AS 3868—1991

Australian Standard®

Earth-moving machinery—Design guide for access systems

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The following interests are represented on Committee ME/63:

Australian Mining Industry Council

Austroads

Bureau of Steel Manufacturers of Australia

Confederation of Australian Industry

Construction and Mining Equipment Association of Australia

Department of Conservation and Environment, Vic.

Department of Defence

Department of Industry and Economic Planning, Vic.

Department of Minerals and Energy, 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

Queensland Forest Service

Rural Water Commission, Vic.

Safety Institute of Australia

Telecom Australia

Tractor and Machinery Association of Australia

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PREFACE

This Standard was prepared by the Standards Australia Committee on Earth-moving Equipment at the request of the Department of Mines, Queensland.

Although it is based on ISO 2867—1980, *Earth-moving machinery—Access systems*, it includes additional recommendations to suit Australian conditions.

The Standard forms part of the series AS 2958, *Earth-moving machinery—Safety*.

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Australian Standard

Earth-moving machinery—Design guide for access systems

SECTION 1 SCOPE AND GENERAL

1.1 SCOPE This Standard recommends criteria for design of component parts of access systems on earth-moving machines having engine power in excess of 15 kW.

1.2 REFERENCED DOCUMENTS The following documents are referred to in this Standard:

AS
1170 SAA Loading Code
1170.1 Part 1: Dead and live loads and load combinations
1170.2 Part 2: Wind loads
1250 SAA Steel Structures Code
1538 Cold-formed Steel Structures Code
1554 SAA Structural Steel Welding Code
1657 SAA Code for Fixed Platforms, Walkways, Stairways, and Ladders
1664 SAA Aluminium Structures Code
1665 SAA Aluminium Welding Code
1734 Aluminium and aluminium alloys—Flat sheet, coiled sheet and plate
1866 Aluminium and aluminium alloys—Extruded rod, bar, solid and hollow shapes
2953 Earth-moving machinery—Human dimensions
2953.1 Part 1: Minimum access
2953.2 Part 2: Physical dimensions of operators and minimum operator space envelope

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

1.3.1 Entrance opening—opening providing entry to the operating compartment.

1.3.2 Grab rail (handrail) and grab handle—devices that may be grasped by the hand for body support.

1.3.2.1 *Grab rail (handrail)*—device designed specifically to permit movement of the hand to a different location without removing the hand from the device. (See Figure 4.1.)

1.3.2.2 *Grab handle*—device designed specifically for single placement of a hand. (See Figure 4.2.)

1.3.3 Guardrail—a rail above the outside edge of a walkway or platform to protect a person falling. (See Figure 5.1.)

1.3.4 Ladder—system consisting of a series of steps that are uniformly spaced and will accommodate either one foot or both feet.

1.3.5 Platform—surface on which personnel are required to perform a service function, or a machine function other than operating.

1.3.6 Step—device designed for foot placement.

1.3.7 Should—indicates a recommendation.

1.3.8 Walkway—surface designed for personnel to move about on the machine.