

I'm concerned about a couple of safety issues. Since these are matters of which many of us are familiar they are issues that are likely to be raised on Safety Day this year.

## **1. Aircraft Equipment**

### **1.1 Seat Belts**

The Navajo doesn't have seat belts for the number of jumpers it sometimes carries. When that is the case jumpers have to share belts. I guess this is allowed but the seat belt length makes it difficult. (On Navajo load 2 on March 20 we flew with 10 jumpers. Joe Manlove was on an AFF jump and he sat in the co-pilot's seat and Mike Shultz and I shared a belt. We actually weren't able to route it through both harnesses. It was through my harness and around Mike's shoulder.)

### **1.2 Loose, Sharp Material.**

1.2.1 In the Navajo fasteners are missing that secure one of the pieces of angle to the door panel. The angle is bent and separated from the door so it could catch on equipment or cut someone.

1.2.2 The floor covering is loose in the Navajo which makes it a tripping hazard.

## **2. Absent S&TA**

On their "Find an S&TA" page the USPA lists two Safety and Training Advisors who are rarely at the drop zone. Troy stated on Saturday that he is not a S&TA for the drop zone.

## **3. Student Training Equipment**

### **3.1 No Navajo Mock-up**

I know it's coming but I don't know when. The offer still stands to make one. (The 3D model of the one we could make includes every individual piece and is available for download at <https://tinyurl.com/fckemmk8>)

### **3.2 Hanging Harness**

The hanging harness is in a high traffic area, in fact, the path through the hangar from both ends of the building is directly adjacent to the harnesses. People walking through their line of sight can distract the student and the instructor at exactly the time when both need to concentrate.

## **4. Skydiving / Flight Operations**

### **4.1 Inadequate Load Boarding Warnings**

Occasionally, announcements for boarding the aircraft aren't effectively communicated in time to don equipment and do dirt dives. This causes us to rush and obviously that can lead to mistakes.

### **4.2 Aircraft Boarding**

#### **4.2.1 Support Equipment**

4.2.1.1 No stanchion for preventing Navajo tail strikes when boarding

4.2.1.2 No egress stair for the Navajo

### **4.3 Ground Support Personnel at Boarding**

At Skydive Delmarva there was someone at the aircraft at boarding to assist with the stair and to guide jumpers to the correct route to the door. (One time Justin stopped a jumper from walking around the front of the airplane while he was adjusting his altimeter rather than looking where he was going). At Cross Keys they too have a staff member, sometimes two, to attend to this function. One of them asks each jumper if they've completed a gear check and offers to do one. Since Skydive Chesapeake does not yet have a fixed loading area or a fixed route to the aircraft someone with the specific responsibility to guide and assist customers to the aircraft would enhance safety. Ideally this individual could be a C or D license holder and he or she wouldn't have to be a staff member.

### **4.4 Landing Off the Field / Bad Spotting**

Exiting at the right location, and every other aspect of the jump, is ultimately the skydiver's responsibility. However, depending on the exit order and your place in your skydiving group, it is often desirable to allow others, including the pilot, to assume that responsibility for you. Many times since the Navajo was acquired groups have landed off the field. The airport owner told me on Saturday during a call relating primarily to another matter that some of the neighbors are complaining about skydivers landing on their property.

#### 4.5 Ground Team Awareness

##### 4.5.1 Landing Off

Although someone on the ground is generally aware of when the plane is on jump run and whether all jumpers are accounted for after they open, staff is often not the first to know if there's a cutaway or if someone has landed off the field, or where the errant jumper has landed. This happens occasionally at other drop zones but it doesn't seem that accounting for all jumpers before they land is part of the regular process here. During winter months when the staff is only a packer, one pilot and one of the owners that definitely isn't standard practice.

#### 4.6 Aircraft Loading

On Saturday when we went up with ten jumpers (no tandems) I wondered whether or not the plane could return to the runway with only one engine. The numbers in the table below indicate that we were overweight. However, the "usable fuel weight" value here isn't correct because it is the weight of 150 gallons, which I think is the full capacity rather than usable fuel. Also the payload weight is not accurate. It is an estimate based on the average of my weight with gear (because I think I was the heaviest one on the plane) and Ahren's weight with gear (because she was probably the lightest) -  $((230\# + 145\#)/2) \times 10$ .

aircraft basic empty weight	3842
usable fuel weight	900
payload	1875
total weight	6617
max allowable gross weight	6500
difference, gross weight vs max allowable	+117

I would like feedback from one of the pilots on this so that I can assess my risk of taking off with 10 jumpers aboard.

#### 4.7 Pilot Education

##### 4.7.1 Exit Order

Before the second load on Saturday (March 20) the pilot told us he wanted the plane loaded with the heaviest jumpers forward. Since that arrangement happened to coincide with the proper exit order based on the types of skydiving the various groups were doing, no further discussion was necessary. However, the pilot should be aware that safety in free fall and aircraft weight and balance are both vitally important safety matters and neither can make the other hazardous.

##### 4.7.2 Spotting

The first load on Saturday consisted of two groups. I was the last jumper in the second group and one more jumper was after me so this was a case in which I allowed someone else to spot for me. As stated before, that's every jumper's choice during every skydive. Since I know that spotting at Skydive Chesapeake is inconsistent I looked at the ground right after I exited and knew that I either had to track, and therefore waste the jump, or make sure that I was clear of others and pull high. I

chose to pull high and made it back to the field by hanging on rear risers, tucking up and landing straight in. Three of the other jumpers in my group, which included Ed Short, Mike Schultz, Gregor Weeks and Harry Berning landed off the field. Ed, Gregor and a jumper who wasn't in our group had to be driven back. Mike had a long walk.

Afterward, the pilot asked me if the spot was OK and of course it wasn't, so he and I spoke and it was clear that he has never been effectively briefed on the concept. He knows more now but unless he's studied and talked to someone since Saturday his knowledge is still incomplete. On my second jump of day the spot the pilot would have had us use was long and the jumper in my group that spotted for us chose to go around. This has repeated itself many times from the first weekend of the Navajo's operation and only seems to be improving gradually.

## **5. Unsafe Activity Unrelated to Flight or Skydiving Operations**

On Saturday as I was taking my gear off I was surprised by a bright flash. Somebody was ark welding in the hanger without a screen! Of course, this is a very unsafe practice and it was a fairly bizarre and very unexpected scene.

Since my wife, and somebody else's children, and I assumed everyone in the room was at risk, I informed the manager that he had to immediately do something to eliminate the danger. He was not aware that this was occurring in his place of business so he responded as he should have and had the welder put his back to the room.

As it happened, the welder was John Gooden, the owner of the airport, which makes sense. No one else could have possibly considered doing such a thing. I didn't know who it was because he was wearing a hood but after the hood was removed I recognized him. He didn't know who lodged the complaint until a Skydive Chesapeake staff member, who was not in the hanger when I chose to intervene, informed him some time later.

Gooden took offense that I interfered with his work and later that evening he called to tell me so. I explained that I wasn't in the hanger when the staff member made the announcement that a dangerous event was about to take place. When I expressed my offense about the risk to my wife's safety, and let him know that she hadn't heard the warning either, he softened. Since I've suffered quite painful effects from welders flash the idea that my wife would suffer from it because someone hadn't taken simple precautions was infuriating.

The staff member in question should not have allowed this to occur. He was a ironworker for many years and knows quite well the dangers of 7000 degree welding rod and welding flash. John owns the building and the staff member works for him during the week so the staff member has conflicting loyalties. If safety were the primary concern that would not have mattered. The room should have been cleared OR a screen should have been used, perhaps a piece of cardboard, OR use of the space should have been denied, regardless of the consequences.

This staff member is fully qualified to identify the hazard, assess the risk and control the danger. By making the announcement he demonstrated that he was aware of the hazard but by subsequently disassociating himself from the activity he chose not to assess the risk or control the danger. The safest course is to assume that under similar circumstances, without intervention, he could allow other hazardous conditions to occur without assessing their risk or controlling their danger. Some corrective action such as safety training where-in standard risk management procedures are taught or regular safety meetings, as many shops conduct, to promote safety and recognize its importance might serve to prevent this sort of failure from recurring. Suggesting that this employee and others avail themselves of risk management books or courses will demonstrate that the drop zone managers are aware of the need.

This incident highlights quite well how safety can be compromised when roles are co-mingled, loyalties conflict and professionalism is sacrificed for any reason.

## **6. Conclusion**

An excellent, recent [article in Parachutist](#) entitled, “A Tragic Case of Normalization of Deviance” is about a phenomena associated with the Shuttle Columbia disaster. The article states the phrase, “normalization of deviance”, was coined by a sociologist that worked on the commission studying the cause of the explosion. The article includes a simple illustration of a spiral in which an “Original Normal” is effected by “Deviation 1”, which leads to “New Normal 1” which leads to “Deviation 2” and so on. Although most, if not all, of the points in this outline aren’t urgent, or even necessarily in need of correction, I can imagine how some could spiral outward.

(The “tragic event” about which the article is written is the Queen Air accident that happened in 1995 at Skydive Westpoint. Ches Judy, our friend John Judy’s father, died in that crash.)

Since the drop zone is new, some procedures and habits are yet to be established. It’s understandable that conditions that are less than ideal may linger. Some that remain can lead to worse consequences than others. By pointing them out, even minor ones, I hope to help the drop zone succeed and thrive. I am also willing, as many others are, to volunteer for tasks and roles that are needed. For example, if asked, just about anyone would be willing to count the jumpers when they open to verify that all make it back and pass that information along. C and D license holders would pitch in to serve as ground crew for aircraft loading and some of the volunteers used in the past are willing to fabricate mock ups and other training / practice aids.

Many of us are willing to pitch in as needed, especially if the goal is to make everyone safer.