BS EN ISO 4254-7:2017

BSI Standards Publication

Agricultural machinery — Safety

Part 7: Combine harvesters, forage harvesters, cotton harvesters and sugar cane harvesters

bsi.

National foreword

This British Standard is the UK implementation of EN ISO 4254-7:2017. It is identical to ISO 4254-7:2017. It supersedes BS EN ISO 4254-7:2009, which is withdrawn.

The UK participation in its preparation was entrusted to Technical Committee AGE/32, Agricultural implements and trailers.

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

This publication does not purport to include all the necessary provisions of a contract. Users are responsible for its correct application.

Published by BSI Standards Limited 2018

ISBN 978 0 580 82892 8

ICS 65.060.50

Compliance with a British Standard cannot confer immunity from legal obligations.

This British Standard was published under the authority of the Standards Policy and Strategy Committee on 31 January 2018.

Amendments/corrigenda issued since publication

Date	Text affected

EUROPEAN STANDARD

NORME EUROPÉENNE

EUROPÄISCHE NORM

EN ISO 4254-7

December 2017

ICS 65.060.50

Supersedes EN ISO 4254-7:2009

English Version

Agricultural machinery - Safety - Part 7: Combine harvesters, forage harvesters, cotton harvesters and sugar cane harversters (ISO 4254-7:2017)

Matériel agricole - Sécurité - Partie 7: Moissonneuses-batteuses, récolteuses-hacheuses-chargeuses de fourrage, récolteuses de coton et récolteuses de cannes à sucre (ISO 4254-7:2017)

Landmaschinen - Sicherheit - Teil 7: Mähdrescher, Feldhäcksler, Baumwollerntemaschinen und Zuckerrohrerntemaschinen (ISO 4254-7:2017)

This European Standard was approved by CEN on 21 September 2017.

CEN members are bound to comply with the CEN/CENELEC Internal Regulations which stipulate the conditions for giving this European Standard the status of a national standard without any alteration. Up-to-date lists and bibliographical references concerning such national standards may be obtained on application to the CEN-CENELEC Management Centre or to any CEN member.

This European Standard exists in three official versions (English, French, German). A version in any other language made by translation under the responsibility of a CEN member into its own language and notified to the CEN-CENELEC Management Centre has the same status as the official versions.

CEN members are the national standards bodies of 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, Serbia, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and United Kingdom.

EUROPEAN COMMITTEE FOR STANDARDIZATION
COMITÉ EUROPÉEN DE NORMALISATION
EUROPÄISCHES KOMITEE FÜR NORMUNG

CEN-CENELEC Management Centre: Rue de la Science 23, B-1040 Brussels

European foreword

This document (EN ISO 4254-7:2017) has been prepared by Technical Committee ISO/TC 23 “Tractors and machinery for agriculture and forestry” in collaboration with 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 June 2018 and conflicting national standards shall be withdrawn at the latest by June 2018.

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

This document supersedes EN ISO 4254-7:2009.

This document has been prepared under a mandate given to CEN by the European Commission and the European Free Trade Association, and supports essential requirements of EU Directive(s).

For relationship with EU Directive, see informative Annex ZA, which is an integral part of this document.

According to the CEN-CENELEC Internal Regulations, the national standards organizations 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, Serbia, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and the United Kingdom.

Endorsement notice

The text of ISO 4254-7:2017 has been approved by CEN as EN ISO 4254-7:2017 without any modification.

Annex ZA
(informative)

Relationship between this European Standard and the Essential Requirements of EU Directive 2006/42/EC amended by Directive 2009/127/EC aimed to be covered

This European Standard has been prepared under Commission's standardization request M/396 mandate to CEN and CENELEC for standardisation in the field of machinery to provide one voluntary means of conforming to Essential Requirements of the New Approach Directive 2006/42/EC of the European Parliament and of the Council of 17 May 2006 on machinery, and amending Directive 95/16/EC (recast) amended by Directive 2009/127/EC of the European Parliament and of the Council of 21 October 2009 amending Directive 2006/42/EC with regard to machinery for pesticide application (Text with EEA relevance) .

Once this standard is cited in the Official Journal of the European Union under that Directive, compliance with the normative clauses of this standard confers, within the limits of the scope of this standard, a presumption of conformity with the corresponding Essential Requirements of that Directive and associated EFTA regulations.

Table ZA.1 — Correspondence between this European Standard and EU Directive 2006/42/EC amended by Directive 2009/127/EC

Essential requirements of EU Directive 2006/42/EC amended by Directiv2009/127/EC	Clause(s)/sub-clause(s) of this EN	Remarks/Notes
Within the limits of the scope, all relevant essential requirements **are covered with the exception of essential requirement(s):** — for all machines: — 1.3.7, first paragraph — 1.3.8.1 — 1.4, with the exception of 1.4.1 first indent, all with regard to moving parts of power transmission — 1.5.11 — 1.6.1, only for cleaning of the grain tank — 1.7.3, first paragraph, first, second and sixth indent — 1.7.4.2 j) — 1.7.4.2 t)	All normative clauses.	Compliance with the second and third indents of Essential Requirement 1.2.1, with regard to safety integrity level, is not achieved.

— 1.7.4.2 u), fourth paragraph, second sentence. — additionally for self-propelled machines: — 1.1.8, only for vibration — 1.5.9 — 1.5.12 — 3.3.3 — 3.4.7, fifth, seventh and eight paragraph		

WARNING 1 — Presumption of conformity stays valid only as long as a reference to this European Standard is maintained in the list published in the Official Journal of the European Union. Users of this standard should consult frequently the latest list published in the Official Journal of the European Union.

WARNING 2 — Other Union legislation may be applicable to the product(s) falling within the scope of this standard.

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Foreword

ISO (the International Organization for Standardization) is a worldwide federation of national standards bodies (ISO member bodies). The work of preparing International Standards is normally carried out through ISO technical committees. Each member body interested in a subject for which a technical committee has been established has the right to be represented on that committee. International organizations, governmental and non-governmental, in liaison with ISO, also take part in the work. ISO collaborates closely with the International Electrotechnical Commission (IEC) on all matters of electrotechnical standardization.

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).

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. Details of any patent rights identified during the development of the document will be in the Introduction and/or on the ISO list of patent declarations received (see www.iso.org/patents).

Any trade name used in this document is information given for the convenience of users and does not constitute an endorsement.

For an explanation on the voluntary nature of standards, the meaning of ISO specific terms and expressions related to conformity assessment, as well as information about ISO's adherence to the World Trade Organization (WTO) principles in the Technical Barriers to Trade (TBT) see the following URL: www.iso.org/iso/foreword.html.

This document was prepared by Technical Committee ISO/TC 23, *Tractors and machinery for agriculture and forestry*, Subcommittee SC 7, *Equipment for harvesting and conservation*.

This third edition cancels and replaces the second edition (ISO 4254-7:2008), which has been technically revised.

The main changes compared to the previous edition are as follows:

— additions to the Scope and of requirements for sugar cane harvesters;

— replacement of the reference to ISO 4254-1:2008 by ISO 4254-1:2013;

— addition of references to ISO 3776-3 and ISO 10975;

— deletion of the references to ISO 12100-1:2003 and ISO 12100-2:2003 and replacement with ISO 12100:2010;

— list of significant hazards (Clause 4) as new informative Annex A;

— in Clause 4, for all machines, replacement of requirements by reference to ISO 4254-1:2013 for the following:

  — operator's seat and addition of a references to ISO 3776-3;

  — handrails and handholds with a modification;

  — operator platform;

  — other boarding means;

  - supports for service and maintenance;
- modification of the requirements for the following:
  - visibility — view to front and rear;
  - disconnection of the battery;
  - greasing;
  - boarding means;
- addition of requirements for the following:
  - forward and rearward facing work lights;
  - cleaning the machine;
  - header hold-up;
- instructional seat: deletion of the requirement that anchorage points for a restraint system have to be provided and addition for a requirement that a restraint system has to be provided in the event of a rollover;
- replacement of the requirements for automatic guidance systems by a reference to ISO 10975;
- in Clause 5, for combine harvesters:
  - clean grain and returns handling systems: addition of information for explanation for better understanding of the requirements;
  - straw choppers: addition of requirement for replacing blades;
- in Clause 6, for forage harvesters:
  - modification of the requirements for run-down of rotating functional elements in the crop flow system.

A list of all parts in the ISO 4254 series can be found on the ISO website.

Introduction

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

This document is of relevance, in particular, for the following stakeholder groups representing the market players with regard to machinery safety:

— machine manufacturers (small, medium and large enterprises);

— health and safety bodies (regulators, accident prevention organizations, market surveillance, etc.).

Others can be affected by the level of machinery safety achieved with the means of the document by the above-mentioned stakeholder groups:

— machine users/employers (small, medium and large enterprises);

— machine users/employees (e.g. trade unions, organizations for people with special needs);

— service providers, e.g. for maintenance (small, medium and large enterprises);

— consumers (in the case of machinery intended for use by consumers).

The above-mentioned stakeholder groups have been given the possibility to participate at the drafting process of this document.

The machinery and systems concerned and the extent to which hazards, hazardous situations or hazardous events are covered are 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.

The machinery concerned and the extent to which hazards, hazardous situations and events are covered are indicated in the Scope of this document. These hazards are specific to combine harvesters, forage harvesters, cotton harvesters and sugar cane harvesters.

Significant hazards that are common to all the agricultural machines (self-propelled ride-on, mounted, semi-mounted and trailed) are dealt with in ISO 4254-1.

INTERNATIONAL STANDARD **ISO 4254-7:2017(E)**

Agricultural machinery — Safety —

Part 7: Combine harvesters, forage harvesters, cotton harvesters and sugar cane harvesters

1 Scope

This document, when used together with ISO 4254-1, specifies the safety requirements and their verification for the design and construction of combine harvesters, forage harvesters, cotton harvesters and sugar cane harvesters. It describes methods for the elimination or reduction of hazards arising from the intended use of these machines by one person (the operator) in the course of normal operation and service. In addition, it specifies the type of information on safe working practices to be provided by the manufacturer.

When provisions of this document are different from those which are stated in ISO 4254-1, the provisions of this document take precedence over the provisions of ISO 4254-1 for machines that have been designed and built according to the provisions of this document.

This document, taken together with ISO 4254-1, deals with all the significant hazards (as listed in Table A.1), hazardous situations and events relevant to combine harvesters, forage harvesters, cotton harvesters and sugar cane harvesters, when they are used as intended and under the conditions of misuse that are reasonably foreseeable by the manufacturer (see Annex A). It is not applicable to hazards arising from the presence of persons other than the operator, cleaning of the grain tank, and hazards related to vibrations and moving parts for power transmission, except for strength requirements for guards and barriers. In respect of braking and steering, it is applicable only to the ergonomic aspects (e.g. location of brake pedal and steering wheel); no other aspects related to braking and steering are covered. In the case of trailed harvesters, it is applicable only to hazards related to the working process.

Design requirements for roll-over protective structures (if applicable) are not specified in this document.

Performance levels (or categories) for safety-related parts of control systems in accordance with ISO 25119 or ISO 13849 are not given in this document.

NOTE Specific requirements related to road traffic regulations are not taken into account in this document.

This document is not applicable to machines manufactured before the date of its publication.

2 Normative references

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements 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 3600, *Tractors, machinery for agriculture and forestry, powered lawn and garden equipment — Operator's manuals — Content and format*

ISO 3767-1, *Tractors, machinery for agriculture and forestry, powered lawn and garden equipment — Symbols for operator controls and other displays — Part 1: Common symbols*

ISO 3767-2, *Tractors, machinery for agriculture and forestry, powered lawn and garden equipment — Symbols for operator controls and other displays — Part 2: Symbols for agricultural tractors and machinery*