
difficult to maintain while looking downward at 45 degrees.

This mask has a relatively large internal volume and a correspondingly high profile. Its size may be an issue for serious breath-hold divers, who prefer low-volume masks that are easy to clear with minimal air. Surface snorkelers probably won't care about or notice its size, though, and will enjoy the panoramic views.

Scuba divers who spend a lot of time in high currents are concerned with drag. When I held onto the anchor line in a one- or two-knot current, the ESA lifted off my face when I turned my head unless I really tightened down on the strap.

The Bottom Line

The ESA has a soft comfortable skirt and better-than-usual

buckles. It's finished with an eye to detail, as one might expect from the premium price. It comes with a nifty inflatable bag, to protect it from bumps, and a one-year warranty. However, the ESA wouldn't be my first choice for high-current diving other than full, go-with-the-flow drifts.

Delmar Mesa

Regulator Overhauls

How much and how often?

Do you take your regulator in for service every year to keep its warranty valid? If so, you're part of a very small minority of divers.

According to several dive-store owners we polled, more than three-fourths of the regulator overhauls they do are off warranty.

Most divers pull their regulators out of their gear bags a couple of weeks before leaving for a dive trip and have them tuned up just in time to run for the plane. After the trip, they put their regulators back into storage to sit, forgotten and sometimes unwashed, until just before the next trip.

Putting it off can cost you. Many, though not all, regulator manufacturers provide free parts for regulators that are serviced annually — in some cases, forever. To collect on the free parts, however, you've got to be the original owner, and you must have the service performed every year close to the anniversary date of purchase. If you miss it once — or if you've bought a used regulator — you're on your own.

When you're thinking of buying a used regulator (or one that you probably won't take in every year), ask your regulator technician what his shop charges for labor, then add in the retail cost for the manufacturer's annual-service parts kit. This kit has the standard parts; it's free to warranty customers or sold along with the labor to put it in. The labor for annual service in most dive stores runs about \$15 per stage. One first stage and two

Victimized by Tank Quacks?

and certified look into our scuba cylinders and inspect them? Yes. Why is that?

Wildcat tank inspection stickers are continuing to be slapped onto cylinders with no response from the editorial pages of dive magazines. No cry from the consumers.

The only inspection stickers that should be recognized are those affixed by trained and certified cylinder inspectors. Untrained and uncertified inspectors aren't inspecting your tanks — they are only slapping on dive-store advertisements disguised as inspection stickers. All dive stores say they won't fill tanks that do not carry up-to-date stickers. You should be telling the general diving public that when they deliver their cylinders for inspection they should be done by inspectors who have been trained to do inspections and are certified to do inspections.

It is the duty of editorial pages to see that the day of wildcat tank inspection programs be brought to a close.

Fred Calhoun
PEW, PDIC-IT
Maynard, Massachusetts

Dear *In Depth*:

Would we let people who have not been certified and trained inspect your teeth? Of course not. Do we let people who have not been trained

second stages would thus cost \$45 in labor.

Parts prices vary widely among brands and models. A three-stage kit (one first and two seconds) for most Sherwood regulators retails for around \$10, perhaps the lowest price in the business. Ten years of annual nonwarranty service would cost \$100 in parts, ignoring inflation. For a Sea Quest Mirage, the same service would run about \$220, while a Mares MR-22 Abyss would cost about \$340. A Sea Quest Century sealed first-stage kit alone costs \$40, bringing its ten-

year cost close to \$500. A pair of Scubapro D400s on an MK 15 first stage would run an impressive \$520. To those prices you can expect to add about \$450 in labor.

When buying either a new or a used regulator, determine the price of a nonwarranty service kit for each stage, even if you intend to have them overhauled annually. Parts costs do exceed labor costs for some regs. Buying a used regulator or overlooking an annual service date for a new reg can add hundreds of dollars to your diving bills over just a few years.

Delmar Mesa

technician can't find the right part, but 'here, this one looks almost like it.' The resulting problems may not happen until you're at depth. A technician has to have already worked on the reg before he or she can tell anything about it on a bench.

"Another good reason for regular servicing is that manufacturers sometimes modify components, replacing them with superior products. Even without use, regulator components can dry out and become defective. Yes, it's true that most regs will fail positively (free flow rather than cut off your air), but why take a chance? It's life support, and parts should be checked and replaced annually."

Some of Rudy's arguments are compelling, but I'm still not a hundred percent convinced that it's necessary to replace all those components every 12 months if I take good care of my regulator.

However, one of the IAST contentions is hard to argue with: that people who service underwater life support systems should be qualified. IAST points out that manufacturers offer courses lasting from a couple of hours to a day on how to service their regs, but as it stands now, anyone who wants to call himself a scuba technician is one. It's IAST's goal to set minimum standards for the training of scuba technicians and organize an international registry of scuba technicians and repair training facilities.

If this would mean that regulators would no longer be most prone to fail on the first dive after servicing, I'm for it.

John Q. Trigger

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Regulator Service

Do I have to do it every year?

Past experience tells me two things: (1) the mostly likely time a regulator will malfunction is on the first dive after it has been serviced, and (2) if I take good care of my reg, I can go for three seasons without service and never have a problem.

So if I dutifully take my regulator in for its annual service, does that mean that, when I get the little plastic bag back with a handful of parts that look perfectly fine, I've just shelled out 50 to 100 bucks for nothing? I called a buddy with a dive store who I knew would forgo the industry line and tell me what he thought. He did, but he also said he would like to remain anonymous.

"No, I don't service my regs annually. I think the annual thing got started back when O-rings were made of rubber. Now that they're made of more durable

material, I don't think it's as necessary. Manufacturers won't back off because of liability reasons, and most dive stores want the service business. When a customer who's an experienced diver brings in a reg, I can crank off the dust cap, look to see if it's clean, check the filter, look for salt crystals, snap it on the test bench, and check the cracking pressures. If it passes all of these tests, I say there's no reason to overhaul it."

Rudy Mola of the International Association of Scuba Technicians (IAST) has a very different view. "Of course you should do an annual checkup — it's a life-support system. You can't tell anything about a regulator by slapping it on a test bench. Some regs will even perform (for awhile) with the wrong parts. In a less than perfect world, a repair