

OPERATIONS MANUAL

SLICKSEAL SHORELINE BEACH BOOM

by

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SLICKSEAL BEACH BOOM

GENERAL DESCRIPTION

SLICKBAR'S beach boom is specially designed to be used as a sealing boom along shorelines and shallow water tidal zones. It differs from conventional booms in that the sealing medium is a water ballast chamber. The design allows for shore sealing to prevent the tide from carrying oil onto the beach.

The purpose of the boom's water ballast chamber is to conform to the beach. This boom can also be connected to other containment booms which may extend out into the body of water being protected. **Warning: The Beach boom must never be moved after the water chambers have been filled.** The boom's upper chamber is filled with air. This air chamber acts to prevent splash over during wave action.

DETAILS OF THE MAJOR COMPONENTS OF BOOM

Air Chamber

The upper 'air chamber' portion of the boom is constructed of coated fabric material. The chamber is filled using a hand held air blower provided by Slickbar. It should be inflated until it reaches a slightly hard tubular shape (approximately 1/2 psi). The air is introduced through a black capped munson valve. This valve is spring loaded in the closed position. In order to introduce any flow of any medium through the valve you must push in on the diaphragm. This acts against and overcomes the spring tension behind the diaphragm causing the valve to unseat and allow flow through the valve. This valve can be locked in the open position simply by pushing in and turning the diaphragm slightly clockwise. Reversing this procedure allows the valve to reseat itself. The munson valve receives a fitting located on the inflation hose.

Ballast/Skirt

The ballast is made up of two water chambers. The water fill valves are munson valves with black caps. These valves work on the same principle as the blue capped inflation valves. The nozzle from the pump is placed in the valve inlet and pushed in thus unseating the valve while the filling procedure is taking place. Removing the nozzle when the boom is full causes the valve to close. The boom is equipped with two relief valves which serve to vent out air trapped in the water chambers. When filling the water chambers, air will escape out via these relief valves. **When water begins to escape from these valves, the chambers are full. Over pressurization of these chambers, caused by leaving the pump connected to the boom for too long after it is full, could cause damage to the boom.** Note: Minor seepage of water at the top of the ballast chambers may occur during operation - this is normal due to the nature of the fabric. In no way will this adversely effect the overall performance of the boom.

OPERATING INSTRUCTIONS

Although the slickbar beach boom is made out of a durable fabric the proper use of the boom must be strictly enforced to ensure that the boom is not damaged. The chambers will not perform if damaged in any way. The personnel handling the boom must be careful around rocks, pilings, pipelines or other structures that may damage the boom.

Do not attempt to tow or move the boom when its water ballast skirt is full, the boom's weight will be over 2,250 lbs (1022Kg) per 10 meter section. Any attempt to pull the boom by its end connector when the ballast chamber is full will damage the boom.

In most cases the beach boom will be set up on or near a shoreline or in shallow marsh areas. The use of boats in deployment may be useful but may not be necessary. Each section of beach boom can be handled as a bundled section. Carrying a bundle in its bag even a short distance will require at least two people for a 10M or 15M section of boom.

TYPICAL INFLATION PROCEDURE

1. SETTING UP:

- Carry the boom to the desired position where the boom will be set up.
- Unroll the boom in the exact location of operation.
- Remove the inflation blower and water pump from your container or other means of storage.
- Check the oil and fuel reservoirs in both the hand held blower and water pump (the inflation blower takes a fuel/oil mixture).

2. INFLATING AIR CHAMBERS

- Remove one of the black caps on the inflation chamber and insert the inflation nozzle from the hand held blower. Inflate until chamber is slightly hard (Approx. 1/2 psi).
- After the first section of boom is inflated, slowly pull it into the water. Care should be taken to prevent damage to the boom as it is being dragged. Note: When you are nearing the end of the first section, hold onto the end to prepare for the connection to the next length of boom.
- Inflate the air chamber on the second boom making sure the inflation valve is closed when finished, slowly pull this section out into the water. Repeat this step for each section that you deploy.

3. ANCHORING

- After the boom is in location, anchor it by attaching to the anchor points on the connector. Be very cautious that no sharp objects are allowed to rub against the boom. The anchors should be arranged opposite to each other to hold the boom stationary.

4. FILLING THE WATER BALLAST CHAMBERS

- The pump is equipped with 25 ft (7.6 Meters) of suction hose and 25 ft (7.6 Meters) of discharge hose. Remove the blue munson valve cap and insert the water fill nozzle into the valve.
- The water ballast chamber of a 10 meter boom holds approximately 290 gallons of water, the boom should fill in less than six minutes.
- The suction line is equipped with a suction strainer. This is imperative as any sand or leaves that get into the boom will adversely affect the performance of the boom. It may be necessary to clean the strainer during the filling operation.
- If repositioning of the boom is required, it will be necessary to drain the boom and relocate it to the new position. Draining the boom must be done from the beach.
- If the boom is to be towed back to the storage site, then again the water ballast chamber must be drained. Make sure that all drain and fill valves are closed on the boom before attempting to tow the boom. The drain ports are 2 - 150mm zippers each, located on each end of the boom. These zippers are used only to drain the boom. Always open the one that is down hill so the boom will drain quickly. Once the boom is drained, the boom can now be towed to the proper storage site.

STORAGE AND CLEANING

The boom should be cleaned after use and prior to long storage. Four methods can be used.

- High pressure water cleaning
- Scrubbing with detergent
- Steam Cleaning
- Flushing with fresh water

These methods can be used singularly or in combination. In any case, the boom should be thoroughly dried prior to storage. You may use your air blower with all the valves open to dry the inside of the boom.

High pressure water cleaning is best used for removing dirt, debris, and sand from the surface of the boom. Do not exceed 1300 psi in any one spot for more than five minutes.

Scrubbing with detergent is usually required if the boom has become oiled. Using a long handle scrub brush, apply and scrub the boom with a detergent solution. When finished, rinse the boom and allow to dry thoroughly.

Steam cleaning may be used if available. The wand of the steam cleaner should be kept in constant motion so that high concentrations of steam heat will not damage the boom fabrics or seams.

Note: when utilizing any of these methods be sure all the valves are closed and that the caps are securely in place. All fittings and valves should be cleaned by hand using a damp cloth.

FABRIC TEARS

Repair # 1: Repairing a minor longitudinal cut on the outer side of the boom's fabric

Step # 1 Remove the valve that is nearest and in the same chamber of the tear. Insert a protective device, (a piece of heavy leather) through valve hole and place directly behind damaged area. Punch out a small hole 3/16" (5mm) at the beginning and the end of the cut or tear (the protective object will prevent you from further damaging the boom with the punch). This is done to stop the cut from increasing.

Step # 2 Cut a patch of fabric material from your spares kit. This patch should be a minimum of 2" (50mm). The patch should extend 3" (75mm) beyond the beginning and 3" (75mm) past the end edges of the cut. For example, the length of the patch for a 6" cut would be determined as follows: cut the patch 6" (150mm) + 3" (75mm) + 3" (75mm) or a total of 12" (300mm) long, so it can be centered over the cut, extending 3" (75mm) beyond the beginning and end edges of the cut.

Step # 3 Clean the patch and the area to be patched with MEK (methyl ethyl ketone).

Note 1: Take care not to spill MEK on the boom, but if a spill should occur, wipe it up immediately, as it will degrade the fabric if allowed to stay on the fabric.

Note 2: Follow the Materials Safety Data Sheet for proper handling of this chemical.

Step # 4 Unscrew the valve from the fabric and insert a piece of insulator by working it through the valve opening. This insulator is to prevent the HH66 adhesive from leaching into the outer skin of the inner chamber.

Step # 5 Using the brush provided in your spares kit, apply a coat of HH66 adhesive to both the patch and the area to be repaired. Let the HH66 dry to an opaque haze, then place the patch over the area to be repaired, taking care to avoid trapping air pockets. Using the roller supplied in the kit, carefully roll on the patch. After the patch has been properly rolled, place a smooth metal object over the patch. This metal object must be larger than the patch. Then place a weight, approximately 5 lbs/sq inch (.35 Kg/CM²) over the metal object. Leave this weight in place for 12 to 24 hours.

Repair # 2: Repair of a longitudinal cut that has occurred in the air chamber

Step # 1 Insert a protective device (a piece of heavy leather) between the cut area and the inner air chamber to prevent accidental puncturing of the inner chamber. Repeat steps # 1 and # 2 of repair # 1.

Step # 2 Insert a piece of insulator (polyethylene sheeting or a piece of the insulator light brown fabric supplied in your repair kit). This piece is to be cut larger than the size of the actual cut. This insulator piece is used to prevent the MEK and HH66 from leaching into the outer skin of the inner air chamber.

Step # 3 Same as Repair #1, Step # 3

Step # 4 Same as Repair # 1, Step # 4

Step # 5 Same as Repair # 1, Step #5

Repair # 3 Repairing exterior scuffs

Step # 1 Cut a piece of boom fabric larger than the area to be repaired.

Step # 2 Same as Repair # 1 Step # 2

Step # 3 Same as Repair # 1 Step # 3

Step # 4 Same as Repair # 1, Step #4

Repair # 4 Repairing a scuff that has gone completely through the fabric

Step # 1 Apply a second patch on the back side of the fabric and follow instructions for repair # 3, steps # 1, 2, 3, 4

Repair # 4 Repairing a vertical cut

Note: Large vertical cuts will reduce the boom's tensile strength.

Step # 1 Cut a 12" (300mm) wide patch of boom fabric from the spares kit so that 6" (150mm) will extend on both sides of the cut.

Step # 2 If cut area is on the boom's skirt, follow repair #1, steps #3, #4 & #5. If cut area is located on the outer air or water chamber, follow Repair steps #1, #2, #3, #4 & #5.