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Machinery for forestry — Noise test code

Matériel forestier — Code d'essai acoustique

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Contents

Page

Foreword ..... **iv**
Introduction ..... **v**
1 Scope **1**
2 Normative references **1**
3 Emission sound pressure level determination at the operator's station **1**
4 A-weighted sound power level determination **2**
5 Installation and mounting conditions **4**
6 Operating conditions **4**
7 Working cycles **5**
7.1 Measurement requirements 5
7.2 Harvesters 6
7.3 Feller bunchers 6
7.4 Processors 7
7.5 Delimbers 8
7.6 Log loaders 8
7.7 Mulchers 9
7.8 Skidders 9
7.9 Forwarders 9
8 Measurement uncertainties **10**
9 Information to be recorded and reported **11**
10 Noise declaration **12**
Bibliography **13**

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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.

The procedures used to develop this document and those intended for its further maintenance are described in the ISO/IEC Directives, Part 1. In particular the different approval criteria needed for the different types of ISO documents should be noted. This document was drafted in accordance with the editorial rules of the ISO/IEC Directives, Part 2 (see www.iso.org/directives).

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For an explanation on the meaning of ISO specific terms and expressions related to conformity assessment, as well as information about ISO's adherence to the WTO principles in the Technical Barriers to Trade (TBT) see the following URL: Foreword - Supplementary information

The committee responsible for this document is ISO/TC 23, *Tractors and machinery for agricultural and forestry*, Subcommittee, SC 15, *Machinery for forestry*.

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Introduction

This International Standard is a specific noise test code for forestry machinery mentioned in the scope of this International Standard and as defined in ISO 6814.

A simulated dynamic test condition, rather than an actual work cycle, is used. Simulated dynamic test conditions provide noise emission data which are repeatable and representative. Actual work cycle tests are complex and repeatability can be a problem.

This International Standard may also be used to determine noise emission for each part of the simulated work cycle.

Specific procedures are described in this International Standard to enable the sound power level and the emission sound pressure level in dynamic test conditions to be determined in a manner which is repeatable. This International Standard enables compliance with noise limits to be determined, if applicable. It can also be used for evaluation purposes in noise reduction investigations.

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Machinery for forestry — Noise test code

CAUTION — The test method specified in this International Standard may lead to a hazardous situation due to moving and rotating machine parts. Test personnel shall stay in safe zones when measuring and observing the tests.

1 Scope

This noise test code specifies all the information necessary for carrying out efficiently and under standardised conditions the noise emission values of self-propelled forestry machinery. It is applicable to fellers, bunchers, delimbers, forwarders, log loaders, skidders, processors, harvesters, mulchers and multi-function versions of these machine types, as defined in ISO 6814.

Noise emission characteristics include A-weighted emission sound pressure values at the operator's station and the A-weighted sound power value. The determination of these quantities is necessary for the following:

— manufacturers to declare the noise emitted;

— comparing the noise emitted by machines in the family concerned;

— purposes of noise control at the source at the design stage.

NOTE For low-noise design, noise emission values in frequency bands are useful and the basic International Standards ISO 3744 and ISO 11201 can be used for determining noise emission quantities in frequency bands.

2 Normative references

The following documents, in whole or in part, are normatively referenced in this document and are indispensable for its application. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies..

ISO 3744:2010, *Acoustics — Determination of sound power levels and sound energy levels of noise sources using sound pressure — Engineering methods for an essentially free field over a reflecting plane*

ISO 4871, *Acoustics — Declaration and verification of noise emission values of machinery and equipment*

ISO 5353, *Earth-moving machinery, and tractors and machinery for agriculture and forestry — Seat index point*

ISO 6395:2008, *Earth-moving machinery — Determination of sound power level — Dynamic test conditions*

ISO 6396:2008, *Earth-moving machinery — Determination of emission sound pressure level at operator's position — Dynamic test conditions*

ISO 11201, *Acoustics — Noise emitted by machinery and equipment — Determination of emission sound pressure levels at a work station and at other specified positions in an essentially free field over a reflecting plane with negligible environmental corrections*

3 Emission sound pressure level determination at the operator's station

3.1 For the measurement of the A-weighted emission sound pressure levels, ISO 11201 shall be used.

3.2 The following emission sound pressure levels shall be determined at the operator's station:

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