

FINAL
DRAFT

AMENDMENT

ISO
4254-1:2005
FDAM 1

ISO/TC 23/SC 3

Secretariat: DIN

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Voting terminates on:
2007-12-31

Agricultural machinery — Safety —

**Part 1:
General requirements**

AMENDMENT 1

iTeh STANDARD PREVIEW

*Matériel agricole — Sécurité —
Partie 1: Exigences générales*
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AMENDEMENT 1

ISO 4254-1:2005/FDAmd 1

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Reference number
ISO 4254-1:2005/FDAM 1:2007(E)

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Amendment 1 to ISO 4254-1:2005 was prepared by Technical Committee ISO/TC 23, *Tractors and machinery for agriculture and forestry*, Subcommittee SC 3, *Safety and comfort*.

If this draft amendment is approved, it will be incorporated in ISO 4254-1:2005 and a new edition of ISO 4254-1 published.

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Introduction

The structure of safety standards in the field of machinery is as follows.

- a) Type-A standards (basic standards) give basic concepts, principles for design, and general aspects that can be applied to machinery.
- b) Type-B standards (generic safety standards) deal with one or more safety aspect(s) or one or more type(s) of safeguards that can be used across a wide range of machinery:
 - type-B1 standards on particular safety aspects (e.g. safety distances, surface temperature, noise);
 - type-B2 standards on safeguards (e.g. two-hands controls, interlocking devices, pressure sensitive devices, guards).
- c) Type-C standards (machinery safety standards) deal with detailed safety requirements for a particular machine or group of machines.

This part of ISO 4254 is a type-C standard as stated in ISO 12100-1.

When provisions of this type-C standard are different from those which are stated in type-A or type-B standards, the provisions of this type-C standard take precedence over the provisions of the other standards for machines that have been designed and built according to the provisions of this type-C standard.

This Amendment technically revises ISO 4254:2005 as follows:

- requirements related to vibration have been added in a new subclause 4.3;
- requirements related to ergonomics have been added in new subclauses 4.4.6 and 5.1.2.2;
- requirements related to the transmission of mechanical power between self-propelled machines/tractors and recipient machinery have been added in a new subclause 6.4.1;
- the requirements related to the guarding of moving parts for power transmission given in 4.6 and Annex C have been deleted.

For the purposes of global relevance, the requirements related to the guarding of moving parts for power transmission have been transferred and published as two separate Technical Specifications: ISO/TS 28923:2007, *Agricultural machinery — Guards for moving parts of power transmission — Guard opening with tool*, which includes the guard requirements taken from both 4.6 and Annex C of ISO 4254-1:2005, and ISO/TS 28924:2007, *Agricultural machinery — Guards for moving parts of power transmission — Guard opening without tool*, which includes only the requirements from 4.6.

Agricultural machinery — Safety —

Part 1: General requirements

AMENDMENT 1

1 Scope

Page iii, Table of contents

Correct “**5.1.6 Cab material burring rate**” to “**5.1.6 Cab material burning rate**”

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Page 1, Scope

Delete the last sentence (“For compliance with ... is additionally applicable”) from the second paragraph.

Replace the first sentence of the fourth paragraph with the following:
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“This part of ISO 4254 is not applicable to environmental hazards, road safety, electromagnetic compatibility or to power take-off (PTO) and the guarding of moving parts for power transmission except for strength requirements for guards and barriers (see 4.7)”.

Page 2, Normative references

Delete ISO 12100-2:2003 from the list of normative references.

Add the following:

ISO 4253, *Agricultural tractors — Operator's seating accommodation — Dimensions*

ISO 15077, *Tractors and self-propelled machinery for agriculture — Operator controls — Actuating forces, displacement, location and method of operation*

Page 4, 4.3

Add a new subclause 4.3. (The former 4.3 becomes 4.4 and so on.)

“4.3 Vibration

If vibration emission values are required to be declared, then the weighted root mean square acceleration value and the measuring method shall be given by referring to ISO 5008, machine-specific standards or the operator's manual showing the measurement procedure.

Vibration measurements are unnecessary for machines that do not require a ride-on operator.

NOTE 1 Mechanical vibrations are caused by the unevenness of the travelling surface and the movement of machine-related components such as engine, gearbox, drives and working tools. Technical measures for the reduction of vibrations can be, for example, isolators, dampening or suspension systems.

NOTE 2 As the origin of vibrations depends on the machine type and the individual design, detailed specifications for vibration reduction measures cannot be given in this document.”

Page 4, former 4.3 (now 4.4)

Add the following new subclause after what was 4.3.5 (becomes 4.4.5).

“4.4.6 Unless specified otherwise in 4.4.3 and 4.4.5, actuating forces, displacement, location and the method of operation shall be in accordance with ISO 15077.

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Page 7, Figure 4

In the drawing, replace the dimension “ ≤ 75 ” with “ ≥ 75 ”.

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Page 8, 4.6

Delete the entire subclause “4.6 Moving parts for power transmission”. [The subclause following it remains 4.7, owing to the addition of a new 4.3 (see above).]

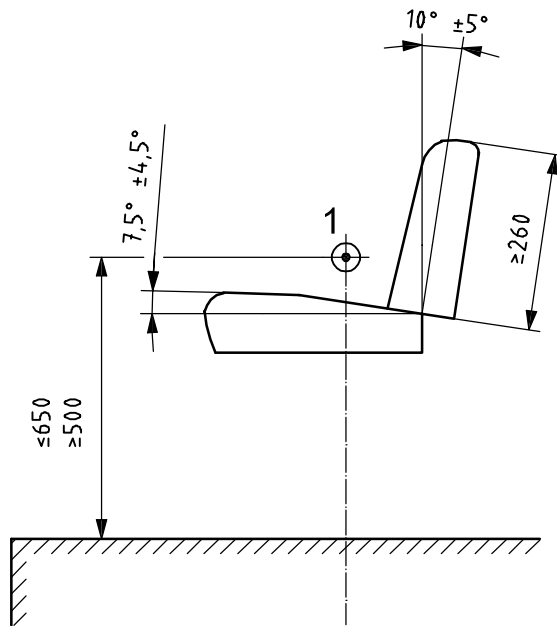
Page 12, 5.1.2.2

Add a new subclause 5.1.2.2. (The former 5.1.2.2 becomes 5.1.2.3.)

“5.1.2.2 The driver's seat dimensions and adjustment shall meet the requirements of ISO 4253, except that the seat index point (SIP) dimension above the platform shall be 500 mm minimum and 650 mm maximum (see Figure 6). The driver's seat adjustment mechanism(s) shall prevent unintended seat movement and shall have stops at the ends of the adjustment range. The suspension system shall be adjustable to accommodate the weight of the driver.”

Add a new Figure 6. (The former Figure 6 becomes Figure 7.)

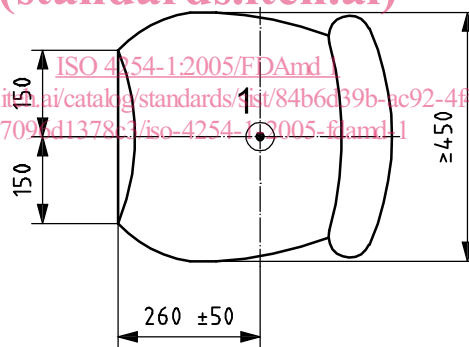
Dimensions in millimetres



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a) Intermediate seat adjustment
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b) Coordinate for measuring width of seat

Key

1 SIP

Figure 6 — Seat dimensions and height

Page 16, 6.4

Replace 6.4 with the following.

“6.4 Transmission of mechanical power between self-propelled machines/tractors and recipient machinery

6.4.1 General

The straight line overlap of the power take-off (PTO) drive shaft guard with the power input connection (PIC) guard shall be not less than 50 mm. This minimum overlap shall also apply to protection devices of wide-angle PTO drive shafts and when using clutches or other elements.

If the machine can be equipped with a PTO drive shaft with a guard, the restraining device of which requires a fixing point on the machine, suitable fixing point(s) shall be provided.

NOTE This requirement is to be the subject of review.

The machine shall be supplied with a support for the transmission shaft when the machine is uncoupled, but this support shall not be the device used to prevent rotation of the transmission shaft guard.

The PIC guard shall be so constructed and attached to the implement that, in conjunction with the PTO drive shaft guard, it encloses the shaft on all sides up to the first fixed bearing housing of the machine, while allowing for fitting and articulation of the PTO drive shaft.

6.4.2 Stationary operation

PTO-driven equipment designed to operate in a stationary position shall be provided with means to prevent separation of the PTO drive shaft, e.g. by keeping it coupled to the three-point linkage during operation. Information on the use of such means shall be provided in the operator's manual [see 8.1.3 t)].”

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Page 17, Table 1

Delete the line of the table related to 4.6.5.

Page 18, 8.1.3

In the alphabetical list:

- delete point i) [points j) to w) become i) to v), respectively];
- in former point t) [becomes s)], replace the cross-reference “(see 6.4.2)” with “(see 6.4.1)”.

Page 19, 8.2

Delete 8.2.4.

Page 20, Annex A

Delete the cross-references to 4.6 in lines A.1.1, A.1.2, A.1.4, A.1.5 and A.19.4.

In line A.1.3, second column, replace “Cutting or servicing hazards” with “Cutting or severing hazards”.

In line A.1.5, third column, replace “Starting/topping the engine” with “Starting/stopping the engine”.

Page 29, Annex C

Delete Annex C. Annex D becomes Annex C.

Page 33, Bibliographie

Add the following reference:

- [7] ISO 5008, *Agricultural wheeled tractors and field machinery — Measurement of whole-body vibration of the operator*, including the Technical Corrigendum ISO 5008:2002/Cor 1:2005

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