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**Industrial trucks — Safety requirements and verification —**

Part 3:

**Additional requirements for trucks with elevating operator position and trucks specifically designed to travel with elevated loads**

**AMENDMENT 1**

*Chariots de manutention — Exigences de sécurité et vérification —*

*Partie 3: Exigences complémentaires pour chariots avec poste de conduite élevable et pour chariots spécialement conçus pour une conduite avec des charges en élévation*

*AMENDEMENT 1*



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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](http://www.iso.org/directives)).

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This document was prepared by Technical Committee ISO/TC 110, *Industrial trucks*, Subcommittee SC 2, *Safety of powered industrial trucks*, in collaboration with the European Committee for Standardization (CEN) Technical Committee CEN/TC 150, *Industrial Trucks - Safety*, in accordance with the Agreement on technical cooperation between ISO and CEN (Vienna Agreement).

A list of all parts in the ISO 3691 series can be found on the ISO website.

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# Industrial trucks — Safety requirements and verification —

Part 3:

## Additional requirements for trucks with elevating operator position and trucks specifically designed to travel with elevated loads

### AMENDMENT 1

#### *Scope*

Replace reference to “ISO/TS 3691-7” with reference to “EN 16307-3:2023”.

#### *Normative references*

Replace “ISO 6292:2008” with “ISO 6292:2020”.

Replace “ISO 5053-1:2015, *Industrial trucks — Terminology and classification — Part 1: Types of industrial trucks*” with “ISO 5053-1:2020, *Industrial trucks — Vocabulary — Part 1: Types of industrial trucks*”.

#### *Clause 3*

Replace term entry 3.2 with the following:

#### **3.2**

#### **elevating operator position**

normal operating position on the operator’s platform as defined by the manufacturer which can be elevated more than 1 200 mm from the ground to the floor of the platform measured with the truck unladen

Note 1 to entry Area where the operator is positioned (standing or sitting) for operating the truck, e.g. travel, lift/lower.

Replace the preferred term in term entry 3.8 with the following:

#### **personal fall protection system**

Add the following new term entry at the end of Clause 3:

**3.11**

**defined walking surface**

load-carrying surface for the operator to temporarily step on (e.g. pallet) to facilitate efficient handling of load

**4.3.1**

Replace the whole subclause with the following:

For operations without guidance systems, the braking performance shall conform to ISO 6292:2020, Table 2 or 3, group C.

Braking when travelling at more than 9 km/h is subject to regional requirements, additional to the requirements of this document. See EN 16307-3:2023.

**4.4.5.1**

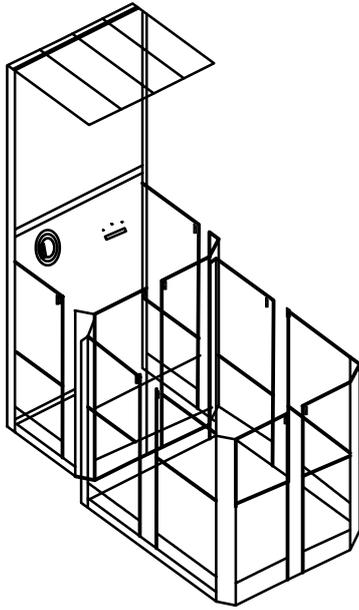
Replace the first paragraph with the following:

Elevated operator's platforms with a lift height of more than 1 200 mm from the ground and fixed operator's stand-on platforms located at heights of more than 1 200 mm shall be equipped with mechanical guards on all sides (e.g. guard rails, access gates).

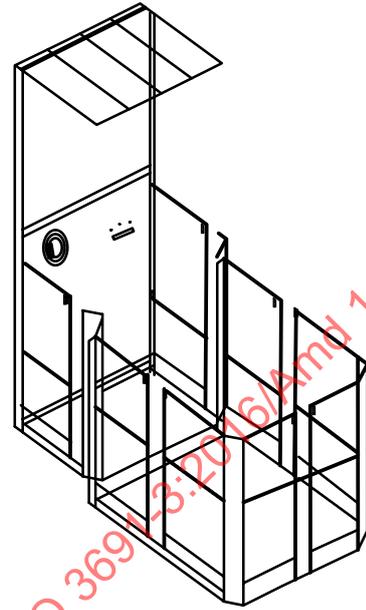
Replace the second sentence in the second paragraph with the following:

The mechanical guards shall be capable of withstanding without permanent deformation a force of 900 N applied in a vertical downwards direction and a force of 900 N applied in a horizontal direction from the inside to the outside, at their location(s) of least strength, and shall not be capable of being opened outwards.

Replace Figure 3 with the following Figure 3 a) and 3 b):



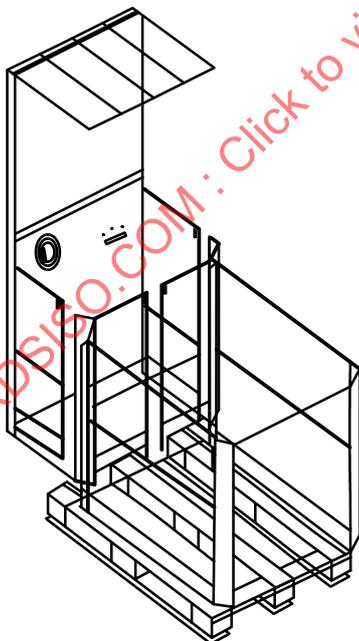
a) Without supplementary platform interlock



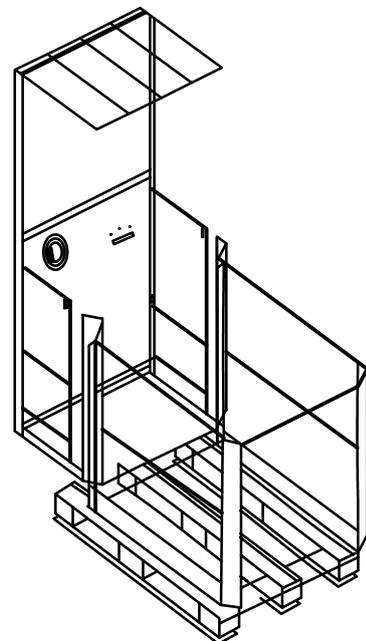
b) With supplementary platform interlock

**Figure 3 — Supplementary platform** (schematic only)

Replace Figure 4 with the following Figure 4 a) and 4 b):



a) Without pallet interlock



b) With pallet interlock

**Figure 4 — Supplementary platform with defined walking surface (pallet)** (schematic only)

4.4.5.2

Replace the second paragraph with:

Interlocking gates are not required if a personal fall protection system according to 4.4.5.5 is used.

4.4.5.3

Replace the subclause title with:

**4.4.5.3 Requirements for supplementary platform**

Replace the first paragraph with:

The whole surface accessible to personnel shall be protected against falling according to 4.4.5.1. If an extended or an interlocked supplementary platform as shown in Figures 2 and 3 b), respectively, is provided, it shall fulfil the requirements of 4.4.5.1 and 4.4.5.2 and shall be extended to encompass the whole area accessible to the operator and assistant if an assistant is permitted by design. Where a supplementary platform interlock is fitted, and the platform [see Figure 3 b)] is not detected, elevating shall be disabled above 1 200 mm.

If no supplementary platform is in place, a mechanical guard as specified in 4.4.5.1 and 4.4.5.2 shall be in place between the operator's platform and the load-handling device (see Figure 1).

If the supplementary platform is in place but not interlocked, a mechanical guard as specified in 4.4.5.1 and 4.4.5.2 shall be in place between the operator's platform and the supplementary platform [see Figure 3 a)].

Supplementary platforms shall have elevating, lowering and travel disabled when any gate is opened and the lift height reaches, or is greater than, 1 200 mm.

In the last paragraph, replace "fall protection device" with "personal fall protection system".

In the last paragraph, replace "ISO/TS 3691-7" with "EN 16307-3:2023".

4.4.5.4

Replace the whole subclause with the following:

For trucks intended by the manufacturer to be used with an interlocked defined walking surface, as shown in Figure 4 b), mechanical guards, which are part of the truck, shall be provided to join the walking surface by a positive engagement device to prevent overturning and shifting of that walking surface [see 6.2 f)]. Disposable pallets are not allowed. Where a defined walking surface interlock is fitted, and the defined walking surface [see Figure 4 b)] is not detected, elevating shall be disabled above 1 200 mm.

If no defined walking surface is in place, a mechanical guard as specified in 4.4.5.1 and 4.4.5.2 shall be in place between the operator platform and the load-handling device (see Figure 1)

If the defined walking surface is in place but not interlocked, a mechanical guard as specified in 4.4.5.1 and 4.4.5.2 shall be in place between the operator's platform and the defined walking surface [see Figure 4 a)].

Defined walking surfaces shall have elevating, lowering and travel disabled when any gate is opened and the height reaches, or is greater than, 1 200 mm.