2015 Tasar World Championships – Insights, Reflections and Lessons Learnt

A Stressful Finish

Our championship win was undoubtedly somewhat unexpected having been sailing in the class together for less than 2 years and in our recently changed skipper crew roles for only 9 months. We hadn't won any Tasar championships before at either State, National or World level and we hadn't beaten any of the big name Tasar champions before in any major regattas. Our regatta goal was to get a heat win and beyond that, we had set no expectations.

It was an incredibly nerve racking and climatic finish to the regatta with a 'who beat who' in the final race and the added twist that we also had to finish 8th or better. As fate would have it we finished 8th after being 9th with just a couple of hundred metres to the finish. The feeling immediately after crossing the finish line was raw emotion. We were unsure about how the points worked with the drops and who the winner was. What we did know is that we sailed the regatta of our lives and that was a victory in itself regardless of the result. It's a shame there can't be two winners when boats finish on equal points because it felt like we were both equally deserving.

Preparation

What we learnt from Cascade Locks is that we weren't 'race sharp' enough. Our upwind boat speed was good, even fast in a breeze but in the pressure of close boat on boat regatta racing we lacked experience.

80% of our preparation for Bussleton was racing other Tasars at any opportunity we could. We only made the decision to go to Bussleton 6 months prior so when the winter series at Mordi came around in August we basically tried to race every weekend up to December - sometimes one day, sometimes 2 days of the weekend. We did very few mid-week sessions and very few solo or 2 boat training sessions. This program was built on a base of doing 3 State Championships (2 Vic, 1 NSW), one Nationals and the Cascade Locks Worlds over a period of just under 2 years.

We certainly felt we were learning how to sail the Tasar better every time we raced. Reviewing every performance was a critical part of our program and integral to accelerating our learning curve. Close, competitive racing sharpens you. We treated every race as a learning opportunity – what did we do well, where could we improve, and what lessons did the other boats teach us. We were very fortunate to have a strong Victorian Tasar fleet where the winners always varied certainly among the top 5 and sometimes deeper. They helped us get race sharp.

Rig Settings / Tuning Controls

Everyone is always interested in boat setup / tuning tips from the fast boats so we will do our best to describe all the setting principles we used. However, we certainly don't see these as a formula for going fast and I'm sure there are many different setting combinations that equally work as well if not better.

Whilst we didn't feel we were slow, the regatta win was definitely not due to a general speed edge over the other top boats. Occasionally on a power reach we felt we were very fast and also at times upwind in fresh/strong conditions. Having a slight weight advantage in these conditions being a partial reason for this. Interestingly, light air upwind speed was also generally very good. Conversely, we occasionally had speed issues on the run and this was our least comfortable leg.

5 Tasar tips for new to the class sailors

Before jumping in on the details, all good guides have a 5 point plan to success. Here are the tips we wish we knew when we started sailing Tasars!

1. Keep your shrouds back on the run in 20+ knots. This was a lesson learnt after a few broken masts!
2. Don't be soft on the Cunningham. Pull it hard when you're overpowered. If you're not putting your foot on the mast, you're probably not pulling it hard enough!
3. The centreboard height needs adjusting upwind. In 20kts, bring it up as high as you can get it while still being able to cleat the jib.
4. The vang is not a vang. It's a "stop the mast rotation popping out thing". Don't use it to bend the mast upwind. Just take the slack out and use mainsheet to control bend and twist.
5. Always play the traveller upwind. Only revert to the mainsheet in drifter.

In detail:

Mast Rake: 5mm from maximum rake (forestay length) just to allow for some measurement tolerance

Height of hounds above deck: close to minimum as possible to maximise the effective rake

Diamond tension: the wires just touch the mast 1-2 inches above the whisker pole ring when squeezed firmly together. We don't adjust these.

Rig Tension: We use 2 settings: Under 15 knots, 16 on the Loos gauge with shrouds all the way back. Over 15 knots we tighten the rig one adjustment (half a hole on the shroud plates). Haven't measured what the corresponding rig tension on the Loos gauge is for this setting.

All the rake, diamond and rig tension settings were how we received the boat when we took possession of it, as set up by Dave Bretherton. Thanks Dave!

Shrouds:

Very light winds: half way forward;

Light/medium: about 1-2 inches from all the way back.

Once fully hiking, all the way back.

For reaching, we ease the leeward stay all the way forward to allow the main to go further out. If fresh / windy, we keep leeward stay back because jib luff is too loose and unstable otherwise.

For running, leeward stay forward unless very windy, then keep both stays back for safety and survival!

Jib

- Clew board setting: We use the same setting for all wind ranges which is two and a half holes from the bottom. This is achieved by having 2 small shackles on the middle hole and 2nd hole from the bottom with the snap shackle going through both

shackles. Rationale: I liked it in the 2nd bottom hole and Chris the middle hole so we solved the argument by splitting the difference. Importantly, this setting is completely dependent on the jib height setting as controlled by the tack line. Our jib height is set such that the lowest part of the foot just 'kisses' the deck to get an 'end plate' effect.

- Jib cars: Inner most setting up to about 13-15 knots, one hole out from 14 – 18 knots, 2 holes out 18 – 22 knots, 3 holes out for 22plus. We would often have the car inboard 1 hole for the conditions for starting gear to help with pointing off the line then move out after first tack
- Jib luff: slight horizontal creases in luff under 6 knots, just remove creases 6 – 14 knots, increase tension as become overpowered until quite tight for over 20 knots
- Jib sheet: by far the most important jib control, whilst all the other jib controls are largely set and forget, the sheet needs to be adjusted constantly and in strong winds is the primary determinant of upwind speed with the main often half luffing / inverting.

  In light winds, jib can be sheeted quite tight so long as the leach ribbon does not stall (we attached a leech ribbon at the same height as the top pair of telltales). In light/medium wind and flat water, a sheet tension where the leach ribbon is just on the point of stalling is a fast setting. Another guide for correct sheet tension is when all the luff wools break evenly when the boat is slowly luffed toward the wind. If the top windward luff wool breaks first, tighten sheet to reduce twist.

  Jib Sheeting Technique

  In lull's, bad waves, dirty air, or when the boat feels slow, ease sheet slightly then bring back in when the reverse applies. The crew and skipper need to work together on this and be communicating changes as the same 'gear change principles' apply to the mainsheet. Our main boat speed discussion on board was about sheet tensions and we would review every time conditions changed or it was apparent we had an issue relative to other boats. We have frequent conversations about how the boat 'feels' and our repertoire of sensing how the boat feels has grown with time in the boat. When the boat doesn't feel good our primary controls we look at are mainsheet/trav and jib sheet and the secondary controls are cunners, centreboard, jib cars and shrouds in about that order of priority.

  In strong winds / gusty conditions, play the sheet frequently. A 'big ease' of a few inches when a gust hits can really accelerate the boat rather than that 'wound up', 'staggering' feeling when overpowered. This is the number one priority technique in fresh, gusty conditions. On the big, over 20 knot gusts, we would even luff the jib momentarily (1 or 2 seconds) to keep the boat tracking really flat and fast through the water. Yes it's hard to play the sheet in and out of the cleat with so much pressure on it and whilst hiking hard but that's why we have super crews :)

  Fast/low groove vs high groove: At around 18 knots, the Tasar can be shifted into 'low mode' and go significantly faster. There were only a very few occasions when we used this mode at the worlds, partly because the pressure was very up and down making it difficult to sustain and partly because we're still improving our confidence on when to use it because if you try it and it doesn't work its very slow i.e. low height and no faster. As Paul Ridgeway advised us, when in doubt don't do

it. Having said that, we've found in plenty of races before the worlds, including at Cascade Locks that the low mode is superfast upwind when we have got it working. So how to do it? Jib cars out at 2 or 3 holes, jib eased a couple of inches and as they say in 420's, 'point and shoot' which means point boat away from wind slightly so not feathering jib and sail fast! Once you're going fast, often planing, shift your mind to "getting height" without losing speed. Take every flat patch as an opportunity to creep your height back. It also helps to have the mainsheet eased a few inches and weight back slightly.

Finally on jib sheet settings, on a broad reach and when crew weight can be positioned to leeward, the jib must be sheeted outboard by hand. The objective is to get the correct twist in the sail such that the tell tails at the top and bottom are all streaming evenly.

Main controls

Outhaul: not a control we would adjust much or place high importance on. In light/ medium winds, set with about 3-4 inches of space between the middle of the foot and the boom. Progressively tighten and flatten the foot completely as wind increases and become overpowered. On the reaches / runs we would ease a few inches unless very windy when not a priority.

Vang: Upwind we don't really use any vang – just take the slack out but no more. When over 15 knots we tension up just slightly to stop the mast rotation popping out but not as a mast bending control. We control mast bend with mainsheet and cunningham only. An overtight vang makes the mast difficult to rotate through tacks and also gybes and results in a complaining crew.

On a reach vang must be eased. One lesson we learned from the Blairgowrie Nationals last year was to sail with less vang and more twist than we had been. This made a big difference to our reaching speed. As with jib twist, a good guide is when the top and bottom telltales are all breaking evenly and the leech ribbons are all flying, although we tend to now judge the twist simply by what looks right which has come from experience.

On a run, vang also needs to be eased. It's good to have the leech just 'flicking' or panting. In over 17 knots we find the leech works better with the mast over rotated in the reaching position. Under this wind strength we have the lever in the centre position. We are still learning where the best settings are with vang / mast and the right steering technique on the run – definitely an area of improvement focus.

Cunningham: We use this a key gear changing control, second only to main and jib sheet tensions. We use no Cunningham under 8 knots and only slight Cunningham to remove excessive wrinkles in 9- 13 knots. When overpowered, cunners is a great way to depower and should be progressively tightened until very tight once up to 18-20 knots. With the pressure up and down so much at Bussleton, the cunners needed to be adjusted frequently the principle being: looking for power, ease; overpowered, tighten. Make sure your main halyard knot is positioned to get the main as high as possible so you don't run out of range when tightening the cunners a lesson Paul Ridgway pointed out to us recently. Although a slightly lower priority, the same principle applies with the centreboard height when responding to pressure changes / changing gears…

Centreboard: fully down for wind up to about 10-12 knots. 4-6 inches raised 12-15 knots. Maximum height that just allows jib to be cleated for over 15 knots. For starting gear, we would sometimes put board all the way down during low speed luffing then raise to normal

height at about 15 secs to go, just before pulling the trigger – something we learnt from watching Anthony and Haley in Cascade Locks.

Mainsheet/Traveller

Light winds: Traveller cleated about 7-8 inches upwind of centre, play mainsheet such that boom is on centreline / leech telltales streaming. Tighten with pressure and loosen in lulls/bad waves/bad air

Medium Winds: Tighten mainsheet, play traveller so it averages about centre. Tighten sheet an inch or 2 with pressure increases and loosen with pressure drops/waves/bad air.

Fresh/Strong Winds: ease a few inches of sheet, play traveller so it averages just below centre.

Very important to continuously play traveller in medium and strong winds to keep the boat flat over waves and in pressure changes.

The mainsheet is very sensitive to being over trimmed and along with jib sheet is the most important speed control. Tightening mainsheet changes mainsail shape in two ways: flattens the main by bending the mast and secondly, tightens the leech/reduces twist. As a secondary effect, it also tightens the forestay thereby flattening the jib luff entry.

We have evolved our mainsheet tension to put more emphasis on its control over the depth of the sail rather than twist (remembering we don't use vang to bend mast). We read this by judging the sail's depth or curvature using the batten shape – flatter sails, straighter battens; fuller sails, more curvature in the battens. In a practical sense, the focus we put on this more applies to medium winds. If we want to introduce more power we ease sheet an inch or two to deepen the sail and flatten by tightening as pressure increases. In light winds, the focus is more about leech control and keeping the telltales just flowing and boom near centre. In strong winds, the cunners can be used to really bend mast and flatten the sail allowing the mainsheet to be eased a bit and having a softer, more responsive leech. Speed is the name of the game not pointing in strong winds.

Marks on both main and jib sheets are really helpful to learn these optimum settings found through no other way than boat performance experience. We're still learning them!

Batten tension: Low priority, tensioned so 'just firm' in pocket but not inducing bend. Back off a turn or two for light winds. We used standard battens as supplied.

Techniques

Surprise, surprise hard hiking is good for speed. We weighed in at 143.5kg which we feel is slightly on the heavier side of ideal. We had a natural advantage with our weight distribution with myself as crew being taller and heavier (77kg). Not to the same extent as a trapeze boat, but I think taller, heavier crews and small light skippers is the ideal on the Tasar. This weight combination generates added leverage since crews are able to hike further out than skippers who need to be more upright to steer and work the main effectively.

Fitness was an area we both worked hard on in our preparation, Chris managing to drop up to 4kg (66kg). Being fit and able to hike harder for longer is a benefit over the length of a full regatta particularly with up to 3 consecutive races in a session. Tired bodies not only impedes you're ability to be physical in the boat in fresh winds but also affects decision making and sharpness of thinking. I recently heard the Nacra guys/girls in the Australian

Sailing Team talk about how their fitness goal is to be feeling as fresh going into the last day of the regatta as the first. Makes sense.

Light air boat heel: In light airs, 4-8 knots, Chris would like to sail the boat very flat with no leeward heel. This can be difficult to maintain without heeling to windward in lulls with the crew needing to frequently shift weight whilst not disrupting the skipper's line of sight. It can also sometimes feel awkward when a bit of heel helps with light air feel. However our light air speed upwind was consistently good and having the centreboard and rig work perfectly upright seems to help with height. Small main and jib sheet tension adjustments through the subtle pressure and wave changes is the other key ingredient to light air speed.

Starting

This was our area of strength for the regatta and was the single most important factor to our success. Our starting technique really took a step change following a lot of coached training with the Vic Squad, led by Mark Tonner Joyce. At Bussleton with the very large fleet, we refined these processes to a system that worked and stuck to it except for the last race where we attempted to win a boat end start due to the points situation.

Our system started with the standard pre-start preparations of getting transits and checking line bias. Based on the bias, we first decided which half of the start line we wanted to be in. From the middle of the line we would recheck the bias at around 3-4 mins to go by looking at the angle of the flags on the mid-line start boat. This told us if there had been any late shift and if we needed to adjust our line positioning plan accordingly, which we did do on at least one occasion.

With 2-3 minutes to go we would be shaking in at half speed on port tack passing just below the parade of starboard tackers. Our focus was to avoid the bunches and locate the lowest density part of the line to tack into. This was a technique that Chris took away from his previous success in 130 boat Sabre fleet starts.

Once located, we tried to position ourselves to approach this low density area without any 'fast boats' under us. At this point, on our final approach, the focus switched to judging time vs distance to the line and defending our leeward space. As crew, I would call number of boat lengths to the line, constantly sighting back and forth between the ends to judge this and give feedback on my opinion of whether to move forward or hold back and when to pull the trigger. Chris would use the boats next to him to decide whether to risk moving forward and be exposed or hold back. As we all know, it's a high stress, critical part of the race and we would often hotly contest our differing viewpoints of time on distance and when to pull the trigger but as skipper, Chris would always have the final call (which was agreed and understood) so this tension worked well for us.

One start we found ourselves jammed in a big bunch, had to bail out by reaching behind all the front row boats and luckily found a gap near the pin. Lucky again the breeze went left and we found ourselves in a strong position. Other than this race and the last where we decided to dial up the risk, all our starts avoided the ends and favoured the flexibility of the middle regions. In summary, avoid the disasters (bunches) and get away clean by taking a conservative position (low density of boats), then get in phase with the oscillating shifts as soon as tacking freedom is established.

We can't stress enough the importance of doing your homework before the start. This is not just the "normal stuff" like wind readings and transits, but also the simple things like knowing traveller height and sheet tensions (all marked). We'd spend quite a bit of time, often with another boat, working out the ideal sheet tension and traveller position. We'd set the traveller up at around 2 minutes to go. We'd both know the settings. Often under the stress of a start it was easy to accidently over/under sheet the main. Having two

heads on the job helped and hence we always knew we were “in gear” right from zero. All this added up and gave us the ability to approach the start with confidence.

Reaching

This was generally a strength for us in anything from marginal planing upwards and in particular, power reaching. The primary focus is on steering angles to keep the boat planing. With the traveller centred, the main is trimmed to just keep the leech telltales flying. Thirdly, there is constant movement of weight from the crew both forward and back and in and out as the boat heats up and bears away for the wave pattern – like movement on a surfboard. This needs to be smooth so the hull is always flat, presenting the most efficient wetted surface and to keep the rig vertical. The crew owns boat heel while the skipper owns steering angle and main trim. Constant communication on these primary factors is important to have a coordinated dynamic.

Both crew and skipper must be in the aft straps when the boat is hard planing to sit the boat flat on its aft planing surface but as soon as the boat drops off the plane due to pressure or soaking low the crew must move forward and inboard so that the stern does not drag nor the weather quarter dig in.

Jib cars outboard, vang and cunners eased are the main adjustments along with a little board up, leeward shroud forward and outhaul off in light to medium winds. Generally we sail with a little more board down on the reach and run than other boats as we like the better ‘grip’ in the water it provides when steering up and down

One lesson we learnt before the worlds was the importance of maintaining the boat on the plane right up to the leeward mark. Rather than the crew come in from hard hiking to setup all the controls for upwind before the mark, we would try to plane right up to the mark then only make one adjustment one boat length before the mark which was bringing the jib car inboard. We would then round the mark, settle everything down then the crew would tighten cunners, outhaul, put board down, put mast in windward setting etc. Whilst you lose a little bit upwind doing all these adjustments rather than hiking, you lose a lot more if you drop off the plane by doing them on the power reach.

The finer points: We definitely had a speed edge on the power reaches (15+kts), particularly in flat water. We put this down to some fine tuning developed leading up to the worlds. The first change was traveller height. We’d drop it down to the point where it became “just possible” to play the mainsheet under the higher load - often 20 to 30cm down from centre. The idea was to keep leech tension without flattening the sail with the vang. The 2nd change was learning to sail the boat “on the edge of cavitation”. Without a kite, weather helm is to be expected. Chris thinks we all have a tendency to sail the boat under-sheeted to avoid weather helm and cavitation. We became very comfortable sailing in the cavitation zone, learning when it was safe to do so, and how to steer with sail trim to avoid rounding up.

Shift Management

The breezes at Bussleton were shifty, particularly the second half of the regatta when it was more offshore. It’s difficult to get shifts right every time and to some extent everyone gets their turn. However, overall, our shift management was very good and another area of strength. Some factors that underpinned our approach included:

Consolidate your gains and don’t consolidate your losses. One race we went from being lead boat to having about 10 boats screw up inside us on a big right-hander. We stuck on the lifted starboard tack all the way to the layline, trusting (and praying) that it would oscillate back. It did, right in the middle of our tack on the layline. It shifted so much we nearly tipped, half filled the boat with water and came screaming in on a close reach,

rounding second. If we had of tacked any earlier we would have consolidated our losses and been back in the pack. There were many other examples of where this principle worked for us. The principle is nothing more than Stuart Walker's famous: cross 'em when you can and don't let 'em cross you.

Other principles we frequently used to manage the shifts included:

- Sail in the wind you've got
- Sail toward the pressure bands and delay tack until reaching the pressure band
- Know your numbers. We invested a lot of time before races recording the ranges of highs and lows on each tack – knowing these in the heat of racing was critical.

That about sums up everything we can think of that is worth sharing. Whilst it may all sound very organised, well planned and like we're on top of everything when laid out in written form, the reality is that the whole experience included plenty of chaos, seat of the pants judgements, mistakes, narrow escapes and a dose of luck. Any way you look at it, regardless of result, it was a fantastic experience to sail in a fleet of that size and quality at such a stunning venue.

Chris Dance & Peter Hackett

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