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Australian Standard®

Powered industrial trucks

Part 8: Pallet stackers and high-lift platform trucks—Stability tests

[ISO title: Pallet stackers and high-lift platform trucks— Stability tests]

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Association of Employers of Waterside Labour

Australian Chamber of Commerce

Australian Industrial Truck Association

Department of Defence

Department of Occupational Health, Safety and Welfare, W.A.

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PREFACE

This Standard was prepared by the Standards Australia Committee on Industrial Trucks and is Part 8 in a series of Standards dealing with the design, manufacture and operation of powered industrial trucks. It supersedes, in part, AS 2359.1—1985, *SAA Industrial Truck Code*, Part 1: *Design and manufacture.*

Other Standards in this series are as follows:

Part 1: General

Part 2: Operation

Part 3: Counterbalanced fork-lift trucks—Stability tests

Part 4: Reach and straddle fork-lift trucks—Stability tests

Part 5: Control symbols

Part 6: Safety code

Part 7: Terminology

Part 9: High-lift rider trucks—Overhead guards—Specification and testing

Part 10: Fork-lift trucks—Hook-on type fork arms—Vocabulary

Part 11: Fork-lift trucks—Hook-on type fork arms and fork carriers—Mounting dimensions

Part 12: Hazardous areas

This Standard is identical with and has been reproduced from ISO 5766:1990, *Pallet stackers and high-lift platform trucks—Stability tests*.

References to international Standards should be replaced by references, where appropriate, to the following Australian Standard:

Reference to International Standard		*Australian Standard*	
ISO		AS	
5353	Earth-moving machinery, and tractors and machinery for agriculture and forestry—Seat index point	2953 2953.3	Earth-moving machinery—Human dimensions Part 3: Seat index point

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Powered industrial trucks

Part 8:
Pallet stackers and high-lift platform trucks — Stability tests

1 Scope

This International Standard specifies the basic tests for verification of the stability of pedestrian- and rider-controlled pallet stackers and high-lift platform trucks. It applies to such stackers and trucks with tiltable and non-tiltable masts, or tiltable or non-tiltable load platforms or fork arms, of rated capacity up to and including 5 000 kg (10 000 lb). It also applies to trucks operating under the same conditions when equipped with load-handling attachments.

This International Standard does not apply to trucks with retractable devices, such as mast or fork or when handling suspended loads which may swing freely.

2 Normative reference

The following standard contains provisions which, through reference in this text, constitute provisions of this International Standard. At the time of publication, the edition indicated was valid. All standards are subject to revision, and parties to agreements based on this International Standard are encouraged to investigate the possibility of applying the most recent edition of the standard indicated below. Members of IEC and ISO maintain registers of currently valid International Standards.

ISO 5353: 1978, *Earth-moving machinery, and tractors and machinery for agriculture and forestry — Seat index point.*

3 Purpose of tests

3.1 Normal operating conditions

The basic tests specified in this International Standard are designed to verify that the pallet stacker or high-lift platform truck demonstrates satisfactory stability when reasonablyand appropriately used under normal operating conditions, i.e.

a) stacking with the mast approximately vertical and the fork arms reasonably horizontal on substantially firm, smooth, level and prepared surfaces;

b) travelling with the mast or fork arms tilted rearwards (if applicable) and the load in the lowered (travelling) position on substantially firm, smooth and prepared surfaces;

c) operating with the load centre of gravity approximately on the longitudinal centre-plane of the truck.

3.2 Operating conditions other than normal

When the operating conditions differ from those stated in 3.1, it is necessary to use either:

a) a truck complying with other International Standard(s) covering different specific conditions (e.g. ISO 5767[1]; or

b) a truck the stability of which is agreed between the interested parties. This agreed performance shall not be less than that required by the tests specified for normal operating conditions (see 3.1).

4 Stability tests

4.1 Test requirements

The stability of these trucks shall be verified by means of one of the test methods described below. In the case of dispute, the tilting platform method shall be the referee method.

4.2 Verification procedure

4.2.1 Tilting platform

A platform which can be tilted about one side shall be used. A truck being tested for stability is placed on the initially horizontal tilting platform, in the conditions specified in 4.3 and, successively, in each of the positions described in table 2.

In each of these tests, the tilting platform shall be tilted slowly to the slope indicated in table 2. The truck is considered stable if it passes all tests without overturning.

For the purposes of these tests, overturning is defined as the test platform slope value which, if increased, would cause overturning of the truck.

It is permissible in lateral tests for one of the load wheels to lose contact with the test platform and it is acceptable for parts of the structure or other designed features to make contact with the test platform.

4.2.2 Fixed slope

Fixed slopes with inclinations equivalent to the prescribed test slope shall be used. The slope surface shall be smooth and capable of supporting the truck mass without deformation likely to affect the test results.

1) ISO 5767 : 1978, *Industrial trucks operating in special condition of stacking with mast tilted forward—Stability tests.*