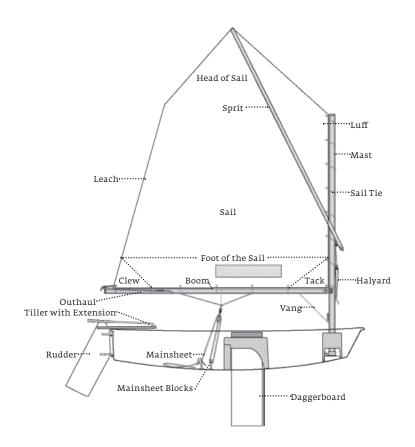
#### **OPTIMIST**

# Rigging Manual

- 1. Nautical Terminology
- 2. Contents of Packaging
- **3**. Attaching the Mainsheet Blocks
- 4. Attaching the Sail
- **5**. Rigging the Outhaul
- **6**. Stepping the Mast
- 7. Mast Tie-in
- 8. Boom Retainer
- **9**. Assembling the Vang
- **10**. Attaching the Painter
- 11. Rigging the Sprit Halyard
- **12**. Attaching the Sprit
- 13. Rigging the Mainsheet Bridle
- 14. Rigging the Mainsheet Bridle Safety
- **15**. Rigging the Mainsheet
- **16**. Rigging the Rudder
- **17**. Rigging the Daggerboard Retainers
- 18. Attaching the Hiking Strap Lifter
- 19. De-rigging
- 20. Sail Care

Congratulations on the purchase of your new LaserPerformance Optimist! We suggest that you read through this guide to better familiarize yourself with the parts and rigging of your new boat. If you have any questions please contact your dealer or call LaserPerformance's customer service department, contact information can be found on the back cover of this guide.

# Optimist Rigging Instructions



#### 1. Glossary

Aft: Back of the boat

**Backstay:** Support at the back of the boat to the top of the mast used to control the mast bend, and support the mast.

Bow: Front of the boat

Burgee: Wind indicator, usually a flag

Batten; A thin stiffening strip in the sail to support the leach

Boom: A spar at the foot of the sail

Cleat: A fitting used for holding/securing ropes

Clew: Back lower corner of a sail

Cunningham: An eye in the sail above the tack of the sail

Foot: Bottom of the sail

Forestay: The wire supporting the mast at the bow of the boat Gennaker: Isometric sail hoisted when sailing downwind

Gennaker Pole: The pole that extends from the bow to fly the gennaker

sail

Gunwale: The outermost edge of the boat

Gudgeon: Fitting on the transom and rudder used to hang rudder

Head: Top of sail

Halyard: A rope or wire used to lower or hoist sails

Iib: Front sail

Jib Sheet: Control rope for the jib Leech: Trailing edge of the sail

Luff: The front edge of the sail
Mast Heel: The fitting at the base of the mast

**Mast step:** The fitting on the boat where the mast heel is located **Spreaders:** Metal struts placed in pairs to support the mast

sideways and control the bend in the mast.

Stern: Back of the boat

Stem fitting: Stainless fitting at the bow to which the forestay

attaches.

Tack: Forward lower corner of the sail

**Traveller:** The track that runs side to side that controls the mainsail

sideways in the boat. Used in conjunction with the mainsheet,

Vang: Otherwise known as the kicking strap.

#### 1. Nautical Terminology

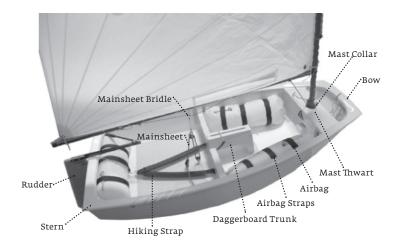
Port: Left side of the boat when looking forward

Starboard: Right side of the boat when looking forward

Gunwale: Upper edge of a boat's side

Leeward: Direction away from the wind

Windward: Direction from which the wind is coming



Here is a list of tools needed to assemble your new Optimist:















FIGURE 8 OR STOPPER KNOT



SQUARE KNOT



CLEAT



BOWLINE



CLOVE HITCH

#### 2. Contents of Packaging

Your new LaserPerformance Optimist will come with three boxes. One box for the spar set, one for the blades and one for the delivery kit containing the sail, block and lines. Use caution while opening the boxes to avoid damaging the contents. Be sure not to cut into the packaging inside of the box.





figure 2

figure 4

figure 1

-	1	,,	
	2.		
	3	 	
		1	

figure 3

#### 3. Attaching the Mainsheet Blocks:

- 1. Locate the bag from the delivery kit containing the mainsheet blocks. Remove the mainsheet ratchet blocks, compression spring, 1 carbo block and the shackle, pin and ring (figure 5).
- 2. There are two eyestraps located on the cockpit floor, aft of the daggerboard thwart (figure 6). With the shackle pin and ring, attach the carbo block to the forward most eyestrap (figure 7).
- 3. Remove the shackle pin and ring from the mainsheet ratchet block. Loop the shackle beneath the aft eyestrap and place the compression spring over it (figure 8).
- 4. While compressing the spring, place the mainsheet ratchet block at the top of the spring and align the hole in the bottom of the block with the holes in the shackle. Secure the ratchet block to the shackle with the pin and ring (figure 9).

Locate the box labeled delivery kit (figure 1). Inside you will find:

- 1. Line bag
- 2. Country sail letters/numbers
- 3. Hardware
- 4. Sail with sail bag and digital 8 sail numbers

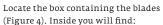
Contents of bag # 3 (figure 2)

- 1. Micro bullet block
- 2. Carbo block with becket (2)
- 3. Shackle, pin and ring
- 4. Compression spring
- 5. Mainsheet ratchet block
- 6. Mainsheet snap shackle with strap and ring
- 7. Daggerboard retainer strap

Locate the box containing the spars. Inside you will find (figure 3)

- 1. Mast
- 2. Sprit
- 3. Boom

Be sure to remove all of the packaging (plastic, bubble wrap, zip ties) before continuing to rig your Optimist. Use caution when removing the zip ties so you do not to scratch the spars.



- 1. Tiller with extension
- 2. Rudder
- 3. Daggerboard





figure 7

figure 5





figure 6





figure 9

#### 4. Attaching the Sail:

- 1. Retrieve the mast, boom, sail, corner ties and sail ties.
- 2. Attach the boom jaw to the mast right above the sprit halyard cleat (figure 10). When laying the mast and boom down, be sure that the area is free of sharp objects that could damage the sail.
- 3. Unwrap the sail. Lay the sail down over the mast and boom, aligning the mast with the luff of the sail and the boom with the foot of the sail.
- 4. Locate the sail ties. Starting at the mast, loop the ties around the mast and through the grommet in the sail. Secure with a square knot (figure 11). Tie the sail ties tight enough that you can slip one finger between the sail and the mast (figure 12).
- 5. Locate the corner ties. Starting at the top of the mast, lead one of the corner ties through the top eyestrap then through the top grommet in the sail. Wrap the corner tie around twice before securing with a square knot (figure 13). Repeat for lower eyestrap.
- 6. Using two more corner ties, secure the tack of the sail to the boom and the mast (figure 14).
- 7. Be sure to adjust the corner ties in order to get the red mark on the luff of the sail to fit between the two blue stripes on the mast (figure 15).
- 8. Continue tying the sail ties onto the boom. Tie the sail ties tight enough that you can place two fingers between the boom and the sail (figure 16).
- 9. Tie off the last corner tie to the clew of the sail.

#### 5. Rigging the Outhaul:

- 1. Locate the outhaul line. Tie a stopper knot in one end. Lead the free end of the line through the port hole in the boom end cap (figure 17).
- 2. Continue the line through the clew grommet and back through the open hole in the boom cap (figure 18).
- 3. Lead the line forward along the starboard side of the boom and through the v-cleat (figure 19). Cleat off and tie a stopper knot in the end of the line.









figure 12

figure 14

figure 10

figure 13





figure 16



figure 17

figure 19

#### 6. Stepping the Mast:

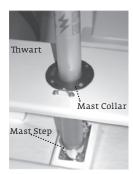
- 1. Lift the mast with sail and boom attached.
- 2. Align the mast butt over the mast collar. Gently slide the mast through the thwart and into the metal mast step (figure 20).
- 3. Make sure that the sprit halyard cleat is facing the bow while the cleat for the vang cleat is facing the stern (figure 21).

#### 7. Mast Tie-in:

- 1. Locate the mast tie-in line. The mast tie-in eyestrap is located on the thwart forward of the mast (figure 22).
- 2. Tie a luggage knot with the mast tie-in line around the eyestrap (figure 22).
- 3. Lead the ends of the line around the mast. Cross the port line over the starboard line right above the vang cleat (figure 23).
- 4. Lead the two ends back around to the front of the mast and secure with a square knot (figure 24).

#### 8. Boom Retainer:

- 1. Locate boom retaining line from the line bag. Tie a stopper knot in one end of the line. Lead the line up through the starboard hole in the boom jaw (figure 25).
- 2. Lead the free end of the line around to the port side hole in the boom jaw. Thread the line down through the hole and secure with a stopper knot (figure 26).
- 3. Located just above the boom jaw, centered on the mast is the mast retainer peg (figure 27).
- 4. Twist the boom retainer line until the line is taught when placed over the peg (figure 28).



Sprit Halyard Cleat Vang Cleat

figure 20

figure 21



figure 22



figure 23



figure 24





figure 25

figure 27





figure 28

#### 9. Assembling the Vang:

- 1. Locate the vang wire attached to the forward boom button (Figure 29).
- 2. Retrieve the vang line from the line bag. With a bowline, tie the vang line to the thimble located at the end of the vang wire (Figure 30).
- 3. Lead the vang line up through the clam cleat located on the mast just above the thwart (Figure 31).
- 4. Cleat off. Tie a stopper knot in the end of the vang line (Figure 32).





figure 30



figure 29



figure 31

figure 32

Completed Vang

#### 10. Attaching the Painter:

- 1. Locate the bow loop and painter line from the line bag. Take the bow loop line and thread both ends down through the small hole on the topside of the bow (Figure 33 & 34).
- 2. Tie off the two ends the bow loop with a square knot (Figure 35).
- 3. Pull up on the bow loop so that the square knot is snugly secured beneath the rail of the bow.
- 4. Wrap the painter line around the mast step, underneath the adjustor bolt, and secure it with a bowline (Figure 36). Lead the line up through the bow loop (Figure 37). Place the remainder of the painter in the bow of the boat.







figure 33

figure 35





figure 36

figure 37

Here are a few safety products that we suggest you have to keep you safe! Refer to the Optimist class rules as most of these items are required

for racing.



TO KEEP WATER OUT OF THE BOAT, HAVE A BAILER HANDY.



DON'T RELY ON THE BREEZE, HAVE A PADDLE.



MAKE SURE YOUR BAILER AND PADDLE ARE SECURED INTO THE BOAT AND OUT OF YOUR WAY.



ALWAYS WEAR YOUR LIFEJACKET!

#### 11. Rigging the Sprit Halyard:

- 1. Locate the upper and lower sprit halyard line from the line bag. Retrieve the micro single block from the delivery kit.
- 2. Tie a bowline in one end of the upper sprit halvard. Making sure to leave a very small loop that can then be placed onto the end of the sprit pole (figure 38).
- 3. Run the free end of the line through the micro single block that is attached to the middle of the mast (figure 39).
- 4. Tie a bowline to the micro single block with the free end of the upper sprit halyard line (figure 40).
- 5. With the lower sprit halyard line tie a bowline to the top of the halyard cleat located on the mast below the boom connection (figure 41).
- 6. Lead the line through the micro single block and then back through the cleat to secure (figure 42).

figure 42

7. Place a stopper knot in the tail of the lower halyard line.

#### 12. Attaching the Sprit:

The sprit has two differing ends. One end has a rubber sleeve covering a section of the aluminum. This end will attach to the sprit halyard as the rubber is used to reduce the chafe against the mast.

- 1. Locate the sprit loop at the head of the sail (figure 43).
- 2. Place the sprit end without the rubber sleeve into the loop in the head of the sail (figure 44).
- 3. Place the opposite end of the sprit into the small loop created by the bowline in the upper sprit halyard. Pull on the lower sprit halyard to raise the top of the sail (figure 45).

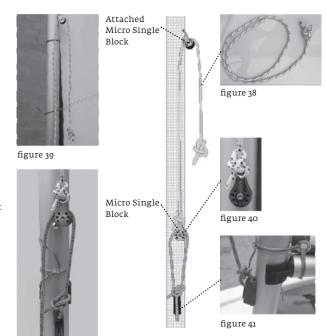




figure 43



figure 44



figure 45

#### 13. Rigging the Mainsheet Bridle:

- 1. Locate the mainsheet snap shackle with pennant from the delivery kit and the mainsheet bridle line from the line bag (figure 46).
- 2. Find the center of the mainsheet bridle line and at the midpoint tie a luggage knot onto the ring of the snap shackle pennant (figure 47).
- 3. Located on the topside of the boom, you will find two boom buttons (figure 48). Take one end of the mainsheet bridle line and lead it through one of the boom buttons, around the boom and secure with a bowline (figure 49). Repeat with the free end of the line at the other boom button (figure 50), tying the line as tight as possible. Make sure the mainsheet shackle is suspended evenly between the two boom buttons (figure 51) and that the bridle runs beneath the outhaul line.









figure 47

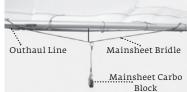


figure 51

#### 14. Rigging the Mainsheet **Bridle Safety:**

1. Locate the mainsheet bridle safety line from the line bag. The mainsheet bridle safety is used to secure the mainsheet bridle closer to the boom. Take the safety line and lead it around the boom and through the ring of the snap shackle pennant twice. Secure with a square knot (figure 52).

Safety Issue: The mainsheet bridle should not span from the boom further than 100 mm (~4"). A quick quide would be the width of three fingers (figure 53). Refer to the Optimist class rules for complete details www.usoda.org.





figure 52

figure 53

#### 15. Rigging the Mainsheet:

- 1. Locate the carbo block from the delivery kit. The hole located in the center of the block is the becket (figure 54).
- 2. Retrieve the mainsheet line from the line bag. Lead one end of the mainsheet through the becket (figure 55) and secure the end with a stopper knot (figure 56).







figure 54

figure 55 figure 56

#### 15. Rigging the Mainsheet Continued:

3. Lead the mainsheet from the becket down to the forward mainsheet block on the cockpit floor (figure 57). Lead the line back up through the carbo block (figure 58). Continue the line down through the mainsheet ratchet block (figure 59).

**Note:** Make sure while pulling the mainsheet the block makes a ratcheting noise. If the block does not make a ratchet sound, one of two things could be the problem. First try running the mainsheet through the block the opposite way. If this does not work, locate the lever on the mainsheet block and switch it to the ratchet position.

Safety: The mainsheet is connected to the bridle by a snap shackle configuration. The snap shackle is provided as a safety device that can quickly be disconnected by pulling on the shackle pin to release the shackle open (figures 60 & 61). Press the bottom of the shackle back over the pin to close.

#### 16. Rigging the Rudder:

- 1. Locate the rudder and tiller from the blade delivery box. The tiller screws and washers should already be attached to the tiller. Remove the screws. Align the two holes in the tiller with the two holes in the top of the rudder (figure 62). Make sure that the tiller extension faces upward (figure 63).
- 2. Place one washer over each hole and insert the screw (figure 64). On the opposite side place one washer over each screw. Using pliers or a crescent wrench, secure the nylon lock nuts over the screws (figure 65). The lock nuts should be tightened so that the tiller is snug. Do not over tighten!
- 3. Align the pintles on the rudder over the holes in the gudgeons on the boat (Figure 66). Press down making sure the pintles are locked in place (figure 67).
- 4. To remove the rudder, press in the retaining clip while pulling straight up on the rudder (figure 68). Once the upper pintle clears the retaining clip the rudder will be released.



figure 57



figure 58









figure 62



figure 63



figure 64



figure 65



figure 66



figure 67



Rudder

Clip

Retaining

figure 68

#### 17. Rigging the Daggerboard **Retainers:**

- 1. Locate the daggerboard strap, shockcord and plastic tubing from the line bag (figure 69). Place one end of the shockcord into the tubing and slide to the center of the shockcord (figure 70).
- 2. Locate the two holes in the mast thwart (figure 71). Take one end of the shockcord and thread it into the starboard hole (figure 72). Tie a stopper knot in the shockcord on the backside of the thwart (figure 73). Make sure that the knot is secure so that when the shockcord is extended the knot does not slip loose.
- 3. Slide the free end of the shockcord into one end of the daggerboard strap (figure 74 & 75).
- 4. Lead the daggerboard strap around the backside of the daggerboard trunk between the space created by the daggerboard trunk and cockpit floor (figure 76).
- 5. Continue the free end of the shockcord through the other side of the daggerboard strap. Lead the shockcord back up to the mast thwart and secure the free end in the port hole. Again make sure that the knot is tight so that it will not release while under load.
- 6. Retrieve the daggerboard from the delivery kit. Locate the hole in the handle of the daggerboard. This side should face towards the bow.

Note: Do not place the daggerboard into the daggerboard slot while the boat is on land. Doing such will damage the bottom of the board. Only place the daggerboard into the trunk when the boat is in the water. The daggerboard should be lowered gradually as you sail into deeper water.



figure 69



figure 71



figure 73



figure 75



figure 70



figure 72



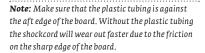
figure 74



figure 76

## 17. Rigging the Daggerboard Retainers Continued:

7. When the daggerboard is inserted into the trunk, take the shockcord with the plastic tubing and bring it to the aft edge of the board (figure 77). As the daggerboard is lifted the compression of the shockcord against the aft edge will keep the board in the desired lifted position without the board slipping back into the trunk.



**Option:** The daggerboard shockcord ends can be led to the eyestrap on the front of the daggerboard trunk instead of the holes in the mast thwart. This option it allows for the front of the cockpit to remain clear (figure 78).

- 8. Retrieve the daggerboard safety line from the line bag. Tie one end of the line to the eyestrap located on the front side of the daggerboard trunk with a bowline (figure 79).
- 9. Lead the free end of the line up to the daggerboard handle. Thread the line through the hole at the front of the daggerboard. Secure with a bowline (Figure 80).

# 18. Attaching the Hiking Strap Lifter:

- 1. Locate the hiking strap lifter shockcord from the line bag.
- 2. Take one end of the hiking strap shockcord and lead it through the hole located in the stern rail of the boat. (Figure 82)
- 3. Tie a stopper knot in the end of the shockcord that will rest beneath the rail of the boat. (figure 83)
- 4. Draw the line over the airbag and secure it to the hiking strap. It is suggested to place a wrap of electrical tape around the knot to prevent the knot from slipping. (Figure 84)







COMPLETE RETAINING

SYSTEM



figure 79



figure 78

figure 80



figure 82



figure 83



figure 84

#### 19. De-rigging

When you approach shallow water, begin to pull up the daggerboard as much as possible without obstructing the boom. After hopping out of the boat, detach the mainsheet shackle from the bridle line. Remove the daggerboard and rudder and place it in the cockpit. It is suggested to rinse your boat and sails with fresh water especially if you are sailing in salt water. It is also suggested to allow the sail to dry before rolling. After drying, pull the sail out taught and roll it up against the booms securing both the sails and booms to the deck with the mainsheet.

It is highly suggested to purchase covers for both the hull and blades in order to protect your boat from natural elements. A wide variety of accessories are available for purchase through your local LaserPerformance dealer.

#### 20. Sail Care

It is important to take proper care of your sail to ensure it will last longer and to provide the best performance. Follow these simple tips to help extend the life of your sail.

- 1. If you are sailing in salt water, be sure to rinse out your sail with fresh water after every use. Dacron sails do not absorb water or salt but the salt will dry on the sails making them stiff. The salt in humid weather can attract moisture that may lead to mildew on your sail.
- 2. NEVER machine wash your sail. Doing so will damage the material as well as remove the finish of the sail. If your sail becomes dirty, clean it with a mild dish detergent and rinse with fresh water. Do not bleach or use other harsh chemicals on the sail-they will ruin the finish, decreasing the life of the sail. It is not recommended to store your sail wet, doing so is an invitation for mildew to grow.
- 3. It is not recommended to dry your sail in the sun because other than when in use, over exposure of UV rays will slowly break down the material of the sail. Be aware of the surface that you are drying your sail on as asphalt and other parking lot surfaces are very abrasive to the sail material and may contain chemicals (i. e. oil) that can damage the sail. Avoid unnecessary flogging for it will greatly reduce the life of the sail.
- **4.** Rolling your sail is highly recommended. Crumpling a sail will crack the finish of the material which quickly reduces the life of the sail. Purchasing a Optimist sail and spar bag is highly recommended and are available through your local dealer.
- **5**. Make sure to regularly inspect your sail for loose or torn stitching or small tears in the cloth. Have any stitching or tears repaired by a local sailmaker before they become more of a problem.



SEITECH dollies are the easy-to-use, light-weight, small boat transportation solution. The Optimist dolly has been designed specifically to fit and support the shape of the hull. SEITECH dollies allow you to spend less time getting your boat to and from the water and more time on the water. www.seitech.com

LaserPerformance equips the Optimist with the highest quality parts available. We partner with key suppliers to develop top-of-the-line sailing equipment so your boat will perform at the highest level possible when sailed with the factory supplied rope, sails and hardware. Shop online at laserperformance.com or at an authorized LaserPerformance dealer to be sure you are getting genuine LaserPerformance parts and accessories. Visit www.laserperformance.com to find your local dealer.

## Care, Maintenance and Service of your LaserPerformance Product

Before rigging your Optimist, please read and familiarize yourself with the rigging manual. Failure to adhere to these guidelines could invalidate your warranty.

#### Maintenance

- Keep the equipment clean by frequently flushing with fresh water. In corrosive atmospheres, stainless parts may show discoloration/brown staining around screw holes and rivets. This is not serious and can be removed with a fine abrasive
- Excess water should be removed from the hull.
- Ropes, rigging and fittings should be checked at regular intervals for wear and tear, including winch gear.
- All moving parts should be lightly lubricated to avoid jamming, i.e., McLube, dry Teflon or a dry silicone based spray. Do not use oil.
- Inspect shackles, pins and clevis rings and tape up to stop snagging sails, ropes and clothing and to prevent them from coming undone.
- When refastening screws do not over tighten as this may strip the thread and do not reuse Nyloc nuts more than three times,
- Damaged or worn parts should be replaced.
- Sails should be thoroughly washed down with fresh water, dried and stored in a dry place.

#### Trailers and Trolleys/Dollies

- It is highly recommended that a trolley/dolly is used to launch and recover your boat. Dragging your hull up onto a beach or slip way will wear away the gel coat or polyethylene and damage the boat. Also, the hull should not be left on a pebble beach as the hull skin could be dented.
- Trailers should be rinsed with fresh water and checked at regular intervals. It is recommended that trailers be serviced annually. The trailer and road base should never be immersed in water.
- Trailers and trolleys supplied by LaserPerformance are designed to transport the hull in the best possible manner to avoid damaging the hull. For instance, LaserPerformance does not recommend support hulls on rollers except on the keel line and only where there is a reinforced keelson. We also recommend gunwale hung trolleys for our smaller products. Hulls supported by a trolley bunk or wide strap must have the ability to drain water away from the hull. Trolley bunks padded with carpet or foam can cause blistering in the gel coat and changes to the hull color. Please do not transport your LaserPerformance product on a trailer or trolley that has not been specifically designed for the product. Hulls damaged through using an incorrectly designed or wrongly set up trailer or trolley are not covered under warranty.
- When securing your boat to a trailer for transport be very careful that ratchet straps and ropes are not over tightened and that there is sufficient padding under the strap or rope to prevent the hull/deck from being damaged through abrasion or pressure.
- Top covers must not be allowed to "flap" when driving at speed. This can abrade the surface of the hull and damage it. It is recommended if you are towing and plan to use your top cover that an under cover is fitted first to prevent cover flap damage to the top sides of the hull.
- Repairs to the polyethylene or GRP hulls should be undertaken by persons with the relevant equipment and skills. Contact LaserPerformance for advice.

#### Storage

- Your boat should always be tied down securely to the ground when not in use.
- UV light will cause fading to some components and fittings. A cover is recommended to reduce the UV degradation.
- Do not leave the rig under tension when not sailing or during storage.
- Care must be taken to support the hull adequately if storing on racking or similar. Any sustained point loading could permanently dent or distort the hull.
- Under covers for LaserPerformance products should be produced from a breathable or semi breathable fabric to allow moisture to evaporate away from the hull. This is essential to prevent damage to the hull skin. Also, the hull should never be left in the under cover wet or damp. A combination of moisture and heat over an extended period can also damage the hull. The under cover is designed to protect the hull when being transported and should be removed when the hull is being stored. Typical damage includes small bubbles or blisters, excessive print through of glass reinforcement, foam or wood and color change.
- Rudders and centerboards must never be stored wet in carry/combo bags. This can cause blistering, print through and warpage.
- All our GRP products are designed to be dry sailed. In other words stored on dry land. If you intend to leave your boat on a mooring for any length of time it is essential that you apply an osmosis barrier coat. LaserPerformance can recommend a suitable product.

#### On Water

• When wearing a trapeze harness, take particular care when climbing on to the centerboard and back into the boat after a capsize. The trapeze harness hook could easily damage the hull or deck.

#### On Water Towing

Towing your LaserPerformance product at high speed (10 - 20 knots) behind a rib or power boat can seriously
damage the hull. Boats damaged in this manner are not covered by the warranty. LaserPerformance recommends
a maximum towing speed of 6 knots.

#### **Owner Information**

hull identification number	
purchased from	date of purchase
contact name	phone #
address:	
audress.	
city / state / county	zip / postal code
· ·	
hull color: sail #:	
registration information (if applicable)	
trailer vin #	
traner viii #	
license plate number	
registration number	state /county registered in
insurance information	
maintananga	
maintenance	



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