INTERNATIONAL STANDARD

ISO 3776-1

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Tractors and machinery for agriculture — Seat belts —

Part 1: Anchorage location requirements

Tracteurs et matériels agricoles — Ceintures de sécurité —

Partie 1: Exigences relatives à l'emplacement des ancrages

Reference number
ISO 3776-1:2006(E)

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Foreword

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International Standards are drafted in accordance with the rules given in the ISO/IEC Directives, Part 2.

The main task of technical committees is to prepare International Standards. 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.

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 3776-1 was prepared by Technical Committee ISO/TC 23, *Tractors and machinery for agriculture and forestry*, Subcommittee SC 3, *Safety and comfort of the operator*.

This first edition of ISO 3776-1, together with ISO 3776-2, cancels and replaces ISO 3776:1989, of which it constitutes a technical revision. Notably, it incorporates the following changes:

— the seat index point (SIP) is used as the reference point;

— the relative position of the anchorages has been aligned with ISO 6683;

— the strength testing of the anchorages is now dealt with exclusively by ISO/OECD 3776-2.

These modifications allow the alignment of ISO standards developed for different sectors and the harmonization of strength testing of seat belts and their anchorages according to ISO and OECD.

ISO 3776 consists of the following parts, under the general title *Tractors and machinery for agriculture — Seat belts*:

— *Part 1: Anchorage location requirements*

— *Part 2: Anchorage strength requirements* [joint publication with OECD]

Tractors and machinery for agriculture — Seat belts —

Part 1: Anchorage location requirements

1 Scope

This part of ISO 3776 specifies the location, relative position and threaded hole dimensions of the anchorages for pelvic restraint (seat) belt assemblies intended to be used by the operators of agricultural tractors and self-propelled machinery.

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

3 Terms and definitions

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

3.1
anchorage
provision to transfer forces applied to the seat belt assembly to the structure of the tractor or the machine

3.2
seat belt assembly
belt, including any buckle, length adjustor, retractor, and means for securing to an anchorage, that fastens across the pelvic area to provide pelvic restraint during operation and roll-over conditions

3.3
seat belt system
seat belt assembly with anchorages

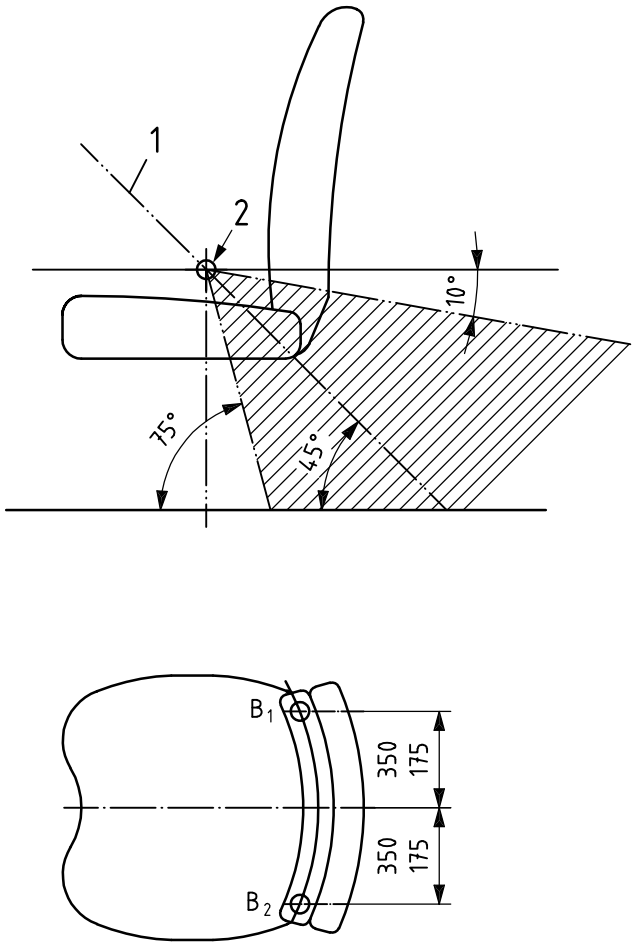
4 Anchorages

4.1 Choice of anchorage location

Each seat belt system shall have two anchorages. If the seat does not swivel or have a suspension system, the seat belt assembly may be anchored to the seat or the tractor/machine at any point within the hatched zone shown in Figure 1.

Alternatively, the seat belt assembly shall be attached to the anchorages on the seat near the rear corners of the seat cushion within the hatched zone shown in Figure 1, such that the seat belt assembly moves with the seat cushion at all times.

Dimensions in millimetres



Key

B_1	anchorage (right side)
B_2	anchorage (left side)
1	preferred angle of webbing
2	seat index point (SIP)

Figure 1 — Location and relative position of anchorages

Belts, cables, or similar flexible devices may be used to transfer seat belt assembly loads from the seat anchorages to the tractor or self-propelled machine.

4.2 Relative position of anchorages

4.2.1 General

The anchorages shall be positioned within the hatched zone shown in Figure 1 — for example, below a line at 10° to the horizontal and behind the vertical line, through the seat index point (SIP). The anchorages, B_1 and B_2, shall be at a horizontal distance of not less than 175 mm and not more than 350 mm from the seat longitudinal plane of symmetry. However, if the seat structure makes it necessary, this lower limit may be reduced, provided suitable arrangements have been made to ensure an appropriate spacing of the webbing where in contact with the operator's body.

4.2.2 Seat index point

The SIP (see Figure 1) shall be determined in accordance with ISO 5353, or its position with respect to the seat shall be as specified by the seat manufacturer.

4.2.3 Webbing angle to horizontal

The angle of the webbing to the horizontal plane shall be as near as possible to 45° for all normal driving positions of the seat. The angle may vary from 45°, nevertheless, in no driving position shall it be less than 10° or greater than 75°. See Figure 1.

4.3 Dimension of anchorage threaded holes

An anchorage shall consist of a threaded hole of 7/16-20 UNF 2 B. The axis of the threaded hole shall be at 90° ± 5° to the seat longitudinal plane of symmetry.

Where a seat belt is designed, fitted and supplied with the tractor or machine by the tractor/machine manufacturer, alternative thread sizes, for example, 1/2-13 UNC 2A or M12, may be used, provided the anchorages supplied comply with all the other requirements of this part of ISO 3776.

4.4 Equivalence with ISO 6683

Seat belt anchorages fulfilling the relevant requirements of ISO 6683 are also in conformance with this part of ISO 3776.

Bibliography

[1] ISO 6683, *Earth-moving machinery — Seat belts and seat belt anchorages — Performance requirements and tests*

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