



## MELGES 15 SPEED GUIDE

*Updated August 19, 2020*

Racing sailboats is much different from the other sporting events. Sailing requires tuning for different wind and water conditions. Many of these tuning adjustments are small, yet critical.

We have outlined the following tuning information for the Melges 15. The measurements achieved have been tested through countless hours on the water in a variety of conditions. What is truly unique with this guide is that we have simplified the tuning process in order to make the process easy for Melges sailors. You will be able to achieve newfound speed in your Melges 15 after following these simple steps.

Melges will continue to bring you the very best in sailing service and technology. Additional resources can be found in our how-to videos and articles available on Melges.com. Our objective is to allow you to set the pace in your racing class.

Melges 15 Rigging Tutorial: <https://youtu.be/BdogJjXHcm0>

### BEFORE STEPPING THE MAST

1. Clean and lubricate turnbuckles, make sure that the top and bottom threaded studs are even in the turnbuckle tube. Make sure that your turnbuckles are loose with a ½ inch of thread showing on each end of the turnbuckle.
2. Position mast so that base is next to the mast step on deck and top end is resting in the boom rest support or on the transom of your boat. You can step the mast alone or with a helper holding the base of the mast.
3. Check all pins, wires and fittings for wear. Plug in the side stays. Make sure that your side stays are attached to the forward chain plate pad eye.
4. If you are stepping the mast alone, attach your spin halyard to the bow of the boat this will help you keep the mast up when you attach the headstay.
5. Check the spreaders to make sure they are pinned in and taped. It is important to tape all rings and pins on the spreaders.
6. Make sure that all halyards are pulled down and not fouled.
7. Once the mast is stepped, use the rig tensioner tool to tension the rig and attach the forestay.

## ALL-PURPOSE SETTINGS

### HEADSTAY TENSION

The Melges 15 has a fixed headstay. We measure our overall rig tension off of the headstay. First attach your PT-1 loose gauge to the headstay tighten your side stays evenly until your headstay reads 220 pounds or 20 on a PT-1 loose gauge. If you want to really fine-tune the rig, measure down to the deck at the chain plates using the jib halyard and adjust the sidestays to center the mast athwartships. This is a good base setting.

### SPREADERS

The spreaders on the Melges 15 are fully adjustable. To measure your spreader rake, place your mast on the ground off the boat on two sawhorses. Have the spreaders facing towards the sky and have your sidestays attached to your spreaders. Take a straight edge (a batten or level works well) and run a straight line from sidestay to sidestay directly adjacent to your spreader. To get your rake measurement, measure from the aft part of your mast up to the bottom side of the straight edge. The spreaders are set from the factory with 135mm of rake or 5 5/16" inches. It is key to make sure that your spreaders are evenly raked on from side to side. To do this, place your tape measure inside of the mast track and measure out to where the spreader ends and the black sidestay retainer cap starts. When raked evenly, this measurement should be 396mm. To double check, measure from the outside of the shroud at the spreader tip to the outside of the shroud at the opposite spreader tip. This should measure 755mm. Note: This is a fast setting in all conditions.



## SPREADER TIP LOCATION

We recommend setting the spreader tips all the way inboard. This is how they will come pre-set from Melges.

## SIDESTAY TENSION

For the all-purpose setting of the sidestays, start by making sure that your turnbuckles are even side to side.

It is important to start to put some tension on the sidestays once the breeze is over 10 knots. We recommend sailing with the headstay tension closer to 300lbs or 24 on a Pt-1 loose gauge once the breeze is over 15 knots.

## TUNING CHART

Wind	Tension (PT-1 Gauge)	Poundage
0-6 Knots	17	175
6-10 Knots	19	200
10-14 Knots	21	240
15+ Knots	24	300

*Note: If you have a new boat, it is important to sail a few times in heavy air to stretch out the rigging before getting permanent settings on the shrouds. Double check the rig tension after sailing a new boat in good breeze.*

## AVOIDING MAST DAMAGE

Though rare, you want to avoid putting the boat into situations where you can have rig failures. We recommend following these simple tips.:

- Crew weight should not exceed 400lbs on the Melges 15. Sailing heavier will dramatically increase loads on the boat and rigging, and amplifies mistakes made with tuning and mainsail handling.
- Gybing in heavy air with the vang loose and the mainsail eased out too far is a recipe for mast damage. This is the single most important thing you need to concentrate on when sailing with the spinnaker. When you go into a gybe, do not slow the boat down, go from high-speed mode directly into the gybe.

Compare this to a high-speed windsurfing gybe. If the sidestays are too loose, this can, in rare instances, cause the mast to invert and fail.

- It is very important to stay within the recommended rig settings. Do not overload the shroud tension as this places too much compression load on the mast and boat and can cause failures.

Once you understand the mechanics of the rig you will realize how much fun the asymmetric spinnakers are and how much easier they are to sail with. With proper mechanics of boat handling and rig tuning, the rigs are very durable and will stand up to A LOT of wind.

## DOWNWIND TECHNIQUES

### SAIL CONTROLS

Vang: As you approach the windward mark, it's imperative to ease your vang a bit. This will allow you to easily round the windward mark and set your spinnaker. When sailing downwind, you want to sail with enough vang tension to match the profile of the leach of your mainsail with the leach of your spinnaker.

Cunningham: Loose

Outhaul: Loosen your outhaul 3-5 inches when heading downwind.

### MAINSHEET TECHNIQUES

It is important with the asymmetrical to sail at slightly hotter or higher angles than with the symmetrical kites to achieve the greatest performance. This, along with the higher speeds you are achieving, will bring the apparent wind angle forward and require the mainsail to be trimmed at a tighter angle. Also, more vang can be carried since you are sailing at hotter angles with more load on the mainsail. Because you are sailing at hotter angles and the spinnakers are so easy to bring around, you should not ease the main sail out too far on the gybes. The maximum the sheet should ever be eased is about 6ft measuring from the aft corner of the boat to the boom. This technique along with keeping some vang tension on will help maintain a positive bend in the mast.

### DOWNWIND TIPS

- When sailing downwind with the asymmetrical, sail with the daggerboard raised about 6 inches. In varying conditions, you may want to experiment with pulling your board up more. This could be especially good in moderate winds and wavy conditions. Practice this technique and find out what is fast for your team. When in doubt, though – leave the board all the way down.

- Angle of heel will be slightly more than when going upwind. It is key not to sail over-heeling with an asymmetrical spinnaker. A good target is 5 degrees of heel allowing you to sail fully on the leeward chine.
- Crew positions vary on wind velocity and angle. When it's light, the skipper should be on the low side with the crew sitting on the high side of the boat trimming the kite. As the wind builds, the crew can hike and the skipper can move to weather. Once both the crew and skipper are on the high side, it's important to be fluid with your weight movement - moving your weight inboard when the wind lessens and aft once planning conditions are present. The M15 comes alive in any breeze over 8 knots. It's important to move your weight aft downwind in order to initiate planning.
- Downwind sailing angles will vary some. Many think that you have to sail hot and fast in all conditions with this setup; this is not the case. Here is a brief guide to go by:
  - Winds 0-8 Knots – Telltales on the sidestays are a must. A higher angle is required so that the boat builds apparent wind. Once up to speed, you can begin to sail lower. As soon as the boat slows, even slightly, or the boat begins to flatten, you need to head back up for speed again. This requires constant attention and focus. One key factor in this condition is mainsheet trim. As your apparent wind moves forward, you need to keep your mainsheet trimmed even more. Make sure your mainsail is not luffing. You will be amazed how the boat reacts to a tighter mainsheet and how much the boat likes to have the mainsheet worked downwind. The key to good downwind sailing in light air is to focus on the heel angle. Concentrate on keeping the boat flat to slightly heeled. As soon as you feel the boat flatten out or heel to windward, it's time to head up. When the boat heels, flatten slightly and head down in the increased pressure.
  - Winds 9-12 Knots – You can experiment with sailing at a lower or deeper angle in these conditions, but both crew should be on the high side. As the breeze hits and the boat heels, drive the boat down and sail deeper. Again, focusing on keeping the boat on the proper angle of heel is key. Work your mainsheet. As you sail deeper, the main will need to be eased slightly, but not nearly as far as for a symmetrical sail.
  - Winds 13-25 – This is where the M15 is really fun! The crew and skipper should both be on the high side in the hiking strap. The mainsail will need to be trimmed in – almost all the way at times as your apparent wind is way forward. The crew will need to work the jib, and both the skipper and crew will need to move their weight aft. It's important to get the boat up and rolling. Do not sail low or keep your crew inboard – put them on the rail and go for a fast ride! The key is the mainsheet - keep it trimmed! Do not ease the main much through your gybe either - keep the sail in! Being dynamic with your weight as the wind builds and

dies is very important. As soon as you feel like you can plane, move your weight aft to get the bow to pop out of the water and the boat up onto the step. As the wind dies and you come off a plane, move forward to make sure you aren't dragging the transom. Mastering this technique will help you keep the speed on in changing conditions.

- You want to perform blow-through or skiff gybes in all conditions. This is when you back your kite against the jib and let it blow through to the other side of the jib. A good blow-through maneuver entails the skipper turning into the gybe at an even pace while the crew trims the sheet tight, strapping the foot of the kite. As the boom crosses the boat, the crew releases the old sheet and trims on the new side. In the Melges 15, we recommend cleating the jib while sailing downwind, leaving it cleated while gybing, and then switching the jib over to the new side once you have completed your maneuver.
- It is very important to keep your lines clean and drop coiled. You need to drop-coil your spinnaker sheets after every gybe so that it runs free through maneuvers.
- It is important to watch your compass angles downwind while staying in the freshest breeze on the course. These boats will be going very fast; angles and wind really make the difference. Watch your compass as much, if not more, than you do going upwind.

## SETTING THE SPINNAKER

1. Ease the vang as you approach the weather mark. Hike the boat down as you bear away. Do not move into the boat until the boat is flat and sailing towards the offset mark.
2. Once you have bore away and the boat is flat, the crew will move into the boat, grabbing the halyard, and preparing to hoist.
3. Make sure to keep the boat flat when hoisting as this helps keep the spinnaker out of the water. Helmsperson Tip: On the set, it is very important to help your crew \ by heading dead downwind on the hoist. This allows the kite to go all the way up with ease. It is important to also make sure the mainsail is not let out too far.
4. Crew pulls the spinnaker halyard all the way up. Tip: Add a permanent mark to the halyard in the fully-hoisted position so you pull to that point every time.
5. Once the halyard is up, your crew should communicate, "Made." The helmsperson should freshen (head up) right away so that the kite blows away from the rig and fills. The crew should go for the spin sheets and trim.

## ADDITIONAL TIPS FOR THE PERFECT SET

- Do not sail too high on the set. This makes it harder to hoist the halyard and the kite will fill early making it more difficult for the crew.

- Ensuring the spinnaker is fully hoisted will also ensure that the tack line is all the way out. On the Melges 15, if the tack isn't made, the halyard will also not be made.
- Practice your timing on all of these things and know when you can push the envelope for the ultimate set!

## ASYMMETRICAL TAKEDOWNS

The easiest takedowns are the windward takedown or the Mexican takedown. The leeward takedown is your third option.

### WINDWARD TAKEDOWN

1. Head the boat virtually dead downwind.
2. The crew goes inboard for the douser line and to release the spin halyard. First by pulling the tension out of the douser line with their left hand, and then releasing the spin halyard with their right hand. Once you have released the spin halyard, pull the douser line as fast as you can!
3. After the halyard has been released, the helmsperson steers up slightly so that the sail blows onto the deck of the boat. If you are dead downwind or sailing by the lee, the kite will blow out away from the boat and go into the water. It is very important that the helmsperson helps the crew by steering up.
4. The crew finishes the drop into the bag and starts to trim the jib for the rounding.

### MEXICAN TAKEDOWN

This takedown is effective when approaching the leeward mark on starboard tack and you need to gybe to go around the mark. As you reach the three-boat length circle at the leeward mark, prepare to go into action.

1. Enter the three-boat length circle on starboard tack.
2. Helmsperson calls for a Mexican.
3. Begin the gybe. The crew goes inboard for the douser line and to release the spinnaker halyard. First, by pulling the tension out of the douser line with their left hand.
4. The helmsperson turns the boat and enters the gybe. As the boom goes across, they yell for the halyard release. The crew releases the halyard and starts to pull on the douser line.
5. The helmsperson heads up so that the sail gets "pressed" into the rig on the port side. The key is to head up so that the sail falls onto the deck keeping the sail out of the water.
6. Once the crew has finished the douse, they can sit on the high side and begin trimming the jib around the mark.

The key is to be at about 150 degrees to true wind as you complete your gybe and sail on port tack to the mark. As you gybe, you need to have the ability to head up on port slightly so that the spinnaker stays on the deck. If you come out of the gybe dead downwind, the spinnaker will collapse into the water. Again, the helmsperson needs to do their job to make the takedown easy and effective. Your relation to the leeward mark is critical – you want to exit the gybe and begin to reach toward the leeward mark

### LEEWARD TAKEDOWN

The key here is that the helmsman heads down for an easy takedown.

The crew goes inboard for the douser line and to release the spin halyard. First by pulling the tension out of the douser line with their left hand and then by releasing the spin halyard with their right. On a leeward drop, it is key to make sure that all slack is out of the douser line. Once you have released the spin halyard, pull the douser line as fast as you can!

### UPWIND CONSIDERATIONS

The angle of heel is very important on the Melges 15. Upwind, go for flat to slightly heeled. As pressure hits, hike hard and ease the main and jib together to keep the boat on the proper heel angle. When you sail into a lull, trim back in, and adjust controls accordingly.

Vang: The vang is the number one control for depowering your Melges 15. Add vang tension as the wind increases. This will flatten your sail and allow you to dump power by easing your mainsheet.

Cunningham: The cunningham should be loose in light air. Once the wind builds, pull on the cunningham to flatten out the front of the sail and to counteract some of the hook in the leach caused by the vang.

Outhaul: You can have 3-5 inches of room between the boom and sail in light air. When the wind starts to build, pull the outhaul tight to depower the bottom of the sail.

Jib Leads: We recommend being in the fifth hole from the back of the car when at your base setting. As the wind increases you will want to move your car back. In lighter air with chop, it may be good to move your jib car forward a few holes. Jib setup depends on a combination of sea state and wind strength. Setting your car further forward will give you a deeper jib with more power, but less ability to point.

Jib Trim: Looking at the telltale on the leach of your jib will allow you to maximize jib trim. When sailing a VMG (normal) angle upwind make sure that your jib telltale is flowing back almost all of the time.

## SAIL CARE

### MAINSAIL

When hoisting and lowering the sail, try to minimize the amount of creasing or wrinkling of the sail. Every time the sail gains a crease, the cloth breaks down that much faster.

The battens can be left in the sail for storage without any issues. Be sure to roll the sail down the leech so that the battens do not twist. Twisting could cause damage to the battens.

### JIB

When rolling the jib, keep the battens perpendicular to the leech. Pay special attention to the battens and batten pockets for wear and tear.

### SPINNAKER

Be sure to repair all tears and pulled stitches. Folding the sail when storing is best.

*This tuning guide only begins to cover all there is to know about racing the boat. The team at Melges is happy to help answer any additional questions. Visit [melges.com](http://melges.com) for more information.*