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# Earth-moving machinery — Hazard detection systems and visual aids — Performance requirements and tests

Engins de terrassement — Dispositifs de détection des risques et d'aide visuelle — Exigences de performances et essais



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# **Foreword**

ISO (the International Organization for Standardization) is a worldwide federation of national standards bodies (ISO member bodies). The work of preparing International Standards is normally carried out through ISO technical committees. Each member body interested in a subject for which a technical committee has been established has the right to be represented on that committee. International organizations, governmental and non-governmental, in liaison with ISO, also take part in the work. ISO collaborates closely with the International Electrotechnical Commission (IEC) on all matters of electrotechnical standardization.

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The main task of technical committees is to prepare International Standards. Draft International Standards adopted by the technical committees are circulated to the member bodies for voting. Publication as an International Standard requires approval by at least 75 % of the member bodies casting a vote.

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ISO 16001 was prepared by Technical Committee ISO/TC 127, *Earth-moving machinery*, Subcommittee SC 2, *Safety requirements and human factors*.

# Introduction

This International Standard outlines test procedures and sets criteria for the development of hazard detection systems (HDS) and visual aids (VA) for detecting people.

Proper job-site organization, operator training and the application of relevant vision standards (ISO 5006 and ISO 14401) address the safety of people on job sites. In some cases, vision of the working area cannot be achieved either by the operator's direct view or indirect view using mirrors. In such cases, operator awareness can be improved by the use of HDS and VA.

HDS and VA provide information to the operator as to whether a person or object is in the path of the machine, primarily during rearward movement.

It is essential to note that HDS and VA have both advantages and disadvantages. There is no device that works perfectly in all situations. It is especially important that the shortcomings of HDS and VA be recognised and known to system users. The advantages and disadvantages of selected devices are summarized in Annex A.