



**NATIONAL STANDARD OF THE
PEOPLE'S REPUBLIC OF CHINA**

GB/T 26949.21-2023

**Industrial trucks - Verification of stability - Part 21:
Order-picking trucks with operator position elevating above 1
200 mm**

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Foreword

This document was drafted in accordance with the rules provided in GB/T 1.1-2020 Directives

for Standardization - Part 1: Rules for the Structure and Drafting of Standardizing Documents.

This document is Part 21 of GB/T 26949 Industrial Trucks - Verification of Stability. GB/T

26949 has issued the following parts:

- Part 1: General;
- Part 2: Counterbalanced Trucks with Mast;
- Part 3: Reach and Straddle Trucks;
- Part 4: Pallet Stackers, Double Stackers and Order-picking Trucks with Operator Position Elevating up to and Including 1,200 mm Lift Height;
- Part 5: Single-side-loading Trucks;
- Part 7: Bidirectional and Multidirectional Trucks¹);
- Part 8: Additional Stability Test for Trucks Operating in the Special Condition of Stacking with Mast Tilted Forward and Load Elevated;
- Part 9: Counterbalanced Trucks with Mast Handling Freight Containers of 6 m Length and Longer;

---Part 10: Additional Stability Tests for Trucks Operating in the Special Conditions of Stacking with Load Laterally Displaced by Power;

---Part 11: Industrial Variable-reach Trucks;

---Part 12: Industrial Variable-reach Trucks Handling Freight Containers of 6 m Length and Longer;

---Part 13: Rough-terrain Trucks with Mast;

---Part 14: Rough-terrain Variable-reach Trucks;

---Part 15: Counterbalanced Trucks with Articulated Steering;

---Part 16: Pedestrian-propelled Trucks;

---Part 17: Towing Tractors, Burden and Personnel Carriers;

1) Currently being revised. After revision, the title of the document will be adjusted to Industrial Trucks -

Verification of Stability - Part 7: Bidirectional and Multidirectional Trucks.

---Part 20: Additional Stability Test for Trucks Operating in the Special Condition of Offset Load, Offset by Utilization

---Part 21: Order-picking Trucks with Operator Position Elevating above 1,200 mm;

---Part 22: Lateral- and Front-stacking Trucks with and without Elevating Operator Position;

---Part 24: Slewing Variable-reach Rough-terrain Trucks.

This document serves as a replacement of GB/T 26949.21-2016 Industrial Trucks - Verification

of Stability - Part 21: Order-picking Trucks with Operator Position Elevating above 1,200 mm.

In comparison with GB/T 26949.21-2016, apart from structural adjustments and editorial modifications, the main technical changes are as follows:

---ISO 5053 is modified into ISO 5053-1 (see Chapter 1; Chapter 1 of Version 2016);

---The definition of "restricted steering" is modified (see 3.3; 3.3 of Version 2016);

---The requirements for casters in Test 2, Test 3, Test 4 and Test 5 are added (see 4.2.3);

---The stipulations of Point M of "trucks with rigidly supported single or tandem casters"

are modified [see 4.2.3 d); 4.2.3 d) of Version 2016];

---The description and statement of "operating speed" are modified (see Footnote b and c of Table 1; Footnote b and c of Table 1 of Version 2016);

---The requirements for operating speed during the test are added (see Footnote g of Table 1);

---The Figure "Vehicle Position on Tilted Platform" is modified (see Table 1; Table 1 of Version 2016).

This document identically adopts ISO 22915-21:2019 Industrial Trucks - Verification of Stability - Part 21: Order-picking Trucks with Operator Position Elevating above 1,200 mm. Please be noted that certain content of this document may involve patents. The institution issuing this document does not undertake the responsibility of identifying these patents.

This document was proposed by China Machinery Industry Federation.

This document shall be under the jurisdiction of National Technical Committee on Industrial Trucks of Standardization Administration of China (SAC/TC 332).

The drafting organizations of this document: NOBLELIFT Intelligent Equipment Co., Ltd.; Beijing Materials Handling Research Institute Co., Ltd.; China Hoisting & Conveying Equipment Quality Detection and Inspection Center (CHCIC); Hangcha Forklift Co., Ltd.; Anhui Heli Co., Ltd.; Lonking (Shanghai) Forklift Co., Ltd.; Zhejiang Zhongli Machinery Co.,

Introduction

Stability is one of the important indicators for assessing the safety of industrial trucks. High-lift order-picking trucks whose operator position can be elevated are mainly used in high-rise

rack warehouses. In recent years, due to the increase in the demand for order-picking from high-

rise racks, the domestic sales of this type of industrial trucks has also been increasing. It is of

great significance to standardize the stability verification requirements, achieve integration with

international standards, improve product's technical level and quality, and ensure operation

safety.

GB/T 26949 Industrial Trucks - Verification of Stability aims to establish the stability of industrial trucks defined in ISO 5053-1 and its verification method. GB/T 26949 is proposed to

consist of the following parts:

- Part 1: General;
- Part 2: Counterbalanced Trucks with Mast;
- Part 3: Reach and Straddle Trucks;
- Part 4: Pallet Stackers, Double Stackers and Order-picking Trucks with Operator Position Elevating up to and Including 1,200 mm Lift Height;
- Part 5: Single-side-loading Trucks;
- Part 7: Bidirectional and Multidirectional Trucks;
- Part 8: Additional Stability Test for Trucks Operating in the Special Condition of Stacking with Mast Tilted Forward and Load Elevated;
- Part 9: Counterbalanced Trucks with Mast Handling Freight Containers of 6 m Length and Longer;
- Part 10: Additional Stability Tests for Trucks Operating in the Special Conditions of Stacking with Load Laterally Displaced by Power;
- Part 11: Industrial Variable-reach Trucks;
- Part 12: Industrial Variable-reach Trucks Handling Freight Containers of 6 m Length and Longer;
- Part 13: Rough-terrain Trucks with Mast;
- Part 14: Rough-terrain Variable-reach Trucks;
- Part 15: Counterbalanced Trucks with Articulated Steering;
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