

LIFT BAG SKILLS

1. **Small bag/light object lift/** 50lb bag/ no dumping allowed!
Make a controlled descent with a lift bag and any necessary lines, straps, and hardware. Using a small lift bag and small light object (10-25lbs) attach lift bag to object using appropriate rigging. Use a solid attachment point and appropriate knots and/or bends. Fill the lift bag with your Alternate Air Source (octopus) until it is only slightly negative. Swim with the object. Make a controlled ascent. Be sure the bag does not "spill" the air causing the object to fall.
2. **Medium bag skill** (bag with relief valve or "dump valve") /100lb bag
Using an appropriate object, a metal safe for example, attach and partially fill the lift bag. Use your Alternate Air Source to put some air into the bag. Fill the bag until neutrally buoyant. Try to "hover" the bag and object. Make a controlled ascent with the object. Remember to dump some air since air expands as you ascend. **DO NOT ASCEND** more than 60 feet per minute!
3. **Two bag skill** (bags of different sizes)
Using an open-end 50lb bag, open-end 100lb bag, necessary lines, straps, and hardware, make a controlled descent with the equipment. Attach the bags to TWO concrete 5 gal buckets. Fill the bags with your Alternate Air Source until the apparatus is neutrally buoyant. Swim with the objects. Make a controlled ascent. Remember to dump air from one of the bags as you ascend. **DO NOT ASCEND** more than 60 feet per minute!
4. **Heavy bag skills** (vehicle)
Rig a heavy object for lifting. Proper technique depends on the object. Make a controlled descent with a large pillow lift bag (or two) and surface-supplied air hose. Attach the lift bag and make a controlled ascent. Instruct your surface support personnel to "VERY SLOWLY" let air into the bag. Be sure you are on the upwind side of any object that may contain gas or oil. Swim the object on the surface to a new location and let the air out of the bag **CAREFULLY** watching that the descent rate is not too fast. Descend on the object as you add some air back into the bag so the object does **NOT CRASH** into the bottom. De-rig the object and make a controlled ascent with the lines and hardware used in rigging.
5. **Rigging detail knowledge/demonstration**
 - ▲ Demonstrate your knowledge of the following topics to your evaluator:
 - ▲ Bowline knot (with half hitch)
 - ▲ Carabiner usage (Locking and non-locking)
 - ▲ Tow straps
 - ▲ Discuss tow truck tow cables (their texture, how to handle, safety concerns)
 - ▲ Discuss points of attachments for cars and boats and general guidelines for points of attachment for other objects.
6. **Safety detail knowledge**
Demonstrate your knowledge of the following topics to your evaluator:
 - ▲ Dangers and precautions associated with entanglement
 - ▲ Dangers and precautions associated with too rapid ascent
 - ▲ Dangers and precautions associated with too rapid descent
 - ▲ Safety concerns associated with the loss of visibility while working
 - ▲ Working with a buddy
 - ▲ Rules for logging working dives