorporated into another visual display.

4.7, *first paragraph*

Add the following as a second sentence after the existing first sentence:

Hour meters not protected by an enclosed operator station shall be in accordance with IP57 according to IEC 60529.

4.9, *first paragraph*

Replace the paragraph with the following:

The hour meter shall be designed and constructed such as to avoid easy disconnection (e.g. tools required to disconnect). The accumulated time in the hour meter shall be protected against modification.

*New 4.11 within Clause 4.*

Add the following new sub-clause 4.11:

**4.11** Hour meters shall be tested according to ISO 13766-1, either:

- as an integral part of the machinery or
- separately as an electrical/electronic subassembly (ESA), if intended to be put separately on the market.

NOTE ISO 13766-1 recommends that when testing an ESA, the integrity of the final system when combined at machine level be tested as well.

*New 4.12 within Clause 4.*

Add the following new sub-clause 4.12:

**4.12** If the hour meter read-out is a self-contained device, the following shall be marked on its outer body:

- trade name or symbol of manufacture
- model of hour meter
- serial number or batch number

This marking shall be clearly, legible and indelible.