Care and Maintenance

REGULATORS

by Keith Cardwell

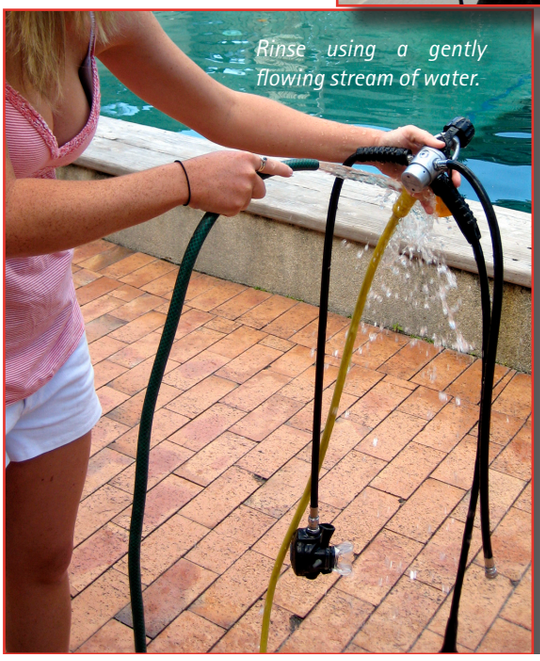
The majority of us use what is often described as single hose, 'open circuit' scuba. This basically describes a compressed air source or scuba tank, and a magic gadget called a regulator that takes the air from the scuba tank via a single hose to a valve with a mouthpiece on it. That's shoved in our gobs so we can breathe from it and when we exhale, it gets exhausted into the water we're diving in.

Store coiled, not kinked!

Curiously, one of the only times we will recognise the expression 'single hose' is when we first take our new regulator out of the box it first came in. But if we now look at it, the odds are there are a few more hoses we've attached belying that earlier description. In fact it will probably look like an octopus with a metal head and liquorice arms.

But getting down to it: Looking after our gear properly is a must. The procedures for regular care and maintenance are drummed into us from the very first dive course we did and I'm sure that most of us follow the rules we were taught. And when it came to making that regulator purchase there was a manual or booklet included giving the manufacturer's recommendations on how to keep it healthy and working. This may also include the requirement of a six or 12 monthly service by a qualified agent and failure to follow this procedure may make your guarantee null and void.

Wipe the dust cap.



Rinse using a gently flowing stream of water.

But whether it's a new regulator or not, the following steps are generally recommended for basic care as soon as you've finished your day's diving:

1. Dry off the dust cap that's usually attached to the first stage. Either wipe or blow it dry. Just a mouthful of exhaled air usually does the trick but for those who found difficulty in passing the respiratory challenge at their last diving medical, preference is given to using the remaining air in the tank. This is certainly effective, but it's noisy, quite unnecessary and it has a tendency of blowing the o'ring out of the tank valve. And from one whose ears often ring from listening to the cacophony often heard after a dive, please! just use your own exhalation or use a cloth!

2. If you can, now put the regulator in a bath of warm water and preferably with some disinfectant in it. Caress as if it was a bunch of pet eels. This will help in getting rid of any salty (or other) stuff trying to find a home on it. Don't push any purge buttons while it's underwater as this may allow water to enter the regulator, and with many models, cause possible internal damage.

3. Now rinse it off by using a gently flowing stream of water.

4. Dry it off thoroughly before storing it away. Avoid drying in direct sunlight and stow your regulator away somewhere cool and, of course, dry. Make sure that the hoses are not placed in such a way as to cause kinks or sharp bends. Also, the ultraviolet rays in the sunlight tend to break down rubber.

There are many regulators to choose from and usually, like most things, you get what you pay for. But whatever you get, invariably it will last longer with just a little TLC.

Surprisingly, many divers I see assembling, using and disassembling their gear show about as much concern for their equipment as the legendary driver who hears a funny knocking in the front of their car and just turns the radio up to drown the noise out. And like cars, regulator servicing alone can become quite expensive if little signs of wear and tear are ignored. If you see a leak, a frayed or cracked hose or mouthpiece, get it fixed. The best time to check for this is just before it's finally stowed away.

This gives the greatest amount of time available to get anything fixed before the next dive.

Preventative maintenance can save a lot of dollars, keep that regulator looking good and above all else, keep you breathing.

But proper care and maintenance doesn't start and stop at the beginning or end of a dive. Wear and tear can be exacerbated by how the regulator and its bits are assembled and used during the dive.

Sometimes bad habits develop either through laziness, lack of early 'good' practice or learned from someone who thinks that 'this is a better way to do things'. Like the example of tucking the alternate (octopus) hose away under the sheath covering the right hand shoulder clip. This appears to have become a common practise by many divers. No doubt hose-manufacturing technology has taken great strides in recent years to tolerate greater abuse, but in general, sharp bends are not smart for hose life.

Yes, the alternate regulator is easily accessible but it puts undue stress on the hose. There are more appropriate methods to ensure accessibility.

The very reason hose protectors are placed on the ends of the hoses connecting to the first stage is to ensure that there is no undue stress experienced from sharp bends.

And if you don't have hose protectors in place, get them on as soon as you can and invest in a couple of inexpensive clips to hold both your alternate air source and submersible pressure gauge (SPG) in place. There are endless varieties of these clips to choose from but the most expensive will still cost only a few dollars

A couple of other general tips: When diving in freshwater locations many often assume that it's okay to just dry their stuff off and pack it away. Yahoo! No crusty salt. What a time saver! Thumbs up for freshwater diving!

above left: Mouthpiece pocket (note the spg clip circled far right). Above right: Don't kink your hose!
left: Hose protector.

However, if we are intending to move between different freshwater locations, we may unwittingly be taking along spores of unwanted plants or algae. And it'll live quite well in and on your dive gear for a long time in storage! A good (actually very bad) example of what could be lurking in your bag would be the noxious algae Dydimo or 'Rock Snot'. This is a real threat to inland waterways. So, make sure your gear is thoroughly washed in clean, and if possible, disinfected fresh water especially if this type of diving is anticipated.

While the thought is still with freshwater locations, we typically find beaches that have a lot of things in common with many of the other freer dive locations we find in New Zealand and Australia. And one of those common things is sand. Sand mixed with a bit of water is a great destroyer of regulators as well as car boots. We'll leave discussing car boot maintenance for another time perhaps, but sand in you're regulator's first and second stages can be a real show-stopper. The terms free flow and ffffffferfrustation come quickly to mind. Take care to correctly attach your other hoses and tucking in those dangly bits will certainly help avoid this type of problem.

Finally, and often taken far too much for granted, the submersible pressure gauge. Internally it is a very simple device but it is nevertheless fragile and must be treated as such. When assembling to the tank, don't just drop it on the ground when you've made sure you have enough air. At the very least you may end up getting a wrong reading, at the worst ... guess!

Okay, I know a lot of this has been like teaching many of you to suck eggs but hopefully it's a good reminder to keep looking after your regulators well. All too often we wash, rinse and tuck away our gear without further inspection. But it's the gadget that keeps us breathing under water and these things bear reminding.