



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

GB/T 26949.17-2023

**Industrial trucks - Verification of stability - Part 17: Towing
tractors, burden and personnel carriers**

工业车辆 稳定性验证 第17部分：牵引车、货物及人员载运车

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Table of Contents

Foreword	3
Introduction	5
1 Scope	7
2 Normative references	7
3 Terms and definitions	7
4 Test conditions	8
4.1 General requirements	8
4.2 Operating conditions	8
4.3 Test load	8
5 Verification of stability	11
Bibliography	13

Foreword

This document was issued on 7 September 2023 by the State Administration for Market Regulation; Standardization Administration of the PRC and takes effect on 1 April 2024.

It is a GB/T standard: recommended rather than compulsory, but it is the text a Chinese reviewer applies when assessing a submission.

1 Scope

GB/T 26949.17-2023 is the part of the industrial truck stability series that deals with towing tractors, burden carriers and personnel carriers, the vehicles defined as such in ISO 5053-1. It is a short document because it leans on the rest of the series rather than restating it: the terms are those of ISO 5053-1 and ISO 22915-1, and the general test conditions are required to comply with ISO 22915-1. What this part adds sits in two clauses. Test conditions are broken into general requirements, operating conditions and the test load, and take in the case of a vehicle that can be operated with an elevating operator position, for which an additional test is required - raising the operator raises the centre of gravity, so a machine verified only in its lowered configuration has not been verified in the configuration it will be driven in. Verification of stability then gives the test methods themselves. An introduction and a bibliography complete the document. Manufacturers of tow tractors, platform trucks and personnel carriers, the bodies certifying them, and the buyers writing tender requirements against the GB/T 26949 series are the readers.

This document specifies test methods for verifying the stability of towing tractors,

burden and personnel carriers as defined in ISO 5053-1.

2 Normative references

The following referenced documents are indispensable for the application of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

GB/T 8420-2011 Earth-moving machinery - Physical dimensions of operators and minimum operator space envelope (ISO 3411:2007, IDT)

ISO 5053-1 Industrial trucks - Vocabulary - Part 1: Types of industrial trucks

NOTE: GB/T 6104.1-2018 Industrial trucks - Terminology and classification - Part 1: Types of

industrial trucks (ISO 5053-1:2015, IDT)

ISO 5353:1995 Earth-moving machinery, and tractors and machinery for agriculture and forestry - Seat index point

NOTE: GB/T 8591-2000 Earth-moving machinery - Seat index point (eqv ISO 5353:1995)

ISO 22915-1 Industrial trucks - Verification of stability - Part 1: General

NOTE: GB/T 26949.1-2020 Industrial trucks - Verification of stability - Part 1: General (ISO 22915-1:2016, IDT)

3 Terms and definitions

For the purpose of this document, the terms and definitions defined in ISO 5053-1 and ISO 22915-1 apply.

4 Test conditions

4.1 General requirements

Test conditions shall comply with the requirements of ISO 22915-1.

If the vehicle can operate with an elevating operator position, an additional test shall be conducted at its maximum height. If a device is equipped to automatically limit the operating speed, the reduced speed shall be used to determine the tilt angle of the tilt table.

4.2 Operating conditions

In addition to the requirements of ISO 22915-1, during the test it shall consider the operating weight of the vehicle and all options and accessories approved by the manufacturer that will reduce the stability of the vehicle after installation.

4.3 Test load

4.3.1 General requirements

The test load of carriers shall consist of a load consistent with 4.3.2 or 4.3.3.

Towing tractors with a load-carrying platform shall be tested according to the method defined for burden carriers (see 4.3.2).

4.3.2 Burden carriers

The test load shall be placed on the vehicle's load-bearing platform, ensuring that its center of gravity (G) is just above the geometric centerline of the load-bearing platform.

The minimum height of the center of gravity (G) shall be 600 mm above the load-bearing platform (see Figure 1) or the height specified by the manufacturer.

The center of gravity (G) specified by the manufacturer shall be indicated on the information plate.

The longitudinal position of the center of gravity (G) shall be at the center of the entire length of the load-bearing platform.

Key:

A-A - longitudinal center plane;

B-B - steer axle;

C-C - rear axle.

Figure 2 -- Schematic diagram of longitudinal center plane and axles

4.3.5 Test 1 and Test 2

The vehicle shall be placed on the tilt table so that the line M-N is parallel to the tilt axis X-Y of the tilt table. The steered wheel shall be turned so that it is parallel to the tilt axis X-Y (see Table 1).

The definition of point M is as follows:

- a) For vehicles steered by a single steered wheel: point M is the center point of the contact surface between the steered wheel and the tilt table;
- b) For vehicles steered by twin steered wheels: point M is the center point of the contact surface between the steered wheel nearest to the tilt axis X-Y and the tilt table;
- c) For vehicles steered by two steered wheels: point M is the center point of the contact surface between the steered wheel nearest to the tilt axis X-Y and the tilt table.

Point N is defined as the center point of the contact surface between the rear wheel nearest to the tilt axis X-Y and the tilt table. When multiple rear axles are installed on the vehicle, it shall select the rear axle nearest to the steer axle.

4.3.6 Test 3, Test 4, Test 5 and Test 6

As shown in Table 1, the vehicle shall be placed on the tilt table so that the longitudinal center plane A-A is perpendicular to the tilt axis X-Y of the tilt table.

The axle of the steered wheel shall be parallel to the tilt axis X-Y of the tilt table.

NOTE: Test 3 and Test 5 are not applicable to towing tractors without a load platform.

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