

InfoLog – February 2014

Cow's Tail and Quick Draw failures

The issue.

The investigation of an accident on a high ropes course discovered that the cow's tail had failed completely. More interestingly the failure could be replicated. Look ***closely*** at the photograph below. The configuration on the right has a rubber 'retainer' which prevents the rope from moving around but is not part of the structural 'chain'. In the configuration on the left however the rubber retainer is ***part of the chain*** and it was this that, not surprisingly, failed when loaded. Easy to miss isn't it?!



The Outcome.

At first it was thought that the cow's tail had been put together incorrectly, or been tampered with later, maliciously or otherwise. There was, however, a simpler explanation which seemed compelling. A very similar re-configuration can happen with some climbing slings and quick draws with the same catastrophic result.

See the dramatic video link below.

<http://www.ukclimbing.com/news/item.php?id=68201!>

(Courtesy of UK Climbing)

The message is the same for slings, quick-draws and cows' tails: don't use rubber retainers on (open) slings or quick draws.



'Open' quick draw
(interestingly with a rubber retainer)



'Fully sewn' quick draw

Something similar can happen with cows' tails. However, rubber retainers on cows tails can hold the karabiner in place and so serve a useful function. Simply not using them can produce further new problems.

There are several ways of preventing accidental unclipping allowing the configuration to 'invert' (as in the video clips):

- Ensure the loop is small enough to make the accidental unclipping impossible.
- Use a captive eye karabiner.



Captive eye karabiner

- Use a Barrel Knot or similar.
- Don't use rubber retainers and find other solutions to the problems this raises.