

SAFETY ALERT

Incident Involving Powered Rope Access Equipment

Purpose

The purpose of this alert is to communicate the details of the incident, and to highlight specific requirements for safe operation of the ActSafe ACC Powered Ascender.

Summary

A rope access operator was using a powered ascender to ascend a rope on an industrial site. The rope spooled abnormally from the device forming a loop between the rope grab and the loop (rope guide). While attempting to rectify the situation, the rope came out of the device causing the device and the operator to fall. It is assumed that the loop of rope pulled 3 of the operator's fingers of his left hand through the rope guide. The fall was arrested by the safety system and the operator was able to re-reeve the device and ascend to a walkway. The operator was taken to hospital for surgery to the fingers of his left hand.

- The index finger was treated for severe rope burn and nail bed reconstruction.
- The middle finger tip was amputated close to the first joint.
- The ring finger tip was amputated at the first joint.

The predominant contributing factor for this incident was that the powered ascender was fitted with a superseded rope cover. The design of the rope cover was changed in 2009, and this particular machine was not modified. The manufacturer took the correct actions and sent a safety alert to all of their importers and distributors, however the independent distributor at the time did not pass on the information and the replacement part to all users. The manufacturer also offered the replacement part at no cost to the end user.



Figure 1. ActSafe ACC powered ascender drive system nomenclature of parts.

Background

On Monday the 29th of April 2013, a 3 man crew were performing work on an industrial site.

The work crew Supervisor (the person who sustained the injury) was a level 3 Rope Access Supervisor. Also in the work crew was a level 2 Rope Access Technician and a Plumbing contractor who were both working on ground level at the time of the incident.

The crew were utilizing rope access techniques to access structure from the ground to the underside of the roof (approximately 60m high). ActSafe ACC Powered ascenders were the primary method of transport on the ropes. Access to the ropes was achievable either from the ground or from the 55m level.

At the time of the incident, the Rope Access Supervisor was working approximately 50m above ground level. While ascending with the powered ascender, the rope spooled abnormally out of the device. The operator noticed a loop (approximately 200mm long) had formed between the rope grab and the rope guide. The operator immediately stopped ascending. While attempting to rectify the issue, the device came off the rope and the loop pulled through the rope guide. It is assumed that the loop of rope was wrapped around 3 of the operator's fingers at the time, pulling them through the rope guide.

The operator fell a short distance onto the safety system. After confirming the integrity of the rope and the ascender, the operator was able to reeve the rope back into the ascender, reset the safety device and ascend to the walkway above.

Contributing Factors

1. Abnormal spooling of the rope out between the rope grab and the rope guide.
 - The powered ascender had a superseded rope cover fitted.
 - It is assumed that the tail of rope exiting the device was blocked, causing the rope to spool abnormally.

2. Rope coming off the rope grab allowing the device to fall
 - The device was not supported / suspended by an alternate system while rectifying the abnormal spooling.
 - The manual / emergency descent pin was left in the receptacle as it was being used for descent to preserve battery life.
 - It is assumed that another rope (used to hoist equipment) caught on the manual / emergency descent pin, engaging the manual descent and allowing the rope grab to rotate. This would have wound the rope off the rope grab allowing the device to fall.

Superseded rope cover

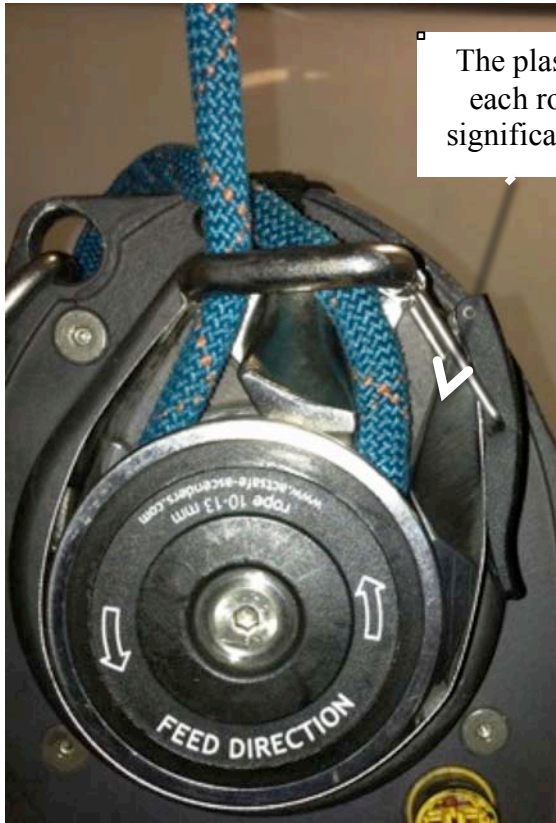


Figure 2. Superseded rope cover.

To Be Removed and Replaced



Figure 3. Replacement / current design rope cover

The equipment manufacturer (ActSafe) distributed a safety notice to all distributors in 2009 notifying them of a number of safety measures that are required of end users. Included in this safety alert was the need to change out the rope cover to a new design. The replacement rope cover was offered to end users free of charge.

The safety notice was not effectively communicated within Australia; consequently the replacement rope covers were not supplied to all end users.

Annual servicing and inspection

As there is no Australian service agent, the majority of Australian end users perform their own service and inspection as described in the user manual. The manufacturer's service agent had not serviced the powered ascender involved in the incident since new. The device was however regularly inspected and serviced by the end user to the specifications described in the manufacturer's operation manual.

Remedial actions

1. Notify end users of the incident details through this safety alert.
2. End users to inspect their equipment to identify if their unit has a superseded rope cover. This applies to ACC 1 models manufactured during, or prior to 2009.
3. If a unit is found to have a superseded rope cover, it must be immediately removed from service and the user contact the Manufacturer.
4. All devices to be sent to the authorised service agent at least annually for inspection.
5. Users to only insert the emergency descent pin when necessary for emergency descent and to remove the pin at all other times. The emergency descent manually disengages the brake, and will function even when the electrical system is isolated.

Sincerely,

Rob Stringer
Highpoint Access & Rescue



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Signature

23RD MAY 2013

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Date