



Supernova Class Association

Supernova 'MOT' Checks – or how to check your boat to minimize risk

Sailing well is tough enough when your boat stays in one piece. If something breaks it can be a minor irritation or a major disaster, depending on what it is and where it happens. You don't want any gear or boat failures, no matter how small, so it's best to pre-empt any failures with a thorough inspection routine. Work hard on your boat in between races, and treat it with respect on the water. When you have more than a Force 4 wind, or if you are sailing outside your comfort zone, for example, don't do risky manoeuvres. If you're using lots of kicker upwind, be sure to ease it before you bear off to go downwind.

Now that we're looking forward to the start of the competitive sailing season, it's worth having a checklist to run through. Like any piece of equipment, the Supernova has its weak points, so I've compiled this checklist with the Supernova in mind. I have had personal experience of breakage on the water, so now I realise that preventative maintenance is 'King'. I sail my boat most weekends and spend a lot of time renewing parts before they break, so on the water breakages are relatively rare for me now. If you spot a weak point before it actually breaks; give yourself a pat on the back.

Inspect your boat regularly before you rig your boat. Better yet, check them a day or a week before your race. Even better, get someone else to check through the list – they are more likely to spot something you don't. If you sail more than one race in a day, go over this list again in between races. When it comes to breakdowns, you can't be too careful or too prepared.

Toe straps.

On one-design boats, this is a common disaster. How many times have you seen or heard about someone going overboard because their hiking strap broke or came untied? We have a YBF-style video on our website showing what happens when a toestraps goes – quite funny in our 'pond' but could be disastrous if you are offshore. Don't assume because your boat is new that it's all OK. At our Club we had an RS Aero less than 6 months old retire from a race this week because the self-tapper fixing on the hiking strap pulled out (there are only 2!). My boat is less than 18 months old, but the webbing stitching on the tensioner managed to break. Check your strap for wear: especially inspect the forward attachment fittings and particularly look for frayed edges. If in doubt, put a new toe strap on.

Tiller & extension.

If you have a tiller with a rubber universal (UJ), check this regularly (especially in colder weather) for cracks. I would recommend the type that has an internal wire and one that has a self tapping screw (or better a machine bolt) securing the UJ to the extension. My home made (ex fishing rod) carbon extension is still going strong after a lot of sailing. Check the rudder uphaul and downhaul cleats are firmly attached to the tiller.

Halyards.

Broken halyards are another common failure. Check the full length of halyards for chafing, etc. Look especially at points where the hoisted halyard sits on the sheave and where it cleats on the mast cam-cleat. My tip is to have the halyard over-long, so every so often you can cut a bit off the top to even out the wear.



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Main Sheets and Control lines.

Check over all running lines to make sure there are no worn spots where they might break. If possible, turn your mainsheet end for end every so often, Check the splicing on control lines – especially if you use English Braids – in my opinion these are more prone to failure than the Marlow lines which have a tighter braid weave.

Strop

Also check the condition of the strop/bridle for wear and security of attachment to the mainsheet blocks and deck fairleads. I would renew this on an annual basis, preferably using dyneema.

Kicker.

The kicker takes a lot of abuse – remember that the loads on the attachment points at boom and mast are extremely high (especially with 16:1 cascade kickers), so be sure to check frequently for wear and tear. I've had a kicker detach from the boom as the boom eye fixing failed, which cost me a race. Look for frayed line and check the intermediate blocks. Also, some of the kicker brackets at the mast end (made by Allen) are of thinner metal (0.8mm) – these have been known to break even on newer boats. The Superspars brackets now available are of thicker metal (1.25mm) and probably more reliable.

Shroud and mast fittings.

In heavy winds, the strain on your mast and shrouds is huge, so don't risk failure here. Check the shrouds don't show any frayed and broken wires. Make sure all shackles and pins are tight and secured (with pliers, not finger tight). Change the clevis pins on shroud attachments annually as they can break with fatigue. Check the shroud attachment U-Bolts. Tape tightly around all fittings and sharp edges to keep them in place and prevent tears and injuries (use PVC electrical tape). Check the gooseneck pin and toggle for signs of extreme wear. Check the mast rivet points – on mast foot, gooseneck/lowers plate, and spreader bracket. If there are any loose rivets, then you need to drill them out and replace with Monel or A4 Stainless ones.

Check the forestay U Bolt. If it is bent towards the mast, it signals that you will need to change it. If it is 5mm then you might as well upgrade to a 6mm one for greater strength – you will need to drill out the deck holes with a 6mm drill. On no account try and turn the U Bolt 180 degrees to bend it the other way. If you do that then it will accelerate fatigue and the U Bolt will snap cleanly off, usually in the middle of a gust or gybe, and the mast and rig will fall down and you will need to be rescued. This could be life-threatening if you are out at sea without any rescue cover. The 'safety cord' attached to the U Bolt won't help in any way.

Sails and Battens.

Check your mainsail for tears and rips – especially check at the luff tack where the boltrope emerges. I have had a Jeckells sail rip there as it's a high stress point. The newer Jeckells sails available from February 2015 onwards have strengtheners here and at the batten pockets – if you buy a sail secondhand or have an earlier Jeckells sail then check for wear. Check also the point where the sail meets the spreaders – if you have tape over the ends of the spreaders there may not be too much wear there, but if there are any sharp edges, watch out!

If your sail is creased along the luff, then the bolt rope may have shrunk. It's not too hard to pick out the stitching and splice on a new section of bolt rope before hand stitching up



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again. I did this with a Jeckells sail and found about 4 inches of shrinkage! For the battens check that 1: they are not broken; 2: the inboard ends are centered in the plastic pocket; and 3: the battens are securely tied at their outboard ends, and correctly tensioned. You should check batten tension every so often, but this is easy to check with the sail up (before every race).

Rudder fittings.

Gudgeons and pintles are common heavy-air victims, so check to be sure these are secured tightly. Inspect the gudgeons closely for stress cracks around the pintle holes. The top one is most likely to have problems. The nylon Supernova gudgeon (131mm), only costs about £3 so it's worth having a spare one handy in your toolbox. Some Mark 1's have a spring plate to stop the rudder lifting off the boat – these often get bent. The Seasure rudder stock used on later boats has a retaining toggle – if you have this type it's best to have a captive pin (cotter pin) to insert through the toggle to keep it in place. One of the worst things that can happen in a choppy sea or heavy wind is for your rudder stock to come away completely and you will almost certainly need assistance.

Foils.

Check the daggerboard slot for signs of damage. This is a heavy wear area which has been known to cause leakage into the hull. Also check the daggerboard leading and trailing edges. Repair any dings and holes as soon as possible after you notice them (marine epoxy filler and gelcoat). Check the rudder leading and trailing edges, and where it meets the rudder stock as this point seems to get impact damage when the rudder is raised.

Outhaul.

Examine the shackle assembly and the clew tie down at the outboard end. Normally there are not too many problems there as the loads aren't too heavy, but the bungee boom return is worth checking too. It's not expensive to replace the bungee (on an annual basis).

Spare equipment.

One of the best and quickest ways to repair a breakdown is with a spare, so I would consider carrying extra parts in your toolbox, apart from the usual tools.

First aid kit.

Be sure you have all necessary first aid supplies in case of human breakdown.

Extra tips for Buying Secondhand

If you are buying a secondhand Supernova, you will be buying into many hours of enjoyment. But, as with most things, it is 'Buyer Beware', so I've put together this list of what to look for in particular. You should read this overall list first, when you are ready to inspect your prospective purchase, and then work through the detailed points above. If you have done that and are happy with the boat, then you have probably done more than most people. Congratulate yourself (again).

1. Check all over for dings, scrapes, holes etc especially at the bow, under the hull, on the deck especially over the transom area where the end of the boom tends to 'whack' down occasionally. Incidentally a TOP TIP is to cut a tennis ball in half along the 'curly' lines and attach it to the end of the boom on the underside with duct tape wrap. This will prevent getting nasty dings.



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2. Check the side decks around the bridle/strop area for crazing or cracking. If you see crazing then it could be a sign that the boat has been over stressed by ratchet straps while towing. This is more likely on older, less stiff, Giles-built boats.
3. Check the condition of the foils (daggerboard and rudder) for signs of major damage, delaminating etc. If they are particularly bad then new ones are pricey.
4. Check the mast and boom. Is the mast straight? Are there any dents in it? Look specifically along the luff track. Same the boom. Are any rivets insecure that need replacing? The gooseneck tends to wear quite a lot especially around the gooseneck pin. Also, while looking at the boom, check the kicker take off (it does snap suddenly) and the condition of the kicker (blocks and string).
5. Open the hatch, check the king post – is it still strong? This is the support inside the boat under the mast to the hull. While the hatch is open, check for water in the hull. Does it smell unduly 'musty'?
6. Check the condition of the sail/s. Any tears, holes etc will be obvious at the foot of the sail and at the spreader points. Also check battens and especially battens and the batten pockets. If the battens have been over-tensioned then it can lead to the luff batten holders 'splitting'.
7. Check for loose cleats for the control lines. They are held on by self tappers so if loose you will have to do a repair, like using RWO backers under the deck - not hard but fiddly.
8. Check the condition of the launch trolley and road trailer. Usually not much goes wrong except tyre tread and wheel bearings (if the boat has been towed a lot). New bearings are cheap and easy to install, so don't let that put you off.
9. Check if there is any water in the boat. Take the drain plug out and see what comes out. Hopefully you won't get any.

Finally, if you can, take the boat out for a sail. This is your 'road test' for the boat. All being well, this will be the start of your passion with the Supernova.

I've attached a one page checklist so that you can print off the page and take it with you when you do your boat checks.

Happy sailing!

Pete Bingham
Secretary, Supernova Class Association



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Checklist

Date:

Tick the boxes as you complete your inspection. This assumes you work from bow to stern.

- Forestay – *U bolt condition, safety rope, tensioner blocks*
- Mast attachment – *gooseneck, rivets, lowers, spreaders & bracket (if possible)*
- Main Halyard – *frayed?*
- Shrouds – *attachment to U Bolts, pins, plates, adequate taping up*
- Kicker - *blocks, boom and mast attachment*
- Outhaul – *working OK, bungee tensioner, clew tie down*
- Control lines:
 - Forestay/rig tension Kicker
 - Outhaul Cunningham Lowers
 - Mainsheet (time to reverse) Strop Security of Cleats
- Toestay – *check for wear, looseness, webbing, frayed*
- Rudder & stock – *gudgeons, retaining pin/plate, drain plug in place*
- Tiller & extension – *check UJ*
- Sails – *batten tension, holes, tears, batten ties secure*
- Foils – *dings and chips (repair if possible)*

Overall comments on Inspection

Use this section is for reporting on the overall condition of your boat. Identify any deterioration, defects and/or conditions which may give rise to possible problems in the future:

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