

INSPECTION UNDER PRESSURE

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Our friends were looking forward to today's visit. There wouldn't be any diving, but it promised to be an interesting day out. Skubba's Mother had agreed with the owner of a dive centre that they could visit his workshop. He would show them around and tell them all about his job.

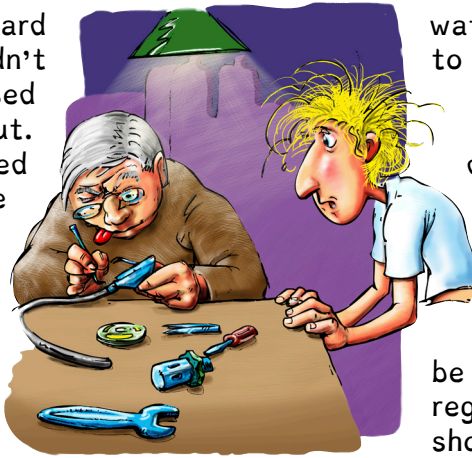
When they came home from school, they immediately started their homework because they wanted to leave as quickly as possible. After a short drive, they arrived at the dive shop. It was closed but the owner let them in making them feel very special. They walked across the courtyard to a garage. The man opened the large door and they walked into the big space where they fill all the scuba tanks up with air. Skubba looked at the colourful collection of tanks. Tall ones, short ones, thinner ones, thicker ones, with one or two valves... and some had some amazing designs on them. They loved the one with an octopus painted on it. In another corner stood some very, very big tanks. How long could you dive with one of those tanks?

"Those ones are not for diving," the man said as if he read Skubba's thoughts, "but they're to fill other tanks. The compressor, a kind of large bicycle pump, behind this door fills the tanks, but if many divers want air at the same time, those large tanks help to do that."

Fred studied the pipes, metres and valves used to fill the tanks. Some valves had the word "NITROX" marked on them.

"That is air with extra oxygen for a long dive with lesser deco stops," said the owner. "It's quite difficult to quickly explain what deco stops are," he said, seeing Fred's curiosity. Diving with deco stops? Fred wrote it down because he wanted to know more about it.

They carried on with their guided tour. To the left of the entrance was the workbench for repairing and maintaining regulators. The man took a regulator apart while they



watched. They were surprised to see that there were so many small parts inside a regulator. He said that during a dive, dirt could come between all those small things and that his job was to remove that dirt. Also, by using the regulator, the seals wore off and therefore needed to be replaced regularly. If not, the regulator could start leaking. He showed them how he removed the dirt and replaced a seal. Once

everything was back in its place, he checked the regulator with a special device to see if it worked correctly. Skubba and Fred watched with eyes wide open.

Then they went over to the bench for testing scuba tanks.

"To be sure that a tank does not rupture while diving, it must be tested regularly," the man said. "We do this by filling a tank with water and then we pressurise it. The tank should not expand too much. If that happens, we throw the tank away because it is no longer safe to dive with."

"Why water? Isn't air normally in a dive tank?" asked Fred.

"Right, but if a bad tank filled with water cracks during testing, only water sprays out. On the other hand, if that tank had been filled with air, it would explode with a big bang. Not something you want to happen. With water in it, the work is less dangerous."

While they were standing at a safe distance, he showed them how he tested a tank and then pointed to a pile of some rejected tanks. After that, they then learned a bit about repairing diving suits.

The visit was over far too quickly. Fred had written down a lot of notes in his booklet and Skubba had learned a lot about diving equipment. The man was exhausted from explaining his work, but he was happy with a visit from such an interested audience.