

Agricultural and forestry tractors — Passenger seat — Requirements and test procedures

ICS 65.060.10

National foreword

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The start and finish of text introduced or altered by amendment is indicated in the text by tags. Tags indicating changes to CEN text carry the number of the CEN amendment. For example, text altered by CEN amendment A1 is indicated by A1 A1.

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A list of organizations represented on this committee can be obtained on request to its secretary.

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Agricultural and forestry tractors - Passenger seat - Requirements and test procedures

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Prescriptions et modes opératoires d'essai

Land- und forstwirtschaftliche Traktoren -
Beifahrersitz - Anforderungen und Prüfverfahren

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European foreword

This document (EN 15694:2009+A1:2015) has been prepared by Technical Committee CEN/TC 144 “Tractors and machinery for agriculture and forestry”, the secretariat of which is held by AFNOR.

This European Standard shall be given the status of a national standard, either by publication of an identical text or by endorsement, at the latest by May 2016, and conflicting national standards shall be withdrawn at the latest by May 2016.

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This document includes Amendment 1 approved by CEN on 2015-09-12.

This document supersedes EN 15694:2009.

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Introduction

Agricultural and forestry tractors are often equipped with a passenger seat to allow the safe, short-term and occasional transport of a person from the farm to the field.

The tractor and cab design is defined by and optimized for various functions and operating conditions. The passenger transport is not a main request and less comfortable conditions are accepted by the market for the benefit of the main purposes.

Roll-over protective structures (ROPS) were introduced to improve the safety of the tractor driver during field operations.

To allow the protection of the passenger, to consider the specific conditions of tractor design, its intended use and all risks including the risk of roll-over, the standard should satisfy especially the following conditions:

- to specify requirements to be applied to all tractors respectively all operations and requirements depending on the intended use respectively operations taking into account the normal use;
- to specify performance based requirements corresponding to the state of art and minimizing the necessary changes in tractor design;
- to ensure a high level of occupational safety for both – the driver and passenger – during the individual operations;
- not to reduce the protection of the driver or passenger against other risks;
- to refer to available specifications or standards;
- to provide repeatable and reproducible test procedures.

1 Scope

This standard is applicable to agricultural and forestry tractors on which provision is made for carrying one person in addition to the driver. It specifies minimum requirements for space and support, specifies roll-over protective structures (ROPS) test procedures and seat belt requirements, by reference to other standards.

It also specifies the information to be provided by the tractor manufacturer.

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 3463, *Tractors for agriculture and forestry — Roll-over protective structures (ROPS) — Dynamic test method and acceptance conditions*

ISO 3776-1, *Tractors and machinery for agriculture — Seat belts — Part 1: Anchorage location requirements*

ISO 3776-2, *Tractors and machinery for agriculture — Seat belts — Part 2: Anchorage strength requirements*

ISO 5353:1995, *Earth-moving machinery, and tractors and machinery for agriculture and forestry — Seat index point* ^{A1}

ISO 5700, ^{A1} *Tractors for agriculture and forestry — Roll-over protective structures — Static test method and acceptance conditions* ^{A1}

ISO 12003-1, *Agricultural and forestry tractors — Roll-over protective structures on narrow-track wheeled tractors — Part 1: Front-mounted ROPS*

ISO 12003-2, *Agricultural and forestry tractors — Roll-over protective structures on narrow-track wheeled tractors — Part 2: Rear-mounted ROPS*

3 Terms and definitions

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

3.1

passenger seat

structure which may or may not be integral with the tractor structure, complete with cushion, intended to seat and transport one adult person

^{A1}

3.2

passenger seat index point (SIP_p)

point located in the central longitudinal plane of the apparatus for determination when installed in the passenger seat

3.3

passenger deflection-limiting volume (PDLV)

volume which is defined in relation to the reference planes and the passenger seat index point (SIP_p) and serving to set limits and deflections permissible when performing laboratory evaluations of the protective structure

3.4

reference planes

vertical planes being longitudinal and transversal to the tractor and passing through the passenger seat index point; these reference planes are assumed to move horizontally with the seat during loading but to remain perpendicular to the tractor or the floor of the roll-over protective structure

3.5

interference zone

portion of the operator clearance zone (OCZ) where a defined maximum interference with PDLV is allowed 

4 Requirements

4.1 Location and mounting

4.1.1 Each seat shall be so placed that the passenger is in no danger and creates no impediment to driving the tractor.

4.1.2 There shall be a vertical clearance of at least 920 mm above the surface of the passenger seat. However, where a tractor satisfies the requirements relating to the driver's protection and seating, but its construction does not allow for such a vertical clearance for the passenger, the clearance may be reduced to 800 mm, provided that adequate padding is provided immediately above the passenger seat at the level of the roof.

The upper part of the vertical clearance allowed for the passenger may be limited at the rear and sides, only by a radius not exceeding 300 mm. The vertical clearance is the vertical open space between the front edge of the seat and the roof of the tractor.

4.1.3 The passenger seat shall not add to the overall width of the tractor.

4.1.4 Each seat shall be firmly fixed and properly attached according to the type of tractor, to a structural member of the tractor chassis, roll-over protective structure, platform, etc. The structural member concerned shall be sufficiently strong to support a laden passenger seat.

4.2 Seat dimensions

4.2.1 Each seat shall be at least 400 mm wide and at least 300 mm deep.

4.2.2 Each seat shall incorporate a lateral support for position-maintenance purposes and be fitted with a back rest that is at least 200 mm high.

NOTE The lateral support and/or the backrest may also be provided by parts of the cab and/or the roll-over protective structure.

4.3 Seat cushion

The seat cushion shall be either padded or made from elastic materials (e.g. plastics).