

Rear-mounted, three-point linkage on agricultural wheeled tractors —

Part 1: Specification for categories 1, 2, 3 and 4

ICS:65.060.10

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Committees responsible for this British Standard

The preparation of this British Standard was entrusted to Technical Committee AGE/6, Agricultural tractors and forestry machinery, upon which the following bodies were represented:

- Agricultural and Allied Workers National Trade Group
- Agricultural Engineers Association
- British Agricultural and Garden Machinery Association Ltd.
- County Surveyors' Society
- Department of Transport
- Forestry Commission
- Health and Safety Executive
- Local Authority Organizations
- Ministry of Agriculture, Fisheries and Food
- National Farmers Union
- Silsoe Research Institute
- United Kingdom Softwood Sawmillers' Association

This British Standard, having been prepared under the direction of the Engineering Sector Board, was published under the authority of the Standards Board and comes into effect on 15 August 1996

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First published as BS 1841-2, January 1973
Second edition as, BS 1841-1, February 1991
Third edition August 1996

The following BSI references relate to the work on this standard:
Committee reference AGE/6
Draft for comment 92/85474 DC

ISBN 0 580 26132 8

Amendments issued since publication

Amd. No.	Date	Comments

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National foreword

This Part of BS 1841 has been prepared by Technical Committee AGE/6 and is identical with ISO 730-1:1994 *Agricultural wheeled tractors — Rear-mounted three-point linkage — Part 1: Categories 1, 2, 3 and 4*, including technical corrigendum 1:1995, which was prepared by Technical Committee ISO/TC 23/ SC 4 of the International Organization for standardization (ISO) and in the development of which the United Kingdom played an active part.

This British Standard supersedes BS 1841-1:1991 which is withdrawn.

Annex A and Annex B are for information only.

The international standard ISO 730-1 cancels and replaces ISO 730-1:1990 and ISO 730-3:1982, of which it constitutes a combination and a technical revision (see clause 1).

ISO 730 *Agricultural wheeled tractors — Rear-mounted three-point linkage* consists of the following Parts:

- *Part 1: Categories 1, 2, 3 and 4;*
- *Part 2: Category 1N (Narrow hitch) [not dual numbered as a British Standard].*

Cross-references

The Technical Committee has reviewed the provisions of ISO 789-1:1990 and ISO 2332:1993 to which normative reference is made in the text and has decided that they are acceptable for use in conjunction with this British Standard.

A British Standard does not purport to include all the necessary provisions of a contract. Users of British Standards are responsible for their correct application.

Compliance with a British Standard does not of itself confer immunity from legal obligations.

Summary of pages

This document comprises a front cover, an inside front cover, pages i and ii, pages 1 to 14, an inside back cover and a back cover.

This standard has been updated (see copyright date) and may have had amendments incorporated. This will be indicated in the amendment table on the inside front cover.

1 Scope

This part of ISO 730 specifies the dimensions and requirements of the three-point linkage for the attachment of implements or equipment to the rear of agricultural wheeled tractors.

It specifies four categories to be used on different ranges of agricultural tractors as shown in Table 1.

Table 1 — Categories

Category	PTO power at rated rotational frequency of engine ^a kW
1	up to 48
2	up to 92
3	80 to 185
4	150 to 350
^a Determined in accordance with ISO 789-1.	

Category 4 has been divided into two parts, 4L and 4H, depending on the location of the power take-off (PTO). Category 4L and 4H dimensions apply to tractors with the PTO, respectively, below and above the rear axle centreline.

Dimensions and requirements for the three-point linkage for the attachment of implements or equipment to the front of agricultural tractors are given in ISO 8759-21[3].

2 Normative references

The following standards contain provisions which, through reference in this text, constitute provisions of this part of ISO 730. At the time of publication, the editions indicated were valid. All standards are subject to revision, and parties to agreements based on this part of ISO 730 are encouraged to investigate the possibility of applying the most recent editions of the standards indicated below. Members of IEC and ISO maintain registers of currently valid International Standards.

ISO 789-1:1990, *Agricultural tractors — Test procedures — Part 1: Power tests for power take-off*.

ISO 2332:1993, *Agricultural tractors and machinery — Connection of implements via three-point linkage — Clearance zone around implement*.

3 Definitions

For the purposes of this part of ISO 730, the following definitions apply. General definitions are given in 3.1, and definitions for components and dimensions in 3.2. The last element of the definition number in 3.2 is also the key number for the element or dimension in Figure 1, Figure 2 and Figure A.1.

3.1 General

3.1.1 linkage

combination of one upper link and two lower links, each articulated to the tractor and the implement at opposite ends, in order to connect the implement to the tractor

3.1.2 hitch point

articulated connections between link and implement

NOTE 1 For geometrical purposes the hitch point is the centre of the articulated connection between link and implement.

3.1.3 link point

articulated connection between link and tractor

NOTE 2 For geometrical purposes the link point is the centre of the articulated connection between link and tractor.

3.1.4 three-point hitch coupler

device which facilitates the connection of the tractor three-point linkage to the implement¹⁾

3.2 Linkage components and dimensions

3.2.1 upper link

upper linkage element, fitted with an articulated connection at both ends

3.2.2 lower link

lower linkage element, fitted with an articulated connection at both ends

3.2.3 upper hitch point

articulated connection between the upper link and the implement

3.2.4 lower hitch point

articulated connection between a lower link and the implement

¹⁾ For examples, see Annex B, [4] to [7].

3.2.5

upper link point

articulated connection between the upper link and the tractor

3.2.6

lower link point

articulated connection between a lower link and the tractor

3.2.7

upper hitch attachment

pin, usually detachable and forming part of the upper link assembly, by which an upper link is secured

3.2.8

lower hitch attachment

pin, or clevis and pin, usually attached to the implement, by which a lower link is secured

3.2.9

upper link attachment

pin by which the upper link is connected to the tractor

3.2.10

linch pin

pin, usually fitted with a spring-retaining device, by which an articulated connection is retained in position²⁾

3.2.11

lift rods

connections that transmit force to the lower links for raising and lowering

3.2.12

mast

component that provides location of the upper hitch point on the implement

3.2.13

mast height

vertical distance between the upper hitch point and the common axis of the lower hitch points

3.2.14

lower hitch point height

height of the centre of the lower hitch points above ground level when they are fully lowered using the full extent of manual adjustment provided in the lift rods in conjunction with the movement range with the lower hitch point axis maintained horizontal to the ground in a transverse plane

3.2.15

levelling adjustment

movement, measured vertically, of either lower hitch point higher or lower than the other, to allow inclination of the implement, measured with one lower link horizontal

3.2.16

lower hitch point span

distance between the shoulders of the lower hitch pins against which the sides of the lower link ball joints abut

3.2.17

linch pin hole distance

distance from the centreline of the linch pin hole to the shoulder of the hitch pin

3.2.18

movement range

vertical movement of the lower hitch points corresponding to the power travel of the lift, excluding any adjustment in the lift rod linkage

3.2.19

transport height

total height of the lower hitch points above the ground using the full extent of manual adjustment provided in the lift rods in conjunction with the movement range, with the lower hitch point axis maintained horizontal to the ground in a transverse plane

3.2.20

lower hitch point clearance

clearance expressed as a radial dimension from the lower hitch point axis to the outside diameter of the tyre, mudguard or other part of the tractor, measured in a longitudinal vertical plane with the implement raised to transport height and all side-sway prevented

3.2.21

pitch

angle of the mast to the vertical, considered positive when anticlockwise viewed from the left-hand side of the tractor

²⁾ See Annex B, [2].