DIRrebreather

The Setpoint

The Setpoint
DIRrebreather Official Newsletter

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Welcome to the first issue of The Setpoint, the DIRrebreather Official Newsletter.

Set...point of view:

by Cedric Verdier, Chairman DIRrebreather

Amazing!!!

That's the only word I can find about what happened in rebreather diving in the last few years and how DIRrebreather was created.

When I originally came with the idea of applying the DIR Philosophy to rebreather diving, I quickly found out that divers were divided in three categories:

1. Those who liked the concept and already started to implement it somehow in their diving habits.

2. Those who believed that it was a nonsense and CCR divers were "strokes".

3. Those who simply didn't care and who'll never want to make the effort to change the way they dive, either on Open Circuit or with a rebreather.

Let's forget the third category, as everybody has the right to believe "they're right" and let's try to see why DIR can also be applied to CCR diving.

The Doing It Right philosophy becomes extremely popular in the recreational and technical diving communities, as it means having:

- The right Mindset

- The right Equipment

- The right Procedures

... and the right Team!

By applying this set of rules and techniques, divers have explored caves, wrecks and reefs in various environment all over the world, with impressive safety records. CCR Diving can become safer by using the same approach and almost the same techniques.

How many times did you see rebreather divers with poor diving skills, bad propulsion techniques and unefficient buoyancy control? Their rebreather is far from streamlined and their gear configuration can easily be improved. The procedures they follow are complex and different for each diver, even within the same team. And everything becomes even more difficult in case of emergency or rescue...

An impressive work was already done by the WKPP members in order to adapt the DIR Philosophy to the Halcyon RB80 Semi-Closed Rebreather. But many people think that Closed-Circuit Rebreathers "can't be DIR".

With this idea in mind, I found a surprising number of rebreather divers and instructors who had the same opinion and who tried to implement it on their own diving habits. Together we worked hard to prove that DIR diving is also possible with CCRs. Proper training, thorough planning, equipment selection and adaptation can help the rebreather diver to be a DIR diver. Standardization should help to make simpler and safer dives, avoiding confusion and improving team work and communication, especially when problems occur.

At DIRrebreather, we still have a lot of work to do on CCR gear and procedures standardization.Based on some extensive cave and wreck explorations, and physiological studies, we try to adapt the most current thoughts in decompression into Rebreather diving. We also have the goal to help rebreather divers to improve their personal skills and techniques through articles, DVDs, manuals and specific Workshops.

DIRrebreather is not a training agency. The DIRrebreather team is made of experienced and active Rebreather explorers and instructors who share the same goal: implementing the DIR Philosophy into Rebreather diving. The fact that you read this newsletter is the proof that our efforts interest divers worldwide.

Safe DIRrebreather diving!

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GAS SWITCHING PROCEDURE

by Peter Steinhoff, www.DIR-diver.com

Breathing the wrong gas at the wrong depth will kill you.

This is a simple procedure yet it can cause big problems for those trying to do it fast and mess it up. Remember, slow and deliberate is always fast. Also keep in mind that all deco and stage tanks are turned off when not in use. That prevents us from loosing gas without knowing it and is also an additional safety step preventing us from breathing the wrong gas.

Common mistakes

These are the most common mistakes for those relatively new to this:

- It's easy to float up or down while changing regs. The solution is to check the depth between each step of the procedure.
- It's easy to get the hoses wrong. Make sure you have a clear mental picture of where everything goes and what is behind or crosses when you switch.

Switch to stage or deco tank

1. Wait until you reach the switching depth.
2. Hang up you primary light (turned on, pointing down).
3. Choose the proper tank by looking at the MOD label and show it to your buddy who verifies it with an OK (depth and gas is correct).
4. Grab the second stage with your right hand and route the hose around your neck.
5. Open the valve and purge the second stage.
6. Remove the long hose (with left hand) and put the stage/deco reg in your mouth and breath.
7. Clip the long hose on the right chest D-ring.
8. Unclip your light and signal you buddy that you are ready with an OK.

Switch back to the long hose.

1. Hang up you primary light (turned on, pointing down).
2. Unclip the long hose and hold it in your right hand.
3. Remove the reg from your mouth with your left and pull the hose over your head.
4. Put the long hose in your mouth and start breathing.
5. Close the valve on the tank you were breathing.
6. Lift the inner tube with your left hand (thumb) and push the hose in there.
7. Pull on the hose and make sure the second stage is secured under the inner tube.
8. Unclip your light.

Switching between multiple tanks

If you need to switch from one stage to another, from a deco tank to another or any combination, you go to the long hose first. Like this:

1. Switch back to the long hose and stow the tank you are breathing.
2. Move tanks around if it makes things smoother.
3. Switch to the new stage or deco tank.

And you can have the light clipped off until you have completed the whole process.

If you are switching deco gases, let's say from 50% to Oxygen, you switch to back-gas (long hose) at 9m/30ft for the last couple of minutes. That gives you time to stow the 50% and move things around. Then ascend to 6m/20ft and deploy the oxygen. This is the cleanest and safest way to do it.

Gas breaks

When doing more than 20 minutes on oxygen you have to do a gas break to keep the gas exchange effective. When you go to breathe the long hose you can stow the reg on the oxygen tank just by clipping the second stage to one of the bolt snaps or the handle. Anyway you chose to stow it, you NEVER let regs hang around your neck. Why? Because when something happens you will not know what you are breathing or even if it is turned on.

Team switching

When you switch deco gases it's best to do it one at a time, especially if you're not very experienced. The chance of something going wrong is always bigger at the gas switches so it's a good idea to supervise each other. I have stopped people from breathing oxygen at the wrong depth or choosing the wrong tank several times. Also it's easy to get something into the second stage, like small sticks, sand, clay and if you breathe that you may need some help to recover. By the way that's why you need to purge the second stage before breathing it. But we all make mistakes, right?

Stage diving

When you are using stages in the ocean you often suck them dry or almost dry. Then you switch to the back-gas (unless you have several stages which is uncommon). If you want to, you can signal your buddies, show them the switch sign and everybody can do the switch. Nice if you have similar gas consumption since everybody's stages should be getting close to empty. If you are experienced you can switch on the fly though..

Article reprinted with the authorization of the author. We publish this article, originally written for DIR divers diving on Open Circuit, as rebreather divers should follow the same safe procedures when they bail out and switch gas).

TO SUBMIT AN ARTICLE FOR THE NEXT ISSUE OR FOR ANY QUESTION, CONTACT US AT DIRREBREATHER@YAHOO.COM

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EQUIPMENT

Halcyon Explorer CCR35wing for CCRs

Halcyon recently introduced a wing for Closed-Circuit Rebreather. Originally designed for the ISC Megalodon CCR, divers have used it on a Jetsam Classic KISS or a Prism Topaz and seem to be more than happy with the usual quality of Halcyon products. and the special design with additional buoyancy on the bottom of the wing (35lbs lift).

www.halcyon.net

Liquivision F1 Depth Gauge/Timer

Eric Fattah and the canadian-based company Liquivision now propose the F1, a revolutionary Depth Gauge and Bottom Timer using an Organic LCD to provide the display with an impressive robustness (depth rating is around 500m/1500fsw). This instrument was designed for deep free divers but can obviously be used by rebreather and technical divers for deep exploration.

www.liquivision.ca

ISC COPIS Meg

Innerspace System Corporation, the famous manufacturer of the Megalodon CCR, recently presented its new product: The COPIS. Using almost exactly the same components than the other Megalodon CCRs, the COPIS has a completely different Oxygen injection system: a simple continuous flow instead of an electronically-driven solenoid valve. Based on a similar concept than the KISS valve, the COPIS has an adjustable 1st stage (APEX DS4) to control the continuous O2 flow and very simple electronics (only one handset showing the 3 pO2 readings).

www.customrebreathers.com

DIRrebreather WORKSHOPS

DIRrebreather Fundamentals Workshops

Paul Neilsen just conducted a Fundamentals workshop in Puerto Gallera, Philippines Islands. Other workshops should be scheduled soon in Cebu.

Cedric Verdier will conducted 2 workshops. The first one will take place in Krabi, Thailand, end of January. The second one will be held just after OzTek 2007 in Sydney, Australia in March.

DIRrebreather EVENTS

DIRrebreather at OzTek 2007

DIRrebreather will officially participate in OzTek 2007 in Sydney, Australia. Being the main Tek Diving show in South-East Asia Pacific, OzTek has grown in popularity over the years. DIRrebreather will be there on March 17th and 18th.

DIRrebreather-sponsored exploration

The Asian Cave Diving Club has planned to keep on exploring and surveying the Sra Keow cave system and several other systems nearby. Sra Keow is located in Krabi, Thailand, and previous expeditions have shown that the main passage goes deeper than 200m/660feet. January will see the same group of avid cave divers pushing their exploration to a deeper section.

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