

# SafeBoarder™

RETRACTABLE PERSONNEL ACCESS SYSTEMS



**Confidence Every Step Of The Way**



**Australian  
Equipment  
Engineering**

## SAFEBOARDER STORY

**SafeBoarder** was established in January 2005 to design, develop and manufacture personnel access systems for the construction, earthmoving and mining industries. Our head office is located in Perth, Western Australia. Due to significant demand, in September 2011, **SafeBoarder** opened a second branch in Rutherford, New South Wales. Both facilities have been highly successful in providing and supporting personnel access systems, having established themselves with OEMs, major mining companies and contractors.

## QUALITY CONTROL

**SafeBoarder** endeavours to provide premier quality products to surpass customer expectations by way of a defined quality assurance programme. We continually monitor the quality of all our processes, from material supply, manufacturing and on-site testing to product education and installation training. Accuracy and reliability are the cornerstones of **SafeBoarder** products and services. The end result is a high quality product that meets ISO and Australian Standards where possible and is CE compliant.

## TAILORED SOLUTIONS

Contemporary work environments are often diverse and conditions may vary greatly from site to site. The unique nature of many work sites requires the development of innovative and often tailored solutions. Australian Equipment Engineering utilises its multi-disciplinary team to identify effective solutions, test prototypes and conduct field trials.

**Heaps easier than the standard rubber steps!**





SafeBoarder systems come standard with non-slip treads.

## SAFEBOARDER SYSTEMS

**SafeBoarder** has been designed to be the safest access system available. We constantly work on striking the right balance between our client's requests and the ISO, Australian Standards and CE regulations. Where possible, we install 45° stairs in preference to ladders, making the **SafeBoarder** range suitable for personnel carrying maintenance equipment or crib/lunch bags.

## SAFER

In an emergency, if the host machine loses electrical or hydraulic power, or when the E-Stop button is pushed, the **SafeBoarder** ladder automatically lowers to the ground. This allows the operator and maintenance personnel to descend in the safest and fastest way possible avoiding the need to find secondary unnatural emergency exits, scaling down or jumping off the equipment. Normally, the ladder is lowered by applying the safety lever in the cab, or by turning the engine off.

**SafeBoarder's** greatest safety feature is its unique (patented) 'L' Force Geometry, going that one step further in reducing personnel injuries on or around construction, earthmoving or mining equipment. 'L' Force will detect if an operator or maintenance specialist unknowingly or accidentally activates the ladder switch while another person is either boarding or using the ladder. The **SafeBoarder** will immediately stall, ensuring that workers won't be thrown off or crushed.

**SafeBoarder** systems come standard with non-slip treads. Most **SafeBoarder** models have boot bars designed to prevent feet from getting caught on the underside of the step when boarding or descending.

## SIMPLER

- ▶ **SafeBoarder** personnel access systems don't require any type of power pack to raise or lower its ladders or stairs.
- ▶ The majority of the **SafeBoarder** systems have only a single acting hydraulic cylinder eliminating the possibility of oil bypassing.
- ▶ Oil impregnated bushings are used in the articulation points, as these don't require regular greasing and are easy to replace if needed, unlike roller or needle bearings. **SafeBoarder** is equipped with standard control valves, electrics and hydraulics.
- ▶ **SafeBoarder** systems range from only 100kg to 350kg for extremely large machines.



Ease of use for operators and maintenance personnel.



Designed for the most challenging operating conditions.

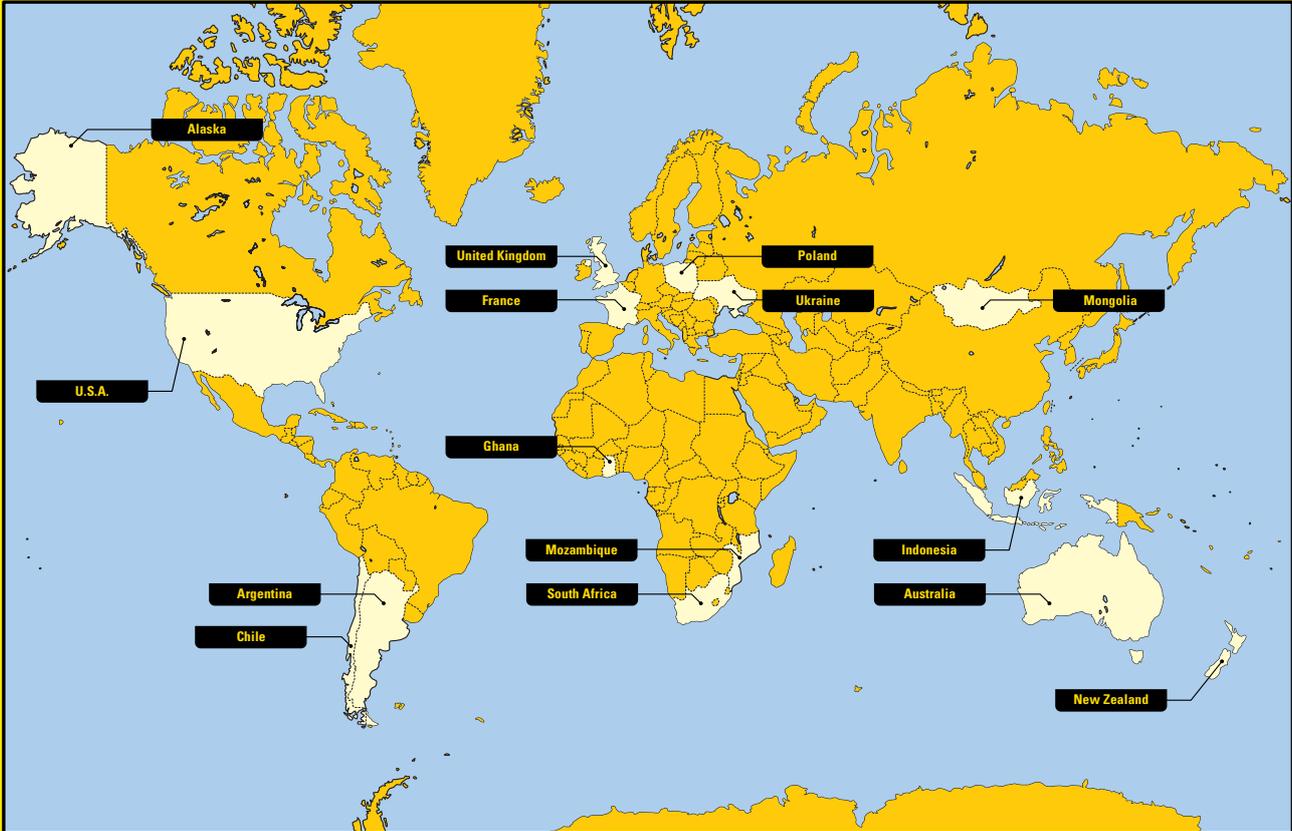
## SUPERIOR

- ▶ **SafeBoarder** is customer-centric, it adjusts to individual needs and requirements.
- ▶ **SafeBoarder** systems automatically lower to the ground following a loss of electrical or hydraulic power.
- ▶ 'L' Force geometry greatly reduces possible injuries.
- ▶ Absence of a power pack and elegant design with fewer moving parts makes **SafeBoarder** easy to maintain, resulting in minimum downtime.
- ▶ Common components across the SafeBoarder range eliminate the need to carry huge inventory.



# SAFEBOARDER WORLDWIDE

**SafeBoarder** is proudly made in Australia. We're continually improving all aspects of our business to stay on top of the game, always providing our local and overseas clients with a quality product that is backed by superior customer support.



## OTHER PRODUCTS AND SERVICES

Australian Equipment Engineering provides a broad range of specialist services including consulting and application engineering, machine analysis and data logging, general design and drafting, manufacturing based on customer's own design and product certification.

We also design and manufacture a wide variety of ancillary products including axle stands, bucket stands and dump tray stands for mobile equipment, tyre stands, jacking systems including belly guard jacks, and retrieval trailers for disabled mobile plants.

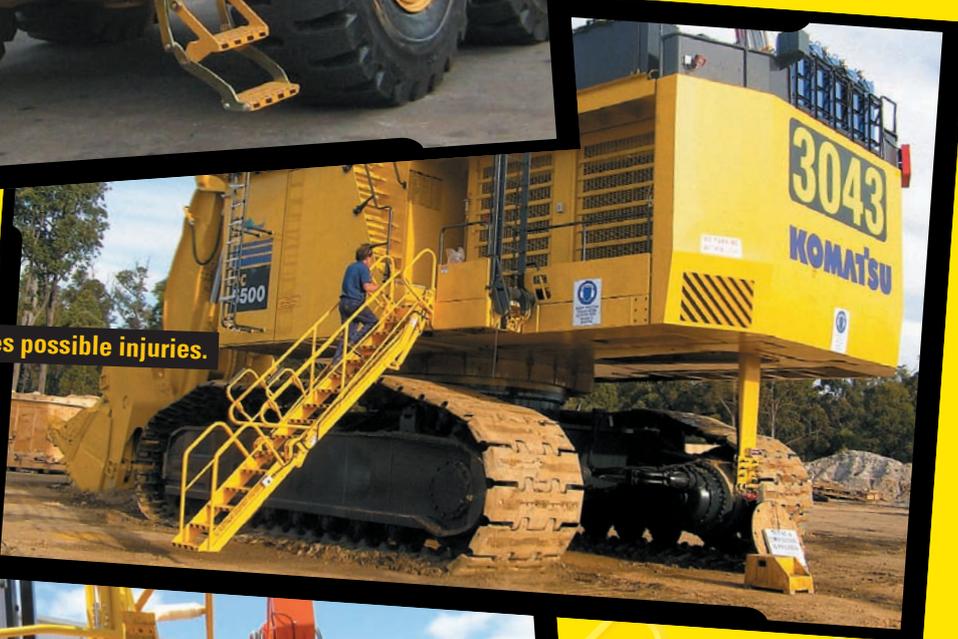
Australian Equipment Engineering manufacture workshop walkways and platforms for ease of service and maintenance of various machinery. These include platforms for bucket repairs, as well as truck transmission and truck front service platforms.

## DOCUMENTATION

All of Australian Equipment Engineering products come with a set of comprehensive user manuals and instructions to ensure the most effective and safe usage of our equipment.



SafeBoarder systems are virtually maintenance-free!



'L' Force geometry greatly reduces possible injuries.



Safe for personnel carrying on-board tools or crib bags.



Common components eliminate the need to carry huge inventory.

# AS 1657 (EXTRACT)

## Fixed platforms, walkways, stairways and ladders. Design, construction and installation.

**SCOPE:** This Standard sets out requirements for the design, construction, and installation of fixed platforms, walkways, stairways, and ladders which are intended to provide means of safe access to and safe working at places normally used by operating, inspection, maintenance, and servicing personnel.

The Standard does not apply to situations where special provision is made in appropriate building or other regulations, e.g. means of escape from fire. Requirements for portable ladders are not included in this Standard.

### STAIRS

**1.1 Rises and goings.** The surface of every tread shall extend across the full width of the stairway and shall be slip-resistant. Rises and goings shall conform to the following dimensions:

- (a) All rises and all goings, in the same flight of stairs shall be of uniform dimensions within a tolerance of  $\pm 5$  mm.
- (b) Each rise shall be not less than 150 mm and not greater than 215 mm.
- (c) Each going shall be not less than 215 mm and not greater than 305 mm.
- (d) The product of the going, measured in millimetres, and the rise, measured in millimetres, shall be not less than 45 000 and not greater than 48 000.
- (e) The tread width shall be not less than the going and there shall be a minimum overlap of 10 mm

**1.2 Minimum vertical clearance.** Unless otherwise approved by the regulatory authority, the head clearance shall be not less than 2000 mm measured vertically from the nosing of the tread.

**1.3 Nosing.** The nosing should be such that the edge of the stairs is highlighted, especially where the stairs may be used in a variety of lighting conditions.

### STEP LADDERS

**NOTE:** Step ladders are not universally accepted and an approach should be made to the regulatory authority to ascertain if this type of ladder is acceptable for the application.

**2.1 General.** The angle of slope of step ladders shall be not less than 60 degrees nor more than 70 degrees to the horizontal. It is preferable that the angle of slope should not exceed 65 degrees.

Provision shall be made to prevent persons from descending a step ladder in a forward direction.

In a step ladder installation, the vertical distance between landings shall not exceed 6 m. Where the vertical height of the installation exceeds 6 m, and the installation consists of more than one ladder, succeeding ladders should change direction or, if not practicable,

be staggered, at each landing level. Where compliance with the requirement for staggering is impracticable, other suitable means such as a guardrailing or a landing not less than 1.5 m long shall be provided to prevent a person from falling more than 6 m. The ladders shall not extend more than 12 m measured vertically without a change of direction.

Where a person could fall more than 6 m, the ladder system should be fully enclosed.

The dimensions of all treads and of all rises in the same ladder shall be uniform and within a tolerance of  $\pm 5$  mm.

Timber ladders should not be used in situations exposed to the weather or under other conditions likely to promote decay.

**2.2 Treads.** Treads shall be not less than 100 mm wide. The surface of every tread shall be slip-resistant. Multi-rung treads shall not be used.

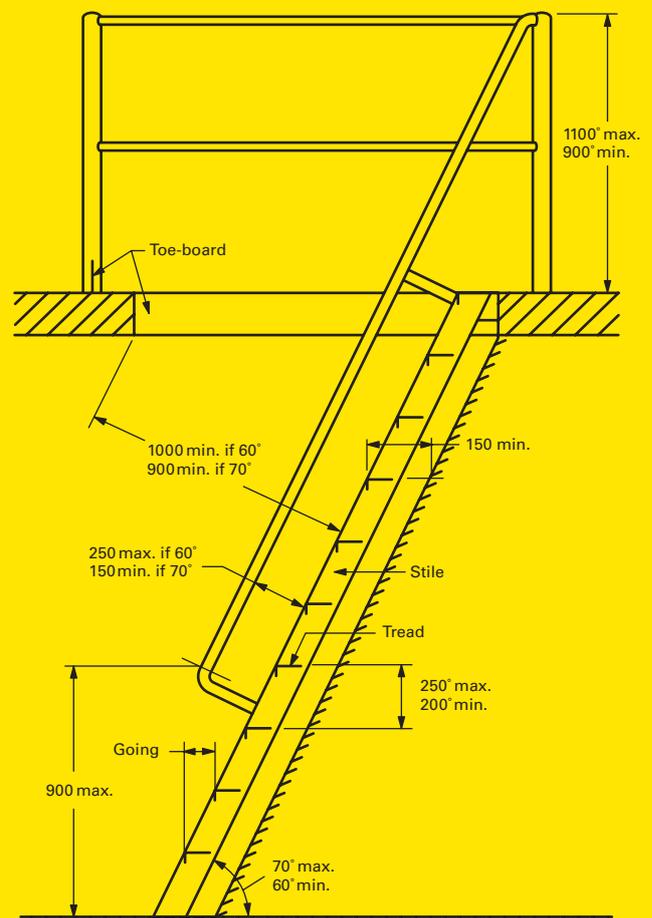
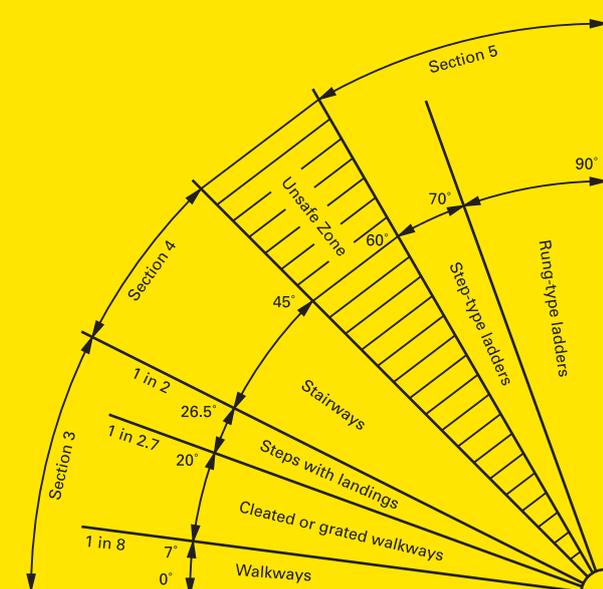
**2.3 Spacing of treads.** The treads shall be equally spaced and not less than 200 mm, nor greater than 250 mm apart. The top tread shall be level with, and may be integral with, the landing.

**2.4 Width.** The width of the ladder between the stiles shall be not less than 450 mm.

**2.5 Handrails.** Metal handrails, not less than 30 mm diameter, shall be provided on each side of the ladder and shall be substantially supported. The clear space between the handrails shall be not less than 550 mm nor more than 750 mm. A hand clearance of not less than 60 mm shall be provided around each handrail.

The clear distance, normal to the slope of the ladder, between the handrails and the plane through the nosing of the tread shall be not greater than 250 mm when the slope of the ladder is 60 degrees, decreasing proportionately to not less than 150 mm when the slope of the ladder is 70 degrees.

The bottom of the handrails shall commence at a point not greater than 900 mm above the floor or lower landing and, except as provided in Clause 2.2, the handrails shall extend above the upper landing to a height of not less than 900 mm and be connected to the guardrailing of the landing. There shall be no hand-pinch points at this connection between components.



## PART REPLACEMENTS

Replacement parts can be ordered from any **SafeBoarder** branch or distributor. All our parts are of the size and weight suitable for Air Freight. Only genuine parts should be used for proper maintenance and to ensure safety, durability and productivity of your **SafeBoarder**.

## SUPPORT SERVICES

**SafeBoarder** has 24/7 support service that customers can access in case of a breakdown or technical emergency. Non-urgent enquiries can be made through our web site, email or over the phone. These low-level enquiries will be managed during normal business hours.

## ON-SITE INSPECTIONS

**SafeBoarder** has customer support managers who are available, when in your area, to carry out a free inspection of your **SafeBoarder** ladders or stairs. Inspections take into account your particular operating practices and site conditions while highlighting the condition and life expectancy of your **SafeBoarder** products.



**CATERPILLAR** **KOMATSU** **LIEBHERR** **HITACHI**



# SafeBoarder™

RETRACTABLE PERSONNEL ACCESS SYSTEMS

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