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Earth-moving machinery — Machine-mounted audible travel alarms and forward horns — Test methods and performance criteria

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Better Regulation Division — SafeWork NSW
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Earth-moving machinery — Machine-mounted audible travel alarms and forward horns — Test methods and performance criteria

First published as AS ISO 9533:2020.

Preface

This Standard was prepared by the Standards Australia Committee ME-063, Earthmoving Equipment.

The objective of this document is to specify a static test method for determining the sound output performance and alarm activation requirements of audible travel alarms and forward horns mounted on earth-moving machinery, as defined in ISO 6165, for operation on work sites and travelling on public roads. It offers objective test methodologies and performance criteria.

It is applicable only to those alarms and horns that are installed on the earth-moving machinery. It does not specify the installation of one or more audible travel alarms or forward horns on particular machines. It addresses neither the laboratory testing of warning alarm functionality nor durability.

This document is identical with, and has been reproduced from, ISO 9533:2010, *Earth-moving machinery — Machine-mounted audible travel alarms and forward horns — Test methods and performance criteria.*

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Foreword

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Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. ISO shall not be held responsible for identifying any or all such patent rights.

ISO 9533 was prepared by Technical Committee ISO/TC 127, *Earth-moving machinery*, Subcommittee SC 2, *Safety, ergonomics and general requirements*.

This second edition cancels and replaces the first edition (ISO 9533:1989), which has been technically revised. Notably, test methods and criteria have been modified to include the evaluation of self-adjusting sound level alarms and travel warning alarms.

Australian Standard®

Earth-moving machinery — Machine-mounted audible travel alarms and forward horns — Test methods and performance criteria

1 Scope

This International Standard specifies a static method for determining the sound output performance and alarm activation requirements of audible travel alarms and forward horns mounted on earth-moving machinery, as defined in ISO 6165, for operation on work sites and travelling on public roads. It offers objective test methodologies and performance criteria.

It is applicable only to those alarms and horns that are installed on the earth-moving machinery. It does not specify the installation of one or more audible travel alarms or forward horns on particular machines. It addresses neither the laboratory testing of warning alarm functionality nor durability.

NOTE Earth-moving machine manufacturer's practices, worksite requirements and local, national or regional regulations could require the fitting of the alarms or horns specified in this International Standard.

2 Normative references

The following referenced documents are indispensable for the application 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.

ISO 3411, *Earth-moving machinery — Physical dimensions of operators and minimum operator space envelope*

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

ISO 6746-1, *Earth-moving machinery — Definitions of dimensions and codes — Part 1: Base machine*

IEC 61672-1, *Electroacoustics — Sound level meters — Part 1: Specifications*

3 Terms and definitions

For the purposes of this document, the following terms and definitions apply.

3.1
machine reference box
MRB
imaginary rectangular box that would just fit over the base machine according to ISO 6746-1, which excludes all equipment and attachment items such as buckets, dozers, backhoes, rippers and booms

3.2
audible travel alarm
machine-mounted audible alarm intended to warn or alert personnel of the potential hazard of the machine travelling under its own power

3.2.1
travel warning alarm
audible signal intended to warn or alert personnel, especially those near a machine, that the machine has been activated to travel under its own power

Note 1 to entry: These alarms are normally associated with machines that have rotating upper structures.

3.2.2
reverse warning alarm
audible signal intended to warn personnel, especially those near the rear of a machine, that the machine has been activated to travel in a rearward direction under its own power