

# INTERNATIONAL STANDARD

# ISO 5131

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**AMENDMENT 1**  
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## **Acoustics — Tractors and machinery for agriculture and forestry — Measurement of noise at the operator's position — Survey method**

**AMENDMENT 1: Annex D — Forestry forwarders  
and skidders**

*Acoustique — Tracteurs et matériels agricoles et forestiers — Mesurage du bruit au  
poste de conduite de l'opérateur — Méthode de contrôle*

*AMENDEMENT 1: Annexe D — Débardeuses et débusqueuses forestières*

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## Foreword

ISO (the International Organization for Standardization) and IEC (the International Electrotechnical Commission) form the specialized system for worldwide standardization. National bodies that are members of ISO or IEC participate in the development of International Standards through technical committees established by the respective organization to deal with particular fields of technical activity. ISO and IEC technical committees collaborate in fields of mutual interest. Other international organizations, governmental and non-governmental, in liaison with ISO and IEC, also take part in the work.

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.

Amendment 1 to International Standard ISO 5131 : 1982 was prepared jointly by Technical Committees ISO/TC 43, *Acoustics*, and ISO/TC 23, *Tractors and machinery for agriculture and forestry*.

This annex forms an integral part of ISO 5131.

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# Acoustics — Tractors and machinery for agriculture and forestry — Measurement of noise at the operator's position — Survey method

## AMENDMENT 1: Annex D — Forestry forwarders and skidders

Insert the following annex after annex C.

### Annex D (normative)

#### Forestry forwarders and skidders

##### D.1 Definitions

**D.1.1 forwarder:** A self-propelled machine, usually self-loading, designed to transport trees or parts of trees by carrying them completely off the ground.

**D.1.2 skidder:** A self-propelled machine designed to transport trees by dragging.

##### D.2 Machine operation

For these measurements, machines with pneumatic tyres shall be operated on a dry, horizontal, concrete or tarmac surface free from gravel, leaves, snow, etc. Tracked and metal-wheeled machines shall be operated on a smooth, horizontal grassland or soil surface free from long grass and vegetation. The test track or course shall have a straight section of at least 150 m to ensure that the machine speed is stabilized for an adequate time for measurements to be made, particularly in the higher gears.

The machine shall be unballasted and unladen. Wheeled machines shall be fitted with normal pneumatic tyres, not more than 50 % worn. Before the noise measurement, it shall be established by a p.t.o. test or other means that the power of the machine is within 10 % of the manufacturer's rated value.

##### D.3 Cabs and auxiliaries

The measurement procedure applies whether or not the machine is fitted with a cab. If a cab is fitted, the noise shall be measured with all doors and windows closed. The noise measurements may optionally be repeated with all windows open.

When the measurements are being made, parts which normally operate at the same time as the engine (for example, the engine cooling fan) shall be operating, but extra equipment powered by the engine or self-powered (for example, windscreen wipers, heating and ventilating fans, power take-off) shall not be operating.

Additional noise measurements shall be taken with the engine stopped and with all auxiliaries (such as ventilating fans, defrosters, air conditioning equipment, etc.) working at the maximum setting. It shall be ensured that at least the nominal energy input of the auxiliary equipment is applied at the equipment terminals.

#### D.4 Location of the microphone

The microphone shall be placed at the side giving the highest A-weighted sound pressure level, as determined in a preliminary check made under the mode of operation given in D.5.b).

#### D.5 Noise measurement

A-weighted sound pressure level measurements shall be made under the following modes of operation.

- a) Driving forward in the highest gear at no-load with the governor lever fully open.
- b) Driving forward in the gear at no-load giving a speed nearest to 4,0 km/h at rated engine speed.

When octave-band pressure levels are measured, it is recommended that the machine be operated under the mode of operation which gives the highest sound level.

#### D.6 Reporting of test results

The test report shall be in accordance with Clause 12 and shall contain the results of measurements according to D.5.

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