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AMENDMENT 1
2021-03

**Earth-moving machinery — Hour
meters**

AMENDMENT 1

Engins de terrassement — Enregistreurs horaires
AMENDEMENT 1

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Foreword

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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*.

Any feedback or questions on this document should be directed to the user's national standards body. A complete listing of these bodies can be found at www.iso.org/members.html.

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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.

Change ISO 6165:1997 to be undated:

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

Add the following:

ISO 13766-1, *Earth-moving and building construction machinery — Part 1: General EMC requirements under typical electromagnetic environmental conditions*

ISO 20474-1:2017, *Earth-moving machinery — Safety — Part 1: General requirements*

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:

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

3.1

Replace the definition with the following (keeping the NOTE):

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

4.1

Replace the text with the following:

The hour meter shall be actuated when the engine is started or when the machine is performing work by consuming stored energy and shall continue to remain actuated until the engine or consumption of energy 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 following sentence at the end:

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

4.7

Add the following sentence at the end:

Hour meters shall be in accordance with ISO 20474-1:2017, 4.16 as mounted in the machine.

4.9

Replace the text 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.

4.11

Add the following new subclause after 4.10:

4.11 Hour meters shall be in accordance with 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.

4.12

Add the following new subclause after 4.11:

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;