Eliminating the quarter-turn-back

"Turn on your cylinder, and then close it one-quarter turn. Many divers have heard this instruction during their initial confined space training. Have you wondered why this procedure was recommended? Is this practice still necessary?"

In the past, valve designs were not as sophisticated as they are today. Over time, older valves could cause damage to two ways. When forced beyond fully open, a seal in the cylinder's handwheel or valve stem seal would leak, possibly causing a 20% or more leak over time. Over-tightening when closed could damage the valve bonnet nut. Divers are now less prone to leaking or sticking valves because manufacturers have made significant improvements to modern valve designs. However, some older valves could cause damage in two ways. When forced beyond fully open, a seal in the cylinder's handwheel or valve stem seal would leak, possibly causing a 20% or more leak over time. Over-tightening when closed could damage the valve bonnet nut. Divers are now less prone to leaking or sticking valves because manufacturers have made significant improvements to modern valve designs.

Modern valve design, however, protects both the valve outlet and the handwheel. When a valve is not fully open, the handwheel is being moved away from the mouthpiece in order to make the valve outlet tighten the handwheel. However, modern valve designs protect both the valve outlet and the handwheel. When a valve is not fully open, the handwheel is being moved away from the mouthpiece in order to make the valve outlet.

The second cause of damage was from closing the valve too tightly, which could happen accidentally and especially at the end of the exhaust breathing curve, which was called the “valve auditory,” by pressing slightly. In both cases the valve would start to leak either through the handwheel or out of the valve mouthpiece. To compensate for the leak, the diver would close the valve more tightly, which would cause a much greater leak later on.

Make it your standard practice to gently and fully turn on your air. If you’re an instructor, consider teaching experienced divers the proper technique and make your diving safer by fully opening your valve. Make sure that your handwheel is open all the way before entering the water. If you’re an instructor, consider teaching experienced divers the proper technique and make your diving safer by fully opening your valve. Make sure that your handwheel is open all the way before entering the water. If you’re an instructor, consider teaching experienced divers the proper technique and make your diving safer by fully opening your valve. Make sure that your handwheel is open all the way before entering the water. If you’re an instructor, consider teaching experienced divers the proper technique and make your diving safer by fully opening your valve. Make sure that your handwheel is open all the way before entering the water. If you’re an instructor, consider teaching experienced divers the proper technique and make your diving safer by fully opening your valve. Make sure that your handwheel is open all the way before entering the water.