

## Safety Bulletin No 4 – All about Pods!

On April 1<sup>st</sup> I was gathering my thoughts for this Safety Bulletin and delighting in the fact that even though we had one accident to discuss it was fairly straightforward and (unlike performance gliders or mini-wings apparently) non-controversial. My reverie was disrupted by Dave Eva's report of his April Fool's Day landing. <http://www.cumbriasoaringclub.co.uk/forum/viewtopic.php?f=20&t=3824> . Dave's incident is still active on the forum so I have decided to leave it until next month to squeeze the maximum learning value out of his misfortune. Many thanks for posting Dave!

This next section should be of interest to any pilots who are new to pod harnesses or thinking of switching.

Mike **Williams** started a thread.

<http://www.cumbriasoaringclub.co.uk/forum/viewtopic.php?f=20&t=3805> In essence, Mike was Flying a Swift 2 with an Advance Impress 3 harness at Treak Cliff in De rbyshire. Conditions were good with little sign of turbulence. He was wearing a chest mounted Go Pro which proved essential in determining the cause of his accident.

*"I reverse launched and flew with the hill on my LHS. I look up to check the wing before leaving the ground and immediately after and it looked normal. I found my pod harness with my foot and pushed into it. I remember on that first beat (40 seconds) that something did not feel right, from memory I think it was that I felt I was losing height more than I would expect against a glider ahead of me. I made my first turn to fly back with the hill on RHS. I remember I flew into very gentle thermal turbulence. I had a front edge collapse (all but 20% of the RHS) at about 5m off the ground. The wing recovered but was diving strongly for the hill on the RHS. I think I has pumped the LHS of the wing immediately after the collapse. I impacted the hill on my right side, legs still in the pod. This was less than 2 minutes into the flight. It was only 3 seconds from the tuck to hitting the ground. I fractured a vertebra but it is apparently 'stable' so I have been very lucky.*

*Before I looked at the Go Pro footage I wondered how the front collapse could have happened. I know my glider. There was hardly any thermal activity & I was not flying in any lee turbulence. All the other pilots were flying smoothly. However, the Go Pro showed something very wrong. It showed that I unknown to me I was flying on full speed bar. The chest position of the camera shows the 'looped up' A risers on both sides, and speed bar pulleys touching. The video also clearly shows that the speed system is free (off) as I reverse launched.*

*What I think happened is that I got the heel of one of my boots accidentally around the stage 2 speed bar strap inside the pod as I pushed into it (I did not have hooks on my boots so it was not caught that way). This would have engaged full bar. I am used to and happy with flying my Ozone Swift 2 so I know with hindsight that the speed bar would have needed some force to push on, however I am new to the pod harness and therefore not used to the 'normal' force needed to stretch the neoprene of the pod to get into it. Also my attention at the time would have been on flying in a relatively congested airspace.*

*What I find scary here is that it is not obvious looking up at the glider that the speed bar is full on. With your legs covered by the pod harness, it is only the speed bar pulleys and the looped material of the A risers that show it, and for these you have to look down. So I was flying on full bar and flying at low altitude, something I would never knowingly do because of the risk of front collapse. Also when the collapse came and the wing recovered, because it was on full bar it dived more violently into the hill than it would have with no speed bar.*

*My Advance Impress 3 manual does not highlight the risk of catching the speed bar system when getting into the pod. I had some feedback on the Derbyshire Soaring Club Facebook page from someone who had done something similar. He had engaged stage 1 of the speed bar accidentally when getting in to his pod harness. He had exactly the same harness as me. I am no expert in pod harnesses, but looking at my Advance Impress 3 pod I can see how it happened."*

Several of the subsequent posts recognized the issue having experienced similar, but fortunately not catastrophic, problems when getting one's legs into a pod. There was some discussion around footwear with a degree of consensus that 'big' boots are more likely to snag the speed bar (whilst acknowledging the tradeoff of better foot/ankle protection). Several pilots advocate a cord system to facilitate pod entry summarized here by **Simon Blake**:

I'm on an Impress 3, and I've seen those "how to get into a pod" videos, and they're OK. However, I'd offer the following tip: get a length of thick bungee cord maybe 2 feet long, and tie one end of it in a bowline loop big enough to fit snugly over your boot. Tie the other end to the inside of your pod (you'll find there's a loop next to the footplate that looks designed for just this).

Now, as part of your preflight, the first bit of donning your harness becomes:

- check the footplate end is the right way out
- thread the loop onto your boot
- put on the rest of the harness as normal.

It doesn't affect your ground handling or launch, but once you're in the air you can just raise the bungee'd leg and the pod lifts up in front of you. You can just slip your foot in calmly and easily, and it greatly reduces the tendency to snag the speed bar. Obviously the bungee doesn't cause any problems while you're snug in the pod, and it's never caused me any issues on landing either. I've flown with that for 2.5 years so far and I wouldn't be without it.

**Geoff Moss** posted a link to a Fly Bubble video on how to get into a pod with the caveat that 'I'm not a pod harness user so can't comment on how useful it is...surprisingly no mention of speed bar'.

My personal view as a recent poddist is to question the video's recommended method of attaching the foot loop to your boot (too fiddly) and, more seriously, the suggested option of using one hand to hold open one side of the harness to enable access. Perhaps, if your usual method has failed (mine did once when the toe loop became disengaged-**pre-flight checks!!!**) and you are well clear of the launch hazards.

**Jackie Knights** provided sound advice: “When I bought my pod from Steve (it’s a supair XA13) I hung it in the shop on a quiet day for half an hour or so, and practiced finding the speedbar loops with my feet and applying it (tensioning the brummel hooks in my hands)”

Several pod pilots have pointed out that if you snag the bar entering the pod it feels different from normal. The problem is that for new pod users there is no normal. Steve Giles has suggested that if pilots are concerned they could experiment by getting their legs out and re-entering the pod whilst soaring (in suitable hazard free conditions obviously!)

The **Kortel** website <http://www.korteldesign.com/spip/?A-Few-Thoughts-On-Pod-Harnesses> provides a more general assessment of flying with a pod.

“Pod harnesses seem to give a significant improvement in performance but unfortunately not without some adverse effects on inherent safety....

### The advantages

- Warmth and comfort in flight
- Improved aerodynamics
- They look great!

### Disadvantages

- Cumbersome
- Modification of the aerodynamic equilibrium of the wing and it’s pilot... .. and thus a modification of the system’s behaviour particularly during in flight incidents.
- Awkward at takeoff and landing.

If you have the slightest doubt about your abilities to master flying with a pod, stick to a conventional harness ! !”

I am extremely grateful to Mike for being willing to discuss his accident in open forum. It has alerted pilots to an issue with pod harnesses that whilst seemingly recognised by many experienced pilots it has not necessarily been discussed. It has now. If you are thinking of switching to a pod, seek advice and practice your entry/exits before connecting the harness to your glider.

Mike Williams suffered a stable fracture of the vertebrae but hopes to be flying before long. We all wish him a speedy return to flying and appreciate his candour in discussing his accident. Further comments on this issue, or any other matters relating to safety are welcome. Comments can be posted on the appropriate forum thread or by contacting the CSO.

*Fly lots, fly safe*

*CSO*

