

8000 Feet, One Spool and One Total Loop Failure

<http://www.quietdiver.com/113/kiss-classic-total-loop-failure.html#comment-368>

<http://thedecostop.com/forums/showthread.php?p=378374#post378374>

by xxxxxxx

A traverse from Naharon to Mayan Blue on rebreathers.

This past week has been very busy for Xxxxxx and me. With the arrival of "Slow Season" here in Playa Del Carmen, we have found more time and more opportunities to get ourselves into some serious dives. We have made two trips to The Pit and one trip to Sistema Naranjal with our Megalodons. Luckily, the dives at The Pit were relatively excitement free, other than Xxxxxx reaching the restriction at Jill's Room at 105 meters. However, the dive at Naranjal was anything but boring.

Xxxxxx had finished up a full cave class at Mayan Blue on Sunday. Unfortunately, the student didn't complete the A Tunnel / Death Arrow circuit, so we had to retrieve the remaining gear, one spool. We decided the only reasonable way to do the clean up dive was to traverse from Cenote Cristal (Cenote Naharon) down to the Death Arrow jump, pick up the spool, and swim back. The swim from Naharon to Mayan Blue typically takes about 2 hours. We decided to cut the swim a little short by only going to the end of the Death Arrow passage.

When we were planning our bailout gas, I was worried about having enough. I hadn't swum this distance and I wasn't sure of the depths. Xxxxxx and I agreed to take 2 Aluminum 80's each. We ran some calculations and it was enough to get us out if we needed it. Xxxxxx's calculations showed that two 80's would last him 4 hours at this depth. My SAC is higher, so I didn't have same cushion.

When it came time to decide on our gas mixes, I asked Xxxxxx what he was taking? He told me Air. And then we got into a discussion about bailout. He very sternly explained to me that the choice of bailout gas didn't really matter. He didn't believe he would ever have to bailout. However, if he did he would only be punished with deco time. He explained that he follows a checklist and is meticulous about assembling his unit. I told him I was going to take 32% regardless of his feelings on the topic and I was going to drop a tank of O2 in the cavern for good measure. You really never know when something unexpected is going to happen. Isn't that the definition of unexpected? We agreed, or I decided in my head, I can't remember, that if someone bailed out, they would get the 32% and the Air would be the gas of last resort. At this point, Xxxxxx's attitude really concerned me and I decided that I was going to have a sit down with him, but I was going to wait until after our dive, as to not mess with his head.

Wednesday arrived and we got on our way. The dive was going according to plan. We passed the restrictions heading for Mayan Blue. At the T, I wanted to "drop" a cookie. As I got my markers out of my pocket, I dropped my safety spool. I reached for the safety and lost control of my buoyancy and started to fall. I reached for the inflator, but no luck! I ended up rolling down the windows saving myself from crashing into the mud, but creating some silting. I could hear Xxxxxx laughing as he watched this comedy of errors. I finally got my act together, marked the T and proceeded. I am sure it looked hysterical, you know how things happen in super slow motion, I know I was laughing about it.

We arrived at the spool at 80 minutes. He retrieved the spool and we rested briefly. When we

finally got going on the return trip I was in the lead. We were singing into the DSVs and just enjoying the dive. After about 10 minutes we settled into a decent rhythm and pace.

At about 20 minutes, I saw a quick flash of the light head of me. I instinctively turned and started to swim to Xxxxxx. We were about 50feet apart. It took me a second to process the situation. What I saw was one of the breathing hoses from the KISS Classic just floating in the water and I saw Xxxxxx struggling to access a bailout reg. My first thought was, 'Oh shit, what do I do? My bailout regulators are really secured and are not quickly accessible.' Before I was close enough to help, he got his regulator out. I arrived and assessed the situation. The exhale breathing hose had disconnected from the canister. At Xxxxxx's request, I reattached the hose. We thumbed the dive, changed positions and started swimming. This is when my heart rate finally picked up and I became aware of the gravity of the situation. This was a real live catastrophic loop failure way back in a cave. This is the exact type of unexpected situation we train and prepare for. I knew we had enough gas, but I still got hit with some adrenalin. I had to stop and think about my breathing and heart rate for a second. My heart rate really isn't under my control sometimes. The base of the brain just reacts.

As we swam, I stayed near to Xxxxxx in case something else went wrong. I checked my computer and marked the time. We had 60 minutes of swimming up stream to exit the cave. Xxxxxx cleaned up his hose routing and attempted to go back on the loop. As I watched him attempt this, I just kept thinking, "You can't recover a KISS from a total flood. Don't try." He found out in short order it was a done deal. Then I offered him my 32%. He waved it off, and he started to play with his X1. Xxxxxx later told me he thought he would be fine on air. However, a couple of minutes later when we reached the T, he realized he was running out of no stop time and asked me for some 32%.

He asked at the worst time for me. I was about to pick up my cookie and had too many things going on at once. I struggled with my tank for a minute and finally told him to start swimming. It would be easier to make the switch underway instead of hovering. At this point I made a mistake, I think I was a bit overloaded and my brain was fried. Instead of doing one thing at a time, I had the tank neck out of the bungee in the left hand. I reached down to get the cookie with my right. Now I was swimming with both hands full trying to get my tank completely off. Ug! What a nightmare!

I finally stopped and stowed the cookie. Then I passed the tank to Xxxxxx. He reached down to pull the regulator off the tank and the mouth piece came off! The irony is that Xxxxxx recently told me it was stupid to put the bungee necklace under the same zip tie as the mouth piece and that the mouth piece would come off at the worst time. I defended my choice and didn't change my configuration. The bungee was wrapped around the tank neck and under the single zip tie. When he showed me the regulator without the mouth piece, I could hear his voice in my head and I laughed. I have since changed my configuration for CCR diving. I removed my 120 degree swivel and the necklace on the bailout regulators. I want them to be as accessible as possible. Now, I believe that I will need them at the worst possible time. He replaced the mouth piece and started to enjoy the joy that is 32% EAN.

Xxxxxx swam off and I struggled with his tank. This dive taught me my sidemount bungees are too short to be useful in an emergency. As I struggled with the tank, I swam into the ceiling with my rebreather. It got a little hung up so I jerked my head down. I immediately realized my head was way heavy and I was heading for the floor! A huge rock had broken loose and was on its way to pinning me. I rolled to the right and the rock fell off my head before I hit the ground.

Again, I laughed. I couldn't believe how many things had happened to us on a single dive. We have been diving for seven months together and all of those dives had been incident free. A series of walks in the park, including cave dives to 300ffw. The type of diving that breeds

complacency.

I caught up to Xxxxxx and we continued to exit. We decided to pull our gear. As I pulled my spool from the jump between Southern Sacbe and Southwestern Sacbe, I created a nasty knot around the main guideline. I ended up cutting the spool free from the guideline. It was the last in a row of incidents. We exited safely with a total run time of 180 minutes. I estimate the total distance at around 8000 feet.

Xxxxxx and I agreed that we handled all of the situations acceptably. We did a serious review of the dive and have both made changes to our rigs and attitudes. As I mentioned, I changed my regulators and I lengthened the sidemount bungee. Xxxxxx also made some changes to his regulators to ensure they are accessible. We adjusted our bailout gas attitudes. And we agreed to take better care to avoid team separation.

Once the stress started to pile on, it made simple tasks like a tank swap more difficult. A task he and I normally can handle in a minute or less took a couple of minutes. My overall awareness decreased and we got a good distance apart more than once after the main failure.

I feel it was an excellent dive! We both returned and no one was hurt. We tested our abilities as a team, and as individuals in a stressful situation. We both stayed calm and controlled our breathing. We reacted instinctively and completed the tasks at hand. We realized our performance wasn't perfect but it was acceptable. The whole dive confirmed to me the following idea. Bailout is for unexpected situations and it does matter. No matter how bullet proof you might think you are or your procedures, unexpected shit happens and it will happen at the worst time. And these situations never happen alone, they are always compounded by other events.

Xxxxxx used just over 2000PSI from one Aluminum 80 to exit from 60 minutes into the cave. I hope you learn a little from this, I know I have learned a lot.