

# 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.

Compressor not to be operated if engine has been run in boatshed/driveway within preceding 30 minutes or if sauna is in use, or for 1 hour afterwards.

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.

Oxygen decanting only to be carried-out via the mixing panel and the boatshed roller door must be fully opened during decanting operations.

Nitrox/trimix 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 mixed gas blending risk assessment, where gas blending is to be undertaken.

<b>Hazard:</b>	<b>Risk of:</b>	<b>Risk Evaluation:</b>	<b>Controls:</b>	<b>Immediate measures to deal with consequences if risk does occur:</b>
Compressor/bank cylinders/mixed gas blending system	Serious injury or death to compressor operator or persons in vicinity; damage to property	Medium	System to be maintained/inspected in accordance with Written Scheme of Examination (WSE). Compressor operator to inspect for visible damage prior to use. If any damage noted, system should not be used and Equipment Officer to be advised.	First Aid to be administered. Hospitalise as required.
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 the main door near the compressor. Compressor Operator to arrange evacuation of boatshed and Meadowbrook Centre. Bidwell Brook School and Robbins' Respite Centre reception to be advised of fire, as appropriate. Oxygen decanting only to be carried-out via the mixing panel and the boatshed roller door must be fully opened during decanting operations. Oxygen	If unable to extinguish fire with fire extinguishers, evacuate building. Contact emergency services – they should be advised of presence of compressed gas

Hazard:	Risk of:	Risk Evaluation:	Controls:	Immediate measures to deal with consequences if risk does occur:
			cylinders to be isolated from mixing panel by turning off the cylinder valves in the external gas store when not actively being used for decanting.	cylinders and boat fuel. If possible close any cylinder valves. If possible 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 <b>or if sauna is in use, or for 1 hour afterwards.</b> 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. Equipment Officer to maintain training log.	First Aid to be administered. Hospitalise as required.

<b>Hazard:</b>	<b>Risk of:</b>	<b>Risk Evaluation:</b>	<b>Controls:</b>	<b>Immediate measures to deal with consequences if risk does occur:</b>
Gas under pressure	Injury from flying debris/flailing hoses and fittings	Low	Only trained competent persons to operate compressor. Compressor operator to inspect charging whips for visible damage prior to use. If any damage noted, whip should not be used and Equipment Officer to be advised.	First Aid to be administered. Hospitalise as required.
Heat	Injury to persons or damage to property coming into contact with hot machinery	Low	Cooling fan fitted as part of compressor assembly. Compressor within metal enclosure.	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	Compressor is located within noise attenuating housing. If it is necessary to operate compressor without housing (e.g. for maintenance inspection) 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.

<b>Hazard:</b>	<b>Risk of:</b>	<b>Risk Evaluation:</b>	<b>Controls:</b>	<b>Immediate measures to deal with consequences if risk does occur:</b>
Trapping	Injury	Low	Compressor assembly located within metal enclosure.	First Aid to be administered.
Coronavirus or other infections	Exposure to/transmission of virus leading to possible acute respiratory tract infection/hospitalisation/death.	Low	Anyone displaying symptoms of virus (high temperature, persistent cough, shortness of breath, loss of taste, sore throat, blocked or runny nose, etc) should NOT attend club activities/boatshed until they feel better and are not displaying any symptoms.	