

weta
marine



WETA SAILING MANUAL

www.wetamarine.com

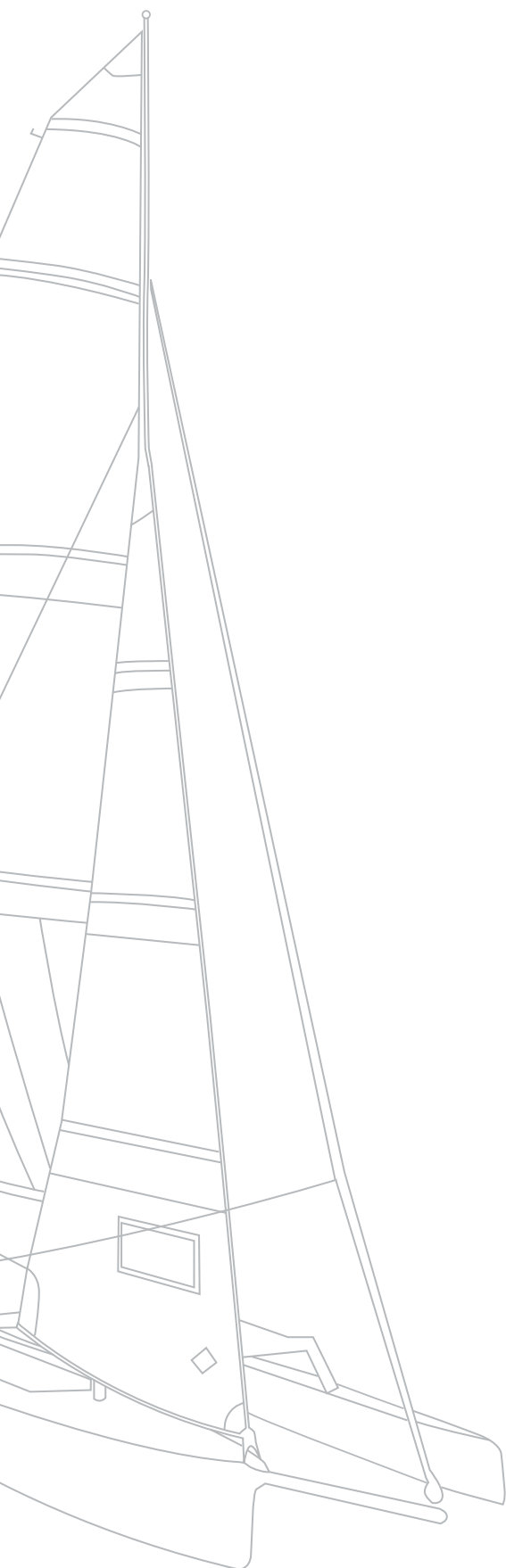


Table of Contents	2
Introduction	3
1.0 RIGGING GUIDE	4
1.1 Basic Knots	4
1 Bowline	4
2 Reef Knot	5
3 Figure of Eight	5
4 Half Hitches	6
1.2 Unpacking your new Weta	7
1.3 Weta Rigging Guide	11
1 Expanding the boat	11
2 Tensioning the trampolines	11
3 Rigging the mast	11
4 Stepping the mast	12
5 Rigging the Gennaker	13
6 Rigging the Jib	16
7 Rigging the Main	16
8 Connecting the Rudder	18
9 Safety Harness	18
10 De-rigging and storage	20
2.0 SAILING GUIDE	22
2.1 General Safety	22
2.2 Launching / Retrieving	25
2.3 Upwind Sailing	28
2.4 Downwind Sailing	32
2.5 Capsize Recovery	35
2.6 Rudder Use	37
2.7 Clothing	38
2.8 Gear Storage in the Boats	40
2.9 Options and Modifications	41
3.0 LOOKING AFTER YOUR WETA	43
3.1 Transporting Your Weta	43
3.2 Washing your Weta	49
3.3 Leaks in your Weta	49
3.4 Storage and Security	51
3.5 Care and Maintenance	52
3.6 Replacing Parts	53
4.0 WETA TUNING GUIDE	55
4.1 Working towards an Efficient Sail	55
4.2 Sheeting Angles	57
4.3 Rig Set Up	59
4.4 Halyard Tension	62
4.5 Batten Tension	64
4.6 Body Trim	65
5.0 RACING BASICS	68
5.1 Start Sequence	68
5.2 Basic Rules for Racing	69
5.3 Race Courses	70
6.0 GLOSSARY	71
7.0 WARRANTY	74



INTRODUCTION

The Weta was designed as a robust family boat to make high performance sailing available to everyone. It is very versatile with a number of sailor and rig options which allow you to sail the Weta to its potential under almost all conditions.

This manual has been written primarily to ensure safe Weta sailing. It teaches techniques that make managing the boat easier to enhance your enjoyment of sailing the Weta. It also helps to improve your knowledge of the boat and assists you to sail your Weta more efficiently in all conditions. We strongly advise you read this before sailing and pay attention to the highlighted points.

The Weta is a simple boat but there are a lot of easy "tricks" in rigging and sailing that need to be employed to ensure a hassle-free sailing experience. Personal preferences may vary but this manual sets out to provide instructions of how the Weta is intended to be used for ease, performance and enjoyment.

This edition of the Weta Sailing Manual will be followed by a second edition including advanced boat tuning and racing. If you have any feedback on this manual or require further information please email info@wetamarine.com.

We hope you enjoy the Weta experience!



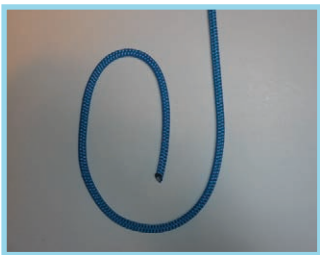
The Rigging guide is in three sections. The first section outlines a few knots that are useful to know and will help make your Weta sailing experience more enjoyable. For safety reasons you should be able to tie a Bowline quickly and efficiently. The second section is on how to put the boat together after taking delivery of it. The last section is a rigging guide for each time you go sailing.

1.1 BASIC KNOTS

Before starting to unpack your Weta you should invest time to learn and perfect some basic sailing knots. This will greatly reduce your rigging and de-rigging time and make the sailing experience safer and much more pleasant. There are many knots you can use, but with these four you can usually get most jobs done. These knots are both easy to tie and untie even after being used under high loads.

1 BOWLINE

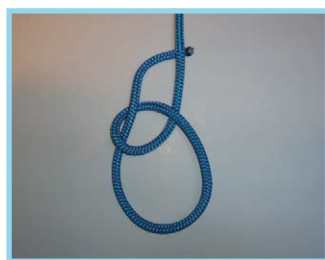
This knot is used to secure the end of a line to an attachment point. Some of the uses on the Weta include the Mainsheet, Gennaker furling line, Gennaker and Jib halyards and trampoline ties.



Form a loop in the line with the tail length defining how big the loop will be,



Pass the free end through the loop,



Then around the standing end,



Then back through the loop to complete the knot.



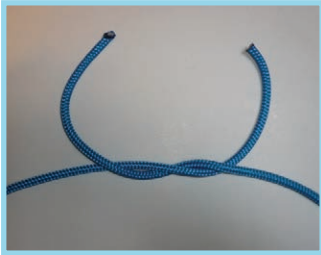


1.0 RIGGING GUIDE

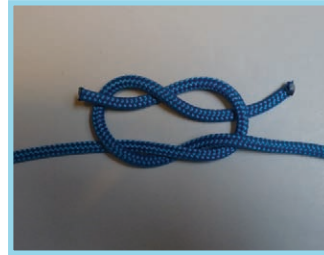
1.1 BASIC KNOTS

2 REEF KNOT

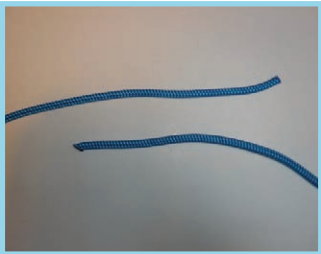
The reef knot is used to tie two loose ends of rope the same size together. Some of the uses on the Weta include tying side stays to trampoline and fastening the battens.



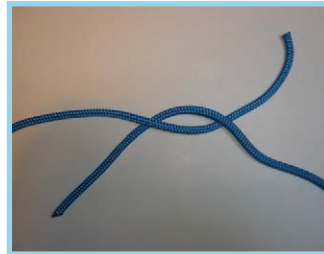
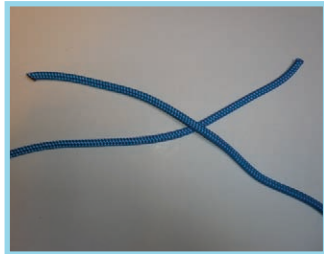
Cross the two line ends over each other (left over right),



Wrap the left line once around the right line and pull tight to complete the knot.



Cross the two line ends over each other (right over left),



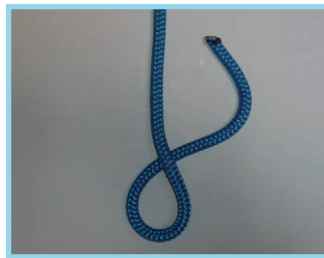
Wrap the right line once around the left line,

3 FIGURE OF EIGHT

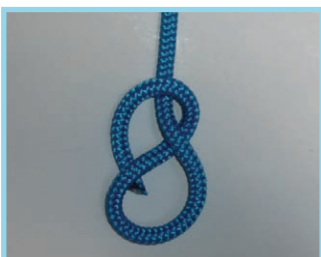
The figure of eight is used as a stopper knot at the end of a line. Some of the uses on the Weta include the Gennaker, Jib and Main sheets.



Form a loop at the end of the line,



Loop the loose end around the standing end,

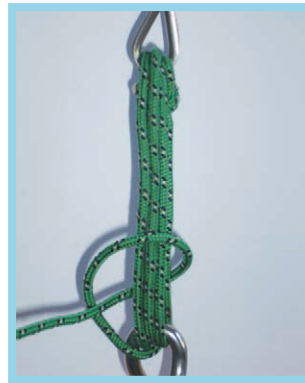


Pass the end through the loop to complete the knot.

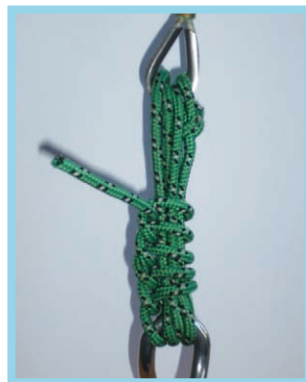
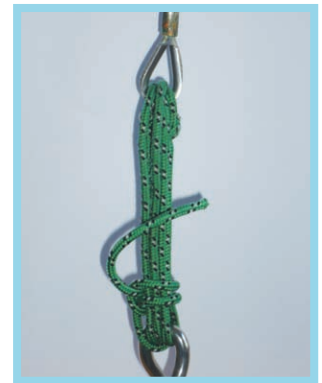
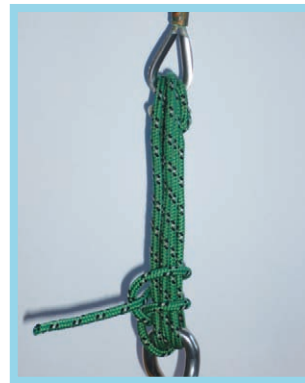


4 HALF HITCHES

Half hitches are used to secure the end of a line when it is under load. Usually the line is looped around the fastening points a few times before tying the knot to reduce the load on it. If there are not enough loops and the load is not reduced enough this knot can be difficult to untie. It is a handy knot to get rid of excess line. Some of the uses on the Weta include the forestay line and trailer ties.



Loop the free end around the standing end then pass the free end back through the loop you have made.



Repeat the process a number of times to use up the rest of the line and complete the knot. There should be at least three loops to ensure a secure knot.





1.0 RIGGING GUIDE

1.2 UNPACKING YOUR NEW WETA

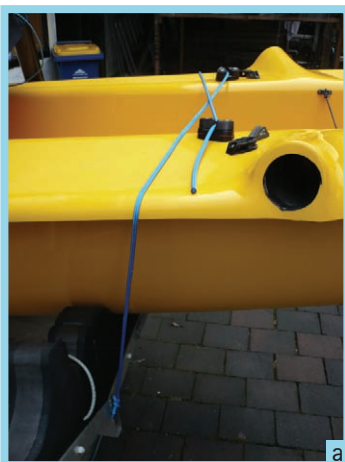
1.2 UNPACKING YOUR NEW WETA

When you first get your new Weta kit it should include:

- Weta with mainsheet block assembly, Cunningham with double block and stainless steel ring on bow
- Beach trolley
- Mast bottom section
- Trampolines x 2 (port and starboard)
- Centreboard
- Prod
- Roller furler drum
- Double block for mainsheet
- 2 Gennaker blocks
- 2 side stays
- 2 shackles (one for jib tack, one for halyard strop)
- 6mm Jib sheet – red
- 4mm Gennaker halyard – green
- 4mm Main halyard with halyard strop – blue
- 6mm trolley ties x 2 – black
- Boat cover (if ordered)
- 3mm line – 4 x 1m lengths (2 gennaker block ties, front trolley tie, forestay tie)
- Mast top section
- Safety harness
- Foil cover
- Rudder assembly
- Tiller extension (this may be found inside the prod)
- Roller furler top swivel
- Stainless steel S-hook for mainsail clew
- 2 stay adjusters
- 1 forestay
- 8mm Gennaker sheet – green
- 6mm Main sheet – blue
- 4mm Jib halyard – red
- 3mm Gennaker retrieval line – green
- 6mm Centreboard handle – 600mm length

If the initial assembly of your Weta has not already been done, follow these steps:

1. Attach the trolley support ties to the back end of the trolley with a bowline. They then cross over the main hull and are held in the cam cleats. The boat is now secure on the trolley for rigging. (a)
2. Thread the trampolines on the beams and use a ladder stitch to tie off the webbing loops under the tramps.
Slide these on equally or they will jam (b)
Line up the tabs (c)



Tie one end around the beam with a bowline (d)

Loop the line around each pair of tabs tightening as you go (ladder stitch). (e)

Tie off the line on the other beam with some half hitches. **Note:** you can adjust the length/tension of the lacing to achieve the correct alignment of the trampoline lines to the cheek blocks and cleats on the deck. (see section 2.9-6) (f)



3. Attach the gennaker blocks on the trampolines. Lace the line through twice and make sure they both pass through the block, Tie off the line with a reef knot underneath (g, h)



4. Attach the centerboard handle. Secure with figure of eight stopper knots on opposite sides of the board. (i)



5. Attach one shackle on the tack of the jib and the other on the thimble end of the halyard strop. (j, k)





1.0 RIGGING GUIDE

1.2 UNPACKING YOUR NEW WETA

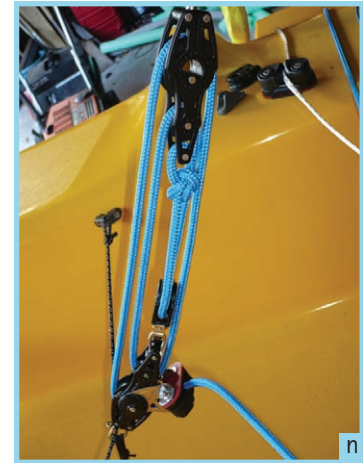
6. Attach the stay adjusters and side stays onto the float hulls (set at the 3rd hole from top as a starter) and store on the tramp. (l)

Tie the side stay to the hiking strap using the front end of the trampoline line for storage/traveling.

Note: when coiling the sides stay it is easiest to start from the fixed end so all the twists come out at the free end.

Note: Take care not to damage the stay/swage join by making the coil too tight. (m)

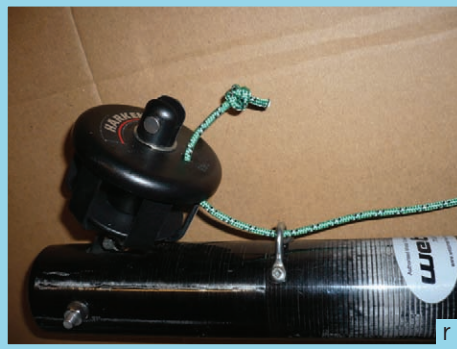
7. Thread the mainsheet system and tie the block end off with a bowline and a figure of eight stopper knot at the loose end. Note: See section 2.9-9 for adjustment of this. (n)



8. Attach S hook to mainsheet double block. It is a good idea to use a vice or similar to close up the S hook eye on the block it cannot come off. (o)

9. Put the remaining sheets (jib and gennaker), halyards (main, jib and gennaker), safety harness, tiller extension, forestay (with tie attached with a bowline knot), centerboard and rudder assembly in the foil bag so it is together ready for when you go sailing. (p, q)





10. Rigging the Gennaker. If your gennaker has not already been furled up when you first receive your boat you will have to do this yourself. This should be done the first time you rig the Weta as per the rigging guide as it requires you to be able to hoist the furled gennaker with the halyard. It can however be done without rigging the boat with two people by having one person hold the head furling unit in step (v).
 - i) Tie the furling line on the drum with a figure of eight stopper knot. (r)
 - ii) Roll the furling unit until most of the furling line is wrapped around the drum. Make sure the line enters the drum freely with no friction. If there is direction you may have gone through the wrong gap in the fence and will have to retie the figure of eight. (s)
 - iii) Attach the tack of the gennaker to the furling drum. Check to make sure the plastic shackle passes through both the luff rope eyelet and the tack eyelet. (t)



- iv) Attach the upper furling unit to the head of the gennaker. Check to make sure the plastic shackle passes through both the luff rope eyelet and the head eyelet. (u)
- v) Hoist the sail up. (this should be done the first time you completely rig the Weta)
- vi) Pull the furling line so the sail rolls up. Keep pulling it with a little tension on the clew of the sail until the line has been completely unwound. (v, w)
- vii) Now the sail is ready to rig as per the rigging guide. It should be put in its bag with the furling line tied off. (x)



11. Check all knots. Once you have assembled your Weta to this stage you should check over all knots that were already tied upon delivery. This is important as sometimes the knots are temporary and not always tied correctly and have the possibility of coming loose and causing damage! This is your responsibility.
12. There should be no fittings or ropes left over... or missing!!!





1.0 RIGGING GUIDE

1.3 WETA RIGGING GUIDE

1.3 WETA RIGGING GUIDE

The Weta has been designed to be simple and quick to rig. Every step in this guide is important to reduce rigging time and the likelihood of damage to the boat. The lines and sail bags for each sail have been colour coordinated to make it easy to match lines and sails. It is recommended you read this guide before rigging the boat and again after you have done it a few times so you do not miss any details that can be very helpful and make your experience more enjoyable.



a

1 EXPANDING THE BOAT

Before expanding the boat make sure the two ties on the back of the trolley are firmly fixed into the cam cleats on the deck (on the opposite side). This will stop the boat from rolling on to one side when the floats are connected. Hold the float with the front hand on the front knuckle and the back hand half way down the beam rail (as shown in photo) to keep it balanced. If you do not hold the boat in this exact position it is likely you will drop the bow on the ground and damage it! (a)



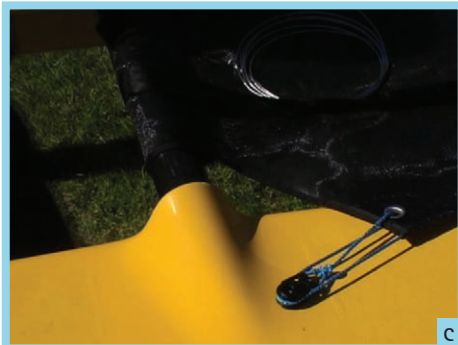
b

When inserting the beams into the sockets do not force them in – make sure the alignment is correct and they should slide in easily. This becomes easier over time. (b)

2 TENSIONING THE TRAMPOLINES

Tie the front end of the trampoline line using a bowline. (c, d)

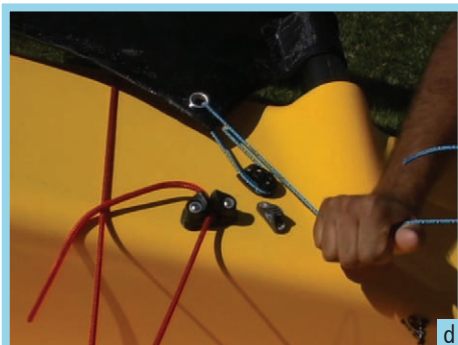
Loop the rear end of the line over the cheek block and tension the line firmly making sure the loops do not come off. It is a good idea to re-tension these lines after a short sail.



c

3 RIGGING THE MAST

When putting together the top and bottom sections make sure the track is aligned and there is no gap. Place it on the boat with the tip at the back. It also usually helps to have one of the horn cleats in the bow eye bolt to stabilize it when running the halyards. **Note:** when running the halyards the rigging time will be significantly reduced if it is done correctly first time. (e)

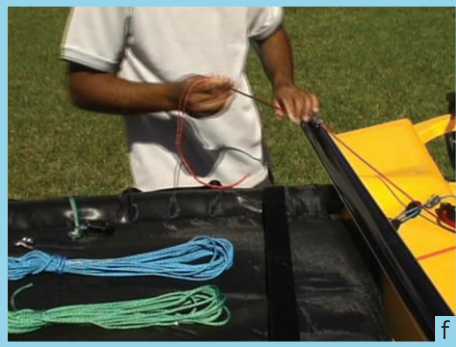


d



e





First run the jib halyard (red) through the lower block on the mast and tie it off at the bottom of the mast by either lacing it around the horn cleat or tying a reef knot. This should be tight in order to minimize the chance of tangles. (f)

Run the gennaker halyard (green) through the upper block on the mast and tie it off at the bottom of the mast. (g)

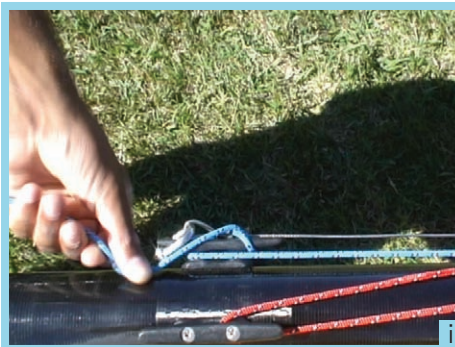
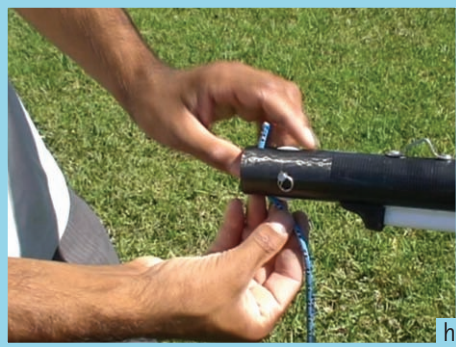
Run the main halyard. It is important to make sure you thread this the correct way otherwise you will not be able to hoist the mainsail. The free end should be passed through the sheave from the back side of the mast towards the front side. (h)



Loop the halyard shackle over the horn cleat then tie off the other end. (i)

Next attach the side stays to the mast. Check the halyards are in the positions shown when doing this to avoid tangles. (j, k)

Lastly before raising the mast attach the forestay. It should be inserted in this position relative to the halyards. (l)



4 STEPPING THE MAST

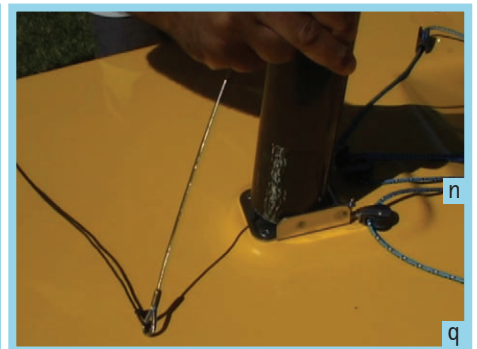
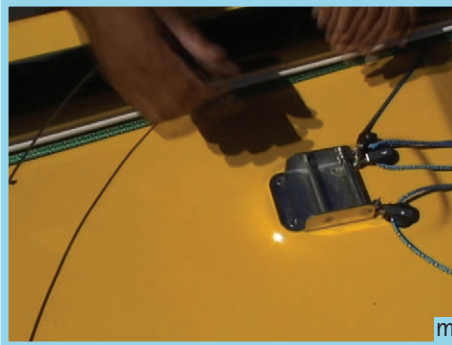
Before stepping the mast check for any overhead power lines that you could potentially hit when raising the mast or pulling the boat to the water. This is a major safety consideration as the carbon fiber mast is a well known conductor of electricity.





1.0 RIGGING GUIDE

1.3 WETA RIGGING GUIDE



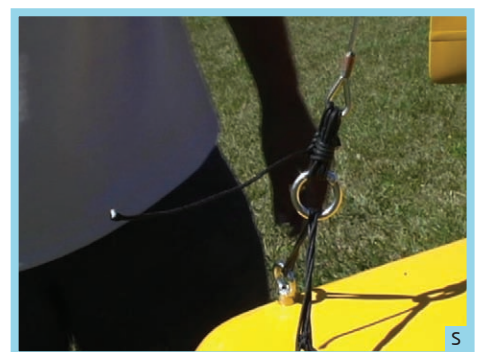
Check that the mast step is clear and the Cunningham blocks are pushed either side of the bar. (m)

Hold the mast as shown and have the forestay in the hand that holds the base of the mast. (n)

Stand the mast upright and place the base on the ground next to the boat. (o)

Step the mast onto the trolley support, re-grip it and then step it onto the mast step. This can all be done in one motion, but by breaking it into these small steps it is easier to manage. (p, q)

Once the mast is in the step take the forestay to the bow fitting and thread it up. The mast will stand supported by the for The forestay should be tied with plenty of tension. A rough guide for how much tension to use is to tighten it until the floats no longer rise up and then tie it off with a few half hitches. (r, s)



5 RIGGING THE GENNAKER

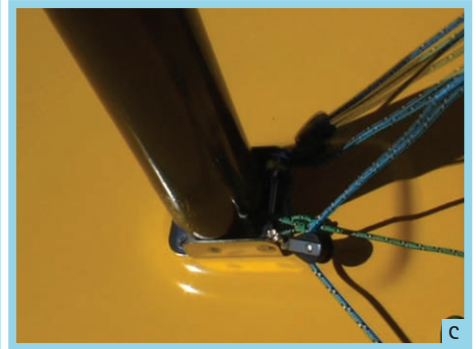
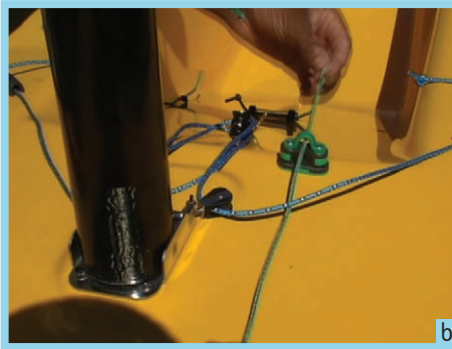
The gennaker sail bag, halyard, furling line and sheet have been colour coordinated green. The gennaker should be pre rigged after initial set up of your Weta (see section 1.2-10). Insert the prod into the bow socket and make sure it is completely in.



Unravel the furling line and thread it through the port side bow eye. (a)

Thread the furling line under the Cunningham line and through the cam cleat. (b)

Tie off the furling line with a bowline on the mast step. Be sure it passes under the Cunningham lines. (c)

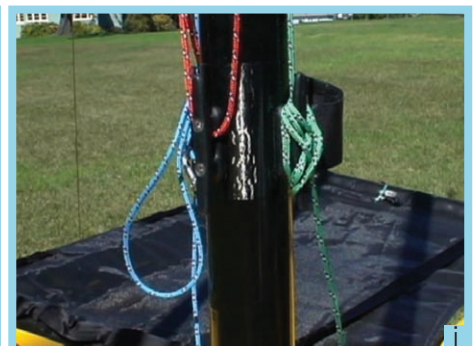
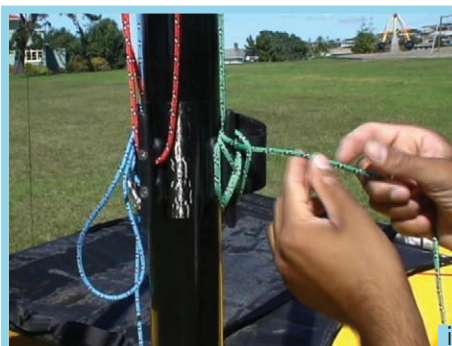


Now pull in all excess furling line so there are no wraps of rope on the furling drum and cleat off the rope. **Note:** It is important to do these steps first when rigging the gennaker. This is so that when the halyard is hoisted the sail is secured and will not unfurl and flog.

Next tie the halyard to the top swivel drum on the gennaker head with a tight bowline. If this bowline is too loose it will restrict the amount of halyard tension that needs to be pulled on later. (d)



Hoist the gennaker and apply a reasonable amount of halyard tension. This should be enough so that there is a slight inverting bend in the tip of the mast.





1.0 RIGGING GUIDE

1.3 WETA RIGGING GUIDE

Tie off the gennaker halyard using the following steps: **Note:** the same technique is used for all 3 halyards.

- Loop around the horn cleat twice (e)
- Cross over on the next 2 loops. (f, g)
- On the fifth loop lock off the halyard with a twisted loop. (h, i)
- Pull the halyard line down to lock it off. (j)



Gather up excess rope and tie off ready to be secured by Velcro after all 3 sails have been hoisted. (k)

Run the gennaker sheets through the blocks and inside the side stays. Make sure the sheet goes through the gennaker blocks the correct way. The test is to pull the sheet through the block in a direction towards the centre of the boat with the other end coming from the bow. If the sheet is run correctly the ratchet will make a clicking noise. (l, m)



Adjust the number of wraps on the gennaker. Make sure the sail is reasonably tightly wrapped, then give it 2 more wraps before attaching the sheets with figure of eight knots. (n, o, p)

At this point check that there is the correct number of wraps on the sail (after a few sails you will know what suits best). This is tested by releasing the furling line when the boat is pointing into the wind.

The sail should be able to fully unfurl – if not there are too many wraps so some will have to be taken out.

The sail should then be able to be completely furled away (ideally with the sheet wrapping around a couple of times) – if not there are not enough wraps and some will have to be added.

This fine tuning is important so that the sail can be released properly and furled up completely.

When it is windy the sail will require a couple more wraps because it furls up tighter with the added wind pressure. Remember it is much easier to test this on land!



6 RIGGING THE JIB

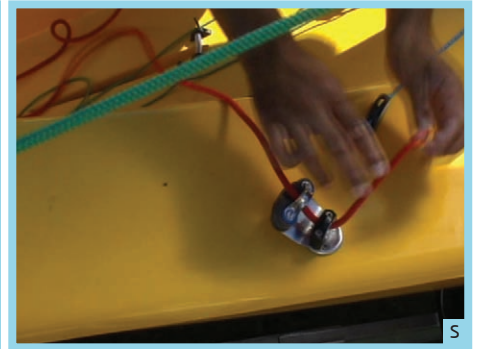
The jib sail bag, halyard and sheet have been colour coordinated red.

Shackle the tack of the jib onto the bow ring. (q)

Tie the halyard on to the head of the jib with a tight bowline and then hoist the sail. As the sail is hoisted clip on the jib hanks. The trick with these is to twist them 90°, slot them on and then let go. They are all aligned the same way so a set technique will ensure a quick hoist. (r)

Tie off the jib halyard the same way as the gennaker halyard. The tension should be adjusted to suit the conditions as per the sailing guide.

Run the jib sheet through the two bulls eye swivel cleats. The sheet should run clear over top of everything in the cockpit and have the ends come either side of the mast. Make sure the sheet is threaded the correct way through the cleats. Tie the sheet off using the same technique as the gennaker. (s)

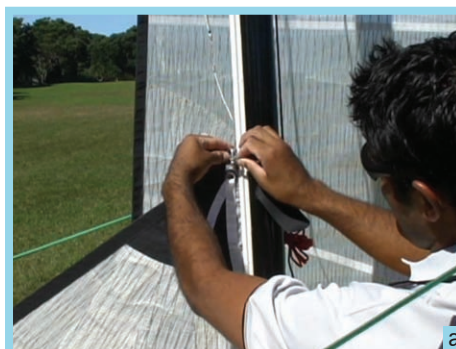


7 RIGGING THE MAIN

The main sail bag, halyard, Cunningham and sheet have been colour coordinated blue.

Unroll the mainsail and insert the top 30cm of the sail up the mast track. Check that the main halyard is free to run and not tangled in the stays then shackle the halyard to the head of the main. (a)

Hoist the sail being careful to feed the bolt rope up the track. This is not a self feeding system! The boat must be pointing directly into the wind when hoisting the sail otherwise it will jam. If it is still stiff to pull up there are a few things you can do to improve this. Firstly wash the track and the bolt rope of the main sail after each outing to get rid of any salt/grit that causes friction. If necessary spray some silicone spray on both the track and the bolt rope. (b)





1.0 RIGGING GUIDE

1.3 WETA RIGGING GUIDE

Once the sail is at the top of the mast lock the halyard off. This is done using the following technique:

1. Pull the halyard down at an angle to the mast so it is free from the lock. The sail should be at maximum hoist at this point. Please note there is an extra image shown here to show the system more clearly. (c, d)



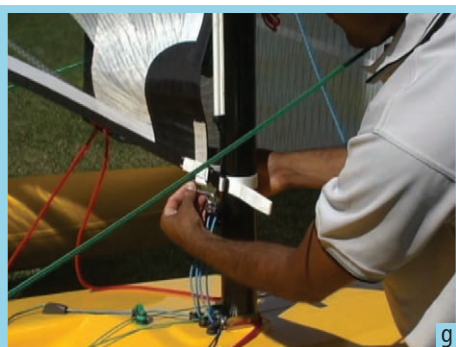
2. Swing the halyard towards the mast so the stop wire sits in the lock and next to the mast.
3. Hold the halyard in this position and slide the sail down the mast until the stop locks in the halyard lock.
4. The sail should be securely fastened. (e, f)



The main halyard should now be tied off at the horn cleat as per the gennaker and jib halyards. Note that there should be little or no tension on this halyard as all the load is taken by the halyard lock at the top of the mast.

Fasten the tack strap, which takes the strain off the track and attach the Cunningham hook. (g)

Clip in the mainsheet. The main sheet system must be attached behind the gennaker sheets. (h)



8 CONNECTING THE RUDDER

Connect the rudder assembly to the boat. The easiest way to do this is:



1. Take both R-clips off the pin.
2. Insert the pin into the rudder stock.
3. Align the pin and insert it into the bottom rudder Gudgeon (stock still attached). The rudder stock will be at a slight angle in order to do this. (i)
4. Push the rudder pin down so that it is flush with the top of the rudder stock Gudgeon flange. (j)
5. With the bottom of the pin aligned in the bottom Gudgeon, rotate the stock so that the top of the stock is in line with the top Gudgeon.

6. Push the rudder pin up from the bottom so it goes through the top Gudgeon. (k)

7. Replace both R-clips. (l)

8. Attach the tiller extension by sliding the base part into the tiller housing and firmly pushing the cap piece down so it locks. Some electrical tape can be used to prevent it detaching while sailing. Centreboard: Place the centreboard on the trampoline.



9 SAFETY HARNESS

If you fall off the Weta it will not capsize and the boat will drift faster than you can swim. This is a problem when sailing alone or with an incompetent crew and could have dire consequences. To overcome this problem a safety harness system has been provided. This is fantastic if used correctly. You must read, understand and practise these instructions before sailing the Weta. The worst possible event would be to capsize with the harness on, not be able to release the clip and get tangled under the water. You must practise wearing the harness in ideal conditions so you get used to the safety release clip. If you do capsize then you should release the clip immediately as the boat is unlikely to drift away. This is an unlikely scenario, but has happened in various other classes. Again it is about preparation, practice and sailing within your limits.

Rigging the Safety Harness

Attach the tether to the pad eye in the cockpit floor by looping the end back through itself. (m, n)





1.0 RIGGING GUIDE

1.3 WETA RIGGING GUIDE

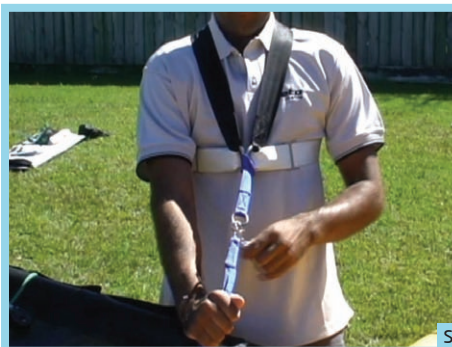
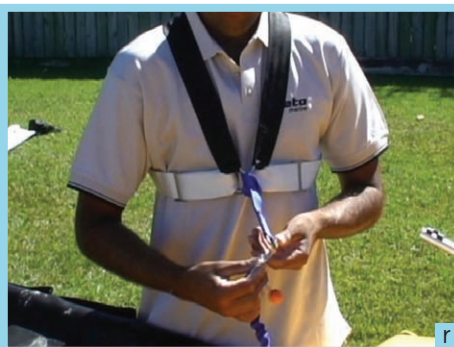
The safety harness is worn by putting your arms through the loops with the adjustable strap at the bottom and the rings meeting at your chest. This should be worn on top of all clothing. The lifejacket can be worn over the top of the harness provided it does not obstruct the quick release safety mechanism. (o)



Thread the small strap around the rings then back through itself. (p, q)



You are now able to attach yourself to the tether on the boat. (r, s)



Releasing the Safety Harness

This is one of the most important safety procedures on the Weta. You must practise this step over and over again so it becomes instinctive for the occasion when you may capsize the Weta when sailing with the safety harness.

Know where the release line is on your body at all times. Extra lengths may be added to this if you think you will not be able to reach the line with the supplied length.

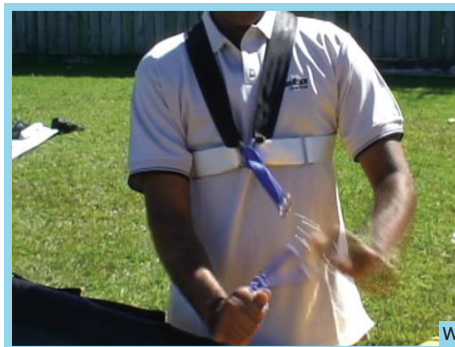
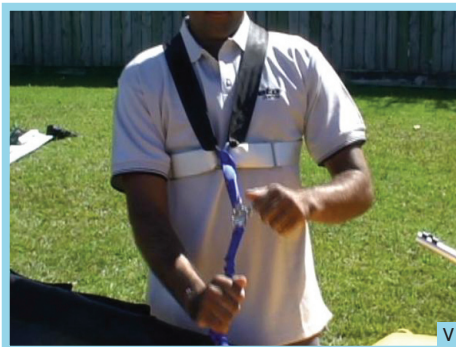
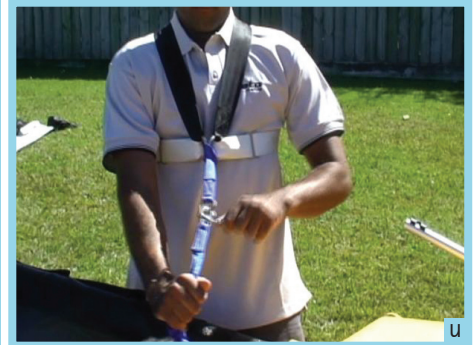


To release the harness simply pull on the release line. A strong definite pull across the body should be enough to release the hook even when the tether is under load. (t, u, v, w, x)

In the event of a capsize there is usually some warning and you should be able to release the harness before the boat is completely over. If you do not manage to do so, remain calm, feel for the release line and take your time to release it.

By panicking you are likely to fumble and delay the release.

You must practise releasing the safety harness before sailing



10 DE-RIGGING AND STORAGE

There are a number of tricks that can be used when de-rigging your Weta to reduce the rigging time the next time the boat is rigged. These are based on leaving as much of the boat together while not leaving the boat susceptible to deterioration or damage.

Main sheet system

This can be left on the boat and used to tie the rear beam trampolines together for transport (see 3.1-4).

Halyards on the mast

One of the most time consuming parts of rigging the Weta is running the halyards. Ideally the mast would be left complete with the halyards tied off at the base for storage but this is not always possible for transportation. There are two other options.

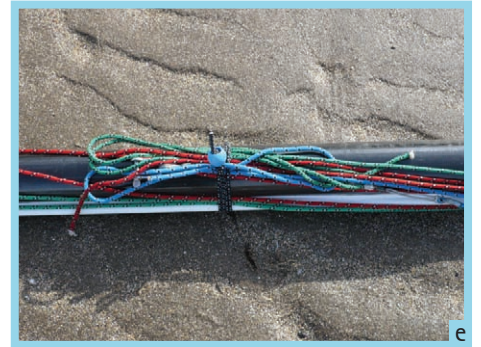
- 1 All halyards are taken out and stored in the foil bag. Make sure they are coiled up neatly so next time they are less likely to tangle.
- 2 Leave the halyards on the mast but use two bungee straps to hold them on the top section. Firstly put a tight bungee at the base of the top section while the mast is fully rigged. (a, b, c)





1.0 RIGGING GUIDE

1.3 WETA RIGGING GUIDE

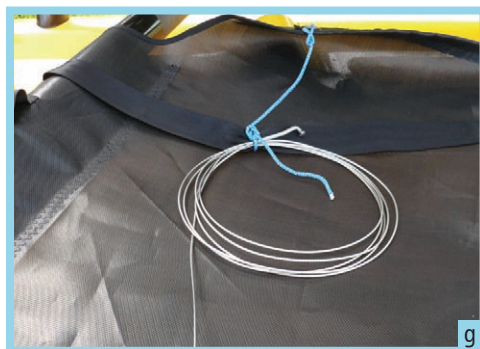


Fold the halyards up the mast, attach the second bungee then take the bottom section off. The two mast sections can now be secured on the trolley. (d, e, f)

Side stays and Trampoline lines

The side stays remain on the boat and are secured by the front trampoline lines. Use a reef knot to tie the coiled stay to the hiking strap. When coiling up the stay start at the fixed end so that any twists can come out the free end. (g)

The back end of the trampoline line should be left like this so it does not get pulled through the sleeve. There is no need to tighten the line for storage as this will just increase your rigging time next outing. (h)



Foil Bag

The foil bag should contain the following:

- Centreboard
- Rudder / rudder stock
- Tiller extension
- The 3 halyards (if not left on the mast)
- Jib sheet and Gennaker sheet
- Forestay
- Safety harness

It is a good idea to always keep these parts together so you do not forget anything!

Gennaker

The gennaker should be left like this. (i)

The gennaker should be left attached to the prod and the furling line should be tied off so the drum has no wraps on it and cannot unroll. The gennaker parts should then be stored in the green sail bag to keep them clean for efficient operation.



2.1 GENERAL SAFETY

You should be aware of these key points before sailing the Weta.

- Always wear a life jacket
- Never rig a boat near power lines – a carbon mast is a notoriously good conductor of electricity
- Have a safety plan for every voyage
- Have a safety kit for longer voyages
- According to the conditions make a safe decision when and where to sail
- According to the conditions make the right sail selection
- According to the conditions make the right clothing selection
- Know your limits
- Check all knots, strop, stays, fittings and lines for wear regularly
- Know how to use the Safety Harness correctly

The most important factor for safe sailing is to recognize dangerous situations and know your own capabilities. By not going out sailing you eliminate all risk. You must be sure as to whether or not you are prepared for the conditions. The correct preparation greatly reduces the chances of finding yourself in trouble. With easy access to live weather reports there is little excuse to be caught in storms, but also bear in mind forecasts are forecasts and anything can happen. It is always better to be on the conservative side as you can always go further, hoist more sail, and take more people out etc if you are in control. If you are out of control you put other people at risk. As you build confidence and experience you will be able to enjoy sailing safely in most conditions.

Have a safety plan for every outing

It is a good idea to always have a "worst case scenario" safety plan before going out sailing.

Ask yourself the following questions:

- What is the worst thing that could happen weather wise today? (wind, waves, temperature, light, visibility, sun, tide)
- What is the worst thing that could break on the boat?
- If either of these things happened what would I do to be safe?
- How many boats are around to help if I get in trouble?
- How would I communicate if I were in trouble?

For example: If you lost steerage / sail power where would you drift to? – offshore into the ocean, towards rocks with breaking waves, or a sandy beach?

It is always a good idea to let someone know where you are planning on sailing and roughly what time you plan to return.





2.0 SAILING GUIDE

2.1 GENERAL SAFETY



Sometimes getting into trouble can be as easy as being becalmed in a strong outgoing tide. The solution can be just as easy by having a phone/VHF radio and a paddle out with you.

By having this safety plan you reduce the risk of getting into trouble, and if you do find yourself in trouble you can act quickly. This does not need to be a written plan, but should be clear in your head.

Have a safety kit for longer voyages

When you do longer destination or offshore voyages we recommend you have a basic safety kit. This kit should include the following: Flares, cell phone or VHF radio, compass, thermal blanket, basic first aid, water, food, extra clothing. Depending on the conditions and location there may be other additions to this kit.

Rigging with power lines

See the warning in rigging guide and tips, but be sure to check for overhead power lines whenever you rig the Weta. This is especially important when you are sailing at any new location.



Deciding when and where to sail and in what conditions

This is probably the most important safety decision you will make. It is best to build up your competence and confidence before sailing in more challenging conditions. Start in sheltered waters before testing more open seas. Talk to locals to gather knowledge of any potential hazards and recommendations. It is always best to learn from other peoples' mistakes! A general rule is that if you are a little unsure about sailing somewhere new in challenging conditions, it's best not to sail –or sail with reduced sail area. It is essential that you get familiar with a chart of your sailing area to be aware of any hazards.

Clothing selection

Exposure is a major safety consideration when sailing in small dinghies – especially in colder climates. Get your selection right so you are always warm. No matter how fast you go or how good the racing is – sailing is not enjoyable if you are cold. Your local marine shop is probably the best place to go for advice as they are familiar with the conditions. There is some excellent lightweight warm clothing available. See section 2.7 for an overview on options available.

Life Jacket

Always wear a life jacket. Never take anyone for a sail without a life jacket under any conditions. Choose a life jacket that is legal and rated for your body weight. It should be fitting and not loose with all the straps done up. Do not put an adult's life jacket on a child. Not only is it incredibly unsafe but the low comfort level can also put the child off their sailing experience. As children grow up you can borrow or swap life jackets with your friends.





Knowing your limits

As stated before, the best safety advice is to know your limits and sail within them. Just because you see someone else managing the conditions adequately, it does not necessarily mean you can handle them. Build up your skill level before you take out your family. Sailing is an interesting sport where unassuming sailors can make boat handling look easy in very challenging conditions – you just don't know if they are past world champions in a high performance class.

Safety Harness

If you fall off the Weta it will not capsize and the boat will drift faster than you can swim. This is a problem if you are sailing alone or with an incompetent crew and could have dire consequences. To overcome this problem a safety harness system has been provided. This is fantastic if used correctly. You must read, understand and practise these instructions before sailing the Weta. The worst possible event would be to capsize with the harness on, not be able to release the clip and get tangled under the water. You should practise wearing the harness in ideal conditions so you get used to the safety release clip. If you do capsize then you should release the clip immediately as the boat is unlikely to drift away. This is an unlikely scenario, but has happened in various other classes. Again it is about preparation, practice and sailing within your limits. See section 1.3–9 for detailed use of the safety harness.

Sail selection

With the versatility of the Weta you are able to sail in many conditions not possible in other similar boats. By sailing just under mainsail, a relatively inexperienced sailor can manage the boat in 20+ knots with ease. It is always best to go out under-canvassed than over-canvassed as it's easier to come in and hoist more sail than reduce sail while under pressure on the water.

On a windy day sail selection is the next most important decision if you decide to go out. When starting out it is always best to be on the conservative side when choosing your sails and if need be, come in and put more sail on. If you are unsure about the conditions you should still rig all 3 halyards. This gives you the option of coming in and hoisting another sail without having to drop the mast and run the halyard.

The gennaker should only be used in lighter conditions until you gain confidence to sail in stronger winds. Once you are experienced enough you will always be able to use the gennaker no matter how much wind there is! (This is because the gennaker lifts the bow so in gale force winds it is advantageous to use it).





2.0 SAILING GUIDE

2.1 GENERAL SAFETY

The sail selections ranked most difficult to easiest to manage are as follows.

1. Main + Jib + Gennaker
2. Main + Gennaker
3. Main + Jib (However this is more difficult upwind in a breeze than Main + Gennaker)
4. Main Only (The main sail alone has a surprising amount of power for its size – so it is recommended for single handed sailing in 15+ knots.)

2.2 LAUNCHING /RETRIEVING

By following the tips in this section you should be able to launch and retrieve your Weta easily in all conditions without damage. Once the boat gets away on you it can easily cause damage and be difficult to gain control of again. The difference between someone looking 'slick' and someone getting in trouble is fine so it is extremely important to read and follow these tips carefully.

General Tips for Launching/Retrieving

- Always keep the trolley support ropes cleated until the boat is in the water. This is so the boat does not get blown off the trailer damaging the hulls.
- When pulling the boat on or off the beach trolley, it is best to do it in a depth of water where the boat floats off (approx knee deep). This makes it much easier.
- Always pull the boat on/off the trolley with its bow pointing into the wind. This may mean you need to go out a little deeper with the trailer in some conditions.
- Avoid hoisting the sails until you are as close to the water as possible.
- When pulling the boat along the beach with the sails up, try to keep the boat pointed into the wind as much as possible. Sometimes in a cross-shore wind you will need to zigzag down to the water. This can be avoided by hoisting the main and jib as close to the water as possible as described above.
- Always hold the boat by the bow when it is in the water. This is because if you try to hold the boat anywhere else the sails can power up and the boat will sail away. By holding the boat by the bow it naturally sits in to the wind with no effort and is easy to manage. There have been some instances when sailors have tried to hold the Weta on the side and managed to lose it for an unmanned sail! This happens because the boat is well balanced and will not capsize so it powers up very easily.



Getting the boat on and off the Beach Trolley

The easiest way to get the boat on and off the beach trolley is to use the water to float the boat into position. This has to be done in deeper water (knee – thigh deep water). If you try to pull the boat on in very shallow water there is a lot of friction between the hull and trolley making it difficult. The only disadvantages of floating the boat on and off are the need for deeper water, you get a little wetter and if your trolley is not set up correctly it will float a little, making it difficult to pull the boat on and off.

In some cases it is not possible to get the trolley into deeper water. In this shallow water situation the following tips are recommended:

- Make sure the foam cradles are wet and sand/mud free so the boat will slide on and off easily.
- The trolley ties should only be untied once the boat is in the water when launching. They should also be the first thing you tie on before pulling the boat out of the water when retrieving the boat.
- You can drill extra holes in the trolley supports to allow them to fill up with water and sink more easily if you are launching in surf.
- You can add extra padding to the beach trolley if you think the hulls will hit bare aluminum sections during launching/retrieving and cause damage. This can be done using appropriate foams/plastics and some contact glue.

Setting off in an onshore wind

This can be difficult because you need to be able to sail upwind straight away to get into deeper water. You may also need to be able to manoeuvre (tack) to avoid obstacles. The Weta needs a reasonable amount of centreboard for it to make progress upwind. The best technique to launch is to take the boat (by the bow) into water that is deep enough to get the centreboard and rudder nearly all the way down. For most adults this is usually just over waist height.

You should make sure there are no sandbars out past where you board the boat (often the case at low tide).

The technique to get sailing once at this depth is as follows:

1. Put the centreboard in when standing in front of the trampolines. (From the front of the boat so you have control if the wind shifts/a wave hits etc). This is difficult in waves/high winds and takes practice to perfect alone.
2. Point the boat close to the wind on the tack you will leave the beach on. (You should have decided which tack while on the beach prior to launching).
3. Make sure the sheets are eased.





2.0 SAILING GUIDE

2.2 LAUNCHING / RETRIEVING

4. Jump into the boat over the front beam and pull a little jib sheet on (if it is up). This helps get the bow down when you start sailing.
5. Move to the back of the boat and put the rudder down. (Be careful not to hit the bottom). This step can be done during step 1 if you have another person to help launch.
6. Take the tiller and mainsheet and sail keeping as close to the wind as possible. You will have to get some speed on for the foils to work so you do not just drift sideways.
7. Look out for swimmers!

With more practice you can launch from shallower water, but it is worth getting a little wet to make a safe, accident free launch.

With 2 people it is much easier. The crew holds the boat by the bow while the skipper gets the foils down and the sail controls ready. The skipper then takes the helm, the crew jumps in and you are sailing!

It is not recommended to launch the Weta in any surf. This is however sometimes unavoidable. Note the Warranty on hulls is not covered for launching in surf. If you do, however, we provide three very important tips:

1. Always have the bows pointing into the waves at all costs. This is achieved by having a person holding the bow into the waves. If the boat gets side-on to the waves your day sailing is over and there will be damage.
2. You usually only get one chance to get it right. Take your time to plan it, brief all helpers on what they need to do, and pick your time to go in between sets of waves.
3. Get the boat into as deep water as possible to get both foils fully down and locked before boarding and sailing. It is very difficult to try locking a rudder down while trying to sail out through surf.

Coming in with an onshore wind

This is relatively easy. Just make sure that the gennaker is furled away in plenty of time, all sheets are eased and the centreboard and rudder are up before it is too shallow. It is usually a good idea to have the rudder half way up when you are very near shallow water. You must however remember to keep rudder loads at a minimum when it is not fully down as the strains are significantly increased. See section 2.6 for more detail.

If there is a lot of wind and waves you can drop the main while out on the water and sail in under jib only (or bare poles if you have no jib up). Just make sure you allow plenty of time to get the sail down and secured and position yourself directly upwind of your destination landing spot. When you are in waist deep water, round the boat up into the wind, jump out over the front beam and hold the bow.



You use a similar technique in high surf conditions however you sail the boat right up into knee deep water, as the waves have usually broken and are just white wash which is easier to manage. You pick a lull in the waves when you surf in. The centreboard can be up and the rudder is down. You usually let it hit the bottom and kick up if it is a sandy surface.

Setting off in an offshore wind

This is the easiest condition for launching a Weta. Any hazards that are directly off shore need to be identified and you must give yourself enough time so you are sailing and under control when you reach them. You can launch just as you do in an onshore breeze described above (however you have the bow pointing towards the shore into the wind). Alternatively when you are more experienced you can just push off and jump into the boat, then put the foils down and sheet in as the boat drifts away from the shore.

Coming in with an offshore wind

The trick to this is to keep the foils down as deep as possible without hitting the bottom. Usually in an offshore wind you sail into the lee of the shore meaning there is less wind and things happen more slowly giving you more time to react. If it is possible you should overlay your destination spot on the most suitable tack and then slowly lift foils as you get shallower. When you are in waist-knee deep water lift both foils up completely and jump out over the front beam then hold the bow.

2.3 UPWIND SAILING

The boat is very sensitive to mainsheet tension when sailing upwind. The boat can sail reasonable tacking angles when tuned correctly. Play around with the tension in the sheet in different conditions and see how the boat feels. Too much tension and the boat will stall out – Too little tension and you will be reaching on each tack making little progress to windward. The basics of tuning the sails are outlined below. These are the practical points you will feel and see while sailing the Weta. To get a deeper understanding into the aero and hydrodynamics of sailing we suggest reading other literature that is well published. More advanced rig tuning can be found in section 4.

Sail adjustments

The Weta is a very simple set up and almost any novice sailor can sail the boat around a race course easily. Although simple, there are however fine tune adjustments and combinations of controls that can make vast speed differences. The following adjustments can be made to the sails while sailing upwind.





2.0 SAILING GUIDE

2.3 UPWIND SAILING

Main Sheet – This is the “accelerator” of the mainsail. This trims the largest and most powerful sail on the boat. Effectively on the Weta this defines the foot and leech tension – thus defining the overall sail shape. Too much and you will “choke” the boat and it will stall. Too little and you will be underpowered with an inefficient sail shape

Jib Sheet – This is the “accelerator” for the jib sail. It has the same characteristics as the main sheet, but for the smaller forward sail.

Downhaul (Cunningham) – This controls the shape in the mainsail. By pulling this on it de-powers the main sail. General rule is the more wind– the more you pull on. What is actually going on is the ‘draft’ of the sail is being brought forward, reducing the depth of the sail. You will see the top of the sail flatten out as this is pulled on and the mast will have a slight bend in it at the top. This is a very effective control for de-powering the sail. The downhaul should be loosened when sailing downwind.

Jib Halyard – Effectively this is the downhaul for the jib sail. It has exactly the same function. The higher the wind strength, the more halyard tension you should have and the reverse applies. Fine tuning is explained more in section 4.4.

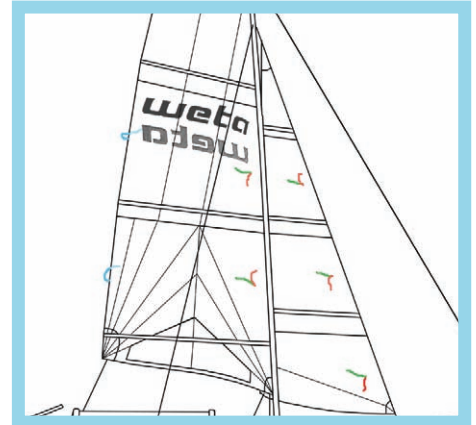
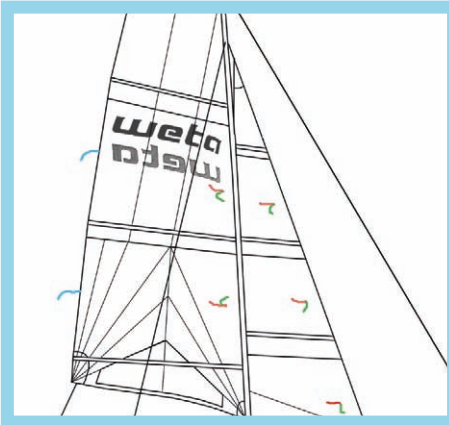
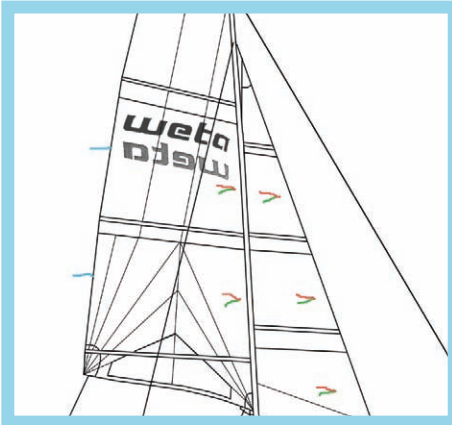
Telltales

These are the ‘speedometers’ on sailing boats. If these are flowing and acting as they should be you know your sails are working efficiently. They are a simple concept that give you direct feedback on the airflow over the sails. Without going into too much theory, the following diagrams illustrate what you are looking for when sailing upwind.

First of all you must recognize the difference between the windward and leeward telltales. The windward telltale is on the windward side of the sail. This is on the side of the sail closest to you that is seen directly. The leeward telltale is on the leeward side of the sail and is seen through the sail. There are also leech tell tales, but these are for more advanced sailors and do not give as important information as luff telltales.

The following diagrams illustrate three situations that you can find yourself in. Please note that the size of the telltales is exaggerated, the green telltales are on the windward side of the sail, the red telltales are on the leeward side of the sail, the leech telltales are blue and both sails are assumed to be trimmed evenly.





Ideal situation

- The windward telltales (green) are flying (usually slightly higher than horizontal)
- The leeward telltales (red) are flying (usually slightly lower than horizontal)
- The leech telltales (blue) are flying

Pointing too high/ Under-trimmed

- The windward telltales (green) are stalled
- The leeward telltales (red) are flying
- The leech telltales (blue) are flying

Pointing too low/ Over-trimmed

- The windward telltales (green) are flying
- The leeward telltales (red) are stalled
- The leech telltales (blue) are stalled

Tuning your sail

The art to tuning the sails upwind is described in this section. Please note that this technique is based on a set heading. You should play around this heading to find the optimal VMG (velocity made good) for the boat.

1. Point the boat in the direction to wish to head. This may actually vary with the adjustment of the Jib sheet. Once you are experienced (and have the goal of best VMG) you will know roughly what jib tension to use, set this, then sail according to the tell tales.
2. Trim the jib so that the tell tales are flying. If you see any creases or sagging in the sail, you may need to adjust your halyard tension. (see section 4.4)
3. Once the jib and heading are set, trim the main sail so the telltales are flying.

When conditions change you will go back to step 2 and re-tune the boat. Once the boat is trimmed you sail by steering according to the telltales on the luff of the jib. When sailing under main only you will ignore step 2 and just sail off the telltales on the luff of the main.





2.0 SAILING GUIDE

2.3 UPWIND SAILING

For more advanced information on rig tuning and getting all telltales on the sails flying see section 4.

This table below is a rough guide on what sort of adjustments you should be sailing with in a range of conditions. This is based on the goal to have your sails working efficiently with maximum allowable power. There are some exceptions to these basic guidelines in certain conditions. This guide is simplified and should be used as a basic starting position for novice sailors. To improve your sailing skills and increase your knowledge we recommend you read the tuning guide and other literature as well as talking to other Weta sailors. There are also internet forums you can join to communicate knowledge. The real learning begins when you start racing and you can then observe other sailors and their rig settings. Then of course tactics is another massive learning curve!

	0-5 knots	5-15 knots	15-25 knots	25+ knots
Main Sheet	Sheet loosely careful not to 'choke' the sail and stall out.	Increase the tension as the wind increases but still be careful not to 'choke' the sail.	Sheet in tight so the head of the sail is powered up.	Begin to loosen the sheet in gusts as the boat gets overpowered.
Jib Sheet	Sheet loosely careful not to 'choke' the sail and stall out.	Increase the tension as the wind increases but still be careful not to 'choke' the sail.	Begin to loosen the sheet as the boat gets overpowered.	No jib used in these conditions.
Downhaul	None.	None, unless the boat is overpowered then pull on a little until the boat is manageable.	Keep pulling more on so the boat is manageable.	Maximum.
Jib Halyard	Very little. Enough so there is either no or a slight sag in the luff of the jib between the hanks.	Just enough so there is no sagging in the jib luff.	Just enough so there is no sagging in the jib luff.	Maximum. (make sure you do not damage the sail by pulling too much on!)



2.4 DOWNWIND SAILING

Sailing a Weta downwind is completely different to sailing a Weta upwind. There are different 'rules' of what and what not to do. The tuning of the boat and the aspects you focus on are both different. The Weta is especially unique to sail downwind being a trimaran with its unique rig plan. You get a combination of characteristics from dinghies, skiffs and multihulls – all adding up for an exciting ride!

Sailing downwind without the gennaker is similar when compared with most other boats – just ease sheets and point the boat where you want to go. You should release the downhaul to relieve the load on the sail and increase its power.

Sailing with the gennaker is simple – but there are a few important "tricks" that need to be employed to avoid getting into trouble.

A good place to start is to have the gennaker rigged correctly before sailing:

- 1 **Adjust the amount of wraps on the sail.** Once the sail is hoisted the furling line should be pulled in so there are no wraps left on the drum, and then cleated. The gennaker should then be wrapped around itself a few times after it is fully furled before attaching the sheets (after a few sails you will know what suits best).

The amount of wraps on the sail should then be tested by releasing the furling line. The sail should be able to fully unfurl – if not there are too many wraps. You should then be able to fully furl up the sail (ideally with the sheet wrapping around a couple of times) – if not, there are not enough wraps.

This fine tuning is important so that your sail can be released properly and furled up completely. You will find you may put a couple of extra wraps if it is windy. Again test the furling as it is so much easier to do this on land.

- 2 **Make sure there is plenty of halyard tension.** This should be the last halyard tensioned as sometimes the jib halyard affects the luff tension in the gennaker. The reason for this is if the luff is slack, the sail will not furl away nicely and you will be left with unwanted, incorrectly furled sail flogging upwind.
- 3 **Make sure the retrieval line end is tied to the bar on the mast step** with a small bowline so you do not lose it.

The gennaker should only be used downwind or tight reaching in the light. It should only be unfurled while sailing on a reach or downwind.





2.0 SAILING GUIDE

2.4 DOWNWIND SAILING

Most sailors are used to de-powering their boat by luffing while sailing upwind. This is not the case with asymmetrical sails downwind. When sailing with a gennaker downwind the opposite applies and you should bear away to de-power.

The basics of this concept are covered in these two points:

- 1 **To get more power – Sail higher** (closer to the wind – push the tiller away from you) this increases your apparent wind and your projected sail area to the wind. This significantly increases your power and the boat loads up and takes off!
- 2 **To reduce power – Sail lower** (away from the wind – pull the tiller towards you). This has the counter effect of the above. This is an extremely effective way of easing the load on the boat. You can actually sail the boat in 25 knots quite calmly with all sails up by sailing directly downwind.

The golden rule to remember when sailing in a breeze with the gennaker is to **head down if you feel like you are losing control**. Just hold on as there are a few G-forces involved that want to throw you off the boat! This should also be combined with easing the gennaker sheet. Be sure to have your safety harness on!

You can sail downwind in 20 knots with the gennaker up and have a nice easy sail eating a picnic lunch if you are heading directly downwind. Head up 30° and you will be having a fantastic ride with lots of speed and spray! With a little experience you will gain confidence and have control. You should practise loading and unloading the boat in lighter winds to get a feel for how the boat reacts to heading before using the sail in stronger winds. A great tip is to make very small adjustments to the helm. This is because the Weta is well balanced and requires minimal helm, making the boat very sensitive to this.

Another crucially important trick when sailing with the gennaker is to **make sure you sail directly downwind when furling the gennaker away**. If this is not done you will get a 'bag' at the head of the sail where the gennaker does not furl properly and it will begin to unfurl itself while flogging in the wind. If this happens just release it again – sail directly downwind and try again. It is always a good idea to give yourself plenty of room when approaching a reef, beach or bottom mark to get the sail furled away. You will learn about this very quickly when sailing the boat! This is a standard technique for any boat with a downwind sail.

The reasoning for this is that when you head directly downwind the gennaker is sheltered in the lee of the main sail reducing the loading on it. This allows it to roll up with no creases and be securely furled so the wind cannot get inside and blow 'bags' in the sail. It is one of the small trade offs for having a sail that is so easy to use!





What if the gennaker gets jammed and I cannot furl it away?

This happens occasionally when the furling line gets jammed in the roller furler. When the sail is released at speed the line can jump under the drum and jam the furler. This can be simply avoided when rigging by putting a wrap of tape around the base of the furling drum so the line cannot jump under. (a)

If this happens and you are stuck with the sail up you can manually drop it. Just let the halyard go and drop it to the deck. No problem. You can then tie it into the cockpit and sail on. If you let the sail flog you will quickly damage the sail.

Gennaker Trouble Shooting

Problem	Cause	Solution
After completely pulling in the gennaker I am left with some sail out.	Not enough wraps on the gennaker around the luff.	Untie the gennaker sheets, wrap the clew around the sail a few more times then tie sheets on again.
When I release the gennaker it does not unfurl completely.	Too many wraps on the gennaker around the luff.	Untie the gennaker sheets, unwrap the clew around the sail a few times then tie sheets on again.
When I furl up the sail I get a 'bag' at the top and it flogs in the wind.	The gennaker is not being furled away while sailing directly downwind. OR There is not enough halyard tension in the gennaker.	Sail directly downwind when furling away the gennaker. OR Pull more halyard tension on.
My furling line jams under the drum so I cannot pull it in.	The line jumps under the drum sometimes when it is released at speed.	Put a couple of wraps of tape around the bottom of the drum.
My sheets always catch on the forestay when I gybe.	The knots are too big and catch on the forestay.	Use an alternative method to tie the sheets. See 2.9-4

Trimming the Gennaker

Trimming the Weta gennaker is the same as trimming any other dinghy gennaker. The only difference is that the Weta gennaker is cut quite flat (so it furls away nicely) so it collapses more easily. The ideal trim is when the luff (front) of the gennaker is just beginning to curl around. If it curls around too much – sheet in. If it is not curling around at all – the sheets need to be eased. This is possible in lighter airs with the Weta but in stronger winds as soon as the luff curls the gennaker collapses, so you tend to slightly over sheet the sail and sail more off feel.





2.0 SAILING GUIDE

2.5 CAPSIZE RECOVERY

2.5 CAPSIZE RECOVERY

The Weta is one of the easiest multihulls to right! You get stability and safety. The process is simple, but you still need to know the correct technique and steps to take to ensure a quick, safe and efficient recovery. You must make sure you have read the instructions and can correctly use the safety harness. The procedure to right the boat is as follows:

1. Safety Harness Use

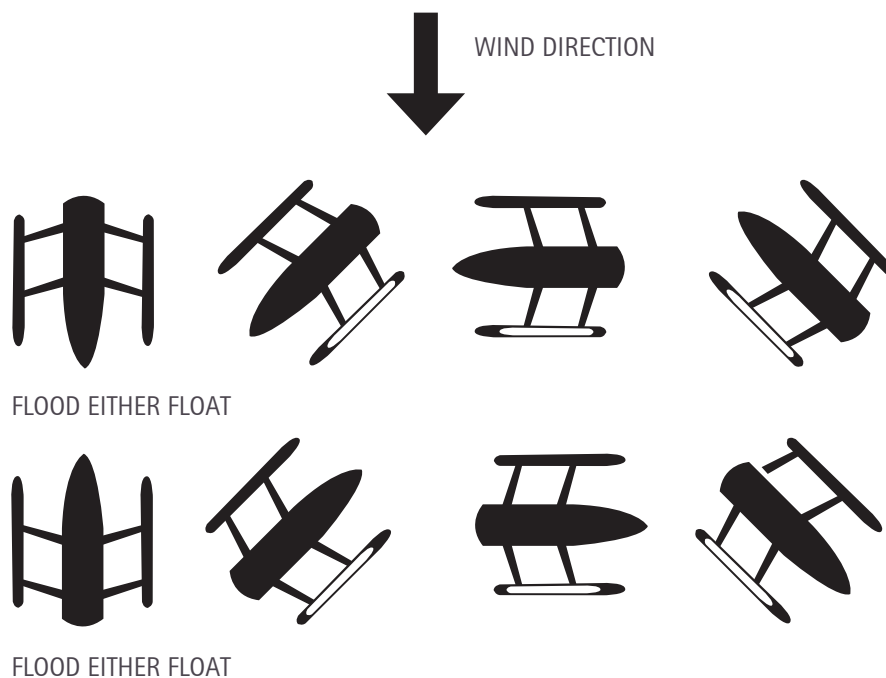
You must know how to use the safety harness correctly. Read section 1.3-9. If you capsize the first thing you should do is release the safety harness at the earliest possible opportunity. This is usually as the boat is going over. This is most important so you do not get stuck under the boat with the harness on. If you do get stuck under water with the harness on, remain calm, take your time to locate the quick release line and free yourself.

2. Furl away the gennaker

If you have capsized with the gennaker up it should be furled away before righting the boat. It is possible to right the boat with the gennaker up, but this makes things more difficult. This is done by swimming to the main hull where the furling line is located and pulling it in. Sometimes it will get caught up (sheets) so you will only be able to get it in half way. This is better than nothing.

3. Choose which float to flood

This decision determines how easy the rest of the righting procedure will be. You should choose the hull that is on the lee side of the oncoming wind. The following diagrams show the best hull to flood in different orientations to the wind. This is important because your selection can mean the wind and waves are working with you or against you. If you make the wrong decision – it is no problem, you will just have to swim the bow of the boat around through the wind before righting the boat.



4. *Remove the hatch cover*

You can walk over the underside of the trampoline and undo the hatch at the back of your selected float. Make sure you do not lose it.

5. *Flooding the hull*

This happens naturally. It is however a little slow – especially if you are in a race. To speed up this process put weight on the bow of the float you are trying to flood by sitting on it. This helps the air escape and water enter.

6. *Righting the boat*

When the hull is flooded all you need to do is put your weight on that side of the boat and wait for the boat to right itself. The best place to stand is on the underside of the front beam. This also makes it easy to climb back into the boat. If the boat comes up to 45° and no further it is likely the boat is in the wrong orientation to the wind (described in step 3). You will need to swim the bow around through the wind so the oncoming wind is on the other side of the boat. This may take a little time, but is usually possible.

7. *Move over the boat onto the centerboard.*

As the boat comes up climb from the underside of the beam onto the centreboard.

8. *Climb over the centerboard onto the main hull*

As the boat rights fully climb from the centreboard over the front beam into the cockpit. This is easy as there are plenty of things to hold on to and it is not a big distance.

9. *Take the helm and release the sheets*

Now the boat is upright you should move towards the back of the boat, take the helm and release the sheets. If you did not manage to completely furl away the gennaker as described in step 2 you can do this now.

10. *Sail on a heading so the water drains out*

The best heading to take is to sail half way between a reach and upwind (approx 60° to the wind). On this heading your sheets are loosely in (not maximum power) and the flooded hull is on the windward side. Sail so you are at the back of the boat helping the water drain out. You should be able to get all but 1-2 litres of water out.

11. *Replacing the hatch*

This needs to be done carefully. Sail on the same heading as in 10, but slow right down by easing sheets. Move to the back of the boat on the side where you can approach the hatch, reach over and screw the cover back in. You can completely stop the boat to do this with less risk of losing the cover, but you will get a little water in the hull. Once you have secured the hatch back in you are ready to sail again!





2.0 SAILING GUIDE

2.5 CAPSIZE RECOVERY

12. Positioning / technique if you have a crew

If you have a crew on board it is usually an easier exercise to perform. They have 2 options for positioning during righting.

- i) They follow the skipper during the process – sitting on the flooding hull, walking on the underside of the beam, onto the centreboard and climbing over the hull into the cockpit.
- ii) When the boat is on its side (step 7) the crew swims around the boat and sits in the water next to the centreboard in the cockpit. When the boat is righted the crew is scooped up by the hull and in the boat ready to help.

Either option works well. (ii) is best suited for an experienced skipper and relatively inexperienced crew in warmer climates.

Once the boat is upright the crew can ease sheets, furl the gennaker and replace the hatch cover while the skipper focuses on helming the boat in the correct heading.

13. Hatch retaining line

If you are not confident that you will be able to replace the hatch without losing it you can attach a retaining line. This is described in section 2.9-7. The Weta will however sail without the hatch replaced in these conditions.



2.6 RUDDER USE

Like all small sailing dinghies the rudder is a sensitive component and needs to be looked after and maintained in order for it to function correctly. The Dotan rudder system is an easy to use flick up system.

Details on how to use it, adjustment and maintenance can be found on their website www.dotan.com

Weta Marine also provide the following advice:

- Never lift a boat by holding onto the rudder (or any part of it) as this will result in damage to the rudder system.
- Avoid sailing with the rudder blade when it is not completely down. If you have to (launching in shallow water) use very little helm, do not load up the boat by sheeting in the sails and do not scull. Put the rudder completely down at the first possible opportunity.
- Invest time into making sure your rudder is set up correctly before first use. This will greatly reduce the likelihood of damage.
- If something on your rudder feels loose it is likely there is a problem. Check over the bolts and the fit of the blade in the stock.



Adjusting your rudder

You should adjust your rudder angle so it is in its 'maximum down' position. This position is as far kicked under the boat as possible. This reduces the loading on the blade and stock. This 'maximum position' has been designed to be most efficient for the Weta. As soon as it is kicked back, the loading increases on the blade and it is likely to suffer damage.

2.7 CLOTHING

To maximise enjoyment of your Weta sailing it is essential to have the correct sailing gear. There is a great selection of equipment that is reasonably priced. You have purchased your Weta, so why not spend a little more and be comfortable while you are sailing. One of the factors that put people off the sport is getting cold. There is no excuse for this now!

Something to remember is that even in summer when it is uncomfortably hot on land it can still be very cold on the water being exposed to the wind and spray. We recommend you always have a warm jacket with you.

You should invest good money into the correct clothing – you will not regret this decision. This is absolutely essential if you are introducing someone to sailing.

When selecting a jacket it is important to get one that is suited to Weta use. Do not get a jacket with an inner lining. This is because you are likely to get very wet and a lining gets heavy and does not dry! You achieve an effective lining by layering up underneath with quick drying, warm thermals, titanium tops etc. Ideally you want a lightweight jacket that keeps the wind and water out. This means you can use it in warm and cold conditions depending on what you layer up underneath!

Drysuit selection: A couple of points to take note of when selecting.

1. Get a suit with the zip on the front if you plan on sailing yourself as you cannot zip up a back entry suit alone. Also a top to bottom front zip is useful for guys when nature calls.
2. Neck seal. There are two options. It is recommended to go for a neoprene seal over a latex seal as the load is distributed evenly over the neck increasing comfort. These seals are also more easily replaced.

It is recommended you consider this advice then head to local marine clothing store and seek their advice as to the best clothing as all locations have different sailing conditions.

* A couple of tips for eyewear:
Do not attempt to wipe the lenses, just wash the salt crystals off in any liquid (water, salt water, juice..), shake off the excess liquid and allow to dry. Do not use fingers on the lens as this leaves grease marks.





2.0 SAILING GUIDE

2.7 CLOTHING

Here are a few options with advantages, disadvantages and suited uses.

Item	Usage / options	Advantages	Disadvantages
Wetsuit	All conditions	Warm and plenty of options in length / thickness / style	Can be restrictive in movements depending on the wetsuit type
Drysuit	All conditions best in colder	You keep dry, can layer clothing underneath to suit conditions, easy to use	Can be restricting if you have a poor fitting suit, can be bulky, can get too hot in light air
Smock Top	All conditions	Can store easily in boat, can layer with other clothing	Limited warmth
Thermal Underwear	All conditions	Lightweight, warm, layerable, dry quickly	
Titanium Top	All conditions	Warm, layerable	
Rash top	All conditions best in light sunny conditions	Protect skin from rashes and sun, lightweight and cool, fast drying	
Boots	All conditions	Protect feet, keep feet warm, options – rubber, wetsuit, deck shoes	Loss of feel in the boat for racers
Gloves	All conditions	Protect hands, keep hands warm, plenty of options	



2.8 GEAR STORAGE IN THE BOATS

There are a number of options for storing gear on your Weta whether it is for an afternoon sail or a 5 day voyage.

- Hatch fitted in the hull
- Removable storage bag in the cockpit
- Inside the floats through the inspection ports
- Dry bags
- Lifejacket / Jacket storage

Hatch fitted in the hull

This is the best option for mass storage on the boats. The major and only disadvantage of this is the potential for leaking. Any boat this size with a hatch opening will leak some water – it is just a matter of how much. A big advantage for a hatch is that you can let the boat air and dry out – although this is not as important on the Weta because the construction is vacuum bagged, so there are no air pockets for water to seep into. You can also repair / add fittings with access to the underside of the deck.



There are 2 possible places for a hatch:

1. In front of the centrecase. This is the best position as it is a compartment contained between the mast and front beam bulkheads. It is also an ideal position to add any extra weight. (a, b)
2. In the cockpit sides. This is usually only used if you are repairing/ replacing deck hardware and need access to the deck underside. Storage here is usually done with a hatch bag of some sort so you do not lose your gear under the cockpit.

Important points to remember when installing: **As soon as the hatch is distorted in shape it will leak!**

1. When cutting the opening for the hatch make sure it is a loose fit. If it is tight the hatch will be distorted when fitted and will cause leakage when the hatch is in.
2. Use plenty of silicone to seal the sides of the hatch. Usually it is not necessary to use screws when fitting a hatch as the silicone does the job. Avoiding screws also reduces the likelihood of distorting the hatch.
3. Select a quality hatch that is likely to leak the least. There will not be a hatch that is 100% watertight. This is because as the boat rides over waves the hull expands and compresses effectively making the boat suck and blow air/water through any opening. The breather hole does most of this, but there is always a little that comes in from somewhere else.





2.0 SAILING GUIDE

2.8 GEAR STORAGE IN THE BOATS



Removable storage bags

There are a number of options within this category. These are a great quick solutions that are effective without much investment and do not require any modifications to the hull. Dry bags are cheap and easy to use. They come in all shapes and sizes and can be attached to the trampolines or main hull. Attachment points that have been used are the hiking straps, grab handles, safety harness padeye, centerboard handle, mast step and trampoline eyes. All of these have their benefits depending on the bag type. Some owners have glued a plastic track to the cockpit side and have a bag with a boltrope that slides onto the track so they have a simple removable storage system. (c)

Storage inside the floats

There is good storage space inside the float hulls. This is ideal for destinations sails. You must remember that it is likely to get wet inside the hulls and that it can be difficult to access when sailing. Also you need to make sure whatever you put in the hulls is fastened so it cannot slide forward to the bow of the floats (a small string does the job).

Lifejacket / Jacket Storage

The best storage for small items is on you! Most lifejackets and jackets have a number of pockets on them which are great for things like drinks, tape, sun block, rope, snacks, keys etc.

2.9 OPTIONS AND MODIFICATIONS

Before making any modifications please refer to the class rules if you intend to race.

1 Gennaker Blocks

The gennaker system can be re-run to make handling the sheet loads easier. This is achieved by lengthening the sheet and adding 2 more blocks onto the beams as illustrated below.

Configuration 1 – Lengthen the sheets 1.5m and set the blocks up so the ratchet block is on the back corner of the beam frame. (d)

Configuration 2 – Lengthen the sheets 3m and set the blocks up so the ratchet block remains in its existing position. (e)

The re-running of this sheet gives a 180° wrap around the ratchet block instead of the standard 90° wrap creating more friction to hold the sheet.



2 Mainsheet System

The mainsheet that is supplied with the boat is 5:1. There are multiple ways to increase this purchase and create a 6:1. You may also substitute blocks to suit your personal preference. The supplied mainsheet system has two adjustments to achieve your personal preference. These are the height of the block and the angle of the cleat.

3 Main and Jib Sheet Configuration

A tip for single handed racers is to tie the tail of the mainsheet to the jib sheets. This means that you can be hiking out on the trampoline and have access to both the main and jib if you have one in your hand as they are attached to each other.



4 Gennaker Sheet Attachment

If the gennaker sheets are catching on the forestay when gybing you can modify the way they are attached to the clew of the sail. This is done by using a smaller gauge rope on the clew and then attaching those ends to the existing sheets by either splicing or tying a simple knot. (f)

5 Sheet Lengths

The length of the sheets has been optimized for efficiency without cluttering up the boat, especially the gennaker. The supplied length has not been influenced by cost. It is personal preference if owners wish to shorten or lengthen them. The diameter chosen for the sheets is also personal choice.

6 Trampoline Lacing Adjustment

You can adjust the spacing of the lacing as instructed in section 1.2 so the trampolines slide in and line up perfectly with the blocks/cleats.

The best way to do this is to put the beams in the sockets and set up the trampoline fastening lines (cheek blocks and cleats) to the correct alignment you want and then tightly lace up the underside of the trampoline. You will be left with a perfectly aligned trampoline.

7 Hatch Retainer Line

If you are worried about losing your hatch cover in the event of a capsize you can add a retainer line. This can be done by attaching fastening points on both the hatch cover and the inside of the float hull. You then tie a line (at least 2mm diameter) between the two fastening points allowing enough length so the hatch can be screwed in without being restricted by the line. The key to doing this right is to make sure the fastening points do not compromise the water tight integrity of the hull. A new hatch will soon be available with a line attached.





2.0 SAILING GUIDE

2.9 OPTIONS AND MODIFICATIONS

8 Wind Indicators

There are four options outlined here on how to attach wind indicating devices on the Weta. It will come down to personal preference and how you use your Weta as to what option works best for you.

- 1 Windex or similar attached to the top of the mast. This option is simple to install (either small rivets or tape) and gives very accurate readings. The only downside is you have to look at the top of the mast to see it and remember to attach it before raising the mast!
- 2 Windex or similar attached to the end of the prod. This option is installed similar to the mast top, but needs to be clear of the furlingdrum and stick out far enough so the gennaker will not get caught. You will also need to bend the shaft so the head is orientated correctly. It is a place where you have great visibility and a reasonable wind reading.
- 3 Pieces of wool/audio tape tied to the side stays. This is a quick cheap and simple way to get a rough reading however these are not so durable and are not in the best position to take readings from.
- 4 Wind Indicator attached to the lower mast section where the sail track ends. This can only be done when sailing without the jib. It is a great viewing point and gives reasonable wind readings.

3.1 TRANSPORTING YOUR WETA

Tie Down Points

There are a few main points you need to know that are effective to safely tie down a Weta for road trailing. These are described below. Each point is backed up with a photo example. Every one of these is important and has a purpose which is described. These points are the bare minimum for a short trip. We strongly recommend more secure attachment for longer journeys.

Securing the Weta to the beach Trolley

1. Weta bow to beach trolley (a)

This tie prevents the Weta main hull from sliding back or forward on the beach trolley. There are a number of ways to tie it, but it is recommended to tie directly onto the bow eye fittings for a secure fastening.

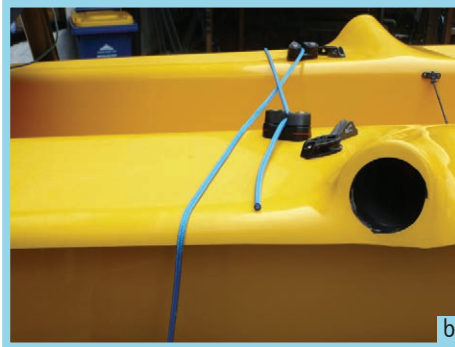
2. Weta main hull to beach trolley (b)

These ties hold the Weta main hull to the beach trolley and prevent it from bouncing up and down. Usually the weight of the Weta does this, but over bumps the Weta can jump. For long voyages an extra tie is recommended. These ties are also essential to keep the Weta stable when assembling the beams to the main hull.



3. Cunningham to front trampoline grab handles (c)

By securing the trampolines like this you hold the float/beam structures down and prevent them from sliding back on the trailer.



4. Mainsheet to back trampoline grab handles (d, e)

By securing the mainsheet here you do the same as the Cunningham line, but prevent the float/beam structures from sliding forward.

5. Tie beam up to trampoline (f)

This tie is not necessary from a safety point, but does a great job protecting your Weta from rubbing/chafing. It just holds the beam off the main hull and protects the gel coat.



6. Check mast ties are on (g)

It is always a good idea to check the mast ties are secure before traveling. On longer trips it is recommended to use more ties than shown as the shock cord is intended for short trips

Securing the Weta/beach trolley to the road trailer

1. Fastening trolley front to the trailer (h, i, j)

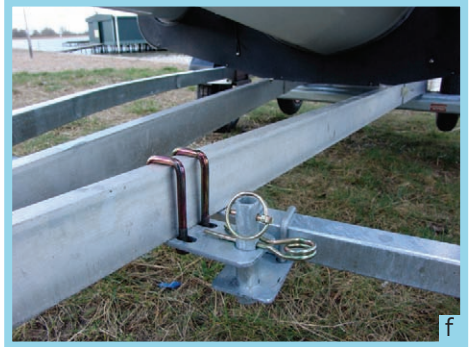
This is one of the most important ties when securing a Weta to a trailer (or any transportation platform). It anchors the bow to a point so it cannot move forward, back, side to side or up and down. It is possible to use a pin here for a quick release system, but be aware of metal on metal wear. This is not recommended as it wears down both trailers and creates significant road noise. It is best used with a lubricated surface of some sort (acetyl) and a fool proof locking pin.





3.0 LOOKING AFTER YOUR WETA

3.1 TRANSPORTING YOUR WETA



2. Picking the point where to sit the Weta trolley on the trailer

It is important to get this point right. This balance can determine how likely you are to damage your Weta. In some cases this will be pre-determined as the Weta trolley will sit on the wheels, therefore effectively on the axle which is the ideal position. With a combi trailer it is desirable to have the Weta load taken as close to the axle as possible. Here are some examples of sitting points that work well.

The trolley sits on its wheels (axle) and the front. (k)

The trolley sits on the frame just in front of the axles right up to the front end. (l)

The trolley sits on the frame behind the wheels and near the front support. (m)



3. Picking the point where to strap the boat

Again it is important to get this point right as you can severely damage your boat if you get this wrong. One strap in the right position is fine for shorter trips. If you cannot get one strap in the correct position we recommend two straps as shown in the photos. These two straps should be used for longer trips.

- A single tie down in the best suited position (n)
- A single tie down in the best suited position (o)
- Two tie downs in ideal positions (p)
- Two tie downs in ideal positions (q)





4. How to strap the boat

Webbing straps are best as they are gentle on the exterior gel coat of the Weta. You can use plastic clips or ratchet tensioners but be very careful when using a ratchet to tension the straps. Do not over tighten the straps as you will just bend the beach trailer. It is best to just nip them tight. Rope (and tying knots) is usually an unsatisfactory way of securing the Weta; ratchet tensioners or robust plastic clips do a much better job. The best position to tie the boat is over the floats behind the front beam uprights and across the main deck behind the jib swivel blocks. (r)



5. Extra ties

Extra ties are recommended for longer trips. Some of these are shown here with a description of their function.

Ties on the back of the trailer (when trailing on wheels). These help to keep the boat central on the trailer and stop it bouncing. (s)

Tie on floats to the beach trailer. Just extra security to stop them from jumping off the trailer frame. (t)

6. Balance and tongue weight

To have a smooth trailing ride it is important to get the balance and tongue weight of the boat correct. The trailer should



be balanced symmetrically side to side. For/aft generally speaking it should have a tongue weigh of approximately 1 5-30kg (10% of gross trailer weight). If there is a negative tongue weight you are likely to experience sway in the trailer. Usually a good rule to use when minimising the load on the trailer is to position the Weta trolley near, or over, the trailer axle.





3.0 LOOKING AFTER YOUR WETA

3.1 TRANSPORTING YOUR WETA



Trailing Options

There are number of ways to get your Weta from "A" to "B". The most common and recommended way is to use a trailer. There are a few different transport options outlined below, but it is best to contact your Weta distributor for the best suited and most readily available system in your country. Usually it is possible to tie a Weta down to any utility/ garden trailer providing it is long enough.

Combi Trailer (a, b, c, d)

Advantages: Easy to load on and off with the low centre of gravity, lightweight, compact to store, takes minimal space, relatively cheap.

Disadvantages: Low to road and susceptible to stone chips, usually a slightly "rougher" ride as it is lightweight, can be expensive to make a one off if not a Weta specific production model.

Flat Deck/Utility Trailer (e, f, g, h, i)



Advantages: Can be a multi use trailer, usually a good ride, ability to have two Weta on top of each other with framework, boat is more protected from stones.

Disadvantages: High centre of gravity, can be more effort pulling boat up ramps (ramps are an extra part), usually larger than combi equivalent.



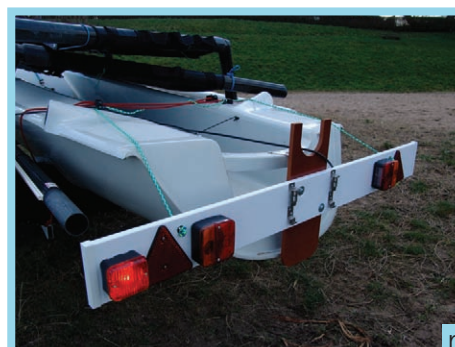


Ramps can be used to get the boat onto a utility trailer (j)

Car Top / Ute Tray (k, l)

Advantages: No need for a trailer, lower ferry charges etc

Disadvantages: Difficult to load on roof alone, need roof racks with a high load rating, generally takes longer to load up.



Other Considerations when Trailing your Weta

Stowing gear in the boat when trailing

The amount of gear stowed in the boat when trailing must be minimised. It is possible to load the sails and foils in the cockpit (must be secured) but this does increase the stresses on the beach trolley and is not recommended. This dynamic loading is significant when the Weta travels over the road and can cause damage to the trolley or boat.

Lighting Board

There are various options for lighting boards on road trailers. Most utility trailers have the lights built into them and this is usually sufficient. Combi trailers require a lighting board on the transom of the boat. An example of a system is shown adjacent. When you have a lighting board you need a long length of cable to connect it to the car. A good trick is to twist the cable to take the slack out of it to prevent it dragging on road. The trampoline cheek block and clam cleat can be used for securing the lighting board. (m, n, o, p)





3.0 LOOKING AFTER YOUR WETA

3.2 WASHING YOUR WETA

3.2 WASHING YOUR WETA

The Weta design has taken into consideration use in salt water and the impact this has with corrosion. Each component has been carefully selected to minimize the effects of this. Where possible, metallic components have been replaced with high quality composites or plastics and if unavoidable stainless steel 316 marine grade has been used. A couple of aluminum components have been used where necessary but these have been anodized.

It is possible not to wash a Weta for an extended period of time and experience minimal corrosion – but it is recommended that the boat is washed after every outing to keep the boat in top condition. All that is needed is a quick rinse off with a hose or a bucket of water. When doing this you should focus on any metal parts or areas that are likely to clog up with salt.

You do not need to wash the sails after each outing, every 10 outings is ok. However you must wash the mainsail bolt rope and the mast sail track after each outing so the sail slides up easily. If the sail is hard to pull up, bring it back down and investigate, do not force it. It is a good idea to use some silicon spray so the sail slides smoothly up and down the track.

Always wash the sheets and halyards otherwise they will become stiff and start smelling.

Wash both the upper and lower roller furler units after each outing to maintain smooth running.

3.3 LEAKS IN YOUR WETA

Water is an amazing compound and will find its way into any dry place it can. All Weta leave the factory after a pressure test but they cannot be guaranteed to be 100% watertight in their life. If you are getting significant amounts of water in the hulls you can perform the following tests and fix the problem. Short term water in the hulls is not a problem and the boat will not deteriorate. This is because they are manufactured using vacuum bag technology so the laminates are 100% resin soaked and water cannot penetrate into it. However like any laminate, water combined with heat causes osmosis and will deteriorate the laminates over time so it is recommended the boats are aired out and kept dry to prolong their lifetime.

Float Hulls

The floats are not designed to be 100% watertight. In heavy winds you should expect to get a few cups of water in each float. This is because there is no lightweight hatch available that guarantees a complete watertight seal when used in an underwater application. This is also not helped when the floats



move through the water and go under compression and expansion blowing air out and sucking water in through microscopic gaps in the seal of the hatch. Some hatches work well and will not leak any water, but this is rare and you should consider yourself lucky if you get one of these! You can improve the seal by using Vaseline or similar, but this is normally a temporary fix as over time it picks up sand and dirt and becomes very difficult to work with. If there is a major leak in the float you should reseal the hatch as this is the only likely place water will enter the hull unless there has been some significant damage.

You will also get water inside the beams when sailing in heavy winds or have capsized (usually only a cup or two). To get this out simply rotate the float on the trolley so the beam ends point to the ground. Be careful the hull does not slip off the trolley.

Main Hull

Your main hull should be dry. The only occasion you will get water in the hull is through the breather hole if it has been windy with a lot of water splashing through the cockpit or you have capsized. To test if there is water leaking in the hull simply remove the bung and tilt the boat with the bow up so any water in the hull drains to the back.

If you are getting any significant amounts of water in the main hull you will have to find the leaks using the following test. This test requires 2 people to carry out.

1. Have a bucket of warm soapy water ready.
2. Block the breather hole under the rudder bar at the back of the boat with a piece of tape or similar. Do not permanently block this hole as this could result in major damage!
3. Remove the bung and blow 3-5 breaths into the boat. Keep the pressure in the hull by either blocking the hole with your thumb or keeping your mouth over the hole. Alternatively you can use a vacuum on reverse but be careful not to put too much pressure in the hull as you can blow the deck off easily! You only require a small pressure differential to find leaks.
4. The second person rubs the soapy water solution over areas on the hull that could be potential sources of the leak. If bubbles appear then you have found your leak. You can make a 'film bubble' seal over the sockets and centrecase to check they are not leaking. When you test the centrecase seal the bottom of it (underneath the hull) with some thick tape and make a film bubble over the top. If this bubble bursts you can then put soapy water in the case and find the localized leak.

The places to look for leaks are: deck fittings, sockets, centrecase and the hull/deck join. If you cannot find any leaks in these areas you should re-seal the bung fitting as this is the most likely cause.





3.0 LOOKING AFTER YOUR WETA

3.3 LEAKS IN YOUR WETA

It should be noted that any hatches that are fitted to the main hull are very likely to leak at least a little bit, so this is a good place to start looking for a leak. For correct installation see section 2.8

Any fittings on the hull can be fixed by removing the component and re-sealing it with silicone. Make sure to get silicone on the screw/bolt and around the base of the fitting. If there is a leak elsewhere on the boat consult your Weta distributor on how to go about fixing it.

3.4 STORAGE AND SECURITY

The best place to store a Weta is in a cool dry place out of the weather. This will prolong the life of your boat and will keep it in excellent condition. If you do store the Weta outside please be aware that the covers available for purchase are not designed to be used for permanent storage. Just like all other dinghy covers these are for occasional use. The reasons for this are that the heat and moisture can be a catalyst to osmosis in both the Weta gelcoat and the covers fabric. Recognizing that it is likely owners will store boats outside all year round a thick durable fabric has been selected that is most suited for this use.

It is a good idea not to leave the mast up. It takes 5 minutes to fold the boat up and put on the boat cover. You then protect the gelcoat, fittings, trampolines, mast, mast track and trailer wheels. This is a small investment of time that greatly reduces the effects of UV and dirt. By collapsing the Weta down for overnight storage it also reduces the windage of the boat. The Weta is a lightweight boat and it does not take much wind to blow it over/around. It is strongly recommended to secure the boat to the ground when it is being left for long periods of time and could be subjected to high winds. Two of the easiest and effective ways of doing this are to use stakes in the ground or concrete weights.

When storing your Weta outside – whether it be overnight, long term or leaving your trailer at a beach for the day there are a few options to keep your Weta secure. Although all of these can be overcome by a determined thief, a combination of devices acts as a great deterrent.

Coupling Locks

There are a range of these available. They effectively block the trailer coupling so it cannot be attached to a tow bar. These are as effective depending on how easy they are to break off. Good when used with a wheel clamp.



Wheel Clamp

This is one of the best deterrents if you can find a suitable one that also prevents the thief from removing the wheel nuts.

Pad Locks

A padlock and chain is really quite ineffective as a set of bolt cutters will usually slice through chain easily, but does act as an extra deterrent.

3.5 CARE AND MAINTENANCE

Constant maintenance of your Weta will prevent damage and prolong the life of your boat. The Weta is one of the most "maintenance free" sailing dinghies about, but a little maintenance will make a big difference to your enjoyment. Like any fiberglass boat, if the gel coat is not well looked after it will deteriorate cosmetically over time. In saying that a well looked after boat can look brand new after 5 years and there are some fantastic examples of this already.

Some basic tips for care of your gel coat are given here.

Gelcoats provide the exterior surface layer of most fibreglass surfaces. They are specialist resins, which not only give the surface its aesthetic appearance, but also provide critical performance factors. These factors include water resistance; chemical resistance; gloss retention and weathering properties.

Exposure to sunlight, water, dust and chemicals can be detrimental to the gelcoat surface, causing chalking, discolouration, yellowing or loss of gloss. Simple periodic maintenance procedures will minimize these changes.

Basic Maintenance

When not in use, keep the gelcoat surface out of the sun or covered with a Weta boat cover. Do not use sheet plastic or other non-porous materials, which can trap moisture between the cover and the surface.

Wash the surface with a mild detergent. For best results, use cleaner recommended for fibreglass and follow label directions.

Do not use automatic dishwasher detergent, abrasives, bleaches, or strong chemicals with acids/bases or ammonia.

Wax at least twice yearly to restore gloss and protect the finish. Use only wax recommended for fibreglass and follow instructions carefully.

Never wax a gelcoat surface in direct sunlight.





3.0 LOOKING AFTER YOUR WETA

3.5 CARE AND MAINTENANCE

Corrective Procedures

1. **Chalking** – A fine rubbing compound as well as a mild detergent will reduce the weathering and chalking accumulated on the surface. Use only a fine grit compound and follow label directions carefully. For best results wax after compounding.
Do not apply rubbing compound in direct sunlight.
2. **Scratches and Nicks** – Most will be removed by using a rubbing compound followed by waxing as described above.
3. **Stains** – Most will be removed by washing with a mild detergent. For stubborn stains, use a fine abrasive household cleanser followed by waxing to restore original luster.

Non water-soluble stains such as grease and oil, rubber heel marks, etc. can often be removed by using a solvent such as acetone, rubbing alcohol, toluene or xylene, followed by a mild detergent. If these solvents are not effective, try a rubbing compound or fine sanding followed by waxing.

4. **Deep Marks, Gouges or Holes** –These should be repaired professionally. Gelcoats can be well repaired by professionals, and in most cases the repair will be undetectable. In cases where the damage has pierced the gelcoat layer, further exposure to water or chemicals should be avoided. Failure to observe this precaution may result in extensive and potentially costly damage to the underlying laminate structure.

3.6 REPLACING PARTS

The Weta has been designed so there is minimal wear/deterioration on parts. However there is always the occasion where kit needs replacement and damage is unavoidable. Most of the hardware and ropes on the Weta are available from any marine chandlery. The parts that are specific to the Weta can be ordered from your local Weta distributor.



Spare parts that can be ordered from your local Weta distributor:

- Mast top section (with all fittings)
- Mast bottom section (with all fittings)
- Prod (bare section with slot cut)
- Mainsail (with battens)
- Jib (with battens)
- Gennaker
- Centreboard
- Rudder blade
- Rudder stock (with tiller)
- Boat Cover
- Foil Cover
- Safety Harness + Tether
- Carbon Tiller Extension
- Trampolines (pair with ropes)
- Set of Stays (no adjusters)
- Halyard Strop
- Main Hull (only internally bolted hardware included)
- Single float/beam assembly (1 side, no trampolines)
- Beach Trolley Complete
- Inspection port 4" black
- Mast Sheave
- Mast Sheave Pin
- Mast Sheave Guide
- Gennaker Tang (incl. bolt + nuts)
- Horn Cleat
- Shackle
- Stay Adjuster
- Rudder Pin
- Rudder Gudgeon Set
- Mast Step
- Tyre Inner Tube
- R-Clip
- Circlip
- Eye bolts set of 2
- Prod End Cap
- Jib Batten set
- Main Batten set
- Batten Pocket Protector
- Carbon Float Bow Cap

Before replacing any hardware on the deck please seek advice from your Weta dealer as to how to go about doing it without compromising the strength of the boat.

As the Weta racing fleets are only just getting up to speed these comments are based on observations at the developmental stage. There has been limited testing done on the Weta in terms of fine tuning so more technical information and calibrations will be given in a second improved tuning guide.





4.0 WETA TUNING GUIDE

4.1 WORKING TOWARDS AN EFFICIENT SAIL

4.1 WORKING TOWARDS AN EFFICIENT SAIL

Essentially the purpose of tuning a boat is to get the sails and hull working as efficiently as possible. This means maximum power and minimum drag. This guide will focus less on the aero and hydrodynamic theories of sailing and more on the practical applications of tuning the Weta. The guide is also based on the assumption that all sheet tensions are set at their optimal adjustment for the given rig set-up, as per section 2.3

What am I looking for with the sails?

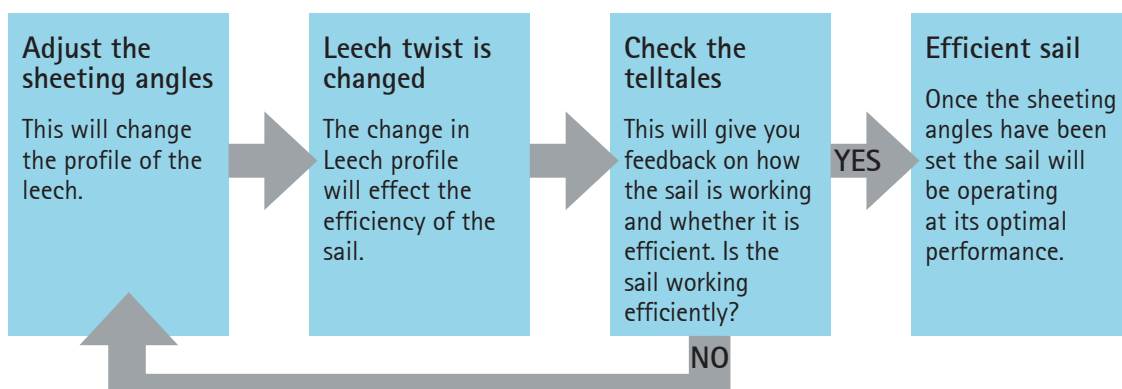
Upwind, the tell tales on the main and jib are used to see what the wind is doing on the sail. You want uninterrupted air flow over the rig. This air flow can be seen when the telltales on both sides of the sail are flying approximately horizontally. The leeward tell tales will be slightly lifted and the windward ones slightly dropped when the sail is performing at greatest efficiency. The telltales on the leech of the sail do not follow this rule – they tend to be flying horizontally 50% of the time and the other 50% of the time "hooked" round the back of the sail. Refer to section 2.3 on what to look for in the telltales.

Because the wind hits your sails at different directions at different heights you need to control the sail shape to achieve maximum efficiency. This is due to apparent wind and wind shear. You will use the techniques on the following pages to adjust your sail shape to achieve maximum efficiency.

Downwind you generally sail with apparent wind by sailing a zig-zag course gybing towards your destination. Refer to section 2.4 for how to trim the gennaker.

Optimizing telltales, leech twist and sheeting angles for sail efficiency

These three factors are all interrelated and used to optimize the rig's efficiency. Sheeting angles are explained more in the next section. A simplified flow diagram of these effects is illustrated below.



The telltales are used to get feedback as to how the sail is working. If it is not working efficiently you will need to adjust the sheeting angle, changing the leech profile. A guideline as to what you are looking for is described below. These are specific to the mainsail, but the same theory can be applied to the jib. Also note that these particular leech profiles are specific to a certain condition, so what is shown as optimal here will not be optimal in other wind strengths.

The following diagrams illustrate three situations that you can find yourself in. Please note that the size of the telltales is exaggerated, the green telltales are on the windward side of the sail, the red telltales are on the leeward side of the sail and the leech telltales are blue. The diagrams are all for starboard tack.



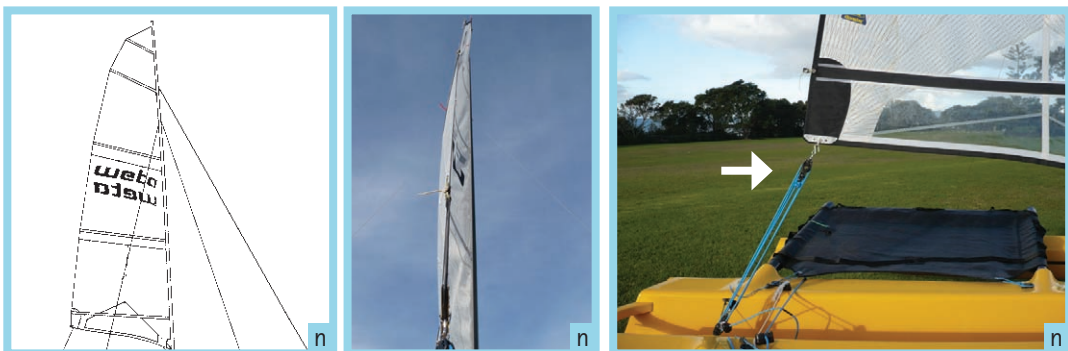
The leech is too open

These telltales show the leech is too open for the conditions and the sheeting angle must be moved back to increase the efficiency of the sail.



The leech is too closed

These telltales show the leech is too closed for the conditions and the sheeting angle must be moved forward to increase the efficiency of the sail.



The leech is optimised

These telltales show the leech is correctly tuned and the sheeting angle needs no adjustment.



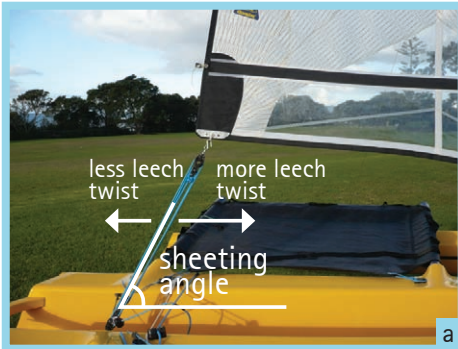


4.0 WETA TUNING GUIDE

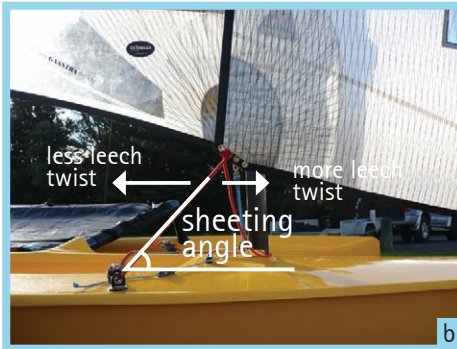
4.2 SHEETING ANGLES

4.2 SHEETING ANGLES

Sheeting angles are important to get right when sailing the Weta, especially with the mainsail as there is no boom. The sheeting angle defines the profile of the leech of the sail twist. The "higher" the sheeting angle, the more leech tension there is, creating less twist on the leech. The reverse applies – the "lower" the sheeting angle, more tension is put into the foot of the sail (not the leech) creating a more open leech with more twist. This is illustrated in the following:



The main sheeting angle (a)



The jib sheeting angle (b)



The main leech is open with twist (c)



The jib leech is open with twist (d)



The main leech is closed with no twist (e)



The jib leech is closed with no twist (f)

Specific adjustment of the main and the jib sail shapes is described below.

Mainsail Sheeting Angle



The clew board of the mainsail allows for a small amount of sheeting angle adjustment with its three positions. This allows quick changes on the water. What most sailors find is that the main sail leech profile is more sensitive to sheet tension than the clew board positioning. Even if the clew board is set in the correct position, over-sheeting the sail can disrupt a perfect sail shape. Sheeting angle is also significantly effected by mast rake, so when the rake is changed, the sheeting angle changes. So far, experience with the boats shows that the S hook should be set in the aft position on the clew board for most sailing conditions and then moved forward as the wind increases to open out the leech and de-power the sail. This is usually in 18 plus knots depending on crew configuration. (g)





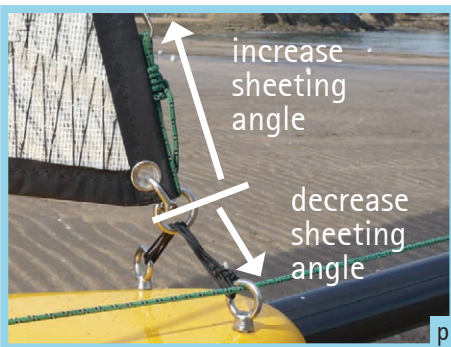
Jib Sheeting Angle

The Jib is also very sensitive to the sheet tension. To get an initial sheeting angle you can use a rough measurement that is generic on most sail boats. This is to set the boat up on land and trim the sails in as if you were sailing. You then sight up the jib sheet and see where an extended straight line up the jib sheet would intersect with the forestay. This point should be roughly 1/3 up the forestay. (h)

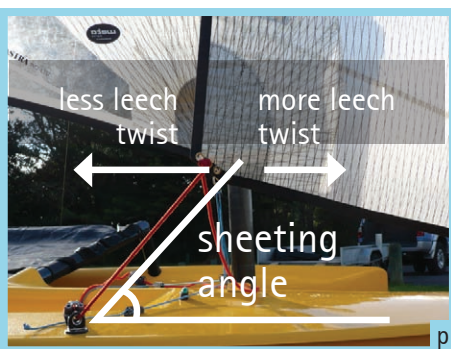
Sight the jib sheeting angle so it intersects approximately 1/3 of the way up the forestay.

After this, sailors generally fine tune the position by feel. There are a couple of ways to change this:

1. **Tack position (base of the sail)** – Depending on how your boat is set up you can either use rope and change the length or change the shackle size. By increasing this length (raising the sail up the forestay) you increase the sheeting angle (make it "higher") thus decreasing the twist in the sail. Reducing the length has the opposite effect. (i)
2. **Clew position** – There are 4 holes to attach the jib sheet to. Make sure you attach both ends in the same eye to achieve symmetry. By using the aft most hole you achieve the highest sheeting angle decreasing twist in the sail. Using the forward most hole reduces the sheeting angle increasing twist in the sail. (j)
3. **Mast rake** – The mast rake does affect the sheeting angle of the jib, but not as significantly as the main sail. It is minor when compared to the previous two adjustments. Thus only more experienced sailors will fine tune this with the previous two adjustments.



An example of a setting would be when using the jib in high winds you would have the tack as low as possible and the sheets in the forward most eye creating the lowest possible sheeting angle effectively de-powering the jib as much as possible by opening up the leech. Obviously this is an extreme case and fine tuning would be used by a proficient sailor.



Gennaker Sheeting Angle

This has been set by the design of the Weta and has no adjustment. The key to tuning this sail is by sheet tensions and heading. Refer to section 2.4 for this information.





4.0 WETA TUNING GUIDE

4.3 RIG SET UP

4.3 RIG SET UP

Rig set up has two main components – rig tension and mast rake. Something to keep in mind is that whatever you set up on shore with no wind in the sails will change significantly on the water when the boat loads up. This is usual for all sailing boats. It is important to recognize this when starting out so you do not get a shock when you look at the rig on the water you set up on land and see it is not acting the way you thought!

What you do is recognize how the rig acts / feels on the water then translate this information to what you see on the boat when it is rigged on dry land.

Mast Rake

Mast rake is important to balance the boat. By sailing with a balanced boat you create a more efficient boat moving through the water. A balanced boat is generally achieved when the boat is heading in the desired direction with the sheets trimmed correctly with minimum or nil helm required.

Mast rake is normally set for upwind sailing. The Weta is much more sensitive to mast rake upwind than it is downwind. This is mainly due to the nature of sailing downwind with an asymmetrical sail where the apparent wind strength and direction is changing all the time and it is more difficult to fine tune the boat.

It takes a lot of experience to set up the mast rake correctly, but with the right knowledge and understanding you can reduce this learning curve significantly.

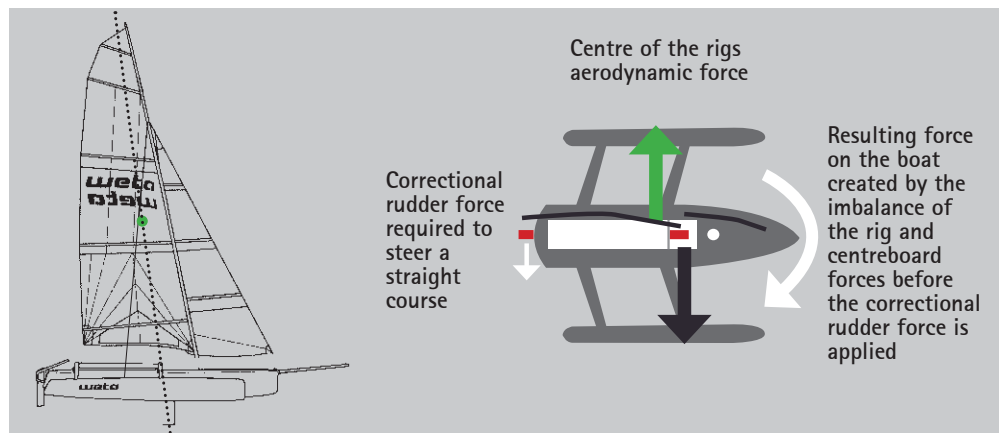
The principles behind the effects of mast rake will be explained, then the applications of these to the Weta. Hopefully this will provide you with a good start to tuning your boat to perfection!

A balanced boat is when the hydrodynamic forces acting laterally on the boat balance with the aerodynamic forces, and no correcting force (rudder) is needed to keep it on a straight course. When the boat is not balanced you need to use rudder to overcome this imbalance and steer a straight course. The use of the rudder causes drag.

The following 3 diagrams illustrate the forces on an unbalanced (both lee and weather helm) and a balanced boat.

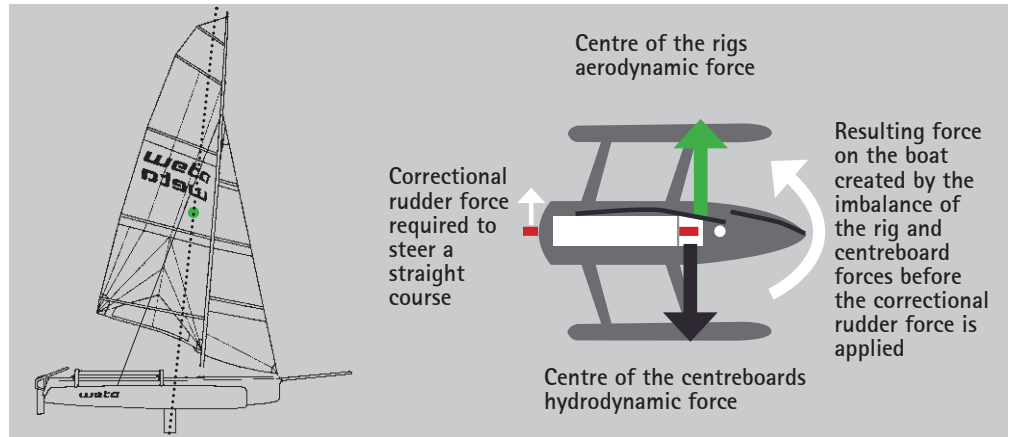
Weather helm – the mast is raked too far back. The resulting imbalance of forces means you will need to apply a correctional rudder force to maintain a straight course. This correctional helm is the 'weather helm' you feel on the tiller.

- Centre of the rigs aerodynamic force
- Centre of the rudders hydrodynamic force
- Centre of the centreboards hydrodynamic force



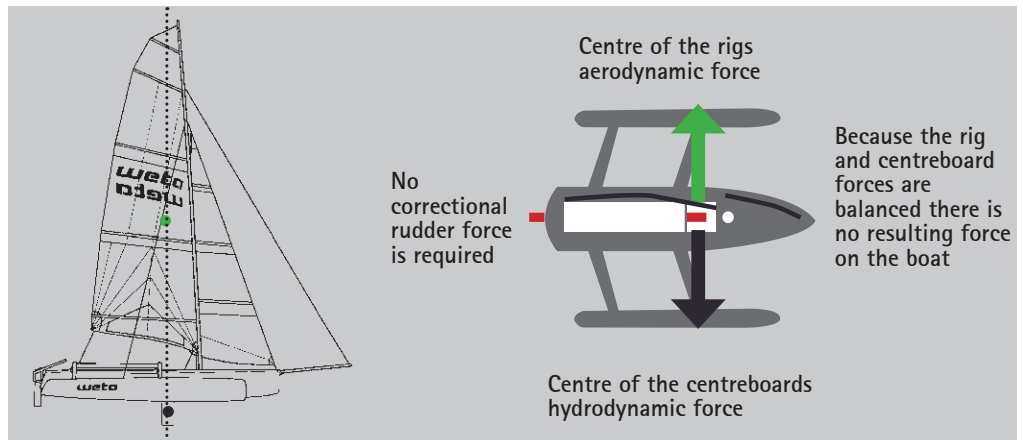
Lee helm – the mast is raked too far forward. The resulting imbalance of forces means you will need to apply a correctional rudder force to maintain a straight course. This correctional helm is the 'lee helm' you feel on the tiller.

- Centre of the rigs aerodynamic force
- Centre of the rudders hydrodynamic force
- Centre of the centreboards hydrodynamic force



Balanced helm – the mast is raked is set correctly. The forces acting on the boat are balanced and there is no need for any correctional helm to steer a straight course.

- Centre of the rigs aerodynamic force
- Centre of the rudders hydrodynamic force
- Centre of the centreboards hydrodynamic force



There are two sailing configurations that the mast rake can be adjusted for. Main + Jib and under Main only. These are explained below.

Main + Jib

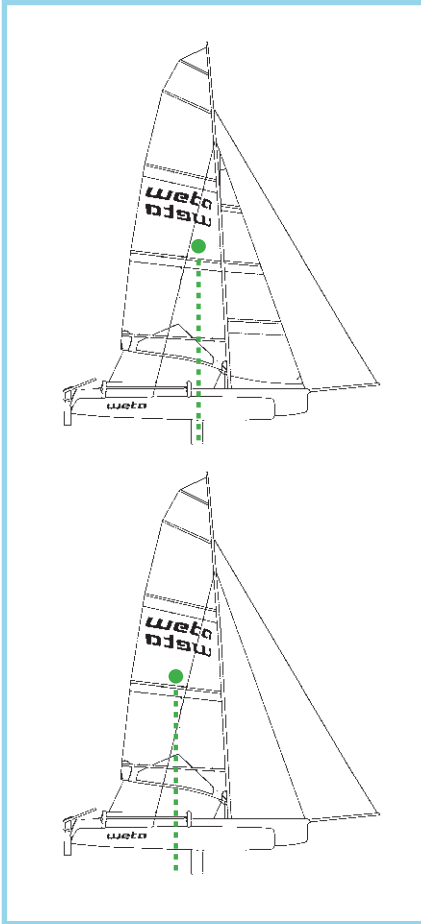
When rigging up the boat for the first time with this sail configuration a general guide is to set the mast rake at 90° to the main deck with rig tension as detailed in the section below. After this is done drop the side stays back a couple of holes (20mm approx) so there is a bit of aft rake. This is a starting point – and with manufacturing tolerances being very sensitive over the geometry of the Weta, this may vary slightly on each boat. You then fine tune this rake after sailing the boat and getting a feel. Note that adjusting the side stays by a single hole can have a significant effect on the feeling of the boat and you should also try to be consistent with the amount of forestay tension you use as this directly effects the rake regardless of side stay position.





4.0 WETA TUNING GUIDE

4.3 RIG SET UP



The rig's aerodynamic centre force is changed when sailing under main only.

When you sail upwind with the sails correctly trimmed, you need to feel the helm of the boat and assess the balance of the boat. By holding the tiller extension with your thumb and finger you will get a much better feel for the boat. Adjust the mast rake according to the following:

You experience Lee helm – This is when the boat wants to bear off (head away from the wind) and you need to push the tiller away from you to keep a straight course. Your mast rake is too far forward. You need to rake it back further by dropping the side stays down in the adjusters.

You experience Windward Helm – This is when the boat wants to round up (head into the wind) and you need to pull the tiller towards you to keep a straight course. Your mast rake is too far aft. You need to rake it forward by raising the side stays in the adjusters.

You have Neutral Helm – This is when the boat sails in a straight line with no (or very little) helm and you should be able to steer with your thumb and index finger in high winds. If you have the boat set up correctly you can actually steer with the sheets by changing the aerodynamic forces on the boat like a windsurfer. This is a good skill to practise to sharpen up your feel and general sailing skills.

Main Only

A general rule when rigging the boat up from scratch is to set the mast rake so it is at 90° to the main deck with rig tension as detailed in the next section. Alternatively if the boat is tuned for main + jib sailing you can just raise the side stays a couple of holes (20mm) so the rake moves forward a fraction. This is because without the Jib the aerodynamic balance of the boat is changed. (a)

The rig's aerodynamic centre force is changed when sailing under main only. Moving the rake forward balances this out. Again this is a starting point – and with manufacturing tolerances being very sensitive over the geometry of the Weta, this may vary slightly on each boat. You then fine tune this rake after sailing the boat and getting a feel.

The fine tuning of this is done exactly the same way as described for the main + jib.

You will find that as you spend more time sailing the Weta you will get a better feel for the balance of the boat and will notice even the slightest change in mast rake. Again we cannot give figures of perfect rig settings as it is best to set the boat up by feel, as top sailors do. It is a good idea to take note of what configurations suit certain conditions so next time you sail you can easily set the boat up.

Another point to bear in mind is the changing of materials. Over time stays stretch, sails lose shape and hulls lose stiffness. This is not to say the Weta is of poor construction by any means, but it is a fact of all composite boats and stainless wire. What settings work perfectly on your first Weta outing will not work perfectly on your 100th Weta outing. This is why it is important to learn the feel of the boat and be alert to change as you sail more often.



Rig Tension

The rig tension effects the dynamic balance of the boat. It is not as important in multihulls as it is in monohulls because there is always some flex in the structures due to the wide geometry. The Weta is a very stiff structure as you will find in choppy conditions, but still has some flex. It takes minimal flex over long lever arms (beams) to cause enough flex to slacken rigs. Although the rig is "skiff"-like you do not need to tension it with "boat benders" or excessive amounts of force. Generally you want enough tension so that the mast base does not jump out of the step and the rig does not slop around when sailing. This is achieved by tensioning the forestay until the floats lift up on the main hull (slack is taken out of the sockets) then pulling a little extra on. You should be able to "ping" the stays. With this amount of rig tension you will notice that at any one time when sailing there will be a slack stay. As the wind increases so will the amount of slackness. This is normal sailing in multihulls.

4.4 HALYARD TENSION

When setting up the boat on land it is important to get this right as it can be difficult to adjust on the water (for inexperienced Weta sailors) and can make some points of sailing difficult. You should also remember that what you rig on the land changes significantly on the water so you need to recognize these signs on and off the water.

The way to set up the 3 halyards is detailed below and is in the order they should be finally tensioned before sailing. This is because they each affect the rig differently and the tensions interact with each other. More specifically the main halyard is least important as it is in a halyard lock and can be done anytime. The gennaker and Jib halyards both pull the mast forward and can interact with each other so the jib should be done first before the gennaker.

Jib Halyard

The jib halyard is effectively the Cunningham/ downhaul/ luff tensioning control for the sail. The tension is adjusted according to the wind strength. General rule is the more wind, the more tension you require. Ideally you want the sail to have no sagging or creases in the luff.

If you have too little tension you will see the luff of the jib sagging between the hanks. (a)

This usually happens when the wind increases and shape is blown out of the sail. You will lose height and become overpowered.





4.0 WETA TUNING GUIDE

4.4 HALYARD TENSION



If you have too much tension you will get little creases parallel to the forestay. They are difficult to see, but take the shape out of the sail. (Over-tensioned jib luff.) (b)

This usually happens when you are sailing in strong winds and the wind drops. Effectively you are reducing the depth in the sail, bringing the draft forward and reducing the power you have.

Sometimes it is difficult to achieve the correct tension with the basic 1:1 halyard system. This is because either you cannot get enough tension and tie off the line or the adjustment is too coarse. This can be overcome by setting up a 2:1 system. (c)

This is done by tying a loop knot halfway on the jib halyard and doubling back through it on the horn. One thing to be careful of when doing this is to thread it through the pulley the right way when rigging. Also this is not standard on the boats as there is potential to over-tension the luff and damage the eyelets or horns with the extra purchase.



Gennaker Halyard

There are different theories on how much gennaker tension should be applied. You need enough tension so that the gennaker can be furled up neatly. If there is not enough tension you will get excessive sag in the luff of the sail and there will be bagging when the gennaker is furled away. If you are tight reaching you will need reasonable tension as well to maintain height. A general rule for more novice Weta sailors is to have more rather than less tension. The advantage of having less gennaker tension is when you are sailing low and want a fuller shape in the sail. However this is still a hotly debated topic amongst Weta sailors.

A guide for a beginner setting up a Weta is to pull the halyard tight so there is no sag in the luff of the sail. You can then pull a little more tension on and tie it off. If the main sail is not up you will see the tip of the mast bending slightly forward. This is normal and desired (especially in high winds) as once the main is hoisted the mast straightens and adds a little more tension to the gennaker luff. Once sailing on the water you will notice a little tension will be lost. This is because as the boat loads up, knots settle and the ropes stretch which is perfectly normal on small sailing dinghies.

Main Halyard

Because the main halyard is on a lock there is no tensioning required. It is just important that you understand how the locking mechanism works and this is described in the rigging guide. The luff tension on the main sail is adjusted by the Cunningham as described in section 2.3.



4.5 BATTEN TENSION

Batten tension has a big influence on sail shape – especially on the depth of the sail. Because the sail is fully battened and boomless it is important to get these set up correctly to maximize efficiency of the sail.

Increasing the batten tension gives more depth and shape in the sail. Reducing the tension has the opposite effect giving less depth and shape in the sail.

For most small boats with a similar rig set up you would have the following rough guide for batten tension.

Light air – loose batten tension. This is because if the sail is too deep you get the air flow stalling.

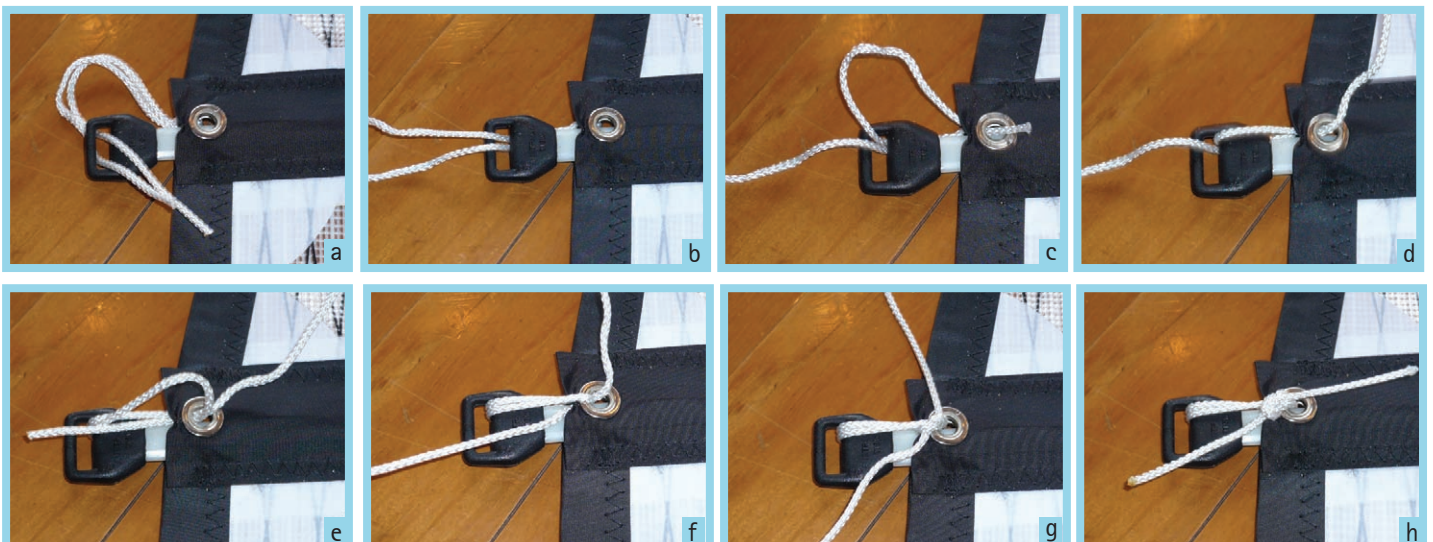
Medium air – tight tension. In these conditions you are searching for maximum power and depth in the sail.

Heavy air – loose batten tension. When you are de-powering you want to reduce the shape and depth and therefore power in the sail.

Because the Weta has a different set up with a slightly flatter sail when compared to other boats, you tend not to ease batten tension in light or heavy winds. Most sailors are happy sailing with full batten tension in all conditions as the rig can be very easily and effectively de-powered with the downhaul and mainsheet. What sailors struggle for most is achieving the required batten tension. With the older fastening system using ties, it is usually easier with two people to tie the knot.

Tension is achieved using the following technique:

- Pass both ties through the batten end. (a, b)
- Pass one tie through the eyelet (from the inside out). (c, d)
- Pass the other tie through the eyelet the opposite way (from the outside in). (e, f)
- Pull the amount of desired batten tension and then tie off with a reef knot. (g, h)





4.0 WETA TUNING GUIDE

4.6 BODY TRIM

It is good practice to ease your batten tension after each day's sailing to prolong the life of the sails, but this is not always practical. The high quality Weta sails hold their shape well and you are able to get away with leaving the tension on. As knots slip and sail cloth stretches over time they will need occasional tightening.

4.6 BODY TRIM

Being a small sailing dinghy the Weta is very sensitive to the positioning of body weight in the boat. Typically the novice sailor sits too far back in the boat.

The trim can be broken down into two components – fore/aft trim and lateral trim. The trim of the boat has a significant effect on its performance. The biggest resistance force acting on the boat is the water drag on the hull which is created by the way the boat moves through the water. By tilting the boat in different orientations (through body trim) you can significantly change the drag characteristics. The goal is to minimize the profile of the hulls through the water and reduce the hydrodynamic drag.

Fore / Aft Trim

This is your body position in the boat relative to the bow/stern. What you are trying to achieve is to have the boat orientated level. As soon as the stern of the boat sits down in the water your speed will be greatly reduced. In lighter air it can be beneficial to have the boat trimmed with the bow slightly angled forward, but in heavier winds this is not ideal.

This is something that you will get a feel for over time. The telltale sign of the boat being in correct trim is by looking at the wake. The creation of waves or disturbance in the water is a sign of inefficiency and should be avoided. If there is a large wake coming from the stern of the boat, and a lot of noise/disturbance in the water behind the rudder there is a good chance you are too far back in the boat. If you see significant waves coming from the bows of the boat then there is a good chance you are sitting too far forward. Small adjustments of your body position, even 20cm can make a noticeable difference.

Lateral Trim

This is your body position in the boat relative to the centerline. This position adjusts the righting moment you create on the boat which balances out the power from the sail. The further away from the centerline of the boat, the more righting moment you create. To maximize speed you want to sail the boat with as much power as you can. This means as the wind increases



getting your righting moment as big as possible by moving out from the centerline.

When sailing upwind (and reaching with the gennaker) you should trim the boat so the floats are just touching the water creating minimal drag.

In light winds you should position yourself to achieve a heeling angle that minimizes the hydrodynamic drag on the boat. As the wind increases you move out to balance the power created by the sails.

Once you are sitting out as far as you can you will then adjust the sail controls and steering angle to achieve the optimal heeling angle. This is effectively changing the trim of the boat through the sail controls (sheets, Cunningham etc).

Heeling Angle

What you are trying to achieve is to optimize the balance between the righting moment and hydrodynamic drag created by the float hull. The righting moment has a direct effect on power. Providing there is sufficient wind pressure, the more righting moment you have, the more power you will use. In conditions where you can provide enough righting moment through body weight alone you should aim to minimize the drag on the hulls. This is usually achieved by sailing with the leeward hull just sitting in the water. In breezier conditions the following theory applies.

There are four main characteristics that change as the boat heels over in breezier conditions.

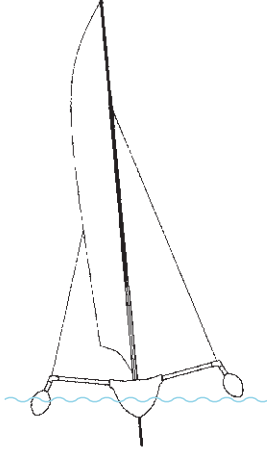
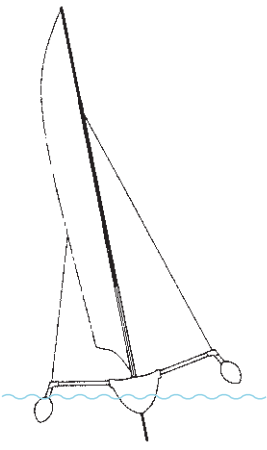
1. The float hull becomes more submerged in the water therefore **increasing the hydrodynamic drag on the boat.**
2. As the float hull is more submerged it is **creating more righting moment** on the boat through its buoyancy.
3. The rig is tilted over further towards the water creating more downward force component on the boat. This has the effect of **increasing the overall hydrodynamic drag on the boat.**
4. As the float hull is submerged in the water it **increases the lateral lift on the boat.** This is effectively like having more centreboard down reducing the sideslip of the boat – although this is a less efficient lifting device.





4.0 WETA TUNING GUIDE

4.6 BODY TRIM

Situation	Ideal heel	Too much heel
What is happening		
What to do	Here you have the optimal balance between righting moment and drag Maintain this balance	The benefit of more righting moment is not enough to outweigh the increased drag that comes with it. Reducing heel will reduce more drag than power and will improve performance

There is no specific 'heeling angle' that can be quantified as the optimal position. This is something you will have to experiment with and get a feel for. There is a small window of heeling angle where the boat will feel right and fast. This constantly changes with different weather/sea conditions, boat set up and crew weight.





Sailing a Weta is great fun whether it is a destination sail, blast reaching in 25 knots or having your six year old take you for a ride. But after doing this for a few seasons most sailors are keen for a new challenge – Racing! (Actually we are yet to find a Weta sailor who has become bored with just sailing!). Racing adds a whole new dimension to sailing and helps improve your skills in the boat as you have to react under pressure. It is also a great social activity where people can yell and scream at each other on the water – then have a beer and laugh about it after the race.

To maximize enjoyment from racing it is good to know the basic rules so you can keep out of trouble! Here are some basic rules to get you started. If you have any questions any member of the Weta team is more than happy to discuss these with you.



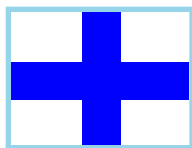
5.1 START SEQUENCE

The standard method of starting a race is using a 5 minute countdown sequence. The following illustration shows what signals the start boat gives prior to the race start. At 0 minutes to go all boats should be behind the start line (an invisible line between the start boat and pin end marker). All boats usually line up on starboard tack at about 1 minute to go and accelerate as the start gun is sounded. It is risky to start on port tack as the boats starting on starboard tack have right of way and if it is congested collisions are likely!

Sequence Time	Till Start	Sound Signal	Flag Movement
Warning	5 Minutes	Sound	 up
Preparatory	4 Minutes	Sound	 up
1 Minute	1 Minute	Long Sound	 down
Start	0 Minutes	Sound	 down

Recalls

When 1 or more boats are over the start line at the gun the race committee will display one of two flags to recall boats.



Individual Recall

If there are 1 or more boats over the start line that the race committee can identify code flag X (left) will be displayed with a single sound signal. This is the individual recall flag which means all boats that were over the start line must return back to the line and restart the race (this is done by dipping back behind the start line and then continuing to sail) . It is up to those boats that think they may be over the line to decide if they will restart. If they fail to return they will be scored maximum points for that race.



General Recall

If there are more boats over the start line than the race committee can identify, the 1st substitute flag (left) will be displayed with 2 sound signals. This means all boats should return to the start line and another 5 minute start sequence will be made.





5.0 RACING BASICS

5.2 BASIC RULES FOR RACING

5.2 BASIC RULES FOR RACING

Here are some of the basic rules you should remember and understand to be able to sail in your first race. The best way to learn the Racing Rules of Sailing (RRS) is to buy a rule book and read it! There are really only 4 pages in the entire book that you need to understand to be able to race without getting into trouble. These are the pages in "Part 2 – When Boats Meet". Having said that, here is a summary of the most important rules to get you started!

There are four basic rules that cover the majority of crossing situations between two boats in open water.

Port/Starboard

This is the most common rule used while racing and overrides most other rules. A boat on Port tack shall give way to a boat on Starboard tack. You should always be aware of boats around you but especially when you are on port tack, as you need to give way.

A boat on starboard tack sails with the wind filling the starboard (right) side of the sail. A boat on port tack sails with the wind filling the port (left) side of the sail

Windward Boat

When two boats are on the same tack and overlapped, the windward boat is the boat that is closest to the direction the wind is coming from. This boat must keep clear of all other boats to leeward. A common situation is when a boat is sailing downwind on a collision course with a boat on the same tack sailing upwind. The boat sailing downwind must give way to the boat sailing upwind.

Clear Ahead / Clear Astern

When two boats are on the same tack and not overlapped, the boat clear astern must keep clear of the boat clear ahead. Basically if you are passing a boat on the same tack you should keep clear of them

Buoy Room

When two or more boats on the same tack are approaching a buoy, the boats on the outside shall give room to the boats on the inside to pass the mark. There are more complicated rules to this regarding the 2 boat lengths circle – but if you are interested please read the current "Racing Rules of Sailing".



5.3 RACE COURSES

These are usually explained in the sailing instructions or at a race briefing. They will consist of:

- Upwind start
- Specified number of laps around a course; windward/leeward, triangle or trapezoid
- A Finish by sailing through an invisible line between a committee boat and a buoy.

All marks are generally rounded to port, that is, when you round a mark, the buoy is on the left side of the boat. One exception is where a gate is used where you sail between the gate marks on the approach and then pick either mark to go around.





6.0 GLOSSARY

Aft	the rear area of the boat
Apparent Wind	while moving forward the air you are moving past acts upon the sail and the wind appears to shift. Apparent wind differs from prevailing or true wind
Backwind	when the wind approaches a sail from the leeward side and disrupts the flow causing the sail to flap
Beating	moving upwind, in a zigzag of tacks
Boat Tuning	setting up a boat aiming to achieve maximum performance
Bow	front of the boat
Choke	<ol style="list-style-type: none">1. pointing too high into the wind causing the sail to backwind slightly2. when a sail is over-sheeted closing the leech and causing the airflow over the sail to stall
Cleat	a "v" or cam shaped fitting that grips ropes and prevents them from sliding out of place
Clew	the back bottom corner of the sail
Close Haul	sailing upwind with the sail pulled right in to achieve maximum efficiency
Cockpit	floor in the middle of the main hull
Come About	tacking, moving the bow of the boat through the direction the wind
Crew	generally trims the jib, second person on boat
Down (low)	sailing a boat at a wider angle to the direction of the wind
Downwind	sailing the boat in the same direction the wind is coming from
Foil	centerboard or rudder
Gybe	steer away from the wind causing the sail to change sides and the boat to change direction
Head (of sail)	the upper most triangle of the sail
Head to wind	bow of boat heading directly into the wind
Healing Angle	the angle the mast makes with the vertical when sailing
Helm	the tiller to steer the boat
High (up)	sailing the boat closer to the angle the wind is coming from
Hike	moving your weight out over the edge of the hull or sitting on the edge to balance the force of the sail
Hull	the main body of a vessel that touches the water
Irons	when a boat is caught with the bow pointed directly into the wind and it cannot move as wind is not filling the sails
Leech	trailing (rear) edge of the sail
Leeward	the side of the boat sheltered from the wind
Leeway	movement in the direction the wind is coming from



Low (down)	sailing the boat away from the angle the wind is coming from
Luff	leading (front) edge of the sail
Luffing	refers to a slight back winding of the sail at the luff
Mast Rake	the angle at which the mast sits relative to a perpendicular on the deck
Over-canvassed	too much sail area for the conditions
Overlay	sailing further than you need to on a tack when rounding a mark
Pinching	when you are sailing very high and suffering from a lack of speed
Port	the left side of the boat as you look towards the bow
Port Tack	sailing with the wind on your port side
Reaching	sailing with the sheets eased
Rigging	the term for all equipment above the deck; mast, sails, stays etc
Run	downwind, sailing with the wind coming from directly behind you
Sculling	moving the boat forward by moving the tiller back and forth
Shackle	a connector in the shape of a "u" that has a removable pin
Sheets	sail control lines; main, jib, gennaker
Sheeting	the act of adjusting the sheet
Skipper	the captain of the boat who takes the responsibility
Stall out	pointing too high into the wind causing boat to backwind slightly and loose speed
Starboard	the right side of the boat as you look towards the bow
Starboard Tack	sailing with the wind on your starboard side
Stern	back of the boat
Tack	changing direction by moving the bow through head to wind and continuing sailing with the wind on the opposite side of the sail
Tell tales	small pieces of wool attached to a sail showing the direction of the wind flow over the surface of the sail
Trim	orientation of the boat relative to the water
Under-canvassed	sailing the boat at a closer angle to the direction of the wind
Up (high)	to little sail area for the conditions
Upwind (windward)	sailing the boat towards the direction the wind is coming from
VMG	velocity made good, the upwind vector of a boat's speed
Whitecaps	strong winds blow the tops off waves creating white patches on the water
Wind Shifts	changes in wind direction
Windward (upwind)	the boat is moving toward the direction the wind is coming from
Windward	the side of the boat that the wind is hitting





6.0 GLOSSARY

1. Main Hull
2. Float Hull
3. Beam (rear, port)
4. Trampoline (port)
5. Main
6. Jib
7. Gennaker
8. Mast
9. Prod
10. Hiking Strap (port)
11. Rudder Assembly
12. Head (main sail)
13. Clew (main sail)
14. Tack (main sail)
15. Luff (main sail)
16. Leech (main sail)
17. Foot (main sail)
18. Telltale
19. Furling Drum (gennaker)
20. Side Stay Adjuster
21. Float Hatch
22. Main Sheet
23. Jib Sheet
24. Gennaker Sheet
25. Cunningham
26. Tiller Extension



Weta Marine Limited | Campbells Bay, Auckland, New Zealand

CUSTOMER WARRANTY FOR WETA TRIMARANS

Purpose of warranty

To provide customers with the peace of mind that they have a boat which is soundly built, is safe and practical, and will stand up to the rigors of normal off the beach recreational sailing and racing.

Warranty

The warranty is for one year from the date of purchase. Weta Marine will at its option repair, replace free of charge any part of the hulls and beams that Weta Marine finds to be defective in factory materials or workmanship when used within the operating limitations of the boat and the provisions of this warranty.

Conditions

This warranty is provided on the following conditions.

- the defect is not a consequence of the customer's failure to properly use or maintain the boat in accordance with good practice, recommendations or instructions, its capacity or operating limitations or specifications, or to take preventative action to avoid further or secondary damage occurring if a fault becomes evident.
- the boat must under normal circumstances be delivered at the customers expense to Weta Marine or its nominated representative for the warranted works as soon as possible after the need for warranted works become apparent
- this warranty will not apply to any defect in, or which is attributed to, or which arises from the use of any modification made to the boat unless the modification has been made by or at the direction of Weta Marine.
- this warranty does not cover damage or wear and tear arising as the consequence of the use of a trailer, friction under the hulls, high speed beachings, collisions or failing to ventilate the boat.
- all works under this warranty must be performed by Weta Marine or its nominated representative.
- this warranty is non-assignable.
- only Weta Marine authorised sails, spars, foils and equipment shall be used.
- this warranty is subject to the exclusions, operating limitations and responsibilities which follow.





7.0 WARRANTY

Exclusions

This warranty does not cover:

- damage by heat to composite laminates
- 'print' on the hull surface
- 'print' from internal frames on the hull skin
- fault resulting from collision or other damage
- scratching of any gelcoat surface
- minor leaks

Operating Limitations

This warranty applies to boats used for recreational sailing or in organised club or championship racing on inland or coastal waters. It does not apply to defects occurring as a consequence of sailing in surf or wind or sea conditions where a reasonable sailing club or association would not sail, or has abandoned racing due to extreme weather conditions or offshore sailing, or long distance racing events.

Boats must be trailed on a trailer approved by Weta Marine and/or importer and shaped to the hulls and padded.

Crew weight (all persons on board) on the boat must not exceed 200kg.

Liability

The buyer assumes all risk and liability whatsoever resulting from the use of the Weta and its parts. In no event shall Weta Marine be liable to the buyer for any indirect, special, or consequential damages or loss of profits.

Responsibilities

This warranty does not apply unless the owner has kept the boat in good order at all times, performed any necessary preventative maintenance and taken immediate action to prevent further damage if any fault appears.

The builder and/or importer may void the warranty for any and all of the above points.

Vessels that do not use authorised Weta fittings are not considered 'Weta'. The owner shall not advertise, sell, race or refer to the vessel as a Weta.





weta
marine



www.wetamarine.com