



# **Generic Compressor Risk Assessment**

This document should be read by all persons using the compressor owned by Totnes Sub-aqua Club, and will be made available to all club members via an annual distribution and on the club website.

It is the Compressor Operator's responsibility to carry out a risk review prior to every compressor use, based on this generic risk assessment, plus consideration of prevailing conditions. If conditions change such as to be significantly different from those applying at the time the original assessment was undertaken, then the Compressor Operator shall reassess the situation accordingly. Hazards should be continuously monitored and the Compressor Operator should be prepared to put any contingency plans into place at any point during the compressor session.

## **Standard Controls**

Only competent trained persons shall operate the compressor.

Divers should ensure that their equipment is properly maintained and functional.

Ear defenders are stored adjacent to the compressor and should be worn by the Compressor Operator and any persons rendering assistance, as appropriate.

Only cylinders that are in test should be filled. The Compressor Operator shall maintain a log of all cylinders filled, noting test date and working pressure.

No oxygen decanting to be carried-out within the boatshed.

Nitrox blending shall only be undertaken by approved gas blenders holding an appropriate gas blending qualification.

This risk assessment shall be read in conjunction with Totnes Sub-aqua Club's nitrox blending risk assessment, where nitrox blending is to be undertaken.



Hazard:	Risk of:	Risk Evaluation:	Controls:	Immediate measures to deal with consequences if risk does occur:
Cylinder failure/explosion	Serious injury or death to compressor operator or persons in vicinity; damage to property	Medium	Only cylinders that are in test should be filled. The Compressor Operator shall maintain a log of all cylinders filled, noting test date and working pressure. Cylinders that are in poor visual condition or whose test date/markings are obscured should not be filled.	First Aid to be administered. Hospitalise as required.
Electrical systems	Injury or death; fire	Medium	All electrical equipment to be fitted and maintained by a suitably qualified electrician and installed to current regulations. Must be capable of operating plant and machinery without overloading the system. No modifications or alterations other than by suitably qualified electricians. Appropriate safety "cut-outs" to be installed as part of system.	First Aid to be administered. Hospitalise as required. Instigate fire plan as necessary (see "fire" below)
Fire	Serious injury or death; damage to property	Medium	Fire extinguishers are provided in the boatshed, adjacent to the pedestrian door and by the compressor. Compressor Operator to arrange evacuation of boatshed and Community Centre. Bidwell Brook School and Robbins' Respite Centre reception to be advised of fire, as appropriate. A second bank of filters has been provided such that all compressed air from the compressor is double filtered, and a non-return valve has been fitted to prevent oxygen rich mixes in dive cylinders back feeding into the compressor. No oxygen decanting to be carried-out within the boatshed.	If unable to extinguish fire with fire extinguishers, evacuate building. Contact emergency services – they should be advised of presence of compressed gas cylinders and boat fuel. If possible close any cylinder valves. If possible



Hazard:	Risk of:	Risk Evaluation:	Controls:	Immediate measures to deal with consequences if risk does occur:
				without endangering personal safety, keep surrounding cylinders cool with hose, deployed from a safe distance, until arrival of fire brigade.
Impure air	Injury to diver / death; contamination of cylinder; explosion	Medium	Air intake to be monitored for external contamination. Compressor not to be operated if engine has been run in boatshed/driveway within preceding 30 minutes. Compressor to be serviced bi-annually and filters changed more regularly if required. Air purity checks to be undertaken every 12 months. Divers to check gas for taste before entering water and to be prepared to abort dive if suspicious of cylinder contents. Divers to report possible "bad air" to the Equipment Officer.	First Aid to be administered. Hospitalise as required.
Operator error	Serious injury / death; damage to property	Medium	Only trained competent persons to operate compressor.	First Aid to be administered. Hospitalise as required.
Air under pressure	Injury from flying debris/flailing hoses and fittings	Low	Only trained competent persons to operate compressor.	First Aid to be administered. Hospitalise as required.



Hazard:	Risk of:	Risk Evaluation:	Controls:	Immediate measures to deal with consequences if risk does occur:
Heat	Injury to persons or damage to property coming into contact with hot machinery	Low	Cooling fan fitted as part of compressor assembly.	First Aid to be administered.
Injury from falling cylinders	Injury to compressor operator or persons in vicinity	Low	Divers to avoid leaving cylinders standing upright other than local to compressor, particularly if unattended.	First Aid to be administered.
Lifting cylinders	Injury to compressor operator or diver	Low	Where possible, twin-sets should be stripped down to single cylinders for handling. Compressor operator or diver to lift cylinders appropriately to avoid placing unnecessary strain on back.	First Aid to be administered. Hospitalise as required.
Noise	Hearing damage	Low	Ear defenders to be worn by compressor operator and any persons rendering assistance/working in vicinity, as appropriate.	
Storage banks	Serious injury	Low	Storage banks to be securely fixed to wall. If it is necessary to move a bank, the lift should be fully planned and only undertaken with the correct equipment and training. Once bank reinstalled, system to be re-commissioned prior to use to ensure everything is back in safe working order.	First Aid to be administered. Hospitalise as required.
Trapping	Injury	Low	Guards fitted as part of compressor assembly.	First Aid to be administered.