WORKSAFE
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HSWA

TECHNICAL BULLETIN

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# Use and maintenance of a diver's hose in occupational diving

This bulletin provides guidance about the maintenance and use of a diver's hose during occupational diving operations.

This technical bulletin clarifies recommendations for testing a 'diver's hose' when undertaking diving work.

## What is a diver's hose?

Occupational divers generally use two types of underwater breathing equipment – SCUBA (Self Contained Underwater Breathing Apparatus) and SSBA (Surface Supplied Breathing Apparatus). Both systems supply air to a diver through flexible pressure hoses, however the types of pressure hose used are significantly different in both specifications and application.

When using SCUBA, the hoses supply breathing gas from the cylinder's air supply to the diver's regulator or inflator system via low pressure (LP) hoses, or to the pressure gauge via a high pressure (HP) hose.

When using SSBA the hose, usually referred to as an 'umbilical', supplies breathing gas from an air supply located on the surface to the diver's helmet or full face mask. Umbilicals normally include bundled communication, video, lighting, electrical and/or hot water supply cables.

## Background

The General Occupational Diving Standard (AS/NZ 2299.1:2015) defines both diver's hose and diver's umbilical (cf. sec 1.5.20 and 1.5.21). It also recommends the conditions for use of a diver's hose (cf. sec 3.13.5.9 to 3.1.3.5.11).

Industry have requested a clarification on the testing requirements for these hoses.

## Recommendations

The testing of a 'diver's hose' as defined in AS/NZS 2299.1.2015 applies to hoses used to supply a diver from the surface, for example an SSBA umbilical, not short hose lengths of the type used for SCUBA.

All SSBA hoses used for the supply of breathing gas should be manufactured and tested in accordance with AS/NZS 2299.1.2015 – sec 3.13.5.9. This includes the hydrostatic pressure/leak testing of SSBA umbilicals to 1.5 times their maximum working pressure at least every 12 months.

SCUBA hoses should be visually inspected prior to each use and replaced whenever they show signs of damage, leakage or significant wear. Those that do not have a working life span specified by the manufacturer should also be inspected by a competent person at least every 12 months to determine whether they are suitable for continued use.

Any hose used for to deliver 100% LP oxygen to the diver should also be cleaned according to the protocols for cleaning of equipment used in conjunction with oxygen enriched mixtures (see our Guide to Gas Cylinders).

Each diving system should be maintained in accordance with the manufacturer's instructions or approved maintenance standards for that system.

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## Further information

- WorkSafe occupational diving guidance
- WorkSafe Guide to Gas Cylinders
- AS/NZS 2299.1:2015 Occupational Diving Operations

## Acknowledgement

This technical bulletin has been developed in consultation with the Diving Industry Advisory Group (DIAG).