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ABLE SAIL VICTORIA
SOCIETY

Person Lift Operation Manual

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DISCLAIMER

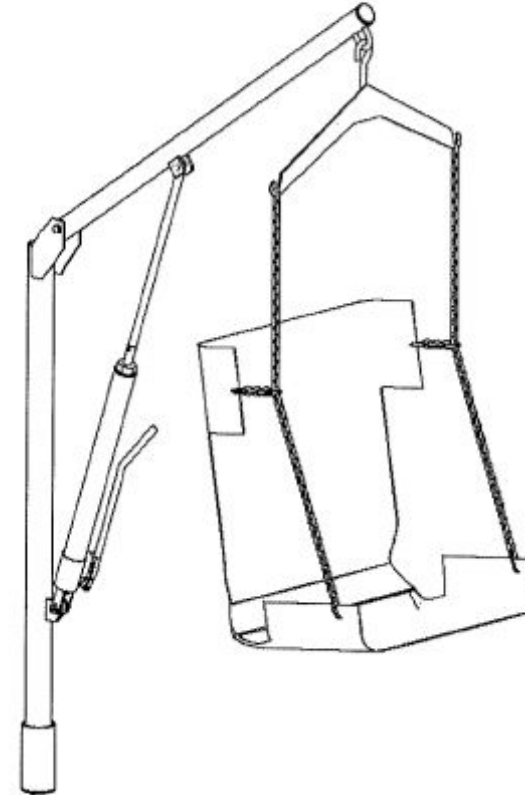
The personnel operating the lift must have formal training to work in adapted sport with participants of varying abilities. This training must include Work Safe B.C. Best Practices Guidelines and Policies for working with people of diverse abilities.

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Lift Orientation

- This lift is similar to those used for accessing pools.
- The lift inserts into a platform on the dock and has a hydraulic ram operated with a hand pump.
- There are four main safety inspection points on the lift.
- It is necessary to inspect the transfer sling attachment to the lift with each use.
- It is necessary to record the inspection findings in the Lift Maintenance Logbook.

Swim-Lift® Elkhorn MP400



Owners Manual
Assembly, Installation and Operation

SPECTRUM
Products®

7100 Spectrum Lane
Missoula, Montana
406.542.9781
Fax: 406.542.1188

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Lift Components

- Figure 2 shows the lift component break down.
- Each separate part requires daily inspection before use.
- Inspect for wear, corrosion, distortion, cracks, missing parts and anything amiss.
- Inspect for proper operation - try it out with staff at the beginning of the day, prior to participant use.

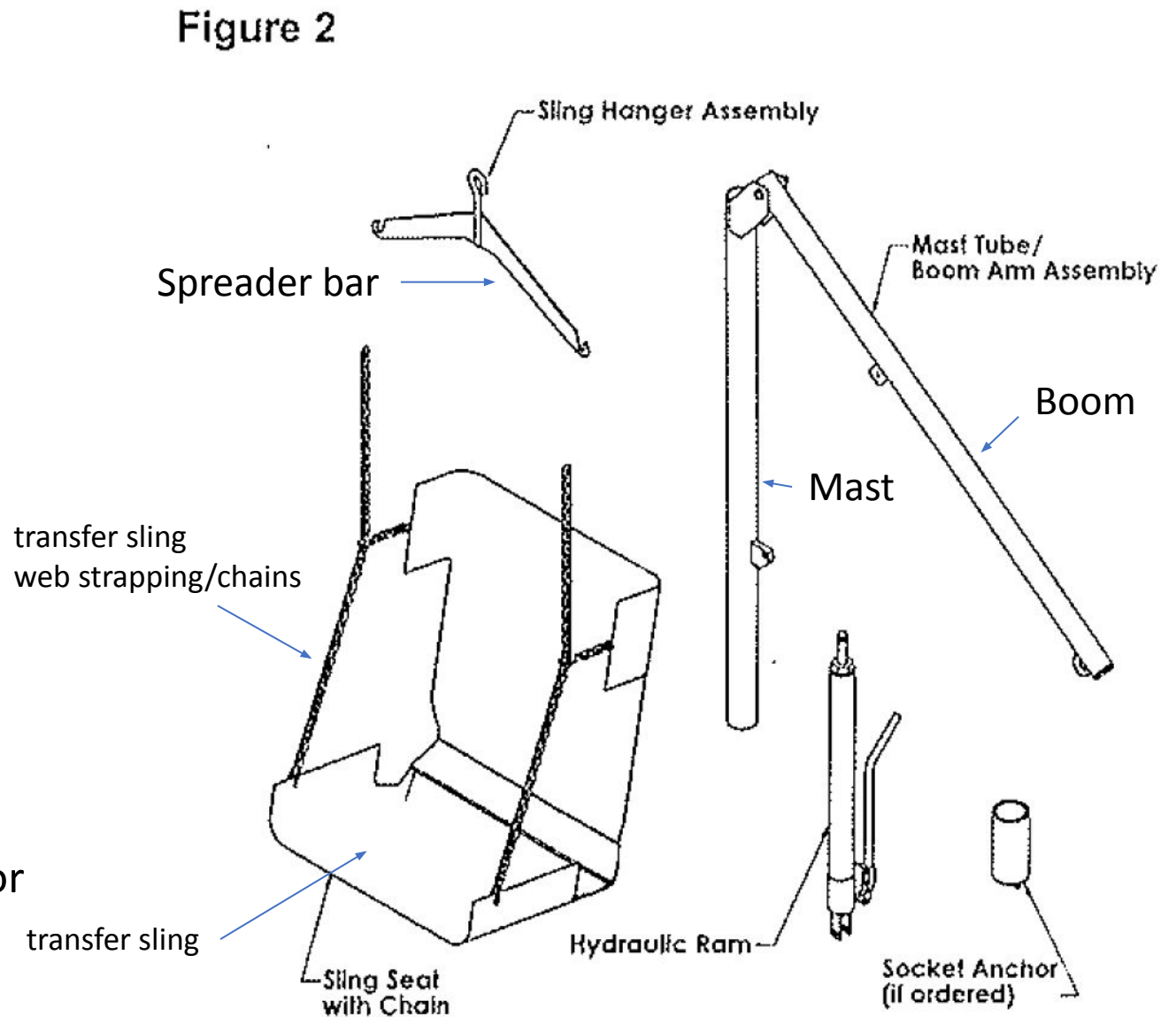
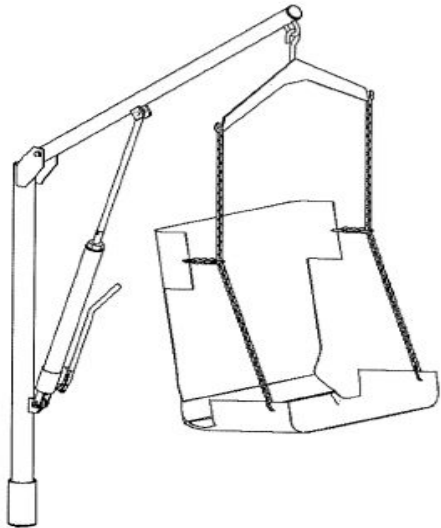


Image from : *Swim –Lift Elkhorn MP400 Owners Manual*
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Able Sail Victoria Lift

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Swim-Lift® Elkhorn MP400



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Sample of Lift Maintenance Logbook

Date	Part inspected	Findings	Action Required	Maintenance Completed	Signed
March 30, 2023	Maintenance Point 1	Secure and clean	None		
March 30, 2023	Maintenance Point 2 Lift Boom to Lift Mast attachment.	Nut and bolt assembly loose	Tighten to Maintenance specification 15 foot-pounds of torque	March 30, 2023 Torque wrench used to tighten 3/8" Hex nut and bolt to 15 foot –pounds of torque	March 30, 2023 Camilla Briggs

Safety Check List

Inspection before EACH use:

Before the participant is at the lift, inspect all maintenance points and record status in the Lift Maintenance Logbook.

- Before each use of the Elkhorn, perform a visual inspection of the lift. Look for wear or damage to any of the components of the lift. If any excessive wear or damaged is observed, do not use the lift.
- There are four structural maintenance points that must be inspected each time the lift is used. See figure 9 and refer to the inspection and maintenance details listed on pages 7-11.

As per: *Swim –Lift Elkhorn MP400 Owners Manual*, page 9.
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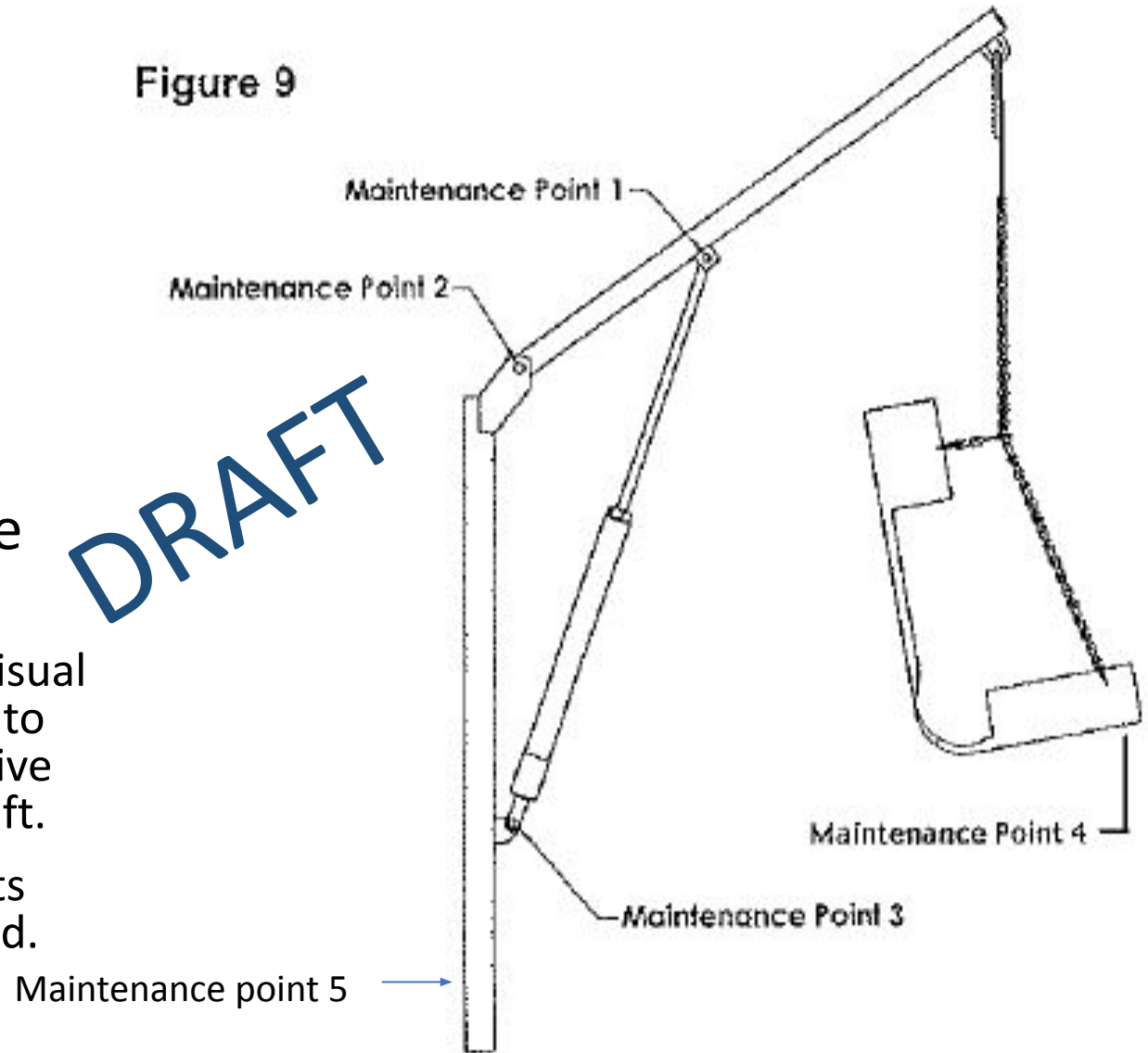


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Inspection before EACH use

- **Maintenance Point 1:** Ensure the bolt/nut assembly is securely tightened and not worn or damaged.
- **Maintenance Point 2:** Ensure the bolt/nut assembly is securely tightened and not worn or damaged.
- **Record findings in the Lift Maintenance Logbook**

As per: *Swim –Lift Elkhorn MP400 Owners Manual*, page 9.
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Figure 9

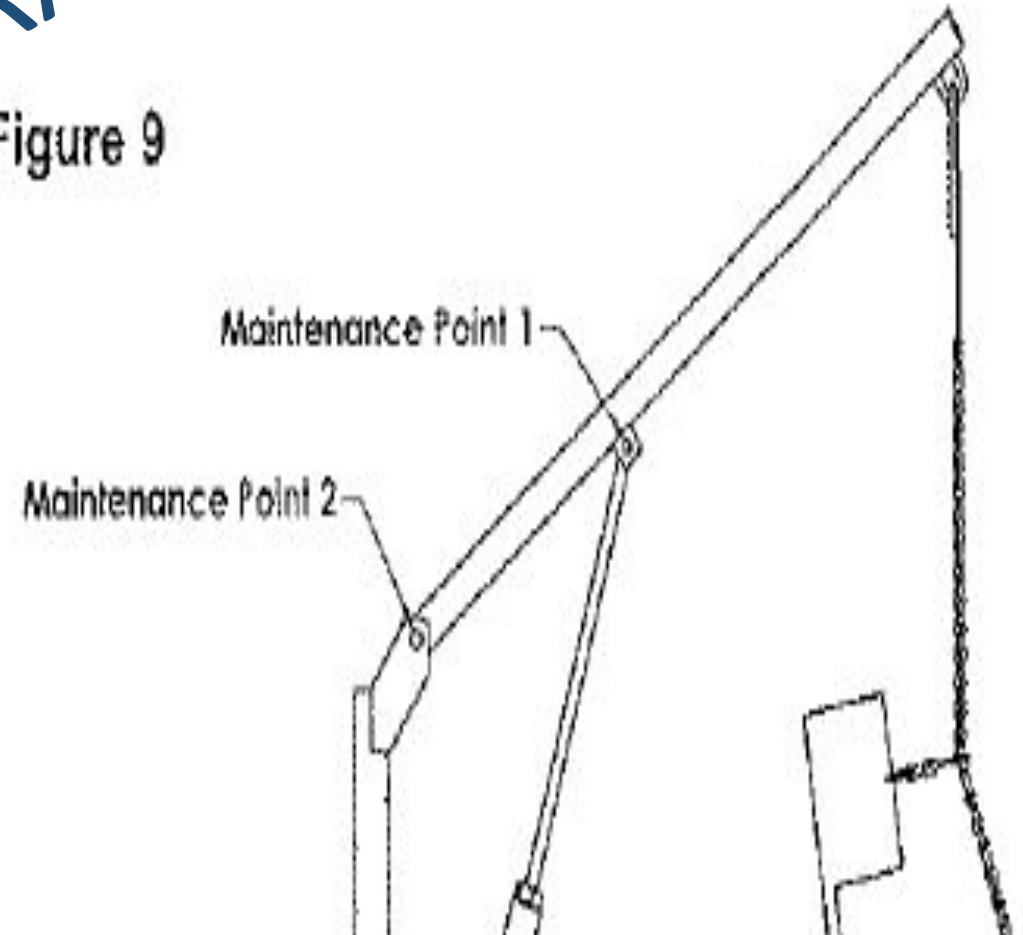


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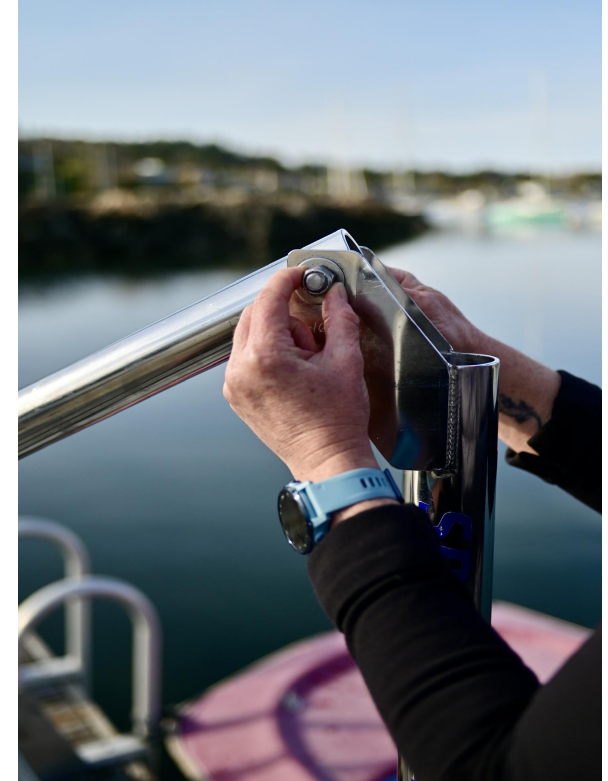
Physically check:

The tightness of bolts.

For corrosion, distortion, rust and cracks in the welds.



Maintenance Point 1:



Maintenance Point 2:

Inspection before EACH use

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- **Maintenance Point 3:** Make sure the 1/2" shoulder bolt in the end of the hydraulic ram is tightened to 25 foot-pounds of torque. Make sure the 1/2" shoulder bolt through the clevis and ram-mounting tab is tightened to 15 foot-pounds of torque.
- **Record findings in the Lift Maintenance Logbook**

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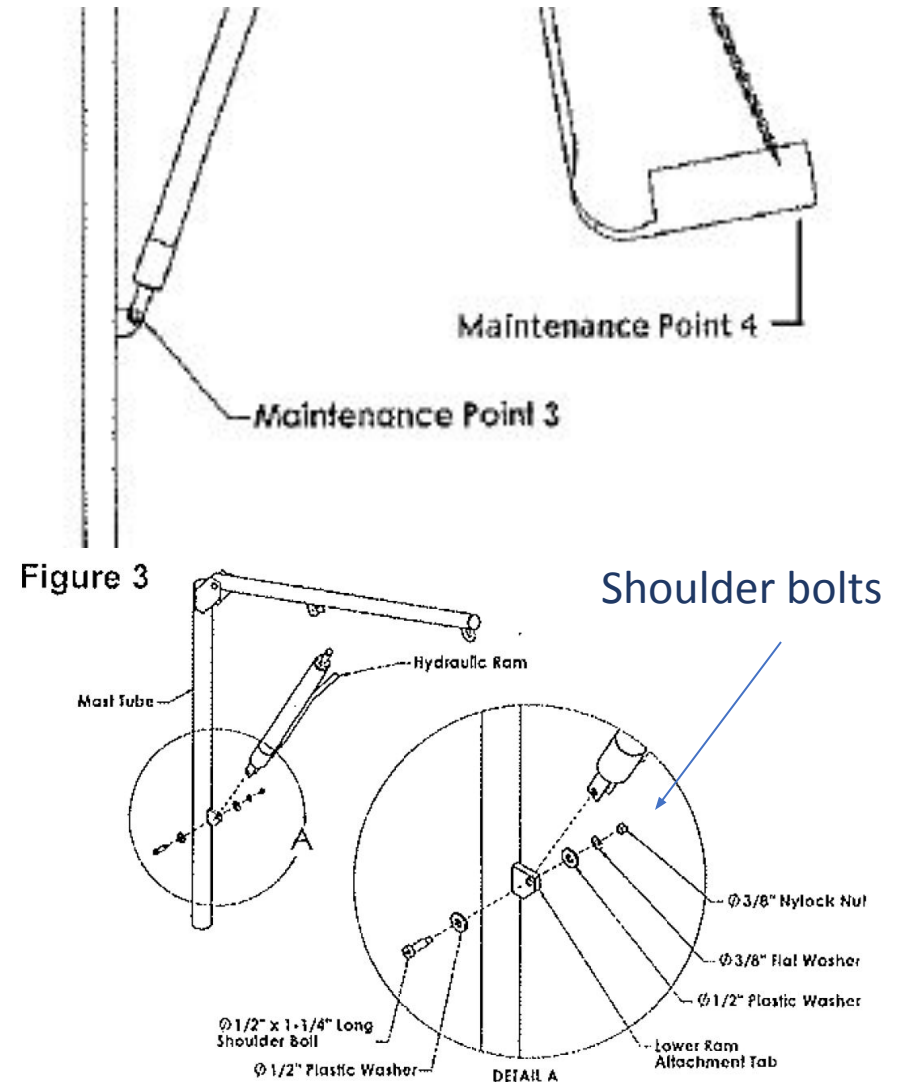


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Inspection before EACH use

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- **Maintenance Point 4:** Inspect the mesh sling for signs of wear and tear. Do not use if worn – replace. Inspect stainless steel chair for signs of wear – replace if worn.
- **Maintenance Point 4:** Inspect chain or webbing slings for damage and wear. Inspect for secure attachment to the sling, prior to operating the lift –replace if worn or damaged.
- **Record findings in the Lift Maintenance Logbook**

As per: *Swim –Lift Elkhorn MP400 Owners Manual*, page 9.
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Figure 9

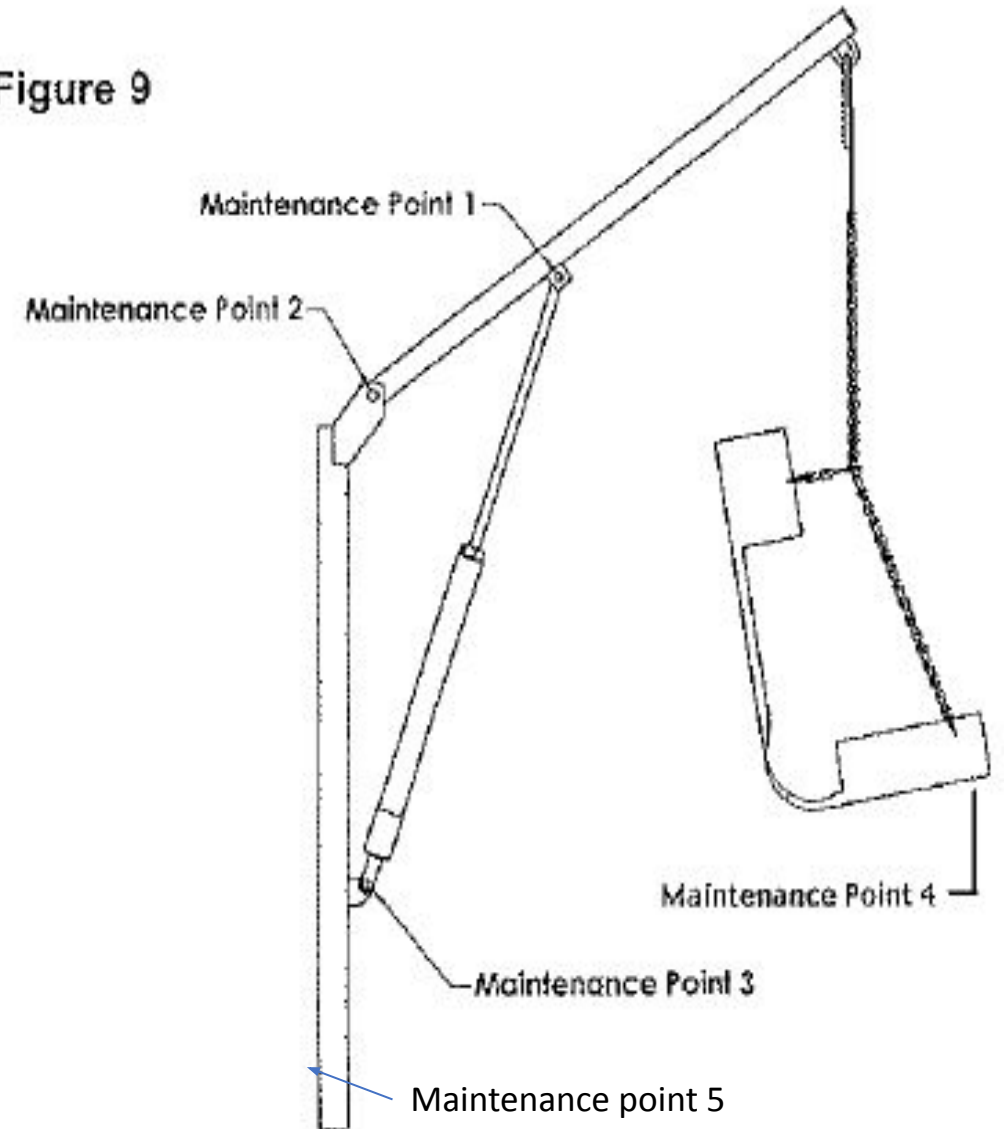


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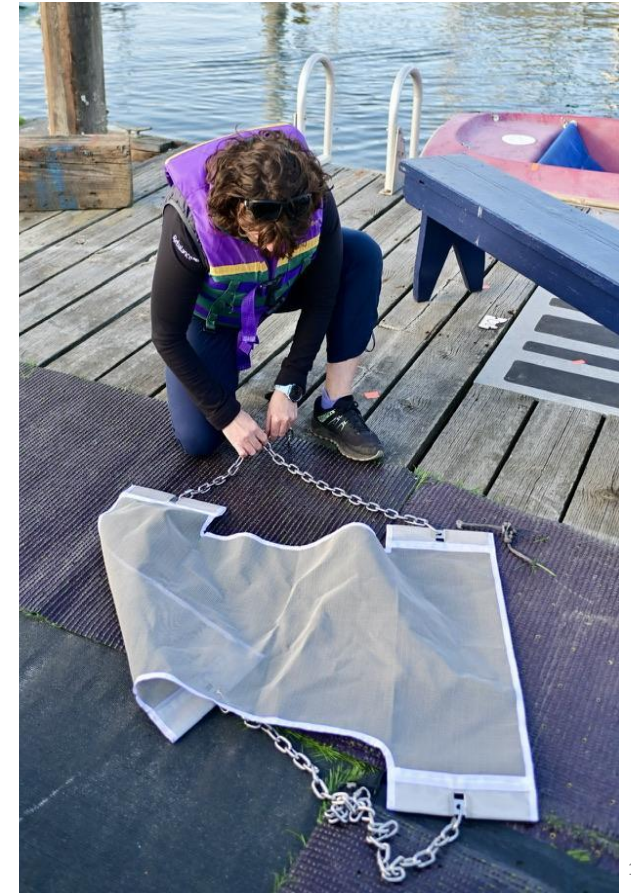
Physically check:

The tightness of bolts, corrosion, distortion, rust and cracks in the welds.

For wear and tear on the sling.



Maintenance Point 3:

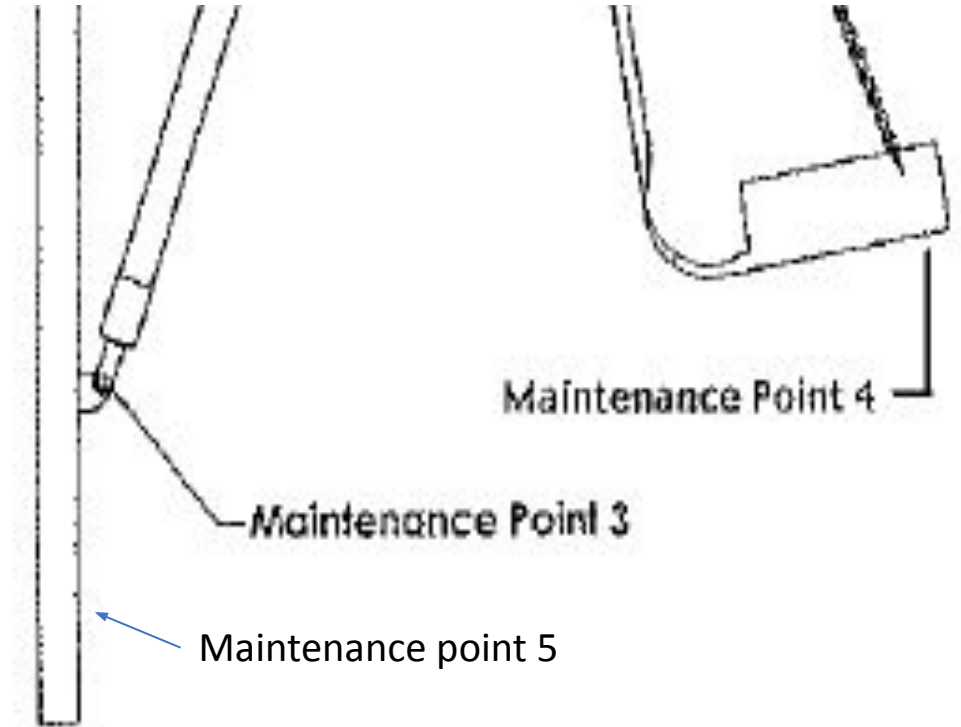


Maintenance Point 4:

Inspection before EACH use

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- **Maintenance Point 5: (Not in the owner's manual)**
Inspect the dock attachment. Ensure that the mast tube is fully inserted to the depth marking on the mast. (note that the owners manual for installation recommends 6 inches minimum into the receiver on the dock). Replace if worn.
- **Record findings in the Lift Maintenance Logbook**



Physically check:

The lift mast is fully inserted into the base.

For corrosion, distortion, rust and cracks in the welds.

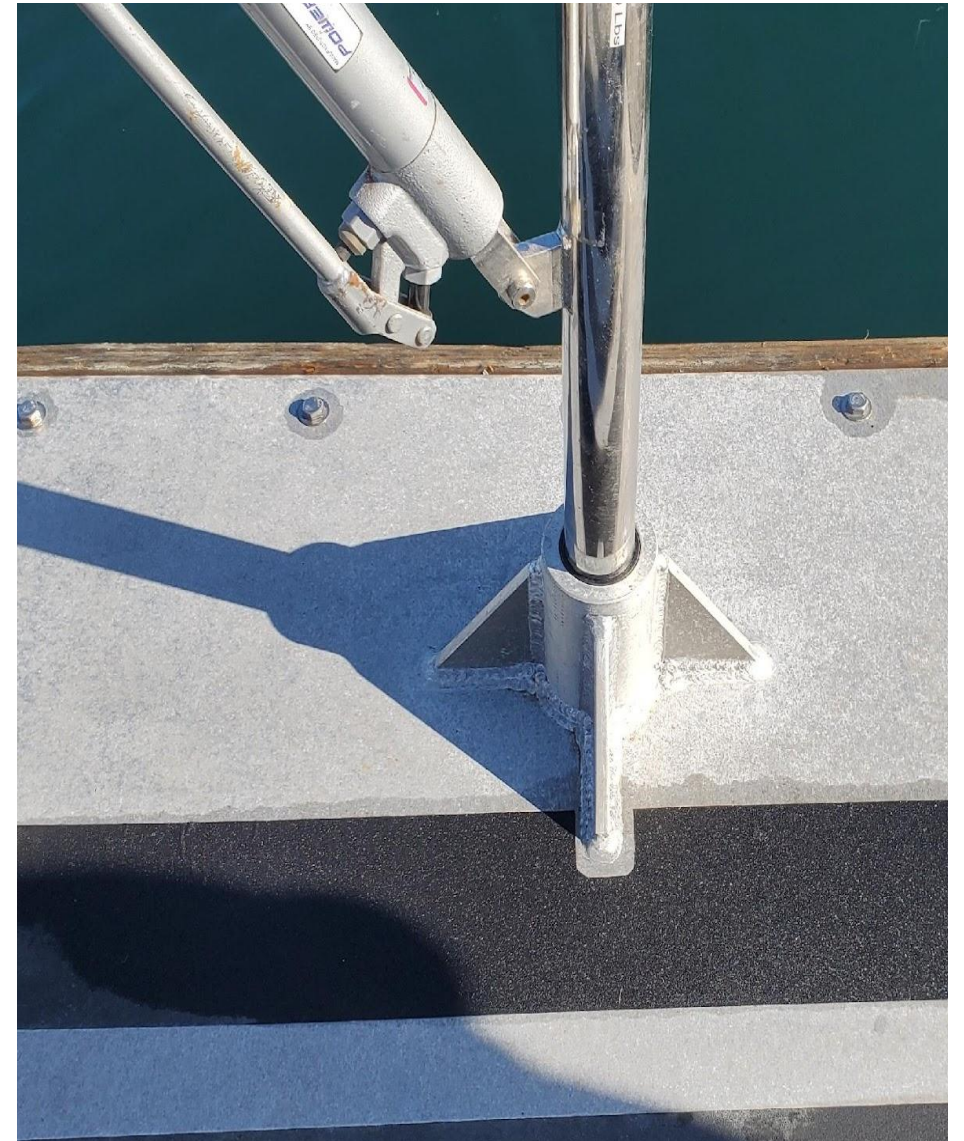


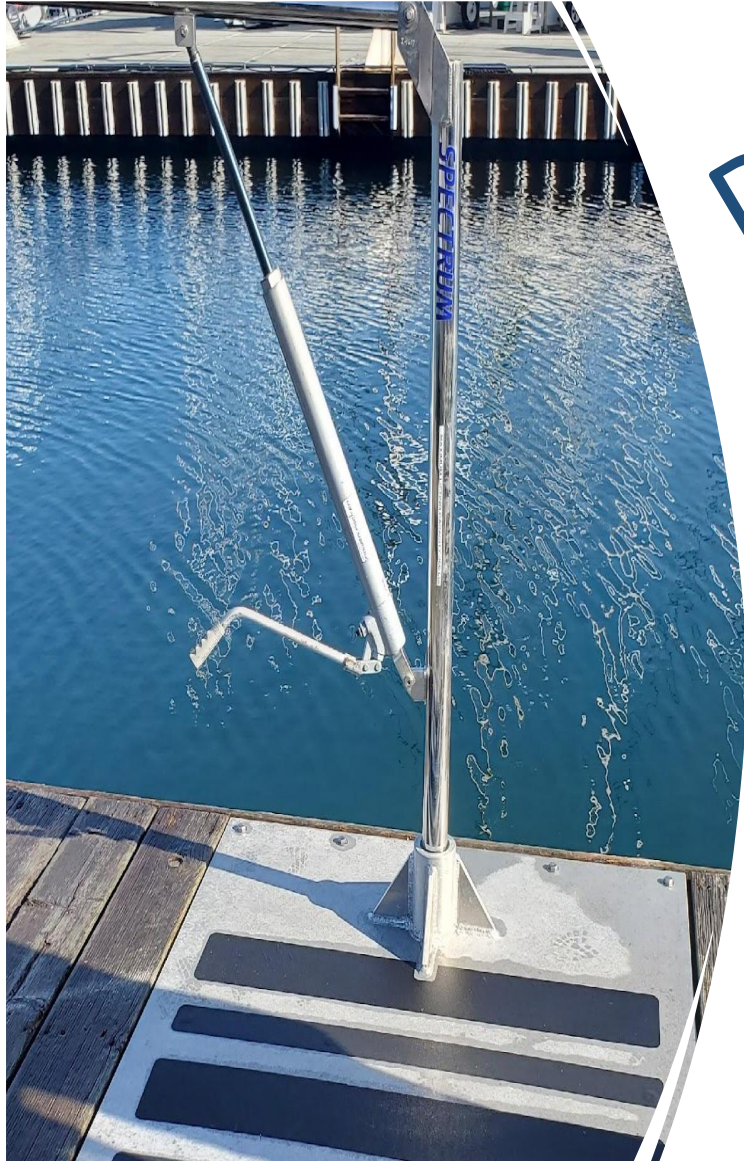
Maintenance Point 5:

Base inspection point

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- Visually inspect welds and base for distortion, cracking and corrosion.
- Visually inspect bolted attachment on the dock for corrosion or loose fasteners.
- Visually inspect base plate for distortion or cracks.
- Record findings in the Lift Maintenance Logbook**





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Daily Maintenance: Care

Clean the lift at the end of each day:

- a) Wash the equipment frequently with fresh water (not pool water or salt water) and wipe clean with a dry cloth.
- b) Inspect the equipment for any discoloration or water stains on the stainless-steel surface. If this condition exists, clean the affected area with a 3M scratch pad and non-chlorinated stainless-steel cleaner (Spectrum Cleaning Kit No. 202050-00). Rinse off the affected area with clean water and dry with a clean cloth.

WARNING: DO NOT USE CHLORINATED CLEANERS, STEEL WOOL, OR HARSH ABRASIVE CLEANERS TO CLEAN THE ELKHORN.

Once the lift is clean remove the lift from dock and store securely, indoors away from UV and weather. Record findings in the Lift Maintenance Logbook

Monthly Inspection: Check torque of the lift assembly

- **Figure 3:** Inspect hydraulic ram to the lift mast tube on the lower ram attachment: Tighten the 3/8"-16 Nylock nut on the shoulder bolt to 15 foot-pounds of torque. Check for corrosion and wear.
- **Figure 4:** Inspect hydraulic ram to the lift boom arm between the upper ram attachment: Tighten the 3/8"-16 hex nut on the 3/8"-16 x 1-3/4" hex head bolt to 15 foot-pounds of torque. Check for corrosion and wear.
- **Record findings in the Lift Maintenance Logbook**

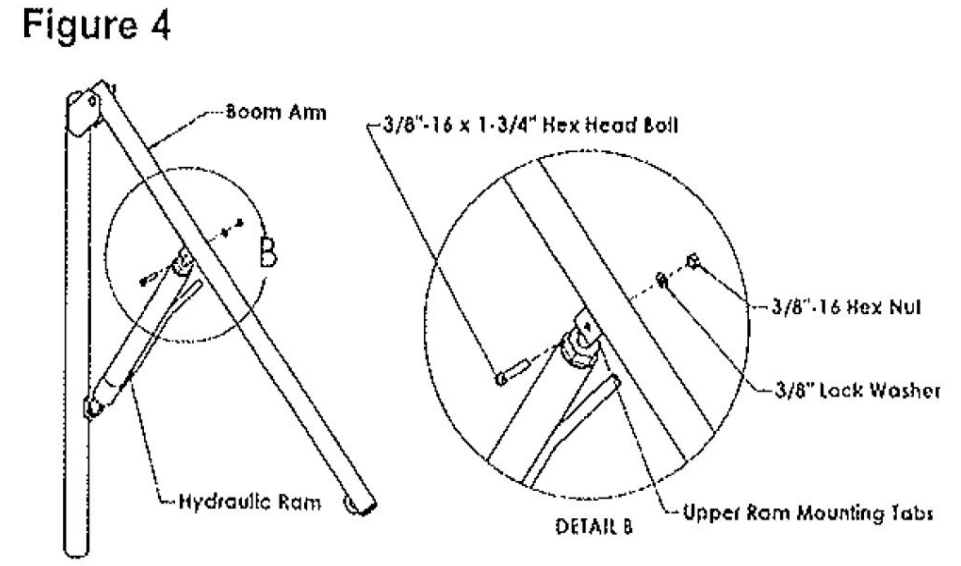
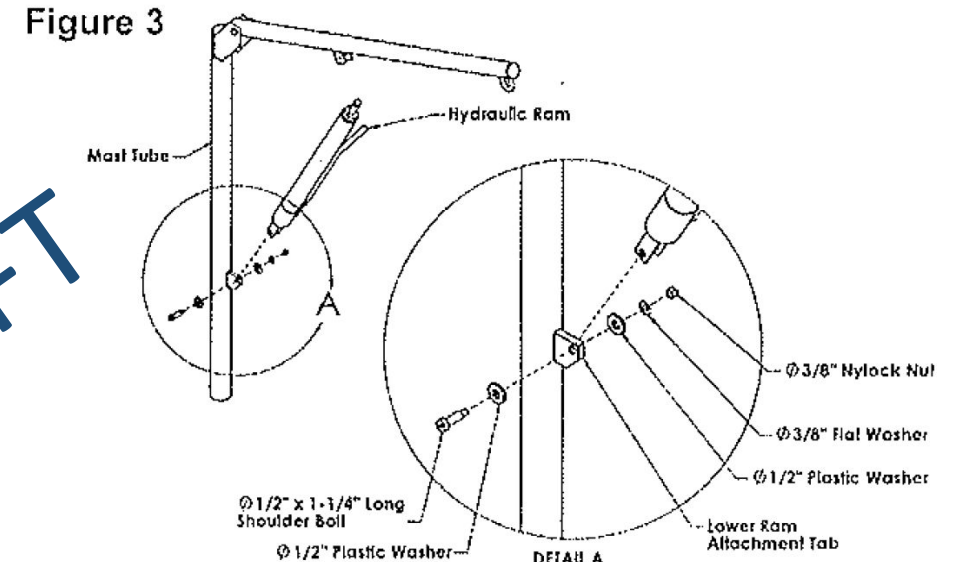


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Monthly Inspection: DRAFT

- Inspect mast joint (maintenance point 2) for distortion, corrosion and wear.
- Inspect all attachment points including welds on the dock receiver for corrosion, cracks and wear.
- Inspect the hanger eye on the end of the boom (where the spreader bar hook attaches) for cracks, corrosion and wear.
- Inspect the load rated swivel and locking carabiner for wear, corrosion and function.
- **Record findings in the Lift Maintenance Logbook**

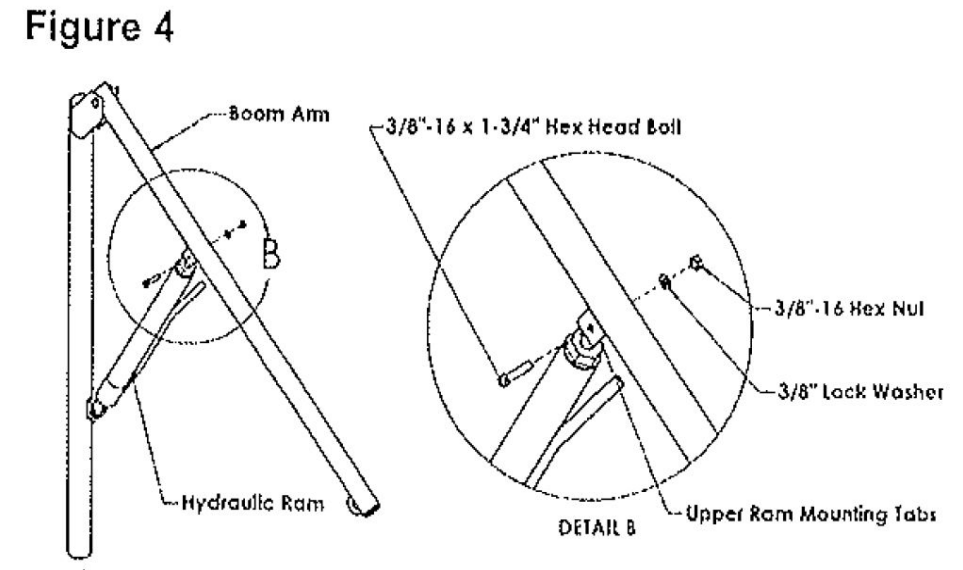
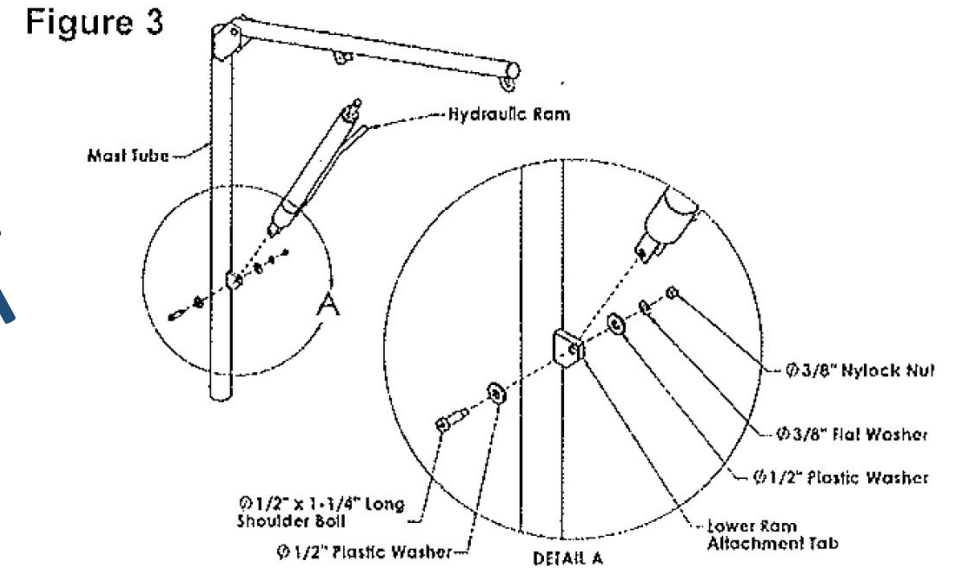


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Yearly Maintenance

Have the lift and mounting platform inspected at the start of each season by an engineering firm (possibly the one who did the original inspection):

- X-ray welds inspecting for cracks not visible with the eye.
- Detect distortion, wear and corrosion in articulating points of boom to mast connection, mast to dock connection and hydraulic ram connection to mast and boom sections.
- Test and recharge hydraulic ram to avoid “slip” or “skip” pumps during use.
- Inspect and replace any transfer slings or web straps/chain that have wear and tear present. Consider load testing transfer slings due to UV degradation of materials.
- **Record findings in the Lift Maintenance Logbook**

Participant Preparation:

Questions to ask participant prior to arrival at the dock

Over the phone or by email:

- Have they used a similar lift for the pool or another activity?
- Will they be arriving with their own transfer sling to be attached to the ASV lift or will they use one of the ASV transfer slings?
- Would they prefer to have the transfer sling under themselves in their chair or utilize a transfer bench on the dock to get into the transfer sling?
- (Awkward) The lift has a load rating of 300lbs, are they comfortable using this lift?



Transfer bench or chair position

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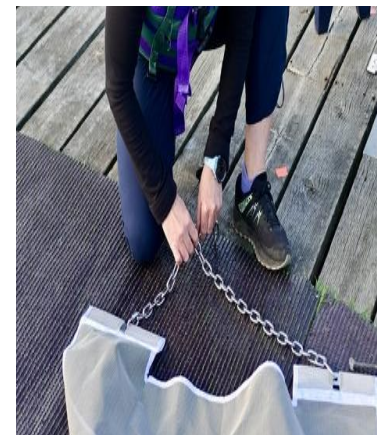
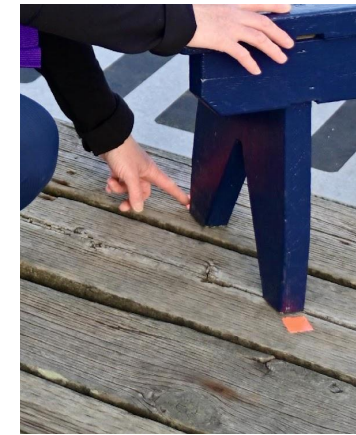
- It is critical that the chair / bench position under the lift be correct. See the marks on the dock for position before attaching the transfer sling to the lift spreader bar on the lift boom.



Correct orientation of bench or chair

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- Ensure the transfer bench or chair is positioned in line with lift orientation. Utilize markings on the dock to position it correctly.
- Check all the attachment points on the transfer sling, before attaching the transfer sling web strapping/chains to the lift spreader bar.



Lift Operation: Preparation

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Once the transfer sling is in place, under the participant in their chair or on a transfer bench, and it has been confirmed that the sling will safely work with the lift:

1. Ensure the sling is properly oriented under participant. Utilize marks on the transfer sling and chair / bench to position the transfer sling. Ensure that when the participant is lifted their legs and back are appropriately supported and they are centered on the sling.



Lift Operation: Preparation

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2. Attach the transfer sling web strapping/chains to the lift spreader bar on the lift boom. Ensure connections are properly seated, fully closed and locked.
3. Talk through the process before starting to lift. This may be familiar to some participants, but it is always good to have clear communication.
4. Ask if the participant has any questions before starting to lift.



Lift Operation: Using the Hydraulic Pump

The hydraulic ram on the Elkhorn is operated by pulling the handle away from the cylinder to lift the boom arm, see figure 8.

DOWN: To lower the lift boom, press the handle toward the hydraulic cylinder, engaging the release button. Lower gently and carefully, maintain a controlled descent of the boom and transfer sling.

STOP: Letting go of the lever and leaving it in the neutral position, aligned with the cylinder, holds the hydraulic ram in position.

UP: Pulling the handle away from the cylinder gently until the end of the travel and then returning to the neutral or stop position is one pump. It will take several repetitions of the pump actions to sufficiently lift the participant to safely rotate from transfer bench to above the boat.

Hydraulic Ram moves out of cylinder with each pump

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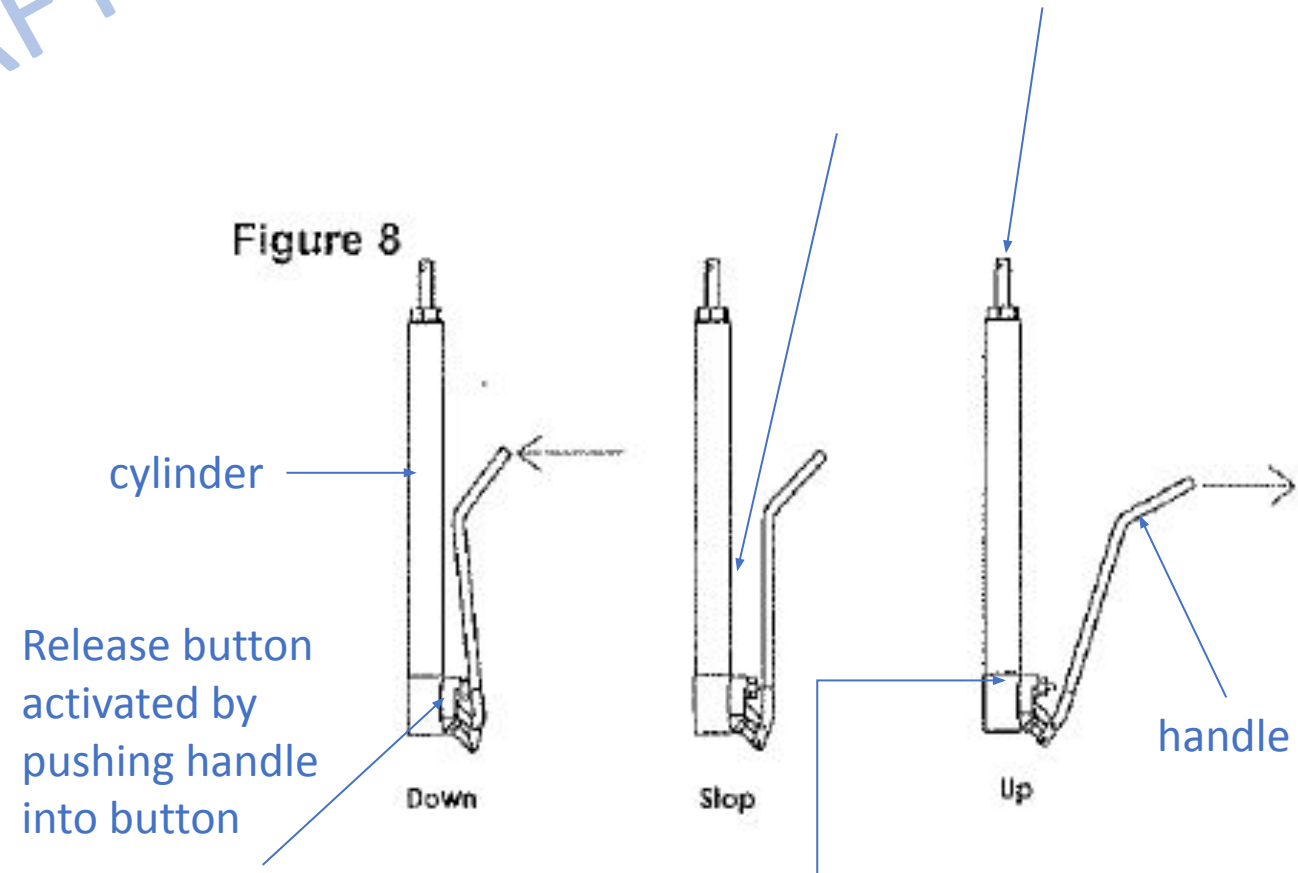


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Lift Operation: Lifting

Communicate with the participant that lift is about to begin and make sure participant is ready for lift.

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- Once suspended above transfer bench check to make sure the participant is securely positioned in the transfer sling before continuing lift.
- If the participant is not comfortable or secure, lower them back to the transfer bench and adjust.
- Ensure the height of the seat is adequate to clear any obstacles before rotating the lift over the boat. Announce “rotating over the boat” to the participant.
- Ensure the participant is prepared for being lowered into the boat. Announce “lowering into boat” to the participant.



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Seat positioning on the participant



Not enough back support, seat bunched at legs. Sling bunched under legs.



Position too laid back, uncomfortable for many.



Good sling position, secure with good back support and not bunched under knees.

- Web strapping/chains equal length makes the position laid back and uncomfortable.
- Seat to be orientated with longer web strapping/chains on seat and shorter end on back rest for more upright position.
- Lower the seat back to the bench or chair and adjust for participant comfort.

Lifting the participant into boat: **Boat position**

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- Ensure the boat is positioned so that participant is lowered directly into the boat seat and there is no need to push them forward or backward during lowering.
- Utilize markings on the dock / lift to line up with landmarks on the boat (e.g. back rest of participants boat seat aligned with marked spot on the dock).



Lowering the participant into the boat: Instructor guiding the participant

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- Communicate with participant: “Lower is about to begin are you ready? Do you have any questions?”
- Lower slowly and with control.
- Watch boat, participant, instructor and lift during lowering to avoid obstacles and errors.



Lowering participant into boat: **Watch for obstacles!**

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The lift operator needs to:

- Communicate with the instructor and the participant about lowering and object avoidance, i.e., tiller / rudder control.
- Communicate with the participant to ensure they are comfortable and ask if they notice any obstacles or issues.



Before leaving the dock: **Make sure participant is comfortable!**

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- Remove the transfer sling web strapping/chains from the lift spreader bar.
- Explain that upon their return to the dock the web strapping/chains will be reattached to the lift for exiting the boat.
- Communicate with the participant to ensure they are comfortable. Encourage them to speak up if they notice any obstacles or issues.



Returning to the Dock



Lift operation: Attaching transfer sling to Lift Boom

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- Position the boat next to the lift so that the web strapping/chains on the transfer sling can be attached to the lift spreader bar on the boom.
- Ensure all attachments to the transfer sling and the lift are secure and fully closed.
- Communicate with the participant that lifting out of the boat is about to begin. Would they prefer to lower directly into their chair or onto the transfer bench?
- Position the chair or bench in the correct spot marked on the dock before beginning lift.



Lift Operation: Lifting out of the boat

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- Ask the participant if they are ready to be lifted out of the boat.
- Ask if they have any questions.
- Operate the lift handle to extend the hydraulic arm by pumping the handle away from the cylinder and back to the neutral position several times until the participant is sufficiently suspended above the boat.
- Carefully and slowly rotate over the dock and above their chair or transfer bench.



Lift operation: Lowering onto chair or transfer bench

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- Ensure the transfer bench or chair is in the correct position so the participant is lowered directly onto a secure surface.
- Announce to the participant “lowering onto chair”.
- Ask if the participant has any questions.
- When the participant is ready, begin to lower slowly and with control by gently pushing handle into release button at base of hydraulic cylinder.



Once the Participant is securely on chair: **DRAFT** Extracting transfer sling

- Ask if they would like to transfer off the transfer sling and into their wheelchair before leaving the dock or if they would prefer to do this in their vehicle (sling may be wet).
- If participant would like to get out of the transfer sling ASAP, ask if they would like to lower to the transfer bench and then transfer off the sling and into their chair.



Other uses for the lift: Ambulatory Participants

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- For participants who are not able get into the boat from the dock.
- Have them sit on a stable chair or the transfer bench with the transfer sling positioned under them.
- The lift process is the same, communicate and use caution throughout the lift and lowering process.



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Summary Of Safe Lift Operation Practices

- Inspect lift condition Daily, Monthly and Yearly for signs of wear. Record these findings in the Lift Maintenance Logbook
- Visually inspect lift components before each use.
- **Check and Double Check** that lift sling is secure, and the participant is comfortable before continuing with lift and rotation over the boat.
- Communicate your actions and encourage the participants to ask questions during the transfer, lift, rotate and lower process.

