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**Fork lift trucks—Brake performance and
brake tests**

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In the event of any doubts arising as to the contents,
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Foreword

This translation has been made based on the original Japanese Industrial Standard revised by the Minister of Health, Labour and Welfare and the Minister of Economy, Trade and Industry, through deliberations at the Japanese Industrial Standards Committee as the result of proposal for revision of Japanese Industrial Standard submitted by Japan Industrial Vehicle Association (JIVA)/Japanese Standards Association (JSA) with the draft being attached, based on the provision of Article 12 Clause 1 of the Industrial Standardization Law applicable to the case of revision by the provision of Article 14.

Consequently **JIS D 6023 : 1999** is replaced with this Standard.

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Fork lift trucks—Brake performance and brake tests

Introduction

This Japanese Industrial Standard has been prepared based on the second edition of **ISO 6292** published in 2008 without modifying the technical contents, but the specifications not stated in the corresponding International Standard (additional requirements on braking system, and calculation methods of stopping distance and drawbar drag force) are added as **JIS**.

The portions given dotted underlines are the matters not given in the corresponding International Standard. A list of modifications with the explanations is given in Annex JC.

1 Scope

This Standard specifies the performance, test methods and component strength for brake systems fitted to fork lift trucks of all rated capacities (hereafter, referred to as "fork lifts").

NOTE 1 Braking used in emergency situations (e.g., activation of emergency switch or shut down of control device) is not covered in this Standard.

NOTE 2 The International Standard corresponding to this Standard and the symbol of degree of correspondence are as follows.

ISO 6292: 2008 *Powered industrial trucks and tractors—Brake performance and component strength* (MOD)

In addition, symbols which denote the degree of correspondence in the contents between the relevant International Standard and **JIS** are IDT (identical), MOD (modified), and NEQ (not equivalent) according to **ISO/IEC Guide 21-1**.

2 Normative references

The following standards contain provisions which, through reference in this text, constitute provisions of this Standard. The most recent editions of the standards (including amendments) indicated below shall be applied.

JIS D 0106 *Road vehicles—Brake types, braking mechanics and brake operation—Vocabulary*

NOTE: Corresponding International Standard : ISO 611:2003 *Road vehicles—Braking of automotive vehicles and their trailers—Vocabulary* (MOD)

JIS D 6201 *Glossary of terms relating to fork lift trucks*

NOTE: Corresponding International Standard : ISO 5053:1987 *Powered industrial trucks—Terminology* (MOD)

3 Terms and definitions

For the purposes of this Standard, the terms and definitions given in JIS D 0106 and JIS D 6201, and the following apply.

3.1 truck velocity v

actually measured velocity of the truck immediately prior to the service brake being applied

3.2 braking force F

force at the contact surface between a tyre and the ground, produced by the effect of a braking system, which opposes the velocity or the tendency to movement of the truck

3.3 braking performance

performance of a braking system as measured by the braking distance in relation to the truck velocity or by braking force, and the capability to hold the truck stationary on a gradient

3.4 braking system

combination of parts which fulfil one or more of the following functions

- a) control (usually to reduce) the truck velocity
- b) bring the truck to a halt or to hold it stationary

3.5 cold brakes

brake that meets one of the following conditions

- a) The temperature measured at the periphery of the disc or on the outside of the drum is below 100 °C.
- b) The temperature on the outside of the housing is below 50 °C or within the manufacturer's specification for totally enclosed brakes including oil-immersed brakes.
- c) The brake has not been operated in the previous 1 h.

3.6 control device

part of the braking system which activates its operation, such as a brake pedal

3.7 fade test

test procedure consisting of brake applications or the continuous dragging of the brake to generate heat with the effect that differences in braking performance, if any, can be observed

3.8 stopping distance S_0

distance travelled by the truck from the moment the control device is activated to the moment the truck stops

3.9 test velocity

velocity greater than 90 % of the designed value of the maximum truck velocity