SLOVENSKI STANDARD
SIST EN 1459-3:2015

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Vozila za talni transport - Terenska vozila - Varnostne zahteve in preverjanje - 3. del: Dodatne zahteve za vozila z mehanizmom za dviganje s spremenljivim dosegom z delovnimi ploščadmi

Rough-terrain trucks - Safety requirements and verification - Part 3: Additional requirements for variable reach trucks fitted with elevating work platform

Geländegängige Stapler - Sicherheitsanforderungen und Verifizierung - Teil 3: Zusätzliche Anforderungen an Stapler mit veränderlicher Reichweite, ausgerüstet mit Arbeitsbühne

Chariots tout-terrain - Exigences de sécurité et vérification - Partie 3: Exigences supplémentaires pour chariots à portée variable équipés d'une plateforme élévatrice de travail

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English Version

Rough-terrain trucks - Safety requirements and verification - Part 3: Interface between the variable-reach truck and the work platform

Chariots tout-terrain - Prescriptions de sécurité et vérification - Partie 3 : Interface entre le chariot à portée variable et la plateforme de travail

Geländegängige Stapler - Sicherheitsanforderungen und Verifizierung - Teil 3: Zusätzliche Anforderungen für Stapler mit veränderlicher Reichweite ausgerüstet mit Arbeitsbühne

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Foreword

This document (EN 1459-3:2015) has been prepared by Technical Committee CEN/TC 150 “Industrial trucks - Safety”, the secretariat of which is held by BSI.

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of an identical text or by endorsement, at the latest by November 2015, and conflicting national standards shall be withdrawn at the latest by November 2015.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. CEN [and/or CENELEC] shall not be held responsible for identifying any or all such patent rights.

The purpose of this standard is to give requirements for the specific aspects related to the fitting and interface of a work platform to a variable-reach truck designed for the lifting of persons. This standard does not give requirements for the complete truck fitted with a work platform.

This document has been prepared under a mandate given to CEN by the European Commission and the European Free Trade Association.

Trucks which are equipped with work platforms as interchangeable equipment are regarded as Mobile Elevating Work Platforms (MEWPs) as defined in 3.1 of EN 280:2013, and listed under Annex IV, item 17 of the Machinery Directive 2006/42/EC.

EN 1459 consists of the following parts, under the general title Rough-terrain trucks — Safety requirements and verification:

Part 1: Variable-reach trucks

Part 2: Slewing variable-reach trucks

Part 3: Interface between the variable-reach truck and the work platform

Part 4: Additional requirements for variable reach trucks handling suspended loads

Part 5: Additional requirements for attachments and attachment interface

Part 6: Application of EN ISO 13849-1 to slewing and non-slewing variable-reach rough-terrain trucks (CEN/TR)

Part 7: Test method and determination of noise emission

According to the CEN/CENELEC Internal Regulations, the national standards organisations of the following countries are bound to implement this European Standard: Austria, Belgium, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, Former Yugoslav Republic of Macedonia, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and the United Kingdom.

Introduction

This document is a type-C standard as stated in EN ISO 12100.

The machines concerned and the extent to which hazards, hazardous situations or hazardous events are covered as indicated in the Scope of this document.

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

Acknowledging that, at the time of publication, the requirements included in this European Standard do not represent the state of the art, a transition period of 18 months is permitted after the date of publication, such that manufacturers can develop their products sufficiently to meet the requirements of this European Standard.

1 Scope

This European Standard specifies the safety requirements for the interface between the work platform and the truck when designed for lifting of persons (covered by prEN 1459-1:2014, FprEN 1459-2:2015 or EN 1459:1998+A3:2012).

This European Standard deals with the significant hazards, hazardous situations and events relevant to the interface when it is used as intended and under conditions of misuse which are reasonably foreseeable by the manufacturer of the truck. The significant hazards covered by this standard are listed in Annex A with the exception of hazards listed below.

This European Standard does not address hazards which may occur:

a) when handling suspended work platforms which may swing freely;

b) when using non-integrated work platforms or other attachments not intended for the lifting of persons;

c) when operating in potentially explosive atmospheres.

This European Standard does not give requirements for the complete truck fitted with a work platform. This standard does not address risks to parts of the truck other than the interface with the work platform.

2 Normative references

The following documents, in whole or in part, are normatively referenced in this document and are indispensable for its application. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

EN 280:2013, *Mobile elevating work platforms - Design calculations - Stability criteria - Construction - Safety - Examinations and tests*

prEN 1459-1:2014, *Rough-terrain trucks - Safety requirements and verification - Part 1: Variable-reach trucks*

FprEN 1459-2:2015, *Rough-terrain trucks — Safety requirements and verification — Part 2: Slewing variable-reach trucks*

EN ISO 12100:2010, *Safety of machinery - General principles for design - Risk assessment and risk reduction (ISO 12100)*

EN ISO 13849-1, *Safety of machinery - Safety-related parts of control systems - Part 1: General principles for design (ISO 13849-1)*

ISO 5053, *Powered industrial trucks — Terminology*

ISO 15870, *Powered industrial trucks — Safety signs and hazard pictorials — General principles*

EN 62061, *Safety of machinery - Functional safety of safety-related electrical, electronic and programmable electronic control systems (IEC 62061)*

3 Terms and definitions

For the purposes of this document, the terms and definitions given in ISO 5053 and EN 280 together with the following apply.

3.1
work platform
fenced platform or a cage which can be moved under load to the required working position and from which erection, repair, inspection or similar work can be carried out

[SOURCE: EN 280:2013, 3.2]

3.2
non-integrated work platform
work platform without controls on the platform

3.3
interlock
mechanical, electrical or other type of device the purpose of which is to prevent the operation of the truck functions under specified conditions

4 Safety requirements

4.1 General

Means shall be provided to enable the truck to recognize that a work platform has been fitted.

The truck function shall change to Mobile Elevating Work Platform (MEWP) function only when the work platform is:

— mechanically, electrically and, if necessary for the operation of any SRP/CS (see EN ISO 13849-1) fitted to the platform, hydraulically fitted to the truck; and

— locked and interlocked.

Verification – by design check and functional test.

4.2 Locking of the work platform

The work platform shall be designed to be securely attached to the truck, locked and interlocked. The interface shall be designed to avoid uncontrolled movements of the platform.

The safety related part of the control system (as defined in EN ISO 13849-1) performing the interlocking function shall comply with 4.6.

Any sensors which are part of the control system fulfilling the interlocking function shall be located on the work platform part of the connection.

Verification – by design check and functional test.

4.3 Dismounting of the work platform from the truck

The release of the locking system shall not be possible from the platform.

The dismounting of the work platform from the truck shall require two separate intentional actions to release the locking system.

The safety related part of the control system (as defined in EN ISO 13849-1) performing the dismounting of the work platform from the truck shall comply with 4.6.

Verification – by design check and visual examination.

4.4 Cables and connections

Means shall be provided to :

a) protect cables, hoses or other means connecting the platform to the truck when in use; and

b) safely store cables, hoses or other means connecting the platform to the truck when not in use. Such means shall prevent damage and/or contamination to disconnected components.

Verification – by design check and visual examination.

4.5 Mechanical locking device

The mechanical locking device shall be retained with the truck or the work platform.

Verification – by visual examination.

4.6 Safety related functions

The safety related part of the control system performing the interlocking function shall comply with Table 1.

Table 1 — Safety related parts of control systems

Paragraph of EN 1459-3	**PLr** (EN ISO 13849-1)	**SIL** (EN 62061)
4.1 General *The truck function shall change to MEWP function only when the work platform is:* *- mechanically, electrically and, if necessary for the operation of any SRP/CS (see* EN ISO 13849-1*) fitted to the platform, hydraulically fitted to the truck; and* *- locked and interlocked*	**c**	**1**
4.3 Dismounting of the work platform from the truck *The dismounting of the work platform from the truck shall require two separate intentional actions to release the locking system.*	**c**	**1**

NOTE prCEN/TR 1459-6:2015 describes the methodology followed to determine the values of PLr listed in Table 1.

Verification – by design check.

5 Verification

Verification shall be carried out on each type of interface.