Australian Standard®

Earth-moving machinery—Safety

Part 3: Roller compactors—Brake systems

This Australian Standard was prepared by Committee ME/63, Earth-moving Equipment. It was approved on behalf of the Council of Standards Australia on 5 June 1992 and published on 14 September 1992.

The following interests are represented on Committee ME/63:

Australian Federation of Construction Contractors
Australian Mining Industry Council
Austroads
Bureau of Steel Manufacturers of Australia
Confederation of Australian Industry
Construction and Mining Equipment Association of Australia
Department of Defence
Department of Manufacturing and Industry Development, Vic.
Department of Mineral Resources, N.S.W.
Department of Resource Industries, Qld
Earthmovers and Road Contractors Association of Australia
Forestry Commission of New South Wales
Local Government Engineers Association of New South Wales
Metal Trades Industry Association of Australia
Queensland Forest Service
Rural Water Commission, Vic.
Safety Institute of Australia
Telecom Australia
Tractor and Machinery Association of Australia
Water Board, Sydney-Illawarra-Blue Mountains
WorkCover Authority, N.S.W.

This Standard was issued in draft form for comment as DR 89011.

Australian Standard®

Earth-moving machinery—Safety

Part 3: Roller compactors—Brake systems

First published as AS 2958.3-1992.

PUBLISHED BY STANDARDS AUSTRALIA
(STANDARDS ASSOCIATION OF AUSTRALIA)
1 THE CRESCENT, HOMEBUSH, NSW 2140

ISBN 0 7262 7638 3

PREFACE

This Standard was prepared by the Standards Australia Committee on Earth-moving Equipment. The Standard is based on SAE J1472–June 87, *Braking performance – Roller compactors,* which however has a broader scope.

CONTENTS

STANDARDS AUSTRALIA

Australian Standard
Earth-moving machinery—Safety

Part 3: Roller compactors—Brake systems

1 SCOPE This Standard specifies requirements for brake systems that are fitted to self-propelled ride-on roller compactors.

2 DEFINITIONS For the purpose of this Standard, the definitions below apply.

2.1 Service brake system – a system used to stop and momentarily hold a machine.

2.2 Secondary brake system – a system used to stop a machine in the event of any single failure in the service brake system.

2.3 Parking brake system – a system used to hold a stopped machine stationary for prolonged periods.

2.4 Stopping distance - the distance travelled by the machine during braking from where the brake control is initially actuated to where the machine comes to rest.

3 GENERAL DESIGN

3.1 Provision Each roller compactor shall be equipped with a service brake system complying with Clause 4, a secondary brake system complying with Clause 5, and a parking brake system complying with Clause 6.

3.2 Control force The braking performances specified by this Standard shall be achieved while an operator is applying a control force that does not exceed the relevant force that is specified in Table 1.

TABLE 1
CONTROL FORCES

Method of control	Maximum control force, N
Finger grasp	20
Hand grasp:	
Upwards	400
Fore-aft	300
Sideways	300
Foot pedal	700
Foot treadle	350

3.3 Component failure Any failure of a single component, other than a tyre, shall not reduce the stopping capability of the machine below the required performance level.

NOTE: Brake systems may use common components that function in two or more brake systems.

3.4 Warning devices

3.4.1 *Low stored energy* Where stored energy is used to operate a brake system, the system shall be provided with an aural warning device that operates so that it is audible to the operator whenever the system pressure is less than 50 percent of the normal system pressure while the machine is operating.

3.4.2 *Applied secondary brake* Where a spring is used to operate a secondary brake system, the system shall be provided with an aural warning device that operates so that it is audible to the operator whenever the secondary brake is being applied.

4 SERVICE BRAKE SYSTEMS

4.1 Operation Service brake systems shall be capable of being operated from the operator's position.

4.2 Performance

4.2.1 *Stopping distance* Service brake systems shall be capable of stopping the machine within the relevant distance specified in Table 2, and then keeping the unit stationary, while the machine is on the maximum operating gradient specified by the manufacturer and braking under the relevant conditions specified in Appendix A.