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(Incorporating Amendment No. 1)
(Expires 17 May 2006)

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Interim Australian Standard™

Counterbalanced trucks handling freight containers of 6 m (20 ft) length and above—Additional stability tests

[Modified and including the full text of ISO 10525:1997.]

STANDARDS AUSTRALIA

This Interim Australian Standard was prepared by Committee ME-026, Industrial Trucks. It was approved on behalf of the Council of Standards Australia on 30 April 2001 and published on 17 May 2001.

The following are represented on Committee ME-026:

Australian Chamber of Commerce and Industry
Australian Electrical and Electronic Manufacturers
Australian Industry Group
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PREFACE

This Interim Standard was prepared by the Standards Australia Committee ME-026, Industrial Trucks.

This Standard incorporates Amendment 1 (May 2004). The changes required by the Amendment are indicated in the text by a marginal bar and amendment number against the clause, note, table, figure, or part thereof affected.

The objective of this Standard is to provide manufacturers and operators of fork-lift trucks with additional stability tests to verify the stability of counterbalanced lift trucks when handling freight containers of 6 m (20 ft) in length and above.

This Standard has been adopted with national modifications and has been reproduced from ISO 10525:1997, *Counterbalanced trucks handling freight containers of 6 m (20 ft) length and above— Additional stability tests*. Additional requirements for Australia are given in Appendix ZZ.

Attention is drawn to the Introduction of this Standard concerning the dangers associated with the operation of counterbalanced lift trucks handling large freight containers. Essential safety considerations that need to be addressed when operating these vehicles are provided in Appendix ZZ.

Where the results of the stability tests set out in this Standard verify the additional capacity of the forklift truck (see Clause 6) the requirements of AS 2359.2:1985, *Industrial Trucks (known as SAA Industrial Truck Code),* Part 2: *Operation*, Clause 3.4(w) do not apply, provided the truck is operated in accordance with the requirements set out in this Standard.

Standards Australia invites comment from persons and organizations concerned with this subject. The date of expiry of this Interim Standard is two years after publication, at which time this Interim Standard will be confirmed, withdrawn or revised in the light of public comment.

During the life of the document the Committee will monitor all comment as it is received.

As this Standard is reproduced from an International Standard, the following applies:

(a) Its number appears on the cover and title page while the International Standard number appears only on the cover.

(b) In the source text, ‘this International Standard’ should read ‘this Interim Australian Standard’.

(c) A full point substitutes for a comma when referring to a decimal marker.

References to International Standards should be replaced by Australian Standards, as follows:

Reference to International Standards		*Australian Standard*	
ISO		AS	
1074	Counterbalanced fork-lift trucks—Stability tests	2359 2359.3	Powered industrial trucks Part 3: Counterbalanced fork-lift trucks—Stability tests
1496 1496-2	Series 1 freight containers—Specification and testing Part 2: Thermal containers	—	
3691	Powered industrial trucks—Safety code: Amendment 1	2359 2359.6	Powered industrial trucks Part 6: Safety code[1]
3874	Series 1 freight containers—Handling and securing	—	

[1] This Standard incorporates ISO 3691:1980 Amendment 1:1983.

CONTENTS

INTRODUCTION

The dangers associated with the operation of counterbalanced lift trucks to transport large containers places extra demands on owners and operators to use safe working practices at all times. As an aid to improving safe working practices, attention is drawn to the warning and information set out below and the additional safety considerations set out in Appendix ZZ.

WARNING

COMPLIANCE WITH STABILITY TESTS SET OUT IN THIS STANDARD CAN NOT ENSURE PREVENTION OF FORWARD TIP-OVERS UNDER FULL BRAKING.

FURTHER, COMPLIANCE WITH STABILITY TESTS IN THIS STANDARD AND AS 2359.3—1995 CAN NOT ENSURE THE PREVENTION OF LATERAL (SIDE) TIP-OVERS DURING CORNERING.

Many tip-over accidents occur while counterbalanced lift trucks are travelling forward with the load elevated in front of the truck. The main cause for tipping forward is the loss of stability due to high deceleration under braking.

Table 3 (p. 10) stipulates various test conditions for stability tests for container handling lift trucks, however, the relationship between the test slope values and dynamic performance of the lift trucks is not given.

Appendix ZZ provides additional requirements and essential safety considerations for the operation of counterbalanced lift trucks that are not addressed in ISO 10525:1997.

INTERIM AUSTRALIAN STANDARD

Counterbalanced trucks handling freight containers of 6 m (20 ft) length and above—Additional stability tests

1 Scope

This International Standard specifies additional tests to verify the stability of counterbalanced lift trucks when handling freight containers of 6 m (20 ft) length and above.

This International Standard specifies tests in addition to those specified in ISO 1074.

The stability tests contained in this International Standard ensure that counterbalanced trucks handling freight containers have satisfactory stability when reasonably and appropriately used under the following conditions.

a) The truck (travelling with the freight container at normal travelling height and stacking) is operating under conditions where the wind speed is up to 12,2 m/s (Beaufort Scale Force 6).

b) Alternative ratings for use in higher wind speeds shall be developed by use of higher values for wind speed, v, in equations (1) and (2) in 3.5.3.

c) The truck is travelling forward with the freight container leading, elevated so that the base is not higher than 1 m above the point of maximum depression of the seat cushion under the operator and the mast is fully tilted back.

NOTE — The elevated load permits an operator to see underneath the freight container.

Stability tests to cover conditions stated in a) or b) are applicable to all trucks.

Stability tests to cover conditions stated in c) are only applicable to a truck which will operate with a partially elevated container.

This International Standard does not apply to trucks when

1) handling suspended loads which may swing freely,

2) handling a container which has a mobile centre of gravity (see ISO 3874).

2 Normative references

The following standards contain provisions, which, through reference in this text, constitute provisions of this International Standard. At the time of publication, the editions indicated were 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 editions of the standards listed below. Members of IEC and ISO maintain registers of currently valid International Standards.