

## RotorStep Ladders

The Safe-Away<sup>®</sup> RotorSteps have been designed to provide a low maintenance, ergonomic and safe access for the operators and maintenance personnel of graders, scrapers or excavators in the heavy mining and earthmoving industries.

The RotorStep Ladders are electro-hydraulically controlled and rotate through an arc of 180° to the upright, 'parked' position to protect the ladders from physical damage when the equipment is in use.



# Safety & Efficiency

The **Safe-Away® RotorStep Ladders** have been specifically designed to suit a wide range of equipment and provide:

- A retractable 62° ladder for access and egress while carrying tools and other items.
- Steps of regulation size.
- Fixed handrail system for three points of contact.
- A simple robust hydraulic actuator that rotates through an arc of 180° to the upright position to protect the ladders from physical damage when the equipment is in use.
- A Proximity Switch to raise the ladder automatically when the door is closed for the RotorStep G, GK, GM and L models.
- Park Brake Interlock Kit providing additional protection by ensuring the ladder is raised automatically when the park brake is released.



RotorStep G Ladder shown fitted to a Cat 16G Grader

# Innovation

The **Safe-Away® 2009 Series Access Control System** manages all ladder operations.

It provides:

- Simple downloading of day to day logged data to a USB.
- Sequential reports on all events with time and date stamps:
  - Raising and lowering,
  - Fault indications.
- Operational history data logs
- Diagnostics and error reporting accessed directly from the incab control digital display.

## Access Control System Features

- Incab control panel with a digital touch pad display showing:
  - Access system status; UP, DOWN and IN MOTION.
  - Detailed fault indication with audible alarm and system event log.
  - 3,000 point event data log with download using a USB key connection to the side of the in cab control panel.
- View downloaded log files as summary and/or full log data in Microsoft® Excel using the supplied SLA to XLS file converter.



The **Safe-Away® 2009 Series Power Pack** is driven by the Access Control System. The hydraulic Power Pack may be mounted vertically, at a convenient location of your choosing, on the vehicle.

It includes:

- Harnesses and Leads.
- Battery Circuit Breaker Kit.



| Log Index | Event Label                             | Event Code | Date                   |
|-----------|---|------------|------------------------|
| 3         | 1 Ladder Down                           | 254        | 01/09/2000 11:31:47 PM |
| 4         | 2 System Voltage Below 18V              | 18         | 02/09/2000 12:13:21 AM |
| 5         | 3 Ladder Up                             | 255        | 02/09/2000 12:20:20 AM |
| 6         | 4 Ladder Down                           | 254        | 02/09/2000 01:38:05 AM |
| 7         | 5 Ladder Up                             | 255        | 02/09/2000 01:40:34 AM |
| 8         | 6 Ladder Down                           | 254        | 02/09/2000 04:38:29 AM |
| 9         | 7 Ladder Up                             | 255        | 02/09/2000 05:21:04 AM |
| 10        | 8 Ladder Down                           | 254        | 02/09/2000 06:17:10 AM |
| 11        | 9 System Voltage Below 18V              | 18         | 02/09/2000 06:42:51 AM |
| 12        | 10 Ladder Up                            | 255        | 02/09/2000 07:19:39 AM |
| 13        | 11 System Voltage < 18V During Movement | 17         | 02/09/2000 07:19:46 AM |
| 14        | 12 Ladder Down                          | 254        | 02/09/2000 08:06:52 AM |
| 15        | 13 System Voltage Below 18V             | 18         | 02/09/2000 08:31:40 AM |
| 16        | 14 Ladder Up                            | 255        | 02/09/2000 08:08:12 AM |
| 17        | 15 Ladder Down                          | 254        | 02/09/2000 08:22:30 AM |
| 18        | 16 System Voltage Below 18V             | 18         | 02/09/2000 08:24:54 AM |
| 19        | 17 System Voltage Below 18V             | 18         | 02/09/2000 12:34:06 PM |

# Designed to suit your fleet

There are 5 models of **Safe-Away® RotorStep Ladders** designed to suit OEM vehicles.

Each of these RotorStep models may be varied to accommodate your requirements for specific mount points, platform handrails, infills, platforms, site/OEM colours, and Power Pack locations.

## RotorSteps

| Model               | Compatible with:   | Features & Benefits   |
|---------------------|--|---|
| <b>RotorStep G</b>  | Cat 16G Graders<br>Cat 16H Graders   | Operates with the cab door fully open or closed.<br>Will not obstruct an operators vision when up.  |
| <b>RotorStep GM</b> | Cat 16M Graders  | The compact mount ensures visibility to the point of the blade.<br>Operates with the cab door fully open or closed.<br>Will not obstruct an operators vision when up.   |
| <b>RotorStep GK</b> | Komatsu GD825 Graders  | The compact mount ensures visibility to the point of the blade.<br>Operates with the cab door fully open or closed.<br>Will not obstruct an operators vision when up.   |
| <b>RotorStep L</b>  | Excavators and Trucks<br>320C 320D<br>320E 385B<br>385C PC300<br>PC1000 ZX350<br>934 974 | Unique design keeps the ladder off the tracks.<br>Compact mount plates to ensure visibility.<br>Operates with the cab door fully open or close.<br>Will not obstruct an operators vision when up.   |
| <b>RotorStep S</b>  | Cat Scrapers<br>631D 631E<br>631G 637D<br>637E 637G<br>651B 651E<br>657B 657E<br>657G    | A rotating platform section provides a walkway between the cab and the ladder. It sits in an upright position when the scraper is operational.<br>A robust mount minimises damage to ladder when positioned on the scraper front corners.<br>Operates with the cab door fully open or closed.<br>Will not obstruct an operators vision when up. |



RotorStep G Ladder shown fitted to a Cat 16G Grader



RotorStep GM Ladder shown fitted to a 16M Grader



RotorStep L Ladder shown fitted to a Hitachi EX350 excavator



RotorStep S Ladder shown fitted to a Cat 657 scraper

## Optional extras

### 1. Additional Raise and Lower Control Panel Kit



A remotely mounted control panel designed to enable the raise and lower operation from outside of the vehicle's cab, or at a position accessible from ground level.

### 2. Boarding Light and Audible Alarm Kit

The boarding light and audible alarm are activated by pressing the up or down directional switch. The light will stay on for an adjustable/ preset period.



### 3. Inhibit Kit

A relay with connecting harness for customer only installation of machine inhibit functions independent of the standard Safe-Away® in-built ladder safety functions.



### 4. Reservoir Heater

The Reservoir Heater ensures the viscosity of the oil is maintained to raise and lower the ladder in cold climates.



# Specifications

This Safe-Away® RotorStep L has been designed and manufactured to comply with the relevant sections of the following standards:-  
SAE J185\_200305    ISO 2867:2011    ANSI Z535.4-2007    ANSI A14.2-2007    AS 3868-1991

## RotorStep L Range Dimensions

| Steps | Deck Height Maximum | Lowered Reach Limit | Raised Extremity | Mount Length |
|-------|---------------------|---------------------|------------------|--------------|
| 5     | 1490mm              | 820mm               | 1070mm           | 872mm        |
| 6     | 1745mm              | 950mm               | 1355mm           | 872mm        |
| 7     | 1985mm              | 1085mm              | 1645mm           | 872mm        |

