

AS 3868—1991

Australian Standard<sup>®</sup>

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**Earth-moving machinery—Design  
guide for access systems**

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This Australian Standard was prepared by Committee ME/63, Earth-moving Equipment. It was approved on behalf of the Council of Standards Australia on 13 November 1990 and published on 11 February 1991.

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The following interests are represented on Committee ME/63:

Australian Mining Industry Council  
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Confederation of Australian Industry  
Construction and Mining Equipment Association of Australia  
Department of Conservation and Environment, Vic.  
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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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## STANDARDS AUSTRALIA

**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.