

SAA LECTURE No E4

BUOYANCY JACKETS : ABLJ/STAB



ABLJ	adjustable buoyancy lifejacket (horse collar type)
STAB	stabiliser jacket (waistcoat type)
Construction	Single bag, or even better, a double bag – nylon outer – plastic inner
Attachments	Oral inflation-direct feed-cylinder feed-dump valves-check straps and attachments Emergency cylinder fitting-dangers-cylinder pressure-always check the working pressure-some dive cylinders have WP of 232 bar-some emergency cylinders have WP of only 200 bar-danger of over pressurising mini cylinder if filled from dive bottle. Also if dive cylinder only half full (100 bar) emergency cylinder will only receive 100 bar = half fill-may not be enough air in an emergency.
ABLJ/STAB	Not only for buoyancy adjustment under water-can be used for surface support-diver trouble-if in rough water waiting to be picked up by boat-can also be used when travelling in a boat as life jacket, BUT remember, if partially inflated-no use at all if you slip and fall overboard. If unconscious there is no guarantee that you will end up on you back. You could end up face down.
Boyle's Law	As you ascend-air in jacket expands. Must dump air out of jacket.
Over-pressurisation	Valve: ensures that the air bag of jacket will not burst due to excess air pressure
Inflation methods	Oral-direct feed-emergency cylinder (bottle should be full for each dive) CO2 cartridge-absolute emergency only.
Deflation methods	1. Oral tube above head (press purge down) 2. Oral tube – pull – deflation 3. Separate dump valve (can be used for control of emergency).Practice makes perfect-in emergency deflation it is essential to release as much air as possible in the quickest time
Emergency breathing	A pony cylinder or twin set with its own demand valve is by far the safest and most efficient alternative air source. As a last resort it is possible to breathe from your ABLJ/STAB jacket. If CO2 cartridge has been used for inflation it MUST NOT be used for emergency breathing. Direct feed – cylinder feed.
Remember	Putting air into jacket will increase positive buoyancy and therefore ascent rate.
CO₂ poisoning	Dangers of breathing re-cycled air from oral inflation
CO₂ cylinder	This is for emergency ascent only and cannot be used under any circumstances for emergency breathing.
Maintenance and Storage	After each dive the following should be carried out: <ul style="list-style-type: none">• Wash inside and out thoroughly• Wash inside with a mild disinfectant (Milton)• Check manufacturers recommendation on rinsing the disinfectant• Store dry and slightly inflated• Make sure attachments are cleaned and silicone greased where necessary• Check all straps etc. for any wear• Check outside bag for wear and cuts• Store out of direct sunlight
Remember	Mini cylinder should be tested along with your dive cylinder. Always store cylinder with air in-never leave empty as condensation forming will cause problems.
Pre-Dive checks	Wear and tear-bag-straps-dumps working-no water in bag-drain plugs secure-direct feed attached firmly and working-mini cylinder filled and working.