HULLO

HULL BRANCH No 14
BRITISH SUB-AQUA CLUB
NEWS LETTER No 161
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SEE PAGE 4 FOR TONY HODGE'S AMAZING PICTURE OF A SEA HORSE, TAKEN AT BRIDLINGTON.

Thousands of catfish escaped into the waterways from a fishery near Hull in the local floods.

PART 3 OF REBREATHERS ON THE CHEAP - INSIDE

REBREATHERS ON THE CHEAP - PART 3

Ex-Military Units

There are several types of "cheap" rebreathers that pop up quite regularly on EBAY. Most of these are military units, and generally from the former Soviet Bloc . It seems that the USSR in particular, stock piled many units, which are now finding their way onto the western market. These are essentially new units, supplied in grease paper, and with a comprehensive spares package. A new unit can be had for as little as £300. Whilst on the face of it, this seems like a good deal, there are several important issues which need to be addressed.

CCR units

Units sold as Closed Circuit Rebreathers (CCR's) generally aren't as you would expect, a cheap alternative to an AP Inspiration. Most of these units are actually O2 rebreathers, and are closed, in respect that all the gas added is metabolised, therefore there is no venting of additional gas, as in a semi-closed unit. These vary from tank escape units, submarine units, through to special operations combat swimmer units. As pure oxygen units, they are limited to 6m depth rating (under BSAC guidelines) or 10m under their operation manual!

In addition some units were originally designed to use "O3" or "superoxide", a material which in addition to removing Carbon Dioxide, produces Oxygen. The downside of this material is that, if it gets wet, produces an exothermic reaction, similar to thermite (used historically for welding rail tracks together). Probably not what you want strapped to your back at 35m……..

There is information available on the internet on how to adapt these units to run as a manual CCR. This is fairly straight forward, especially if you are a plumber!

"Unit specific" training for all ex-military units is not available.

SCR Units

These items are particularly rare, as generally not many were made, and they can be used with little or no modification by civilian divers. This type of unit was used for mine clearance work, where long durations at

depths greater than 10m were required. They are also usually non-magnetic (for obvious reasons!) so are made with aluminium and fibre glass or plastic parts.

Two units which are suitable for recreational use, are the Russian AKA60 and Drager FGT 1/D. Both these units follow the same principle, in fact it is said that the Russians "acquired" a Drager unit, and copied it! In fact there are striking similarities between the Drager unit and the "new" Submatix rebreather…..

Both these units have a counter lung/s, a scrubber unit centrally mounted between two cylinders, all housed in a hard shell, and worn on the back. A continuous flow of Nitrox is supplied to the counter lung, which , when exhaled passes through the scrubber unit (to remove CO2) and back into the inhale side of the counter lung. Excess gas in the counter lung (from exhaling + additional Nitrox) is vented by an overpressure valve, similar to a dry suit dump valve. The resulting mix of gas being inhaled, is slightly less than the original Nitrox mix (approx 4%- dependant on metabolism). A good idea is to fit an o2 gauge, so you know what percentage Nitrox you are actually breathing, something that the military didn't worry about!. Both units have an adjustable flow rate, and different mixes can be used, to allow for depth and duration.

Should I buy one?

Whilst many of these units appear to be a cheap way of getting into rebreathers, they are not without their (serious) drawbacks. If you want to learn how rebreathers work, and are competent enough to "tinker" with them, then they can provide hours of fun. Get it wrong however and this may prove to be only "minutes", followed by unconsciousness and drowning! A safer bet would be to buy a Drager Ray, which you can pick up for £300, BUT don't forget some suitable training!!!!

Disclaimer: these are my own personal views and not that of the BSAC or any other training agency. Work on all breathing apparatus should only be carried out by a trained technician. Suitable training should be sought before trying to kill yourself, etc etc…!

Chris Storey

HULLO is the newsletter of the Hull Branch of the British Sub-Aqua Club.
Please send your contributions to the Editor - Don Wilson - don@poorlyleg.karoo.co.uk
Visit the club's web site at **www.bsac14.org.uk**

SPECIAL FOOTWEAR FOR OUR LADY MEMBERS TO HELP THEM COPE WITH THE CURRENT WEATHER

TONY HODGE'S FINE PICTURE OF A SEA-HORSE

MEMBERS, AND OTHERS, ENJOYED THE BARBECUE AT THE SHIP INN