

Self-contained breathing apparatus cylinder connections

Sets should be maintained to the highest possible standard

The SCBA is possibly the most important piece of equipment to be used in an emergency situation. It can also be the most frequently overlooked or poorly maintained, and lives have been lost because of this. Needless to say the sets should be maintained to the highest possible standard.

Cylinder connections

The SCBA cylinders are highly engineered and can be progressively damaged by incorrect use. The screwed thread on the cylinder is a tapered thread. This ensures that as the screw connection on the high pressure air line is tightened by hand, the fit becomes secure enough to withstand the high pressure of the air (>300 bar on some sets) flowing from the cylinder to the apparatus.



It is not uncommon to see that this valve has been secured to the apparatus using spanners or other hand tools. This should not be done, tightening by spanner



results in the screwed thread being overly compressed and tensioned. Consequently the threaded connections are not air tight and in an effort to make them so PTFE tape (polytetrafluoroethylene plastic thread tape) has often been used (photo below right).

The use of PTFE tape in this area is dangerous and should be avoided. It is possible for particles of tape to enter the airlines of the apparatus and block the piping to the mask via the reducing valve. This could result in a fatality if the equipment was being used in a real emergency.

