



BSI Standards Publication

**Permissible mechanical connection combinations
between towed and towing agricultural vehicles**

National foreword

This British Standard is the UK implementation of [ISO 22471:2020](#).

The UK participation in its preparation was entrusted to Technical Committee AGE/6, Agricultural tractors and forestry machinery.

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

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

© The British Standards Institution 2020
Published by BSI Standards Limited 2020

ISBN 978 0 539 06204 5

ICS 65.060.10

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 August 2020.

Amendments/corrigenda issued since publication

Date	Text affected
------	---------------

**INTERNATIONAL
STANDARD**

**ISO
22471**

First edition
2020-08-21

**Permissible mechanical connection
combinations between towed and
towing agricultural vehicles**

*Combinaisons de liaisons mécaniques autorisées entre véhicules
agricoles remorqués et remorqueurs*



Reference number
ISO 22471:2020(E)

© ISO 2020



COPYRIGHT PROTECTED DOCUMENT

© ISO 2020, Published in Switzerland

All rights reserved. Unless otherwise specified, no part of this publication may be reproduced or utilized otherwise in any form or by any means, electronic or mechanical, including photocopying, or posting on the internet or an intranet, without prior written permission. Permission can be requested from either ISO at the address below or ISO's member body in the country of the requester.

ISO copyright office
Ch. de Blandonnet 8 • CP 401
CH-1214 Vernier, Geneva, Switzerland
Tel. +41 22 749 01 11
Fax +41 22 749 09 47
copyright@iso.org
www.iso.org

Contents

Page

Foreword	iv
1 Scope	1
2 Normative references	1
3 Terms and definitions	1
4 Hitch compatibility	1
Bibliography	4

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 of 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 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 4, *Tractors*.

Any feedback or questions on this document should be directed to the user's national standards body. A complete listing of these bodies can be found at www.iso.org/members.html.

Permissible mechanical connection combinations between towed and towing agricultural vehicles

1 Scope

This document provides a list of the recommended mechanical connection combination standards for towing and towed agricultural vehicles.

2 Normative references

There are no normative references in this document.

3 Terms and definitions

No terms and definitions are listed in this document.

ISO and IEC maintain terminological databases for use in standardization at the following addresses:

- ISO Online browsing platform: available at <https://www.iso.org/obp>
- IEC Electropedia: available at <http://www.electropedia.org/>

4 Hitch compatibility

[Table 1](#) defines the recommended connection combinations for agricultural vehicles.

The recommendations for connection combinations are only applicable if the connections devices for each combination meet the corresponding standards for towing and towed vehicles.

Before any use of this document on agricultural vehicles, the user is invited to check the current version of the International Standards listed in [Table 1](#).

Towing vehicle connection	Towed vehicle connection
ISO 730/ISO 730 Amd1 ^d Rear-mounted three-point linkage	ISO 730/ISO 730 Amd1 Rear-mounted three-point linkage ^d
	ISO 11001-1 U-Frame ^e
	ISO 11001-2 A-Frame ^e
	ISO 11001-3 Linke ^e
	ISO 11001-4 Bare ^e
<p>^a Connecting an ISO 6489-1:2001 hook, manufactured in accordance with the maximum sizes permitted, to hitch-rings in accordance with ISO 5692-1 and of minimum dimensions (30 mm ring diameter) according to ISO 20019 could result in a “jerky” connection between the tractor and the trailer and result in less driving comfort.</p> <p>^b Primarily used on trailers towed behind trucks (on-road).</p> <p>^c In case a hitch hook according to ISO 6489-1:1991 is used, it can be only used with a hitch ring according to ISO 5692:1979.</p> <p>^d Contains specifications for both towing and towed vehicle.</p> <p>^e Contains specification for attaching to ISO 730/ISO 730:2009/Amd 1:2014 three-point hitch and towed vehicle.</p>	

Bibliography

- [1] [ISO 730](#), *Agricultural wheeled tractors — Rear-mounted three-point linkage — Categories 1N, 1, 2N, 2, 3N, 3, 4N and 4*
- [2] [ISO 1102](#), *Commercial road vehicles — 50 mm drawbar eye — Interchangeability*
- [3] ISO 5692:1979¹⁾, *Agricultural vehicles — Mechanical connections on towed vehicles — Hitch-rings — Specifications*
- [4] [ISO 5692-1](#), *Agricultural vehicles — Mechanical connections on towed vehicles — Part 1: Dimensions for hitch rings of 50/30 mm cross section*
- [5] [ISO 5692-2](#), *Agricultural vehicles — Mechanical connections on towed vehicles — Part 2: Coupling ring 40 with socket*
- [6] [ISO 5692-3](#), *Agricultural vehicles — Mechanical connections on towed vehicles — Part 3: Swivel hitch rings*
- [7] [ISO 6489-1:1991](#)¹⁾, *Agricultural vehicles — Mechanical connections on towing vehicles — Part 1: Hook type*
- [8] [ISO 6489-1](#), *Agricultural vehicles — Mechanical connections between towed and towing vehicles — Part 1: Dimensions of hitch-hooks*
- [9] [ISO 6489-2](#), *Agricultural vehicles — Mechanical connections between towed and towing vehicles — Part 2: Specifications for clevis coupling 40*
- [10] [ISO 6489-3](#), *Agricultural vehicles — Mechanical connections between towed and towing vehicles — Part 3: Tractor drawbar*
- [11] [ISO 6489-4](#), *Agricultural vehicles — Mechanical connections between towed and towing vehicles — Part 4: Dimensions of piton-type coupling*
- [12] [ISO 6489-5](#), *Agricultural vehicles — Mechanical connections between towed and towing vehicles — Part 5: Specifications for non-swivel clevis couplings*
- [13] [ISO 8755](#), *Commercial road vehicles — 40 mm drawbar eye — Interchangeability*
- [14] [ISO 11001-1](#), *Agricultural wheeled tractors — Three-point hitch couplers — Part 1: U-frame coupler*
- [15] [ISO 11001-2](#), *Agricultural wheeled tractors and implements — Three-point hitch couplers — Part 2: A-frame coupler*
- [16] [ISO 11001-3](#), *Agricultural wheeled tractors and implements — Three-point hitch couplers — Part 3: Link coupler*
- [17] [ISO 11001-4](#), *Agricultural wheeled tractors and implements — Three-point hitch couplers — Part 4: Bar coupler*
- [18] ISO 20019, *Agricultural vehicles — Mechanical connections on towed vehicles — Dimensions for hitch rings*
- [19] [ISO 21244](#), *Agricultural equipment — Mechanical connections between towed and towing vehicles — Implement hitch rings and attachment to tractor drawbars*
- [20] [ISO 24347](#), *Agricultural vehicles — Mechanical connections between towed and towing vehicles — Dimensions of ball coupling device (80 mm)*

1) Withdrawn.

British Standards Institution (BSI)

BSI is the national body responsible for preparing British Standards and other standards-related publications, information and services.

BSI is incorporated by Royal Charter. British Standards and other standardization products are published by BSI Standards Limited.

About us

We bring together business, industry, government, consumers, innovators and others to shape their combined experience and expertise into standards-based solutions.

The knowledge embodied in our standards has been carefully assembled in a dependable format and refined through our open consultation process. Organizations of all sizes and across all sectors choose standards to help them achieve their goals.

Information on standards

We can provide you with the knowledge that your organization needs to succeed. Find out more about British Standards by visiting our website at bsigroup.com/standards or contacting our Customer Services team or Knowledge Centre.

Buying standards

You can buy and download PDF versions of BSI publications, including British and adopted European and international standards, through our website at bsigroup.com/shop, where hard copies can also be purchased.

If you need international and foreign standards from other Standards Development Organizations, hard copies can be ordered from our Customer Services team.

Copyright in BSI publications

All the content in BSI publications, including British Standards, is the property of and copyrighted by BSI or some person or entity that owns copyright in the information used (such as the international standardization bodies) and has formally licensed such information to BSI for commercial publication and use.

Save for the provisions below, you may not transfer, share or disseminate any portion of the standard to any other person. You may not adapt, distribute, commercially exploit or publicly display the standard or any portion thereof in any manner whatsoever without BSI's prior written consent.

Storing and using standards

Standards purchased in soft copy format:

- A British Standard purchased in soft copy format is licensed to a sole named user for personal or internal company use only.
- The standard may be stored on more than one device provided that it is accessible by the sole named user only and that only one copy is accessed at any one time.
- A single paper copy may be printed for personal or internal company use only.

Standards purchased in hard copy format:

- A British Standard purchased in hard copy format is for personal or internal company use only.
- It may not be further reproduced – in any format – to create an additional copy. This includes scanning of the document.

If you need more than one copy of the document, or if you wish to share the document on an internal network, you can save money by choosing a subscription product (see 'Subscriptions').

Reproducing extracts

For permission to reproduce content from BSI publications contact the BSI Copyright and Licensing team.

Subscriptions

Our range of subscription services are designed to make using standards easier for you. For further information on our subscription products go to bsigroup.com/subscriptions.

With **British Standards Online (BSOL)** you'll have instant access to over 55,000 British and adopted European and international standards from your desktop. It's available 24/7 and is refreshed daily so you'll always be up to date.

You can keep in touch with standards developments and receive substantial discounts on the purchase price of standards, both in single copy and subscription format, by becoming a **BSI Subscribing Member**.

PLUS is an updating service exclusive to BSI Subscribing Members. You will automatically receive the latest hard copy of your standards when they're revised or replaced.

To find out more about becoming a BSI Subscribing Member and the benefits of membership, please visit bsigroup.com/shop.

With a **Multi-User Network Licence (MUNL)** you are able to host standards publications on your intranet. Licences can cover as few or as many users as you wish. With updates supplied as soon as they're available, you can be sure your documentation is current. For further information, email cservices@bsigroup.com.

Revisions

Our British Standards and other publications are updated by amendment or revision.

We continually improve the quality of our products and services to benefit your business. If you find an inaccuracy or ambiguity within a British Standard or other BSI publication please inform the Knowledge Centre.

Useful Contacts

Customer Services

Tel: +44 345 086 9001

Email: cservices@bsigroup.com

Subscriptions

Tel: +44 345 086 9001

Email: subscriptions@bsigroup.com

Knowledge Centre

Tel: +44 20 8996 7004

Email: knowledgecentre@bsigroup.com

Copyright & Licensing

Tel: +44 20 8996 7070

Email: copyright@bsigroup.com

BSI Group Headquarters

389 Chiswick High Road London W4 4AL UK