INTERNATIONAL STANDARD

ISO 6292

Third edition
2020-01

Powered industrial trucks and tractors — Brake performance and component strength

Chariots de manutention et tracteurs industriels automoteurs — Performance de freinage et résistance des éléments de frein

Reference number
ISO 6292:2020(E)

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Published in Switzerland

Contents

Page

Foreword

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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).

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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 110, *Industrial trucks*, Subcommittee SC 2, *Safety of powered industrial trucks*.

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.

This third edition cancels and replaces the second edition (ISO 6292:2008), which has been technically revised.

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

— the definition for drawbar drag has been added as 3.13;

— Subclause 4.7 (previously 4.8) has been technically revised;

— for service brake systems, the heat fade test is now compulsory in all test methods.

— the scope has been extended to industrial tractors with 66 750 N drawbar pull.

Introduction

Industrial trucks, generally referred to as trucks, can satisfy the braking system requirements of this document by complying with either the stopping distance requirements or the drawbar drag requirements. Based on the requirements for brakes of rubber-tyred earthmoving machinery (ISO 3450), the stopping distance as a measurement value has been established. The brake performance is limited by consideration of the load. For further reference as to how the measurement of stopping distance and measurement of brake reaction time were derived, see ISO/TR 29944.

Powered industrial trucks and tractors — Brake performance and component strength

1 Scope

This document specifies performance, test methods, controls, control forces and component strength for brake systems fitted to the following, as defined in ISO 5053-1:

— powered industrial trucks of all capacities;

— towing and pushing tractors up to and including 66 750 N drawbar pull (hereafter referred to as industrial tractors);

— burden carriers; and

— industrial trucks handling freight containers.

Loss of electrical power and loss of any other form of power assistance is not covered by this document. Braking systems used in emergency situations (e.g. activating the emergency switch or control system shut down) are not covered in this document.

This document only includes requirements for newly manufactured trucks.

2 Normative references

There are no normative references in this document.

3 Terms and definitions

For the purposes of this document, the following terms and definitions apply.

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/

3.1
braking force
force at the contact surface between a wheel and the ground, produced by the effect of a *braking system* (3.3), which opposes the speed or the tendency to movement of the truck

[SOURCE: ISO 611:2003, 9.11.3]

3.2
braking performance
performance of a *braking system* (3.3) as measured by the braking distance in relation to the initial speed of the truck and/or by *braking force* (3.1) and the capability to hold the truck at a standstill on a gradient

3.3
braking system
combination of parts which fulfil one or more of the following functions:

— control (usually to reduce) a truck's speed;