

Info log. July 2015.

Waist belt & leg loop terminations on harnesses with ABS buckles.

A number of harnesses now use ABS buckles as apposed to more traditional double back systems. These are particularly common in outdoor centres and climbing walls.

A recent near miss has highlighted two potential issues with this type of buckle system.

1/ In some designs the termination of the webbing is held within a rubber stopper, if the stopper is removed or comes off, the webbing is thin enough for the belt/leg-loop to be undone (intentionally or otherwise).

2/ If this does occur rethreading requires careful attention to the two buckles and in particular their alignment with each other.



(Example of a rubber 'stopper' termination)

In the near-miss incident a young participant whilst fiddling with their harness accidentally pulled the rubber bit off and the waist belt became undone. (It's not clear whether this was done by the wearer intentionally). It seems they then rethreaded the buckles so as to match (they thought) those on their leg loops. When the rope was subsequently connected to the waist loop the harness opened up and it became obvious something was wrong, fortunately before they left the ground.

Once undone, for whatever reason, rethreading correctly is slightly complicated by there being two metal buckles, which must be correctly positioned in relation to each other. Unfortunately, at first glance, they can look pretty similar when done up correctly or incorrectly!



This picture shows the buckles correctly arranged, small buckle on the outside, and the belt doubled back as designed.



This picture shows the buckles incorrectly arranged, small buckle on the inside, and although the belt is doubled back it will pull through when loaded.



Lessons Learned

- Make staff aware of this potential problem with some harnesses fitted with DBS type buckles and check to see if any of yours have lost their rubber bits.
- Ensure those responsible for fitting and checking harnesses are aware of the importance of the correct arrangement of the two metal buckles or ensure that the termination is such that it cannot be pulled through. Some designs use a double or even triple backed and stitch termination which, unless the stitching fails entirely, is simply too big to pull through.
- Remind participants of the importance of having harnesses checked if they are removed during sessions for any reason.