Failure of an air lift bag attachment point

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A Member has reported that a diver lost control of an air lift bag being used as a diver aid during construction activities.

What happened?

The lift bag had a lifting capacity of 500 kg and was attached to a spool-piece by both its rigging and an inverter line which was in place to invert and deflate the bag should the rigging have failed.

The inverter line was attached to one of the handling loops on the top of the bag. When the lift bag was required to be deflated, the bag dump valve was unable to be operated, leaving the lift bag inflated. The decision was taken to cut the rigging attaching the bag to the load in an attempt to invert the bag using the inverter line. When the rigging was cut, the inverter line came under tension and the attachment point (handling loop) on top of the bag failed. This allowed the lift bag to freely ascend to the surface.

handling loop attachment point failure

What were the causes?

The subsequent investigation by the member company highlighted the following:

- Some lower capacity lifting bags in use do not have a dedicated inverter line attachment point.

- Many lift bags in use have webbing loops and handles which are intended to assist with manual handling and may not be suitable for use as attachment points for lines and rigging.

- Some lift bags that do have dedicated fit-for-purpose inverter line attachment points may not be clearly marked as such.

Lessons learned

Members are reminded that air lift bags from different manufacturers may vary in configuration and that inverter line attachment points may vary further, depending on the size and capacity of the lift bag.

Members are reminded of the importance of identifying the inverter line attachment point on lift bags and that this point is certified fit for purpose and clearly identified as such.

Members are also reminded to refer to guidance document *Guidance on open parachute type underwater air lift bags*.