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NATIONAL STANDARD OF THE PEOPLE'S REPUBLIC OF CHINA

GB/T 20340.1-2024

Replacing GB/T 20340-2006

Agricultural trailers and trailed equipment - Drawbar jacks - Part 1: Design safety, test methods and acceptance criteria

农用挂车和被牵引设备 牵引杆千斤顶 第1部分：设计安全、试验方法和验收条件

(English Translation)

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Foreword

This document is in accordance with the provisions of GB/T 1.1-2020 "Guidelines for standardization work Part 1: Structure and drafting rules for standardization documents" Drafting:

This document is part 1 of GB/T 20340 "Drawbar jacks for agricultural trailers and towed equipment": GB/T 20340 has been the following parts were published:

--- Part 1: Design safety, test methods and acceptance conditions;

--- Part 2: Application safety, test methods and acceptance conditions:

This document partially replaces GB/T 20340-2006 "Agricultural machinery, agricultural trailers and towed equipment drawbar jacks" and Compared with GB/T 20340-2006, in addition to structural adjustments and editorial changes, the main technical changes are as follows:

--- Changed the scope of application (see Chapter 1, Chapter 1 of the:2006 edition);

--- Changed the definition of jack (see 3.1, 3:1 of the:2006 edition);

--- Delete the terms and definitions of mechanical jack, hydraulic jack, load, rated load, overload and overtravel (see:2006 Version 3:2, 3:3, 3:4, 3:5, 3:6, 3:7);

--- Added 24 terms and definitions such as static compression load (see 3.2 to 3:25);

--- Changed the physical properties of the base, installation requirements and jack overtravel requirements (see 4.1, 4:2, 4:1, 4:2 of the:2006 edition);

--- Added design requirements for hydraulic jacks and lifting legs (see 4.3, 4:4);

--- Changed the crank force requirements (see 5.1, 4:6 of the:2006 edition);

---Added corrosion protection, waterproof design, basic rated life, compression load value, tensile load value, lateral load value and lateral torsion Moment level requirements (see 5.2 to 5:10);

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--- Added acceptance test method for jack support system (see Chapter 6);

--- Changed the requirements for the use information of the jack (see Chapter 7, Chapter 6 and Chapter 7 of the:2006 edition):

This document is modified to adopt ISO 12140-1:2020 "Drawbar jacks for agricultural trailers and towed equipment Part 1: Design and installation Safety, test methods and acceptance conditions:

The technical differences between this document and ISO 12140-1:2020 and their reasons are as follows:

--- ISO 9227 (see 5.2:1, 6:5) has been replaced with the normative reference GB/T 10125 to adapt to my country's technical conditions, and the addition of Operability:

Introduction

GB/T 20340 "Drawbar jacks for agricultural trailers and towed equipment" specifies the jacks for drawbars for agricultural trailers and towed equipment:

The safety requirements for the design, manufacture and use of jacks and the corresponding test methods and acceptance conditions are planned to consist of two parts:

--- Part 1: Design safety, test methods and acceptance conditions: The purpose is to establish the traction Manufacturing requirements, performance test methods and acceptance conditions for jacks used as original equipment and replacement equipment on the rack:

--- Part 2: Application safety, test methods and acceptance conditions: The purpose is to establish the traction Safety requirements, test procedures and minimum acceptance criteria for jacks installed as original equipment on a stand or installed with a coupling condition:

Drawbar jacks for agricultural trailers and towed equipment Part 1: Design safety, test methods and acceptance conditions

1 Scope

This document specifies retractable mechanical screw caps for installation on the drawbar of general purpose towed equipment as original equipment or replacement equipment:

The document specifies the manufacturing requirements and acceptance conditions for jacks and hydraulic jacks and describes the performance test methods: In addition, this document also specifies the requirements for jack manufacturers:

Provide at least identification and usage information:

These jacks are designed for:

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---Hitching points to support implements during storage;

--- Raise and lower the implement drawbar to facilitate connection or disconnection of agricultural tractors;

---Machinery used for leveling and fixing:

This document applies to telescopic mechanical screw jacks installed on the towing frame of general towed equipment as original equipment and replacement equipment Design, manufacture, inspection and testing of hydraulic jacks:

Note: In this document, "general-purpose towed machinery" is referred to as "machine":

2 Normative references

The contents of the following documents constitute the essential clauses of this document through normative references in this document:

For referenced documents without a date, only the version corresponding to that date applies to this document; for referenced documents without a date, the latest version (including all amendments) applies to this document:

GB/T 10125 Artificial atmosphere corrosion test Salt spray test (GB/T 10125-2021, ISO 9227:2017, MOD)

3 Terms and definitions

The following terms and definitions apply to this document:

Jack

Hand-operated jacks with ground contact pads (base) or wheels and support points [jack stands (3:11) or support points], designed for controlling vertical movement Dynamic or electric telescopic mechanism:

Note: Manual jacks usually use mechanical devices to control vertical movement, and electric jacks usually use hydraulic oil displacement to control vertical movement:

Used to support the vertical forces expected to be applied under static conditions:

The measured vertical force that is expected to be applied during the operation of the jack for lifting:

static tensile load A force in the opposite direction to the static compressive load (3:2) forms a tensile load on the jack (3:1):

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